

PERSONALITY TYPE AND JOB SATISFACTION
IN THE HOME OFFICE ENVIRONMENT

By

RANDALL RAY RUSS

Bachelor of Science
Kansas State University
Manhattan, Kansas
1986

Master of Science
Oklahoma State University
Stillwater, Oklahoma
1993

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Thesis approved:

Margaret J. Weber
Thesis Adviser

Cheryl G. Farr

Mona Lane

R.P. Lumsden

Thomas C. Collins
Dean of the Graduate College

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TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
Theoretical Framework	4
Purpose of the Study	5
Objectives of the Study	5
Definitions	6
Assumptions	7
Limitations	8
II. REVIEW OF LITERATURE	9
Congruence	9
History of Myers-Briggs Type Indicator	16
Job Satisfaction	20
Physical Environment	23
Physical Environment Factors	26
Home-based Business	27
III. METHOD AND PROCEDURE	33
Research Design	33
Selection of Subjects	34
Research Instruments	35
Myers-Briggs Type Indicator	35
Work Environment Scale	35
Work Environment Type	36
Data Collection	37
IV. PERSONALITY TYPE AND JOB SATISFACTION IN THE HOME OFFICE ENVIRONMENT (Manuscript)	40

Cover Page	40
Abstract	41
Introduction	42
Method	55
Instruments	56
Data Collection	58
Results	58
Discussion	62
References	66
Table I	71
Table II	72
Table III	73
Table IV	74
V. PERSONALITY TYPES OF HOME-BASED BUSINESS OWNERS AND HOME OFFICE ENVIRONMENTS (Manuscript)	75
Cover Page	75
Abstract	76
Introduction	77
Method	82
Results	83
Discussion	86
References	93
Table V	95
Table VI	96
Figure I	97
VI. RECOMMENDATIONS AND CONCLUSIONS	98
Areas for Future Study	99
Evaluation of Study	101
BIBLIOGRAPHY	103
APPENDIXES	113
APPENDIX A - MYERS-BRIGGS TYPE INDICATOR	114
APPENDIX B - WORK ENVIRONMENT AND WORK SATISFACTION INSTRUMENT	116

APPENDIX C - COVER LETTER FOR INSTRUMENTS	123
APPENDIX D - POSTCARD FOR SECOND MAILING	125
APPENDIX E - COVER LETTER FOR THIRD MAILING	127

LIST OF TABLES AND FIGURES

Table	Page
I. Descriptive Statistics for Home-Based Business Owners	71
II. Examples of Jobs for Eight Occupations	72
III. Occupations and Personality Types of Home-Based Business Owners	73
IV. Personality Types, Occupations, Job Satisfaction and Environment for Home-based Business Owners	74
V. Type Distribution of All Subjects	95
VI. Type Distribution of All Subjects Dichotomous Preferences	96
Figure	
I. Framework for Home-Based Business Occupations and Personality Type	97

CHAPTER I

INTRODUCTION

Theories of vocational choice tend to describe personality and job types, stating that satisfaction results from a fit between personality and job type, and dissatisfaction results from a non-fit (Bretz & Judge, 1994). Individuals seek occupational environments which are congruent with their personalities and job satisfaction is increased when there is a congruence between personality and occupational environment (Holland, 1973). The occupational environment refers to both physical and psychological elements which impact the perception of the individual. Physical barriers, noise, and proximity of other individuals are examples of these environmental elements. The concept of fit or congruence between individual attributes and the characteristics of a situation have been an important explanation for differences in individual performance and satisfaction at work. The application of this general notion has ranged from the typical personnel selection strategy: analyze the job, define ability requirements, hire the person with the right abilities; to attempts to link more general individual characteristics to particular aspects of an occupation, job or organization.

Holland (1985) argued that satisfaction and performance are enhanced when individuals select an occupation that is compatible with their own traits and skills. On a similar note, research has attempted to show an interaction between the individual's personality or needs and specific task characteristics (Broughton, Trapnell & Boyes,

1991). Increased performance and productivity are the result an environment congruent with an individual. Job satisfaction may depend upon the individuals' establishment in a type of work, a work situation, and a way of life in which they can play the kind of role for which their growth and exploratory experiences have led them to consider congenial and appropriate.

Research on home-based work in recent years focused on estimating its prevalence using a variety of definitions for home-based work and on describing samples specific to one industry and/or population. Despite the attention given to home-based work, there is little representative data available because definitions of the sample groups have differed from study to study (Masuo, Walker, & Furry, (1992).

Almost 19 million Americans, more than 15% of the entire U. S. workforce work for themselves, with the vast majority of these running single-person businesses out of their homes. As increasing numbers of workers acclimate to this work setting, a variety of aspects and impacts of home-based work on the workers and their households should be considered. On average, a professionally self-employed person with a PC generates almost \$70,000 in household income, 42% more than one without. Home workers present the opportunity to study their satisfaction with their home office environment (Roberts, 1994).

Over the last 50 years, a wide variety of career and vocational instruments have been developed to measure personality attributes, provide career exploration and predict vocational choice that fit with these personality attributes (Elam, 1994). The Myers-Briggs Type Indicator (MBTI) is being used by a number of professionals for career

counseling (Bayne, 1990). The MBTI produces results which examines or identifies personality characteristics for a management style based on the selected preferences of the individual. Previous research suggests the profile may correspond to certain career fields to be explored by the individual (Elam, 1994; Bayne, 1990; Martin & Bartol, 1986; Pinkney, 1983). The type of person you are and how you prefer to interact with people, data, and ideas are components of a person's personality and psychological profile. Careers involve interacting with these same issues. The extent to which one will enjoy various careers and settings is determined to some degree by the type of person one is (Howard & Howard, 1995).

Personality traits have been extensively studied and especially those of the MBTI. Although there has been a vast amount of work on the MBTI, relatively few studies have examined the relationship between MBTI types and occupational behavior such as productivity and satisfaction, or productivity and person-environment congruence (Shewchuk & O'Connor, 1995). Rahim (1981) tested the hypothesis that there would be a congruence between MBTI type and occupational type (technical, intellectual, and social) as measured by a job satisfaction index. The results did not confirm the person-job fit hypothesis, but did show the occupational environment was positively correlated with job satisfaction. Three of the five main effects were significant: the E-I dimension, the J-P dimension and occupation. Extroverts were shown to be more satisfied than introverts, and judging types more satisfied than perceiving types, irrespective of their occupation.

Results have shown evidence of the main effects of personality on job satisfaction (Davey, Schell & Morrison, 1993). Marcic, Aiuppa & Watson (1989) compared the

MBTI, self-esteem, and job satisfaction scores of 102 American managers with the organization's "normative" type. It was hypothesized that managers whose personality type was of the norm of their particular organization would show higher self-esteem, greater job satisfaction, and a lower turnover rate. The results were confirmed for self-esteem, but not for job satisfaction. The authors argue that those with high fit tend to be rewarded by the organization, which tends to increase their self-esteem.

Theoretical Framework

Career advice from the time of Parsons' (1909) has been to find the job niche best suited to one's characteristics. A fit was thought to ensure success with satisfaction and advancement. Currently, few believe the formula to be accurate due to the complex nature of vocational choice. However, the idea of congruence between people and their work environments remains at the core of environmental psychology (Chartrand, 1991).

Person-environment fit has been extensively studied in the vocational behavior literature and has been related to several occupational outcomes. Person-environment congruence is the foundation of Holland's theory of vocational choice which posits that the choice of vocation is an expression of personality and the success of career satisfaction is dependent upon the congruence between an individual's personality and work environment (Holland, 1985).

Congruence is the degree of fit between personality and environment. The term environment is broadly defined to include physical, social, cultural, and organizational elements. Some theorists have placed primary significance on the social environment, others have stressed the physical environment, and still others have targeted the social and

organizational factors of the environment. Congruence as the fit between an individual's personality style and job selection has been shown to be positively related to job satisfaction (Carlopio & Gardner, 1992). Spokane (1985) found in an extensive review of the literature that higher congruence was substantially related to greater job satisfaction. Job satisfaction involves a complexity of factors unique to the employee, employer, job environment, and the interaction over time.

Purpose

The purpose of this research is to study person-environment fit of the individual in the home office environment. There is little research on the relationship between personality type, home office environment and job satisfaction.

Objectives

The specific objectives of the study are to:

- Determine the relationship between personality type and type of home office environment.
- Determine the relationship between personality type and job satisfaction in the home office environment.
- Determine the relationship between personality type, type of home office environment, and job satisfaction.

The hypotheses for the study include:

- Specific personality types are congruent with types of home office environments.
- Higher job satisfaction exists for those personality types which are congruent with their home office environment.

- Higher job satisfaction exists for those personality types which are congruent with their home office environment.
- Greater congruence of person-environment fit exists for individuals with greater job satisfaction.
- Stronger relationships exist between specific personality types, home office environment and higher job satisfaction.

Definitions

The following definitions clarify the terms used in this study:

Personality type - refers to all conscious mental activity which is classified into four mental processes or functions - two perception processes (sensing and intuition) and two judgment processes (thinking and feeling). Information comes to an individual through either their senses or their intuition. For this information to remain in consciousness, perceptions must be used. They are used - sorted, weighed, analyzed, evaluated - by the judgment processes, thinking and feeling.

Extraversion (E) - is the personality classification which identifies individuals who prefer to focus their attention on the outer world of people and things, rather than the inner world of ideas and concepts.

Introversion (I) - is the personality classification which identifies individuals who prefer to focus their attention on the inner world of ideas and concepts, rather than on the outer world of people and things.

Intuition (N) - is the personality classification which identifies individuals who prefer data gathering methods involving a holistic integration of ideas, hunches and impressions.

Thinking (T) - is the personality classification which identifies individuals who prefer to rationally make decisions through a process involving logical analysis of causes and effects.

Feeling (F) - is the personality classification which identifies individuals who prefer to make decisions by weighing the relative importance or value of competing alternatives.

Judging (J) - is the personality classification which identifies individuals who prefer moving quickly towards decisions and enjoys organizing, planning and structuring.

Perceiving (P) - is the personality classification which identifies individuals who prefer to be curious and open to changes, and keeping options open before reaching conclusions or decisions.

Job satisfaction - is the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values. The relationship between skills/behavior of a career choice and satisfaction.

Home office environment/occupational environment - is a room or area within a residence devoted to work done at home as part of one's regularly scheduled employment.

Assumptions

Included in this study are the following assumptions:

1. Respondents answered the self-administered questionnaires truthfully and accurately.

2. The instruments used accurately measured personality type, job satisfaction, and home office environments.
3. Respondents selected from the targeted list accurately represent home based business owners.
4. The national sample selected accurately represents home-based businesses.

Limitations

1. Respondents did not represent a cross section of the home based business population, due to their selection from a targeted list described as individuals operating a business from the owner's residence.
2. The instrument does not assess all the factors that may influence job satisfaction.
3. The instrument does not assess all the factors associated with home office environments.

CHAPTER II

REVIEW OF LITERATURE

This chapter will be looking at the concept of person-environment fit or congruence from the early stages of trait oriented approaches to a more dynamic model of interaction between the person and the environment. Also, the MBTI will be discussed from its conception to current usage in the vocational counseling arena. The physical work environment and related factors and their impact on job satisfaction also will be discussed. The progression of home-based business and related issues to congruence and satisfaction will be reviewed at the end of the chapter.

Congruence

The core of the person-environment theory lies with the original work of Lewin (1935). Lewin theorized that a person's behavior is a function of the person and environment. The person-environment model has shifted to a more dynamic model. The theory now involves individuals shaping the environment and the environment influencing individuals.

Holland's (1973) theory of vocational choice assumes that vocational interests are one aspect of what is commonly called personality and the description of an individual's vocational interests also describes that individual's personality. Personality traits are identified by preferences for school subjects, recreational activities, hobbies, and work; vocational interests can be viewed as an expression of personality.

Holland's theory provides an explicit link between various personality characteristics and corresponding job titles because it organizes the data about people and jobs. Holland (1985, p. 2) describes what the different approaches have in common: (1) The choice of an occupation is an expression of personality and not a random event, although chance plays a role. (2) The members of an occupational group have similar personalities and similar histories of personal development. (3) Because people in an occupational group have similar personalities, they will respond to many problems and situations in similar ways. (4) Occupational achievement, stability and satisfaction depend on congruence between one's personality and the job environment.

Holland's work on personality focuses on the study of types. He contends that each individual to some extent resembles one of six personality types. The more one resembles any given type, the more likely one is to manifest some of the behaviors and traits associated with that type. Just as there are six types of personalities, there are six types of environments, which, like personalities, can be described according to certain attributes or characteristics. Environments are characterized by the people who occupy them.

There are four basic assumptions underlying Holland's (1973) theory:

1. "In our culture, most persons can be categorized as one of six types: realistic, investigative, artistic, social, enterprising, or conventional" (p. 2). The manner in which an individual chooses to relate to the environment indicates type.
2. "There are six kinds of environments: realistic, investigative, artistic, social, enterprising, or conventional" (p. 3). Generally, each environment is

populated by individuals of the corresponding personality type. As people congregate, they create an environment in which individuals of a certain type dominate, and the environment thus created can be identified in the same manner as the dominant individuals.

3. “People seek out environments that will allow them to exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles” (p. 4). “A person’s behavior is determined by the interaction between his personality and the characteristics of his environment” (p. 4). The identification of a person’s personality and present environment provides information about the quality of fit or the nature of the pairing.

Holland suggested “congruence” as a term for different types requiring different environments. Congruence occurs when individuals work in environments of a type identical or similar to their own. Individuals tend to flourish in environments that provide the kinds of rewards that are important to them.

Koffka (1935) made a distinction between the geographic (physical) and behavioral (psychological) environment and indicated that the psychological environment was a function of the interaction between the physical environment and the organism.

Also in 1935, Lewin contributed to the person-environment theory by suggesting that a person’s behavior is a function of the person and the environment. Lewin’s idea that the environment is as important as the individual, and that both must be analyzed to assess and understand behavior, continues to be a theoretical base for person-environment psychology today (Walsh, 1987).

The largest areas of emphasis within the counseling psychology perspective currently appear to involve person-environment fit and lifespan research. Person-environment fit models have a long history in the field of vocational psychology. Person-environment fit approaches are also widely used in industrial and organizational psychology in the areas of selection (Schmidt, Hunter, Outerbridge, & Goff, 1988) job satisfaction (Locke, 1984) organizational entry and socialization (Premack & Wanous, 1985) and job stress (Caplan, 1987).

More recent research has examined person-organization fit from four general perspectives:

1. Fit has been thought to be an extension of the traditional selection process that assessed the degree to which individual knowledge, skills and abilities matched job requirements (Caldwell & O'Reilly, 1990).
2. Fit has been defined as the degree of congruence between individual needs and organizational reinforcement systems and structures (Carlopio & Gardner, 1992).
3. Fit has been defined as the match between individual value orientations and organizational culture and values (Donald, 1994).
4. Fit has been described in terms of individual personality and perceived organizational image or personality (Bowden, Ledford & Nathan, 1991).

Edwards (1991) has drawn attention to an important methodological issue in many studies testing person-environment fit models. Most studies derive a composite index of fit (between the person's profile or type and the environmental profile or type), which is related to an outcome measure such as satisfaction, stability, or mental health. The use of

a composite fit index fails to control for the independent contribution of the person or the environment and results in spuriously high correlation between fit and the outcome measure. Further research is needed to look at certain types being more stable and satisfied than others. Certain environmental types produce higher levels of stability and satisfaction which may be due to role clarity (Schwartz, 1992).

Studies using a composite congruence index have not examined and controlled for the possibility that certain interest types are more stable and satisfied than others, nor for the possibility that certain environmental types produced higher levels of satisfaction or stability. When a composite congruence index is used it is not possible to know whether satisfaction and stability result from person characteristics, situation characteristics or their interaction. To counter this effect, a hierarchical moderated regression can be incorporated into the analyses. The independent person and environment components are entered first. The next step requires looking at the incremental contribution of fit, i.e., the interaction between perceptions and preferences (Edwards, 1991).

In a study by Hesketh and Gardner (1993) a reformulated view of person-environment fit was examined. The purpose was to determine whether fit explains significant incremental variance in satisfaction after controlling for the independent contribution of work preferences and job perceptions. Fit improved the prediction of satisfaction even after controlling for the direct relations of preferences and perceptions, providing some support for Holland's theory.

A major contribution of this study was to draw attention to the attenuated role of fit when controlling for the possibility that some types of work are more satisfying in their

own right, and that some types of people are more satisfied. Traditional approaches to testing person-environment fit hypotheses would not have provided this information (Hesketh & Gardner, 1993). The notion of individuals actively shaping their environments fits with the revised view of person-environment interaction counseling discussed by Rounds and Tracey (1990) and Chartrand (1991). Environmental psychology literature differs from the psychology field in that the perceptions of the individual and space are the focus. The effects of the built environment on people is at the core of the environmental psychology field.

The trait-and-factor model, as currently argued, has evolved into what is more accurately called a person x environment (P x E) fit approach. The origins of the trait-and-factor model can be traced to Parsons' (1909) proposition that vocational choice involves the individual, the work environment, and an understanding of the relationship between the two. For several decades, the trait-and-factor approach enjoyed considerable success. During the 1950s, it began to lose favor with career counselors and researchers as the developmental and social learning approaches to career counseling matured. The current status of this approach is debatable. Its contribution to vocational psychology continues to be acknowledged, but its value as a viable counseling approach is sometimes dismissed (Chartrand, 1991).

A general conceptual shift took place from the trait-oriented to a P x E perspective. This shift coincided with the person-situation controversy that unfolded in the personality literature. The controversy centered around the dynamic interaction of the person and environment. Questions were raised as to what kinds of personal and

environmental factors were useful in predicting vocational choice and how best to characterize the process of the person-environment interaction. Also, a change took place as the static P x E matching perspective gave way to a more dynamic interpretation of persons selecting and shaping environments. The P x E fit approach moves beyond the assumption of congruence, to include the notion of dynamic reciprocity. In other words, the P x E fit is a reciprocal process with individuals shaping the environment and the environment influencing individuals. Simply matching the person to the environment is no longer considered suitable. More importantly, the interaction between the person and their environment has become the focus (Chartrand, 1991).

Bretz and Judge (1994) used the Theory of Work Adjustment (TWA) to determine if person-occupation fit predicts tenure and satisfaction. As predicted by the TWA, person-organization fit significantly explained additional variance in tenure and in job satisfaction beyond the effects accounted for by the other variables, although the effect was substantially more powerful for satisfaction. The pattern of variation explained by perceptions, preferences and the interactions suggest that person-organization fit has an important effect on job satisfaction and is consistent with Hesketh and Gardner (1993) findings that job perceptions explained the majority of the variance accounted for by fit.

The results indicate that individuals should be very concerned about the degree to which they fit in their organizations. Since fit appears to lead to higher levels of both satisfaction and extrinsic success, the consequences of not fitting may be quite serious. These consequences include job involvement, turnover, organizational commitment and the potential for limiting effects of career development (Bretz & Judge, 1994).

History of Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator (MBTI) has become the most widely used personality instrument for non-psychiatric populations (Pittenger, 1993). The MBTI was based on Carl Jung's typology (Jung, 1971). Jung's personality model evolved from years of research and observations. The model describes four basic mental processes and four attitudes in which the four mental processes operate. These processes and attitudes combine to produce the sixteen preference types described by the MBTI.

According to Jung's personality theory, everyone uses four basic mental processes, which Jung referred to as sensing (S), intuition (N), thinking (T), and feeling (F). Type theory assumes that any conscious mental activity can be classified under one of the four processes. When using sensing perception (S), persons are interested in what is real, immediate and observable through the senses. For those individuals using intuition perception (N), these are people interested in future possibilities, implicit meanings and symbolic or theoretical patterns suggested by insight. If using thinking judgment (T), persons rationally make decisions through a process of logical analysis of cause and effect. When using feeling judgment (F), individuals rationally decide by weighing the relative importance of values of competing alternatives (McCaulley, 1977).

In Jung's (1933) work, the term attitude was reserved for extraversion and introversion. Myers added two other preferences for orientation to the outer world: judgment and perception. Extraversion and introversion relate to the balance of an individual's orientation toward the external world of objects and people or toward the internal world of concepts and ideas. Extraversion describes the attitude when a person is

energized by the objects and people found in their immediate environment. Stimulation and guidance come from an awareness and reliance on the environment. People with an extraversion preference are generally action-oriented, sometimes impulsive and have an ease of communication (McCaulley, 1987).

Introversion describes an attitude where energy is drawn from the environment and consolidated in one's inner world of ideas and concepts. People with an introversion preference are interested in and also rely on more enduring concepts and ideas rather than transitory external events. The enjoyment of solitude and privacy is greatly valued by those of an introversion preference.

Judgment (J) can be seen as an attitude towards the outer world when an individual is concerned with making decisions, seeking closure, planning and organizing activities and operations. These preference types are often characterized as organized, purposeful, and decisive. Perception (P) can be viewed as an attitude toward the outer world when a person is concerned with seeing all sides of an issue, keeping their options open, being spontaneous, adaptable and curious (McCaulley, 1987).

Once Jung's work was translated into English, it was discovered by Myers and her mother Briggs. The two women intensely studied and tested family and friends for over 20 years, becoming increasingly convinced of the value in creating an "indicator" for people to match their type to an interest in a career and prevent job dissatisfaction. After World War II, Myers developed and refined a series of forms for the MBTI. During the early 1950s, she collected a sample of 5,355 medical students which she later followed up on to determine type differences in aptitude, achievement and medical specialty selection

(McCaulley, 1977). In 1962, the MBTI was published by the Educational Testing Service (ETS) as a research instrument only. ETS added the MBTI to a larger study of college students, making it possible to compare the MBTI with better-known instruments.

MacKinnon began to include the MBTI in the creativity research at the University of California at Berkeley, where it continues to be used to this day (MacKinnon, 1962).

In 1975, the MBTI was considered ready for applied use and a non-profit center for MBTI research and training was established, the Center for Application of Psychological Type. In 1979, the Association for Psychological Type, an organization for those interested in type was formed. Carskadon (1979) established a refereed journal for researchers called *The Journal of Psychological Type* at Mississippi State University. In 1980, the year of Myers death, CPP published her book, Gifts Differing, which distills 60 years of insights into psychological types for professionals and public alike. Five years later a revision of Myers (1975) Manual was published (Myers & McCaulley, 1985).

The eight indicators tend to be more successful and effective when a contingency measure combines all four scales, resulting in the sixteen temperament types, rather than referring to just one indicator pair such as extrovert or introvert. Test-retest reliability values were .82, .83, .84, and .77 for EI, SN, TF, and JP respectively (Lorr, 1991).

Over the last 50 years, a wide variety of career and vocational instruments have been developed to measure personality attributes, provide career exploration, and predict vocational choice (Miller, 1992). The MBTI is being used by a number of professionals for career counseling. The MBTI produces results that examine personality characteristics for a management style based on the selected preferences of the individual. Previous research

suggested individual profiles may correspond to certain career fields (Jagger, Neukrug, & McAuliffe, 1992).

Based on the research of McCaulley (1987), the humanistic, enthusiastic, and insightful Intuitive - Feeling (NF) types, are drawn to the humanities, arts, counseling, psychology, psychiatry and journalism. Studies indicate that artistic interests and the intuition preference are related (Holland, 1985; Kramer, 1977). The literature supports a relationship between artistic interests and an intuitive personality orientation for women and men. An experiment by Martin and Bartol (1986), compared the MBTI to Holland's (1978) Vocational Preference Inventory (VPI) and found that a higher score on the artistic sub-scale of the VPI was likely to be correlated with a higher intuitive score on the MBTI sensing-intuition scale (Myers & McCaulley, 1985).

Studies have been conducted with the Myers-Briggs Type Indicator (MBTI) a personality assessment instrument and identifying personality factors related to job satisfaction. In arguments similar to those of Holland (1985), Myers and McCaulley reason that serious mismatches between type and occupation may lead to lower motivation, whereas work is likely to be more satisfying and intrinsically motivating when it involves processes more closely related to one's personality orientations (Miller, 1992).

Although the MBTI does not measure interest, it has been effective in predicting or describing characteristics of different occupations. The MBTI produces results which examine personality dynamics based on the selected preferences of an individual. The profile corresponds to certain career fields to be explored by the individual. The extent to

which one will enjoy various careers and settings is determined to some degree by the type of person one is (Miller, 1992).

The MBTI was chosen for this project due to its extensive use in business settings and research. The instrument is user-friendly and therefore can be mailed to an individual without elaborate instructions and is not time consuming to complete. Also, the results of the instrument are readily accessible to the researcher.

Job Satisfaction

Various definitions of job satisfaction have been advanced. Locke (1976) suggests that job satisfaction is a pleasurable or positive emotional state resulting from an appraisal of one's job or job experience. Job satisfaction and dissatisfaction are a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing. Milburne and Francis (1981) further define satisfaction as a source of information for managers: job satisfaction is an indication of how individuals feel about their job when their expectations are compared to what is actually received from different facets of the work situation.

There is still some confusion over whether the determinants of job satisfaction lie solely in the job itself (the intrinsic view²), whether they reside wholly in the worker's mind ("the subjective view³"), or whether satisfaction is the consequence of an interaction between the worker and the work environment. The causes of job satisfaction are not in the job nor solely in the individual but lie in the relationship between them. The prediction of job satisfaction requires an interactive approach, not because 20 or 30 correlational

studies have “proven” it, but because of the nature of individuals and the evaluation process (Locke, 1969).

In his classic review of the literature, Vroom (1964) concluded that employee job satisfaction “is directly related to the extent to which their jobs provide them with such rewarding outcomes as pay, variety in stimulation, consideration from their supervisor, a high probability of promotion, close interaction with co-workers, an opportunity to influence decisions which have future effects on them, and control over their pace of work” (p. 74).

Research which has been conducted on the determinants of job satisfaction has dealt primarily with two relationships: (1) the relationship between satisfaction and job characteristics, and (2) the relationship between satisfaction and characteristics of the person. As Lawler (1973) states, “Not surprisingly, the research shows that satisfaction is a function of both the person and the environment.” (Mount & Muchinsky, 1978)

For each individual there are environments (interpersonal and noninterpersonal) which more or less match the characteristics of their personality. A “match” or “best-fit” of individual to environment is viewed as expressing itself in high performance, satisfaction, and little stress in the system whereas a “lack of fit” is viewed as resulting in decreased performance, dissatisfaction, and stress in the system (Pervin, 1968, p. 56).

Relating more specifically to satisfaction, Blocher & Schutz (1961) found that similarity between self and liked occupation was greater than that between self and disliked occupation. Brophy (1959) found that the similarity between self-concept and perceived occupational role requirements was correlated with job satisfaction. The

conclusion in the latter study was that occupational satisfaction is a function of the interaction between a personal concept and a related environmentally focused concept. In sum, the studies reviewed suggest that occupational satisfaction may be studied as resulting from the interaction between personality and environment variables rather than the result of personality variables or environmental variables alone (Pervin, 1968).

Congruence rarely involves a relation between a single motive or personality characteristic and a single dimension of the environment. Rather, more typically person-environment interaction, and thereby questions of congruence, involve relations between multiple personal goals and multiple environmental demands or opportunities for goal attainment. Processes of interaction and the question of congruence need to be considered in terms of systems--person systems, environment systems, and relations between person and environment systems (Pervin, 1987).

Vocational counseling commonly assumes that certain personality types are best suited to certain occupations and that individuals and careers can be matched to facilitate a person-environment fit. Chartrand (1991) suggests that the important psychological characteristics of an environment are the multiple opportunities or constraints it offers for promoting or thwarting individuals' goal attainments.

In a study by Gustafson & Mumford (1995) correlation between subgroups and the outcome criteria were higher within certain environments than across the organization as a whole. These results indicated a combination or additive interaction of personal style and psychological environments were sometimes more predictive of job outcomes than was personal style alone. Results did show personality patterns predicted differential job

outcomes, regardless of the situation. However, the results also illustrated that the influence of personality type on job outcomes was enhanced. Influence of personality type effects were assessed within particular psychological environments, categorized across occupations on the basis of opportunities and constraints these environments pose to job incumbents. Indications show a combination or additive interaction of personal style and psychological environments are sometimes more predictive of job outcomes than personal style alone. These results suggest the possibility to be verified with further research that some environments may facilitate job adaptation, some may consistently hinder adaptation, and that some might prove adaptive for those individuals who exhibit specific personality configurations (Gustafson & Mumford, 1995).

Brady, Kinnaird & Friederick (1980) studied employee perceived work environment and job satisfaction. The researchers found that employees who perceived involvement, cohesion, support, autonomy and innovation as positive aspects of the environment also had greater job satisfaction.

An optimal match between person and environment can contribute to morale and reduce the dysfunctional consequences of some work settings. Most generally, the personal growth or goal orientation dimensions channel the direction of change, while the relationship and system maintenance dimensions influence the commitment to an environment as well as the extent of change and the personal costs involved. More specifically, environmental systems tend to maintain or accentuate personal characteristics congruent with their dominant aspects.

Physical Environment

Three attempts have been made to classify the physical environment within organizations. Steele (1973) examined the internal physical environment in terms of what he felt were its six main functions: 1) shelter and security, 2) social contact, 3) symbolic identification, 4) task instrumentality, 5) pleasure, and 6) growth. Pfeffer (1981) classified the internal environment in terms of six main dimensions and measures: 1) size, 2) quality, 3) flexibility, 4) arrangement, 5) privacy, and 6) location. Becker (1981) offered no overall framework but, instead, suggested some “alternative ways of thinking about the design, management, and evaluation of physical settings (Davis, 1984).

Davis (1984) proposed a potentially useful framework for both research and practice involving the physical environment in organizations as being composed of three main elements: 1) physical structure, 2) physical stimuli, and 3) symbolic artifacts.

Physical structure can be defined as the architectural design and physical placement of furnishings in a building that influences or regulates social interaction. The research carried out so far on the physical structure of settings has been devoted to three main areas: 1) building design and physical location, 2) furniture comfort, placement, and seating arrangements, and 3) open versus closed office designs. There is some evidence that building design and physical location within a building influence interaction and relationships (Carlopio & Gardner, 1992; O’Neill, 1994; Canter, 1976; Proshansky, Ittelson & Rivlin, 1976).

Physical stimuli are those aspects of the physical setting that intrude into the manager’s or organization member’s awareness and influence their behavior. A host of physical stimuli for the organization member’s attention, such as incoming mail, telephone

ringing, notes on the desk from others to name a few (Sundstrom, Town, Rice, Osborn & Brill, 1994).

Symbolic artifacts are aspects of the physical setting that individually or collectively guide the interpretation of the social setting. For instance, the design of the office, the type and style of furnishings, the color of the walls, the presence or absence of carpeting, framed certificates or photographs all tend to communicate information about the organization and the people who work there (Davis, 1984).

Research is needed to provide increased understanding and awareness of how the physical setting affects performance and to discover how office administrators and individual managers can manipulate or rearrange the physical environment to support more efficient behavior at work (Sundstrom, et. al., 1994).

Much research has been devoted to understanding the role of the physical environment in people's experience of work and productivity. However, the focus of this research has, on the whole, been on factory environments and manual labor, with little attention within the occupational and organizational psychology being paid to office environment beyond basic ergonomic considerations. There has been little systematic research into psychological aspects of offices carried out by members of the design professions. Consequently, designs have often been based on expectations or personal prejudice rather than knowledge (Donald, 1994).

Within environmental psychology, there has been a growing interest in the implications of office design for work, organizational functioning and employees well-being. Research into various isolated constituents of office environments has been carried

out since the 1960s. During the last decade there has also been a major thrust towards consideration of the environment as a whole (Donald, 1985; Hedge, 1986; Oldham & Brass, 1979) with research tending to be field based and usually conducted in open plan offices. This research has tended simply to look at a greater number of variables independently, rather than attempting to develop holistic models. Consequently there is still a need for an adequate model or framework for structuring the research and for understanding people's experience of their office environment as an integrated whole (Donald, 1994).

Organizational researchers have demonstrated that objective characteristics of the physical work environment have an impact on outcome variables such as satisfaction, motivation, and performance. Research in this area has suggested that the relationships among these predictors and outcomes are frequently mediated or moderated by individuals' perceptions and other factors (Carlopio & Gardner, 1992).

Physical Environmental Factors

Several studies in the organizational and environmental psychology literature have reported associations between characteristics of the physical office environment like temperature and ventilation, lighting, work station design, and employee behaviors and attitudes, most notably comfort, satisfaction and turnover (Duvall-Early & Benedict, 1992; Carlopio & Gardner, 1992; O'Neill, 1994).

Klitzman & Stellman (1989) studied the extent to which the physical environment affected the psychological well-being of office workers. Their analysis revealed that physical characteristics of the office environment could have an impact on psychological

well-being. Physical environment factors appeared to exert a stronger influence on office satisfaction than on symptoms of psychological distress or on global job satisfaction, while psychological working conditions were more strongly related to job satisfaction.

A survey of U. S. office workers (Harris, 1980) identified “the ability to concentrate without noise and other distractions” as the most important of 16 features of the office environment. To the extent that office noise contributes to dissatisfaction with the physical environment, it may also contribute to dissatisfaction with the job. Locke (1983) identified working conditions as one of the few consistent elements of job satisfaction. Similarly, Sundstrom (1986) identified satisfaction with the physical environment as a component of job satisfaction (Sundstrom, et. al., 1994).

Sundstrom, et al., (1994) studied the disturbance of employees by office noise in relation to environmental satisfaction, job satisfaction and job performance ratings. Their findings suggest that disturbance by office noise can reflect a variety of environmental conditions and may influence job satisfaction through job characteristics as well as environmental satisfaction.

Home-Based Business

Estimates suggest that by the turn of this century 40 million workers representing 10 to 20% of the labor force, will be home-based. Changes in the nature of office work, the composition of the labor force, and the structure of economic markets, as well as the elimination of restrictions on commercial home-based employment, have led to an increased interest in working at home. As increasing numbers of workers acclimate to this

work setting, a variety of aspects and impacts of home-based work on the workers and their households should be considered (Gritzmacher, 1993).

Research on home-based work in recent years focused on estimating its prevalence using a variety of definitions for home-based work and on describing samples specific to one industry and/or population. Despite the attention given to home-based work, there is little representative data available because definitions of the sample groups have differed from study to study (Masuo, Walker, & Furry, (1992).

Several factors have contributed to the increasing interest in working at home. First is the changing nature of office work. Currently, information processing is central to the operation of most offices. As the cost of computers and telecommunications equipment has dropped, it has become more feasible for white-collar workers to work out of the home. The second factor is the changing composition of the labor force. An increasing number of women with young children and self-employed workers make up the current labor force. These two particular groups find home-based work to be an ideal working arrangement. The renewed interest in home-based work also came about when the U. S. Department of Labor lifted its long standing ban on practically all types of home-based work and replaced it with a certification system. By 1989, prohibitions remained only for the women's apparel industry and for hazardous jobs in the jewelry industry (Hukill, 1990).

Any study of home-based work should begin with the recognition of the differences among work styles, the nature of the work and the work environment. Variables endogenous to the nature of at-home work and the dimensions of the

home/work environment may have a profound effect on a family's daily routine and general pattern of living. Nature-of-work factors include the form of employment, location, and asortpiveness of the work (Owen, Carsky, & Dolan, 1992).

Employment is a dichotomous variable that indicates whether an individual is an employee of an independent organization or is self-employed. An employed person generates income by completing work received from and overseen by another. In contrast, self-employed persons are required to develop a market or client group for the goods or services produced.

Although location of the work is limited by definition to being home-based, there are differences in location within that designation. The major distinction is whether all the work for the business or employment takes place within the home or whether a major portion of it takes place in another space (Owen, Carsky, & Dolan, 1992).

In addition to the nature-of-work variables, environmental variables are significant to understanding the interface of environment with the home-based worker. Work environment is comprised of those components of work associated with quantitative aspects of resource allocations and of projected work outcomes. These components are expected to influence the nature of work chosen, resource allocation, and satisfaction from work. Included in the work environment are time, space, and psychic rewards (Owen, Carsky, & Dolan, 1992).

Work time has many facets. A home-based worker is expected to have more control of work time, including the number of hours worked, than does the conventional on-site worker. A home-based worker may arrange the time of work to be compatible

with other family members. With some occupations, however, scheduling flexibility may be restricted by client demands or seasonal adjustments. The degree to which home-based workers can control the various aspects of time may influence the satisfaction derived from work (Owen, Carsky, & Dolan, 1992).

Space may be thought of as a refinement of the location variable meant to ascertain where, in or near the family residence, the work takes place. Work may be take place in a separate building, a designated work space, or be integrated into space the family uses for other activities.

Whether paid labor is done at home or at a work site, there are psychic rewards for the worker. Feelings of being a productive member of society usually accompany appropriately remunerated work. Another psychic consequence is the satisfaction or dissatisfaction that comes from the performance of income-generating work. The concept of reward can be measured by satisfaction scales and advantages of working from home (Owen, Carsky, & Dolan, 1992).

In a study of satisfaction with home-based employment, Gritzmacher (1993) looked at quality of life, family income and control over everyday life satisfaction as variables impacting individuals employed at home-based work. The results of the study showed that the state in which one lived and the occupational category of the home-based employment were related to satisfaction with quality of life. Those involved in clerical and administrative support occupational categories had higher levels of life quality satisfaction than those in mechanical and transportation occupations.

Most households with home-based employment were satisfied with the control they had over everyday life. Home-based households having the highest life control satisfaction were in marketing and sales. Wage earners' control over the amount of work completed in a day was associated with life control satisfaction. Other variables associated with life control satisfaction were liking the work as well as feelings about the work and income received. Also, number of years in the community, age of the household manager, and smaller number of household members were related to life control satisfaction (Gritzmacher, 1993).

Horvath (1986) studied work at home styles for home based business owners. In a telephone survey, respondents were asked questions about work hours, job satisfaction and computer usage in the home. Nearly 60 percent of the respondents cited working at home to be the "ideal work arrangement." Although home-based work is often viewed as an ideal work arrangement and a trend of the future, few studies have examined such employment (Furry & Lino, 1992).

One such study was conducted by Furry & Lino (1992). When asked the main advantage of home-based work, working in one's own way, at own pace, and being one's own boss were the most cited responses. Other advantages cited included lower overhead, tax benefits, and job security. The main disadvantage of home based work most often given was work too much. Other disadvantages given included feeling of isolation, unsteady income, and wear and tear on home.

Many of these same factors may influence job performance, environmental satisfaction, and job satisfaction of operating a home-based business. The growing trend

towards individuals operating home-based businesses creates the need to understand the interaction of environmental factors with personality and the impact on job satisfaction.

CHAPTER III

METHOD AND PROCEDURE

The purpose of this study is to assess the relationship between personality type, job satisfaction and home office environments. The objectives of this research are to assess personality type, home office environments, and job satisfaction within the home office environment. In addition, the researchers will assess other factors associated with job satisfaction in the home office environment. Recommendations will be made for individuals operating home-based businesses based on the findings.

Research Design

This research is a combination of non-experimental and descriptive research. “Non-experimental research is a systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables (Kerlinger 1986, p. 348). According to Kerlinger, random assignment cannot be used in non-experimental design.

Descriptive research is “concerned with hypothesis formulation and testing, the analysis of the relationships between non-manipulated variables and the development of

generalizations” (Best 1981, p. 24). Best also states, “descriptive research describes what is. It involves the description, recording, analysis, and the interpretation of conditions that exist. It involves some type of comparison or contrast and attempts to discover relationships between existing non-manipulated variables” (Best 1981, p. 25).

The second type of non-experimental research to be used in this study is assessment. “Assessment is a fact finding activity, describing conditions that exist at a particular time (Babbie & Wagenaar, 1989). The hypothesis proposed states that individuals with particular personality types in congruence with particular home office environments will experience higher levels of job satisfaction. Assessment research design is used for assessing personality types, level of job satisfaction, and type of home office environments for individuals involved in home-based businesses and other small scale office environments.

Selection of Subjects

“The entire group of people in a category is called a population. The smaller group selected for testing is called a sample. The sample is then used to make generalizations about the population from which it is drawn” (Touliatos & Compton, 1988, p. 55).

For the purposes of this study, the population is defined as: all persons operating a home-based business in 1996. The sample was selected from a targeted population of 50,000 individuals known to operate a business from their residence. These individuals are members of the Dun and Bradstreet home-based business database available from Survey

Sampling, Inc. Self-reported questionnaires are used to survey individuals as to their occupation and other demographic information. Survey Sampling uses this method to determine whether an individual has a home-based business. The sample consisted of 500 individual listings randomly selected by computer in the continental United States.

Of the original sample, 162 (32%) responded and returned the instruments. Of these, 131 responses were used in the analyses. The telephone follow-up of 10% of the non-respondents produced three usable responses, with the majority of respondents at work for another job when the telephone calls were placed. One of the individuals on the list was deceased.

Since Survey Sampling, Inc. uses self-reported questionnaires to collect information for their databases, individuals who are perhaps thinking about opening a home-based business may respond before the business is a reality. As a result of the telephone follow-up and non-respondents, apparently over 7% of the sample was non-usable. This may be attributed to either the individual had never operated a home-based business or had gone out of business since the most current update of this database.

This percentage of non-usable subjects can also be attributed to the failure rate associated with small businesses in the first five years. Traditionally, the hypothesis has been that four out of five businesses fail in the first five years. Kirchoff (1994) found in a study of small businesses after taking into account ownership changes, that after eight years, 54% of the start-ups survived in some form: 28% had the original owners, and another 26% survived with new owners.

Research Instruments

Several instruments were used in this study to assess the areas of personality type, job satisfaction, and home office environment.

The Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator (MBTI) was designed by Myers and Briggs (1962) based on Jung's (1971) model to help people in non-clinical populations discover their own preferences for perception and judgment. The MBTI form G self scorable version was used to assess personality type consists of 94 questions. The MBTI measures one's preferences on four scales; (a) Extravert "E" or Introvert "I", (b) Sensing "S" or Intuition "N", (c) Thinking "T" or Feeling "F", and (d) Judging "J" or Perceiving "P". MBTI scoring generates four basic scores for each of the four preferences stemming from any combination in the four scales.

The Work Environment Scale

The Work Environment Scale (WES) was developed by Rudolph Moos (1981) to assess the perceived work climate. Three major dimensions are measured: Relationship dimensions, Personal Growth dimensions, and System Change dimensions. The Involvement, Peer Cohesion, and Supervisor Support subscales are defined as Relationship Dimensions. The Autonomy, Task Orientation, and Work Pressure subscales are Personal Growth Dimensions. The Clarity, Control, Innovation, and Physical Comfort subscales are the System Change and Maintenance Dimensions. The WES contains 90 items answered true or false. Scores on each subscale range from 0 to nine. The validity and reliability evidence for the WES has been substantiated by Moos (1981). Test-retest coefficients for one month ranged from .69 to .83 and for one year ranged from .51 to .63

(Moos, 1981). The WES has been tested with a wide variety of work groups including both blue collar and professional to insure that the subscales would be applicable to a variety of work environments.

Work Environment Type Instrument

The Workplace Instrument was developed by Huszczo (1989) from research conducted by Williams, Armstrong & Malcolm (1985). The latter researchers had developed the PeopleProcessPlace model and created instruments to type jobs and workspaces using the MBTI conceptual framework. Herman Miller, Inc. funded Huszczo to investigate the instruments and the PeopleProcessPlace model.

Davis (1984) created a three factor taxonomy Physical Structure, Physical Stimuli, and Symbolic Artifacts from an extensive review of the literature on the impact of physical elements of workspaces on job satisfaction and/or productivity. This taxonomy was combined with Becker's (1981) hypothesis that workplace items can have one of three effects: detriment, catalyst, or support. Huszczo cross fertilized this combined model with the MBTI to develop the 133 item Workplace Instrument.

This particular instrument was revised for the present research to address issues pertinent to those individuals who work in home office environments and own a home based business. Previously, the low internal reliability coefficients for these scales may have been due to the dichotomous response format of the items. The test-retest reliability estimates for the space typing scales are acceptable (Huszczo, 1989). Some evidence for validity exists in that all the scales except the T (thinking) workspace scale correlate significantly with their appropriate single item criterion. The E (extroversion), N

(intuition), and J (judging) scales correlate better with their appropriate criterion items than any other.

Data Collection

The instruments relevant to the areas of environment and job satisfaction were pilot tested with a group of home-based business owners in the immediate area. The instruments were revised to address the unique situation of individuals generally working alone in an isolated setting. Many of the original questions pertained to interaction with others in a traditional organizational environment. Revisions were made to the instruments to correct for any misconceptions on the part of the subjects.

The original intention of the researchers was to test the reliability and validity of the revised instruments for job satisfaction and the environment. This was not possible due to the relatively low response rate of the instruments. There were not enough responses in order to run these tests. Future studies in this area may present the opportunity to do reliability and validity.

Sets of instruments were mailed at the end of March, 1996 to home-based business owners generated from a mailing list of the Dun and Bradstreet business sample available from Survey Sampling, Inc. The subjects were asked to complete the instruments and complete and return in the enclosed envelope via mail. Two weeks after the initial mailing, in mid-April, reminder postcards were mailed to those individuals who had not responded. A letter explaining the need for the return of the completed instruments was mailed four weeks after the original mailing to those who had not responded. A telephone follow-up of 10% of the non-respondents was conducted to verify the sample was

representative of the population of home-based business owners. This process followed Dillman's (1978) method of data collection.

A demographic section was included to collect additional demographic information not covered by the other two instruments that were pertinent for this study. Results of the instruments were then analyzed by chi-square analysis and analysis of variance.

Personality Type and Job Satisfaction in the Home Office Environment

Randall Ray Russ
Oklahoma State University

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Abstract

This study was conducted to determine the relationship between personality type and job satisfaction in the home office environment. Personality type was measured using the Myers-Briggs Type Indicator and job satisfaction was measured using the Work Satisfaction Scale (Moos, 1981). Subjects were 500 individuals known to operate a business from the owners' residence. Results indicate that more sensing-judging (SJ) types were home-based business owners in occupations involving skilled services. These SJ types had medium to higher job satisfaction than the other personality types. The presence of symbolic artifacts in the home office environment impacted the level of satisfaction for these business owners. These results indicate that personality type, choice of occupation and type of home office environment impacts job satisfaction for home-based business owners.

Personality Type and Job Satisfaction in the Home Office Environment

Introduction

Individuals seek occupational environments which are congruent with their personalities and job satisfaction is increased when there is a congruence between personality and occupational environment (Holland, 1973). The occupational environment refers to both physical and psychological elements which impact the perception of the individual. Physical barriers, noise, and proximity of other individuals are examples of these environmental elements. The concept of fit or congruence between individual attributes and the characteristics of a situation have been an important explanation for differences in individual performance and satisfaction at work.

Holland (1985) argued that satisfaction and performance are enhanced when individuals select an occupation that is compatible with their own traits and skills. Increased performance and productivity are the result an environment congruent with an individual. Job satisfaction may depend upon the individuals' establishment in a type of work, a work situation, and a way of life in which they can play the kind of role for which their growth and exploratory experiences have led them to consider congenial and appropriate.

Estimates suggest that by the turn of this century 40 million workers representing 10 to 20% of the labor force, will be home-based. Changes in the composition of office work, the labor force, as well as the elimination of restrictions on commercial home-based employment, have led to an increased interest in working at home. As increasing numbers

of workers gravitate to this work setting, a variety of factors and their impact on home-based workers should be studied (Gritzmacher, 1993).

Almost 19 million Americans, more than 15% of the entire U. S. work force work for themselves, with the majority of these running single-person businesses out of their homes. As increasing numbers of workers gravitate to this work setting, a variety of factors and their impact on home-based workers should be studied.

Over the last 50 years, a wide variety of career and vocational instruments have been developed to measure personality attributes, provide career exploration and predict vocational choice that fit with these personality attributes (Elam, 1994). The Myers-Briggs Type Indicator (MBTI) is being used by a number of professionals for career counseling (Bayne, 1990). The MBTI produces results which examines or identifies personality characteristics for a management style based on the selected preferences of the individual. Previous research suggests the profile may correspond to certain career fields to be explored by the individual (Elam, 1994; Bayne, 1990; Martin & Bartol, 1986; Pinkney, 1983). The type of person you are and how you prefer to interact with people, data, and ideas are components of a person's personality and psychological profile. Careers involve interacting with these same issues. The extent to which one will enjoy various careers and settings is determined to some degree by the type of person one is (Howard & Howard, 1995).

The purposes of this research are to 1) identify personality type of individuals engaged in home-based businesses, 2) determine the level of job satisfaction for home-based workers, and 3) determine the relationship of the personality types of the home-

based workers to job satisfaction and the home office environment. Because the analyses are exploratory, simple descriptive statistical techniques are used.

Conceptual Model

Career advice from the time of Parsons' (1909) has been to find the job niche best suited to one's characteristics. A fit was thought to ensure success with satisfaction and advancement. Currently, few believe the formula to be accurate due to the complex nature of vocational choice. However, the idea of congruence between people and their work environments remains at the core of environmental psychology (Chartrand, 1991).

Person-environment fit has been extensively studied in the vocational behavior literature and has been related to several occupational outcomes. Person-environment congruence is the foundation of Holland's theory of vocational choice which posits that the choice of vocation is an expression of personality and the success of career satisfaction is dependent upon the congruence between an individual's personality and work environment (Holland, 1985).

Congruence is the degree of fit between personality and environment. Congruence as the fit between an individual's personality style and job selection has been shown to be positively related to job satisfaction (Carlopio & Gardner, 1992). Spokane (1985) found in an extensive review of the literature that higher congruence was substantially related to greater job satisfaction.

Congruence

The core of the person-environment theory lies with the original work of Lewin (1935). Lewin theorized that a person's behavior is a function of the person and

environment. The person-environment model has shifted to a more dynamic model. The theory now involves individuals shaping the environment and the environment influencing individuals.

Holland's (1973) theory of vocational choice assumes that vocational interests are one aspect of what is commonly called personality and the description of an individual's vocational interests also describes that individual's personality. Personality traits are identified by preferences for school subjects, recreational activities, hobbies, and work; vocational interests can be viewed as an expression of personality.

Holland's work on personality focuses on the study of types. He contends that each individual to some extent resembles one of six personality types. The more one resembles any given type, the more likely one is to manifest some of the behaviors and traits associated with that type. Just as there are six types of personalities, there are six types of environments, which, like personalities, can be described according to certain attributes or characteristics. Environments are characterized by the people who occupy them.

Holland suggested "congruence" as a term for different types requiring different environments. Congruence occurs when individuals work in environments of a type identical or similar to their own. Individuals tend to flourish in environments that provide the kinds of rewards that are important to them.

In 1935, Lewin contributed to the person-environment theory by suggesting that a person's behavior is a function of the person and the environment. Lewin's idea that the environment is as important as the individual, and that both must be analyzed to assess and

understand behavior, continues to be a theoretical base for person-environment psychology today (Walsh, 1987).

In a study by Hesketh and Gardner (1993) a reformulated view of person-environment fit was examined. The purpose was to determine whether fit explains significant incremental variance in satisfaction after controlling for the independent contribution of work preferences and job perceptions. Fit improved the prediction of satisfaction even after controlling for the direct relations of preferences and perceptions, providing some support for Holland's theory.

A major contribution of this study was to draw attention to the attenuated role of fit when controlling for the possibility that some types of work are more satisfying in their own right, and that some types of people are more satisfied. Traditional approaches to testing person-environment fit hypotheses would not have provided this information (Hesketh & Gardner, 1993). The notion of individuals actively shaping their environments fits with the revised view of person-environment interaction counseling discussed by Rounds and Tracey (1990) and Chartrand (1991). Environmental psychology literature differs from the psychology field in that the perceptions of the individual and space are the focus. The effects of the built environment on people is at the core of the environmental psychology field.

The trait-and-factor model, as currently argued, has evolved into what is more accurately called a person x environment (P x E) fit approach. The origins of the trait-and-factor model can be traced to Parsons' (1909) proposition that vocational choice involves the individual, the work environment, and an understanding of the relationship

between the two. For several decades, the trait-and-factor approach enjoyed considerable success. During the 1950s, it began to lose favor with career counselors and researchers as the developmental and social learning approaches to career counseling matured. The current status of this approach is debatable. Its contribution to vocational psychology continues to be acknowledged, but its value as a viable counseling approach is sometimes dismissed (Chartrand, 1991).

A general conceptual shift took place from the trait-oriented to a P x E perspective. This shift coincided with the person-situation controversy that unfolded in the personality literature. The controversy centered around the dynamic interaction of the person and environment. Questions were raised as to what kinds of personal and environmental factors were useful in predicting vocational choice and how best to characterize the process of the person-environment interaction. Also, a change took place as the static P x E matching perspective gave way to a more dynamic interpretation of persons selecting and shaping environments. The P x E fit approach moves beyond the assumption of congruence, to include the notion of dynamic reciprocity. In other words, the P x E fit is a reciprocal process with individuals shaping the environment and the environment influencing individuals. Simply matching the person to the environment is no longer considered suitable. More importantly, the interaction between the person and their environment has become the focus (Chartrand, 1991).

Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator (MBTI) has become the most widely used personality instrument for non-psychiatric populations (Pittenger, 1993). The MBTI was

based on Carl Jung's typology (Jung, 1971). Jung's personality model evolved from years of research and observations. The model describes four basic mental processes and four attitudes in which the four mental processes operate. These processes and attitudes combine to produce the sixteen preference types described by the MBTI.

According to Jung's personality theory, everyone uses four basic mental processes, which Jung referred to as sensing (S), intuition (N), thinking (T), and feeling (F). Type theory assumes that any conscious mental activity can be classified under one of the four processes. When using sensing perception (S), persons are interested in what is real, immediate and observable through the senses. For those individuals using intuition perception (N), these are people interested in future possibilities, implicit meanings and symbolic or theoretical patterns suggested by insight. If using thinking judgment (T), persons rationally make decisions through a process of logical analysis of cause and effect. When using feeling judgment (F), individuals rationally decide by weighing the relative importance of values of competing alternatives (McCaulley, 1977).

In Jung's (1933) work, the term attitude was reserved for extraversion and introversion. Myers added two other preferences for orientation to the outer world: judgment and perception. Extraversion and introversion relate to the balance of an individual's orientation toward the external world of objects and people or toward the internal world of concepts and ideas. Extraversion describes the attitude when a person is energized by the objects and people found in their immediate environment. Stimulation and guidance come from an awareness and reliance on the environment. People with an

extraversion preference are generally action-oriented, sometimes impulsive and have an ease of communication (McCaulley, 1987).

Introversion describes an attitude where energy is drawn from the environment and consolidated in one's inner world of ideas and concepts. People with an introversion preference are interested in and also rely on more enduring concepts and ideas rather than transitory external events. The enjoyment of solitude and privacy is greatly valued by those of an introversion preference.

Judgment (J) can be seen as an attitude towards the outer world when an individual is concerned with making decisions, seeking closure, planning and organizing activities and operations. These preference types are often characterized as organized, purposeful, and decisive. Perception (P) can be viewed as an attitude toward the outer world when a person is concerned with seeing all sides of an issue, keeping their options open, being spontaneous, adaptable and curious (McCaulley, 1987).

The eight indicators tend to be more successful and effective when a contingency measure combines all four scales, resulting in the sixteen temperament types, rather than referring to just one indicator pair such as extrovert or introvert. Test-retest reliability values were .82, .83, .84, and .77 for EI, SN, TF, and JP respectively (Lorr, 1991).

Over the last 50 years, a wide variety of career and vocational instruments have been developed to measure personality attributes, provide career exploration, and predict vocational choice (Miller, 1992). The MBTI is being used by a number of professionals for career counseling. The MBTI produces results that examine personality characteristics for a management style based on the selected preferences of the individual. Previous research

suggested individual profiles may correspond to certain career fields (Jagger, Neukrug, & McAuliffe, 1992). An experiment by Martin and Bartol (1986), compared the MBTI to Holland's (1985) Vocational Preference Inventory (VPI) and found that a higher score on the artistic sub-scale of the VPI was likely to be correlated with a higher intuitive score on the MBTI sensing-intuition scale (Myers & McCaulley, 1985).

Job Satisfaction

Research which has been conducted on the determinants of job satisfaction has dealt primarily with two relationships: (1) the relationship between satisfaction and job characteristics, and (2) the relationship between satisfaction and characteristics of the person. As Lawler (1973) states, "Not surprisingly, the research shows that satisfaction is a function of both the person and the environment." (Mount & Muchinsky, 1978)

Relating more specifically to satisfaction, Blocher & Schutz (1961) found that similarity between self and liked occupation was greater than that between self and disliked occupation. Brophy (1959) found that the similarity between self-concept and perceived occupational role requirements was correlated with job satisfaction. The conclusion in the latter study was that occupational satisfaction is a function of the interaction between a personal concept and a related environmentally focused concept. In sum, the studies reviewed suggest that occupational satisfaction may be studied as resulting from the interaction between personality and environment variables rather than the result of personality variables or environmental variables alone (Pervin, 1968).

Congruence rarely involves a relation between a single motive or personality characteristic and a single dimension of the environment. Rather, more typically person-

environment interaction, and thereby questions of congruence, involve relations between multiple personal goals and multiple environmental demands or opportunities for goal attainment. Processes of interaction and the question of congruence need to be considered in terms of systems--person systems, environment systems, and relations between person and environment systems (Pervin, 1987).

An optimal match between person and environment can contribute to morale and reduce the dysfunctional consequences of some work settings. Most generally, the personal growth or goal orientation dimensions channel the direction of change, while the relationship and system maintenance dimensions influence the commitment to an environment as well as the extent of change and the personal costs involved. More specifically, environmental systems tend to maintain or accentuate personal characteristics congruent with their dominant aspects.

Physical Environment

Three attempts have been made to classify the physical environment within organizations. Steele (1973) examined the internal physical environment in terms of what he felt were its six main functions: 1) shelter and security, 2) social contact, 3) symbolic identification, 4) task instrumentality, 5) pleasure, and 6) growth. Pfeffer (1982) classified the internal environment in terms of six main dimensions and measures: 1) size, 2) quality, 3) flexibility, 4) arrangement, 5) privacy, and 6) location. Becker (1981) offered no overall framework but, instead, suggested some "alternative ways of thinking about the design, management, and evaluation of physical settings (Davis, 1984).

Davis (1984) proposed a potentially useful framework for both research and practice involving the physical environment in organizations as being composed of three main elements: 1) physical structure, 2) physical stimuli, and 3) symbolic artifacts.

Physical structure can be defined as the architectural design and physical placement of furnishings in a building that influences or regulates social interaction. The research carried out so far on the physical structure of settings has been devoted to three main areas: 1) building design and physical location, 2) furniture comfort, placement, and seating arrangements, and 3) open versus closed office designs. There is some evidence that building design and physical location within a building influence interaction and relationships (Carlopio & Gardner, 1992; O'Neill, 1994; Canter, 1976; Proshansky, Ittelson & Rivlin, 1976).

Physical stimuli are those aspects of the physical setting that intrude into the manager's or organization member's awareness and influence their behavior. A host of physical stimuli for the organization member's attention, such as incoming mail, telephone ringing, notes on the desk from others to name a few (Sundstrom, Town, Rice, Osborn & Brill, 1994).

Symbolic artifacts are aspects of the physical setting that individually or collectively guide the interpretation of the social setting. For instance, the design of the office, the type and style of furnishings, the color of the walls, the presence or absence of carpeting, framed certificates or photographs all tend to communicate information about the organization and the people who work there (Davis, 1984).

Much research has been devoted to understanding the role of the physical environment in people's experience of work and productivity. However, the focus of this research has, on the whole, been on factory environments and manual labor, with little attention within the occupational and organizational psychology being paid to office environment beyond basic ergonomic considerations. There has been little systematic research into psychological aspects of offices carried out by members of the design professions. Consequently, designs have often been based on expectations or personal prejudice rather than knowledge (Donald, 1994).

Organizational researchers have demonstrated that objective characteristics of the physical work environment have an impact on outcome variables such as satisfaction, motivation, and performance. Research in this area has suggested that the relationships among these predictors and outcomes are frequently mediated or moderated by individuals' perceptions and other factors (Carlopio & Gardner, 1992).

Home-Based Business

Research on home-based work in recent studies attempted to quantify its existence using a variety of definitions for home-based work and on describing samples specific to one industry and/or population. There is little representative data available because definitions of the home-based sample groups have differed from study to study (Masuo, Walker, & Furry, 1992).

Several factors have contributed to the increasing interest in working at home. First is the changing composition of office work. Currently, telecommunication is vital to the operation of most offices. As the cost of computers and equipment has dropped, it has

become more economical for white-collar workers to work at home. The second factor is the change in the labor force. An increasing number of women with young children and self-employed workers make up the current labor force. These two particular groups find home-based work to be an ideal working arrangement. The renewed interest in home-based work also came about when the U. S. Department of Labor replaced the ban on nearly all categories of home-based work with a certification system (Hukill, 1990).

In a study of home-based employment and satisfaction, Gritzmacher (1993) looked at quality of life, family income and control over everyday life satisfaction as variables impacting individuals employed at home-based work. The results of the study showed that the state in which one resided and the occupational category of the home-based worker were related to satisfaction with quality of life. Clerical and administrative support occupational categories had higher levels of life quality satisfaction than those in mechanical and transportation occupations.

Most home-based business owners were satisfied with the control they had over everyday life. Home-based businesses having the highest life control satisfaction were in marketing and sales. Other variables associated with life control satisfaction were liking their work and perceptions about their work and income received. Also, longevity in the community, age, and smaller number of household members in the home-based business were related to life control satisfaction (Gritzmacher, 1993).

Horvath (1986) studied work at home styles for home based business owners. In a telephone survey, respondents were asked questions about work hours, job satisfaction and computer usage in the home. Nearly 60 percent of the respondents cited working at

home to be the “ideal work arrangement.” Although home-based work is often viewed as an ideal work arrangement and a trend of the future, few studies have examined such employment (Furry & Lino, 1992).

One such study was conducted by Furry & Lino (1992). When asked the main advantage of home-based work, working independently, at their own pace, and being one’s own boss were the most cited responses. Other advantages cited included lower overhead, tax benefits, and job security. The main disadvantage of home based work most often given was number of hours worked. Other disadvantages given included a feeling of isolation from others, unreliable income, and use of the home as a business.

Many of these same factors may influence job performance, environmental satisfaction, and job satisfaction of operating a home-based business. The growing trend towards individuals operating home-based businesses creates the need to understand the interaction of environmental factors with personality and the impact on job satisfaction.

Methodology and Data

For the purposes of this study, the population was defined as: all persons operating a home-based business in 1996. The sample was selected from a targeted population of 50,000 individuals known to operate a business from their residence. These individuals were members of the Dun and Bradstreet home-based business database available from Survey Sampling, Inc. The sample consisted of 500 individual listings randomly selected by computer in the continental United States.

Research Instruments

The Myers-Briggs Type Indicator

The Myers-Briggs Type Indicator (MBTI) (1975) was designed by Myers and Briggs based on Jung's (1971) model to help people in non-clinical populations discover their own preferences for perception and judgment. The MBTI form G self scorable version was used to assess personality type consists of 94 questions. The MBTI measures one's preferences on four scales; (a) Extravert "E" or Introvert "I", (b) Sensing "S" or Intuition "N", (c) Thinking "T" or Feeling "F", and (d) Judging "J" or Perceiving "P". MBTI scoring generates four basic scores for each of the four preferences stemming from any combination in the four scales.

The Work Environment Scale

The Work Environment Scale (WES) was developed by Rudolph Moos (1981) to assess the perceived work climate. Three major dimensions are measured: Relationship dimensions, Personal Growth dimensions, and System Change dimensions. The Involvement, Peer Cohesion, and Supervisor Support subscales are defined as Relationship Dimensions. The Autonomy, Task Orientation, and Work Pressure subscales are Personal Growth Dimensions. The Clarity, Control, Innovation, and Physical Comfort subscales are the System Change and Maintenance Dimensions. The WES contains 90 items answered true or false. Scores on each subscale range from 0 to nine. The validity and reliability evidence for the WES has been substantiated by Moos (1981). Test-retest coefficients for one month ranged from .69 to .83 and for one year ranged from .51 to .63 (Moos, 1981). The WES has been tested with a wide variety of work groups including

both blue collar and professional to insure that the subscales would be applicable to a variety of work environments.

Work Environment Type Instrument

The Workplace Instrument was developed by Huszco (1989) from research conducted by Williams, Armstrong & Malcolm (1985). The latter researchers had developed the PeopleProcessPlace model and created instruments to type jobs and workspaces using the MBTI conceptual framework. Herman Miller, Inc. funded Huszco to investigate the instruments and the PeopleProcessPlace model.

Davis (1984) created a three factor taxonomy Physical Structure, Physical Stimuli, and Symbolic Artifacts from an extensive review of the literature on the impact of physical elements of workspaces on job satisfaction and/or productivity. This taxonomy was combined with Becker's (1981) hypothesis that workplace items can have one of three effects: detriment, catalyst, or support. Huszco cross fertilized this combined model with the MBTI to develop the 133 item Workplace Instrument.

This particular instrument was revised for the present research to address issues pertinent to those individuals who work in home office environments and own a home based business. Previously, the low internal reliability coefficients for these scales may have been due to the dichotomous response format of the items. The test-retest reliability estimates for the space typing scales are acceptable (Huszco, 1989). Some evidence for validity exists in that all the scales except the T (thinking) workspace scale correlate significantly with their appropriate single item criterion. The E (extroversion), N

(intuition), and J (judging) scales correlate better with their appropriate criterion items than any other.

Data Collection

Sets of instruments were mailed at the end of March, 1996 to home-based business owners generated from a 1995 mailing list of the Dun and Bradstreet business sample available from Survey Sampling, Inc. The subjects were asked to complete the instruments and complete and return in the enclosed envelope via mail. Two weeks after the initial mailing, in mid-April, reminder postcards were mailed to those individuals who had not responded. A letter explaining the need for the return of the completed instruments was mailed four weeks after the original mailing to those who had not responded. This process followed Dillman's (1978) method of data collection.

Results

Of the original sample (n=500), 32% (n=162) responded and returned the instruments. Of these, 131 usable responses were collected. As a result of the self-reported questionnaires used by Survey Sampling, Inc., over 7% (n=36) of the sample was non-usable. Either the individual had never operated a home-based business or had gone out of business since the most current update of the database.

This percentage of non-usable subjects can also be attributed to the failure rate associated with small businesses in the first five years. Traditionally, the hypothesis has been that four out of five businesses fail in the first five years. Kirchoff (1994) found in a study of small businesses after taking into account ownership changes, that after eight

years, 54% of the start-ups survived in some form: 28% had the original owners, and another 26% survived with new owners.

The profile of the home-based business owner is represented in Table 1 by frequencies and means. A greater proportion of the sample consisted of women 71% (n=90) than men 29% (n=37). On average, the home-based business owner was 45 years old with some college education, but not necessarily a college degree. A majority (78%) of the sample were married.

Table 1 here

The work characteristics of the business owner reveals that only 21% employed others in their home-based business. On average, 27% of the sample worked 21-35 hours a week and had been involved with the home-based business between 2-5 years. The average gross income for the business owner was between \$5,000-\$9,999. The level of income reported might suggest the respondents in this sample had a home-based business to supplement the household income. The occupations most often represented by the sample were skilled services 27% (n=35) and consulting services 19% (24).

Table 2 here

The distribution of personality types and occupations of the home-based business owner is shown in Table 3. The sixteen types were collapsed into four type trait

categories; Sensing/Perceiving, Sensing/Judging, Intuitive/Feeling and Intuitive/Thinking. Over 40% of the sample were Sensing/Judging types. The other three categories were almost evenly distributed. As stated previously, the two occupation categories with the highest percentages were consulting and skilled services.

Table 3 here

Chi-square analysis was conducted to determine relationships among the variables. Personality type was compared to gender, job satisfaction and the type of work environment. Job satisfaction was compared to the work environment with the use of Davis' (1984) taxonomy: physical structure, physical stimuli, and symbolic artifacts.

Personality type was significantly associated with gender. There were more Sensing/Judging types associated with females ($X^2=15.02$, $p=.002$). Traditionally, the thinking/feeling dimension of the MBTI has been the only one to be associated with gender. Generally males are associated with the thinking dimension and females with the feeling dimension. This result could be attributed to the large number of females in the sample. Also, 53% of the sample has the feeling dimension in their personality type. This represents over half the total sample involved.

The job satisfaction scales were compiled into low, medium and high satisfaction scores. Sensing/Judging types had medium to higher job satisfaction than the other three types ($X^2=10.91$, $p=.09$). Intuitive/Feeling had the next highest job satisfaction scores.

Eight of the work environment questions were designed specifically to test the eight dimension of the MBTI. Each question related to one specific dimension of the personality types. Of the eight, only the feeling question was significantly associated with personality type ($X^2=7.635$, $p=.05$). Again, this result can be attributed to the large number of females in the sample. Since feeling/thinking is associated with gender through previous research, the outcome was expected by the researchers.

Table 4 here

Job satisfaction and personality type were compared to Davis' (1984) taxonomy. An analysis of variance (ANOVA) was used to simultaneously compare the means of job satisfaction and personality type with the three areas of the taxonomy. The ANOVA revealed that symbolic artifacts significantly differed by personality type. The Sensing/Judging type ($\mu=13.44$, $p=.10$) differed significantly from the Intuitive/Thinking type ($\mu=13.56$, $p=.10$). The results for symbolic artifacts reinforce the knowledge for the Sensing/Judging type since they are very realistic individuals who are impacted by their surroundings. The Sensing dimension of their particular type explains how information is collected through the five primary senses. Symbolic artifacts would be important to these individuals, especially those Sensing/Judging types with a Feeling dimension. The artifacts would represent their personal values and ideals and would be important to the Sensing/Judging type in their daily work activities.

However, the significant results for symbolic artifacts for the Intuitive/Thinking type was not expected. An Intuitive/Thinking individual is someone who is focused on ideas and possibilities. These persons are not as readily impacted by their surroundings, they “see” things intuitively; looking for patterns and solutions in hunches and ideas. The artifacts would be in their work space, however these artifacts would not be as important to them as the Sensing/Judging type. The Intuitive/Thinking type is more concerned with taking in information through perception and then making decisions about this information in a very logical and analytical fashion. These artifacts would not be a component of their decision making process.

Discussion

This study presents a current profile of home-based business owners. Clearly, a majority of these are female, married, with some college education. The lower number of hours worked and lower mean incomes could suggest that these home-based businesses are second incomes for the family. The demographic results do not suggest that the owners support themselves solely from this business. These results concerning demographic data might be attributed to several factors. The majority of these home-based business owners are part-time employed and therefore may have more time to complete a questionnaire such as was used in this study. Second, traditionally it has been the role of the female to supplement the income for a two income household. Third, the Sensing/Judging type feel the need for closure in their daily activities and could feel the need more than other types to complete and return the questionnaire. The

Sensing/Judging type would be an individual more likely to complete and return the questionnaire.

Sensing/Judging types comprise roughly 38% of the population in the United States. There are four of these in the Jungian typology: ISFJ, ESFJ, ISTJ, and ESTJ. These four types are as alike as they are different from each other, especially in their longing for duty. They exist primarily to be useful to the social units to which they belong. The large number of Sensing/Judging types (40%) is consistent with the findings in the type of occupation. Sensing/Judging types are concerned with service to others and to be useful. Over 27% of the sample are in skilled services: for example, computer, alterations, and child/adult care. The care of others, especially the young and the old, is a special concern of the Sensing/Judging.

The job satisfaction scores of the Sensing/Judging types were medium to high. This can be attributed to their choice of occupation and reflect a fit between the individual and their work. Research has shown some correlation between job satisfaction and personality type (Elam, 1994; Bayne, 1990). The Sensing/Judging types are involved in service occupations which reinforce the need to serve others. In serving others, these particular home-based business owners are fulfilling their need to serve which impacts upon their job satisfaction.

The findings represented in the taxonomy reflect that symbolic artifacts are important to the home-based business owner. This corresponds to the feeling dimension represented by over half of the sample. These business owners need to have items in their home office which reflect their personal values and aesthetics which are important to them

in their decision-making processes. Also, because there are Sensing individuals in the sample, these kinds of items impact the person in their daily activities. The Sensing/Judging individual collects information through the five senses and makes decisions concerning this information through a subjective process. Individual values and ideals guide the decision making process. The artifacts found in the Sensing/Judging type work place reflect these values and ideals.

This research updates the current literature on home-based business owners and presents a profile of the personality types of home-based business owners and their satisfaction with both occupation and their home office environment. Further research is needed for work environment variables and satisfaction. Some association was found for personality type with the environment and satisfaction, however, more research is needed to determine satisfaction with a home-based business.

The results of the study show that particular personality types are more satisfied with their choice of occupation and home office environment. The results of the study could be used by home-based business associations to counsel individuals interested in a home-based business. Also, organizations interested in telecommuting may find the need to type their employees before sending them home to work. This endeavor could enable employers to determine which of their employees are more suited to a home office environment.

As more individuals gravitate toward home-based businesses, it is important to understand how the choice of occupation and the type of home office environment can impact the satisfaction of the individual. Aspects of the job and environment can affect

home-based business owners and this data can be useful to those individuals interested in this particular segment of the labor force.

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TABLE I

Descriptive Statistics for Home-based Business Owners

Variables	n=	Percent	Means
Business owner characteristics			
Gender			
Males	37	29%	
Females	90	71%	
Age (years)		--	45.8
Education			Some college
Marital Status			
Single	20	14%	--
Married	96	78%	--
Other	11	08%	--
Work characteristics			
Business employs others			
Yes	28	21%	--
No	98	79%	--
Hours worked per week (21-35)	32	27%	--
Years in home-based business (2-5)	43	33%	--
Gross annual home-based income (\$5,000-\$9,999)	23	19%	--

TABLE II

Examples of Jobs for Eight Occupations

Occupation	Job title examples	n=	%
Consulting Services	Insurance, interior design, accounting/taxes, real estate	24	18.8
Skilled Services	Computer, alterations, dressmaking, lawn care, child/adult care, catering	35	27.3
Educational Services	Tutoring, music lessons	6	4.7
Product manufacturing/Fine Arts	Crafts, wood products, machinery	14	10.9
Product Sales	Gift baskets, sporting goods, home products	19	14.8
Agriculture/Forestry/Fisheries	Herbs, you-pick-it, Christmas trees, fish farms	2	1.6
Tourism/recreation	Bed & breakfast, amusement centers, travel	3	2.3
Other	House painters, landscaping services	25	19.5

TABLE III

Occupations and Personality Types of Home-based Business Owners

Occupation	SP	SJ	NT	NF	TOTAL
Consulting Services	2	9	7	6	24
Skilled Services	3	16	6	10	35
Educational Services	1	3	1	1	6
Product Manufacturing	3	3	2	6	14
Product Sales	4	8	5	2	19
Agriculture/Forestry	1	1	-	-	2
Tourism/Recreation	-	1	1	1	3
Other	7	10	3	5	25
TOTAL:	21	51	25	31	
Grand Total					128

TABLE IV
 Personality Types, Occupations, Job Satisfaction and Environment
 for Home-Based Business Owners

Personality Type	Consult Services	Skilled Services	Education Services	Product Manufacturing	Product Sales	Other	Job Satisfaction			Environment		
							Low	Med.	High	Structure	Stimuli	Artifacts
SP	2	3	1	3	4	8	12	6	4	$\mu=$	$\mu=$	$\mu=$
SJ	9	16	3	3	8	12	13	19	20	13.19	4.04	14.14 a
NT	7	6	1	2	5	4	8	12	6	12.63	3.98	13.44 ab *
NF	6	10	1	6	2	6	10	7	14	12.76	3.80	13.56 ab *
										12.68	3.74	12.71 b

* Significant at $p = .10$ level

μ =mean

a=Duncan's grouping of one mean

b=Duncan's grouping of one mean

ab=Duncan's grouping of two means

Means with same letter are not significantly different

Personality Types of Home-Based Business Owners
and Home Office Environments

Randall Ray Russ
Oklahoma State University

Manuscript prepared for submission to Journal of Psychological Type

This article is based on the Doctoral dissertation research of the author in partial fulfillment of requirements for a Ph.D. degree in the Department of Design, Housing and Merchandising, College of Human Environmental Sciences, Oklahoma State University.

Abstract

Previous research indicates little or no evidence of particular personality types for home-based business owners. Also, the type of home office environment for these business owners has not been studied. This research was conducted to determine if particular personality types are more prevalent in home-based businesses and the types of home office found for these individuals. The Myers-Briggs Type Indicator (McCaulley, 1987) and an environment instrument (Davis, 1984) were administered to 131 home-based business owners nationwide. ESFJ and ISFJ types represented almost one-half of the sample. Personality type was significant with gender, physical stimuli and symbolic artifacts. Data were discussed in relation to the relationship between personality type, occupations found in home-based businesses, and home office environments.

Personality Types of Home-Based Business Owners and Home Office Environments

Introduction

Estimates suggest that by the turn of this century 40 million workers representing 10 to 20% of the labor force, will be home-based. Changes in the nature of office work, the composition of the labor force, and the structure of economic markets, as well as the elimination of restrictions on commercial home-based employment, have led to an increased interest in working at home. As increasing numbers of workers acclimate to this work setting, a variety of aspects and impacts of home-based work on the workers and their households should be considered (Gritzmacher, 1993).

Research on home-based work in recent years focused on estimating its prevalence using a variety of definitions for home-based work and on describing samples specific to one industry and/or population. Despite the attention given to home-based work, there is little representative data available because definitions of the sample groups have differed from study to study (Masuo, Walker, & Furry, (1992).

Several factors have contributed to the increasing interest in working at home. First is the changing nature of office work. Currently, information processing is central to the operation of most offices. As the cost of computers and telecommunications equipment has dropped, it has become more feasible for white-collar workers to work out of the home. The second factor is the changing composition of the labor force. An increasing number of women with young children and self-employed workers make up the current labor force. These two particular groups find home-based work to be an ideal working arrangement. The renewed interest in home-based work also came about when

the U. S. Department of Labor lifted its long standing ban on practically all types of home-based work and replaced it with a certification system. By 1989, prohibitions remained only for the women's apparel industry and for hazardous jobs in the jewelry industry (Hukill, 1990).

Horvath (1986) studied work at home styles for home based business owners. In a telephone survey, respondents were asked questions about work hours, job satisfaction and computer usage in the home. Nearly 60 percent of the respondents cited working at home to be the "ideal work arrangement." Although home-based work is often viewed as an ideal work arrangement and a trend of the future, few studies have examined such employment (Furry & Lino, 1992).

One such study was conducted by Furry & Lino (1992). When asked the main advantage of home-based work, working in one's own way, at own pace, and being one's own boss were the most cited responses. Other advantages cited included lower overhead, tax benefits, and job security. The main disadvantage of home based work most often given was work too much. Other disadvantages given included feeling of isolation, unsteady income, and wear and tear on home.

Many of these same factors may influence job performance, environmental satisfaction, and job satisfaction of operating a home-based business. The growing trend towards individuals operating home-based businesses creates the need to understand the interaction of environmental factors with personality and the impact on job satisfaction.

Over the last 50 years, a wide variety of career and vocational instruments have been developed to measure personality attributes, provide career exploration, and predict

vocational choice (Miller, 1992). The Myers-Briggs Type Indicator (MBTI) is being used by a number of professionals for career counseling. The MBTI produces results that examine personality characteristics for a management style based on the selected preferences of the individual. Previous research suggested individual profiles may correspond to certain career fields (Jagger, Neukrug, & McAuliffe, 1992).

Although the MBTI does not measure interest, it has been effective in predicting or describing characteristics of different occupations. The MBTI produces results which examine personality dynamics based on the selected preferences of an individual. The profile corresponds to certain career fields to be explored by the individual. The extent to which one will enjoy various careers and settings is determined to some degree by the type of person one is (Miller, 1992).

There has been little research in the area of small business owners, let alone that of the area of home-based business. Previous studies using the MBTI have traditionally focused on managers from large organizations. Hoy and Hellriegel (1982) studied small business managers and their personality types. The businesses were within the Midwest region, and had a firm size of not more than 50 nor less than five.

Over two-thirds of the sample scored as sensing-thinking style problem solvers. This personality type focuses on short term economic goals and the details of their businesses. The sensing-thinking type prefers to deal with the facts and details of the “here and now” problems, especially those of a technical or procedural nature.

Another study of small retailers was conducted by Rice and Lindcamp (1989). The sample was gender specific and consisted of only white males. Their hypotheses

consisted of; 1) Extraverts would be more successful in business than introverts, 2) Thinking-Judging type managers would be the most successful business owners, and 3) Thinking-Sensing type managers would be the most successful business owners.

The results of the study revealed there were a significantly greater number of extraverts than introverts, a significantly greater number of sensing than intuitive types, and a significantly greater number of judging over perceiving types. There was no significant difference between the thinking-feeling dimension for the sample. None of the hypotheses were fully supported in the results of the data. The authors were unable to conclude if one particular type would prove to be more successful in small business (Rice & Lindcamp, 1989).

Davis (1984) proposed a potentially useful framework for both research and practice involving the physical environment in organizations as being composed of three main elements: 1) physical structure, 2) physical stimuli, and 3) symbolic artifacts.

Physical structure can be defined as the architectural design and physical placement of furnishings in a building that influences or regulates social interaction. The research carried out so far on the physical structure of settings has been devoted to three main areas: 1) building design and physical location, 2) furniture comfort, placement, and seating arrangements, and 3) open versus closed office designs. There is some evidence that building design and physical location within a building influence interaction and relationships (Carlopio & Gardner, 1992; O'Neill, 1994; Canter, 1976; Proshansky, Ittelson & Rivlin, 1976).

Physical stimuli are those aspects of the physical setting that intrude into the manager's or organization member's awareness and influence their behavior. A host of physical stimuli for the organization member's attention, such as incoming mail, telephone ringing, notes on the desk from others to name a few (Sundstrom, Town, Rice, Osborn & Brill, 1994).

Symbolic artifacts are aspects of the physical setting that individually or collectively guide the interpretation of the social setting. For instance, the design of the office, the type and style of furnishings, the color of the walls, the presence or absence of carpeting, framed certificates or photographs all tend to communicate information about the organization and the people who work there (Davis, 1984).

Much research has been devoted to understanding the role of the physical environment in people's experience of work and productivity. However, the focus of this research has, on the whole, been on factory environments and manual labor, with little attention within the occupational and organizational psychology being paid to office environment beyond basic ergonomic considerations. There has been little systematic research into psychological aspects of offices carried out by members of the design professions. Consequently, designs have often been based on expectations or personal prejudice rather than knowledge (Donald, 1994).

As stated previously, there has been little research in the area of small business owners. The purpose of this research was to determine the relationship between personality types and home-based businesses.

Method

For the purposes of this study, the population is defined as: all persons operating a home-based business in 1996. The sample was selected from a targeted population of 50,000 individuals known to operate a business from their residence. These individuals are members of the Dun and Bradstreet 1995 home-based business database available from Survey Sampling, Inc. Self-reported questionnaires are used to survey individuals as to their occupation and other demographic information. This method is how Survey Sampling determined whether an individual has a home-based business. The sample consisted of 500 individual listings randomly selected by computer in the continental United States.

Procedure

The MBTI form G self scorable version was used to assess personality type. An environment instrument was included to determine the types of settings home-based business owners use for home offices. The instruments were mailed at the end of March, 1996 to home-based business owners generated from a mailing list of the Dun and Bradstreet business sample available from Survey Sampling, Inc. The subjects were asked to complete the instruments and complete and return in the enclosed envelope via mail. Two weeks after the initial mailing, in mid-April, reminder postcards were mailed to those individuals who had not responded. A letter explaining the need for the return of the completed instrument was mailed four weeks after the original mailing to those who had not responded. This process followed Dillman's (1978) method of data collection.

Results

Of the original sample (n=500), 32% (n=162) responded to the original mailing and completed and returned the instruments. Of these, 131 usable responses were collected. As a result of the self-reported questionnaires used by Survey Sampling, Inc., over 7% (n=36) of the sample was not usable due to misrepresentation. Either the individuals had never operated a home-based business or had gone out of business since the last update of the 1995 database.

This percentage of non-usable subjects can also be attributed to the failure rate associated with small businesses in the first five years. Traditionally, the premise has been that four out of five businesses fail in the first five years. Kirchhoff (1994) found in a study of small businesses and taking into account ownership changes, that after eight years, 54% of start-ups survive in some form: 28% have the original owners, and another 26% survive with new owners. Although statistics are not available for the home-based business sample, one might imagine even a larger failure rate to be possible due to the unique nature of home-based businesses.

Over 70% of the respondents were married females with an average age of 45 years. The home-based business owners were the principal owners or operators of the business (84%) with some college education, but not necessarily a college degree. The average gross income was between \$5,000-\$9,999 for these home-based business owners. Over 27% of the sample had businesses in the skilled services occupations, such as computer, catering, lawn care and child/adult care.

The type distribution for the study is shown in Table 5. Overall, extraverts represented 55% of the sample and introverts 45%. Sensing was preferred by 56.5% of the respondents, whereas 52.7% preferred intuition. Feeling was preferred 52.7% of the time compared with thinking at 47.3%. Judging was preferred by 60.3% of the sample as compared with 39.7% for perceiving.

Insert Table V here

ESFJ represented the largest percentage at 11.5% and ISFJ represented the second largest percentage at 10.7%. When these two types are combined, this study found that ESFJ and ISFJ account for 22.2% of the sample. This is nearly one-quarter of the respondents involved in home-based businesses to date.

The results for personality type are different from that of small business owners. There were more extroverts than introverts, more sensing than intuitive, and more judging than perceiving types in the present study. However, the percentages were not significant as in the small business owner study. There was a much larger group 52.7% (n=69) of individuals with the feeling dimension in the present study. These differences could be attributed to specifics found within home-based businesses as opposed to small business locations. Many of the home-based businesses are run by females who are supplementing the household income with that of a second income. The previous studies did not include females or did not analyze by gender in their samples. The large percentage of feeling

preferences could be due to the thinking-feeling dimension being gender specific (McCaulley, 1987).

Table VI here

Chi-square analysis was conducted to determine relationships between the variables. Personality type was compared to gender. Personality type was significantly associated with gender. There were more SJ types associated with females ($X^2=15.02$, $p=.002$). Traditionally, the thinking-feeling dimension of the MBTI has been the only one associated with gender. Males are more often found to have a thinking preference and females that of a feeling preference. This result could be attributed to the large number of females in the sample. Also, 53% of the respondents have the feeling dimension in their personality type.

Chi-square analyses were performed on personality type and the three elements of the Davis (1984) taxonomy: physical structure, physical stimuli, and symbolic artifacts. Of the three elements, only two were significantly associated with personality type, physical stimuli ($X^2=28.67$, $p=.004$) and symbolic artifacts ($X^2=37.10$, $p=.09$). The stimuli element is expected due to the large number of sensing individuals in the sample. People with a sensing preference absorb information through their five senses. The sensing types are observant of events going on around them and see the practical realities of a situation.

Stimuli such as phones ringing, lighting sources and other extraneous noises would impact on these individuals more so than others.

Symbolic artifacts as mentioned previously, involve items such as the type and style of furnishings present in the work space, color of the walls, and photographs or certificates on the walls which tend to communicate information about the individual who works in that space. These artifacts would be representative for a person with a feeling preference. Individuals with a feeling preference tend to consider what is important to them and to other people. These subjective values are necessary during the decision-making process for those with a feeling preference. They mentally place themselves in a situation and consider the impact of their decision on others and the resulting ramifications. This process using personal values would be reflected in the types of artifacts found within the home office for those individuals with a feeling preference. Nothing is so important to them as a harmonious environment (Myers & Kirby, 1994).

Discussion

This study presents a current profile of home-based business owners. Clearly, a majority of these are female, married, and home-based business owners. The lower number of hours worked and lower mean incomes could suggest that these home-based businesses are second incomes for the business owners and their families. The results do not suggest that the owners support themselves solely from this business.

Sensing/Judging types comprise roughly 38% of the population in the United States. There are four of these in the Jungian typology: ISFJ, ESFJ, ISTJ, and ESTJ. These four types are as alike as they are different from each other, especially in their

longing for duty. They exist primarily to be useful to the social units they belong to. The large number of Sensing/Judging types (40%) is consistent with the findings in the type of occupation. Sensing/Judging types are concerned with service to others and to be useful. Over 27% of the sample are in skilled services; for example, computer, alterations, and child/adult care. The care of others, especially the young and the old, is a special concern of the Sensing/Judging type. The Sensing/Judging types are involved in service occupations which reinforce the need to serve others. In serving others, these particular home-based business owners are fulfilling their need to serve which is an expression of their personality.

An ESFJ likes to be appreciated for themselves and for what they give to others. They are sensitive to the needs of others and are good at providing practical caring. Much of their pleasure and satisfaction comes from the comfort and pleasure of people around them. ESFJs may tend to lean toward service occupations in their career selection. They are found in occupations which serve humanity. An ESFJ is good in teaching, preaching, administration, and in general, people-to-people jobs (McCaulley, 1987).

ESFJs use their subjective feeling decisions to bring harmony and goodwill to almost any situation in which they find themselves, while at the same time imposing order and structure on any situation. Their gentle, caring nature with its extraverted preference, takes them beyond their own needs to serve the needs of the world around them (McCaulley, 1987).

The ISFJ has a primary desire to be of service and to address individual needs. The major drive to be of service to others leads them to occupations such as nursing,

teaching, and secretarial work. Satisfaction for the ISFJ is magnified when they are able to administer to the needs of others.

Work for the ISFJ, is fun, rewarding satisfying and fulfilling. In general, ISFJs fill their work hours most with service to others. For the ISFJ, work builds character; it brings growth, maturity, satisfaction and fulfillment. ISFJs find meaning in life by serving human needs and making others happy.

The findings represented in the taxonomy reflect that physical stimuli and symbolic artifacts are important to the home-based business owner. This relates to the sensing and feeling dimension represented by over half of the sample. These business owners need to have items in their home office which reflect their personal values and aesthetics which are important to them in their decision-making processes. Also, these kinds of items impact the person in their daily activities and their need for harmonious environments.

The results of the personality types, occupations, and home office environments present the opportunity to create a framework of these factors. The framework could with future research enable individuals to develop the greatest potential between their personality type, vocational choice and home office environment. The framework is represented in Figure 1.

Figure 1 here

The Sensing/Perceiving type are very realistic and focused in the present. They perform well under pressure and can be extremely flexible and adaptable to suit any

occasion. The Sensing/Perceiving type need to be active and prefer to learn as they go along. The need to research and plan is not a necessary activity for the Sensing/Perceiving type. The work environment for this particular type would be represented by a large open, neat area with a few specially chosen items to reflect their culture. The neatness reflects the Sensing/Perceiving type's way of ordering facts to understand the world.

The Sensing/Judging type feel the need to serve the organization to which they belong. The past, including traditions and rules are very important to them. The Sensing/Judging type learns from the past and uses this information to make decisions. The Sensing/Judging type is very organized in all aspects of their life and like to organize projects and people around them. The work environment for this particular type would be very compact and neat. There might be charts or graphs on the walls which reflect the need for factual information to be present at all times for the Sensing/Judging type. Permanence and stability would be good descriptors for this work environment since stability is necessary for the Sensing/Judging type to contribute at their peak level.

The Intuitive/Feeling type are very future oriented and respect values and morals. This type is very capable about drawing out the best in other people. They tend to work in bursts of energy which are focused to contributing to the good of humanity. The work environment for this Intuitive/Feeling type would be reflected by a large number of personal and work related items mixed together in the space. Every item would have personal significance to the Intuitive/Feeling type and would be rarely discarded. The walls would be a combination of personal and occupational items reflecting personal values important to this type.

The Intuitive/Thinking type is an individual who values competency and knowledge. They continually seek to improve themselves and are their own worst critic. The Intuitive/Thinking type is a natural leader and organizer, able to manage several projects at one time. These types are very good at determining solutions to problems and see both short and long term goals with ease. The work environment of the Intuitive/Thinking type is reflected by a great number of books and manuals. All information past and present is stored in the workspace for developing the big picture, which is the primary goal for the Intuitive/Thinking type. This process of developing the big picture is likely to totally absorb the individual. The work space would reflect a high degree of privacy as other people are not necessary to the formulation of the plans, only to the execution of the long-range plan.

These findings for personality type, occupations and type of home office environment present the challenge to develop a model with further research. This model in time may allow individuals to achieve a better match for their personality type, occupation and work environment related to the operation of a home-based business. This match or congruence between person and environment would allow greater potential and more satisfaction for home-based business owners.

This research updates the current literature on home-based business owners and presents a profile of the personality types of home-based business owners and their home office environment. Overwhelmingly, in this particular sample, there are more female business owners who are supplementing their primary income through the operation of a home-based business. The relatively low number of years in operation prevents knowing

if these businesses are truly successful. The current rate of small business failure and the non-usable portion of the sample would suggest that these a percentage of these home-based businesses will not survive the next few years. The potential to fail would be greatest for the Sensing individuals due to their orientation and focus on the present. These type in particular fail sometimes to see the wider ramifications of a decision. Also, they may tend to stay focused on immediate problems and fail to see the long-range picture, which in turn can affect the success of the business. A longitudinal study of those represented in this research and the longevity of their business in the next few years would contribute to the knowledge of the success rate for home-based businesses. Also, further research is needed to develop a better sample.

Further research is needed to determine the specific work environment variables associated with a home office environment. The absence or presence of a private office in the home dedicated to a home-based business could impact those business owners more so than the results of this study reveal. As much of the current literature has focused on traditional organizational settings, research in the area of home offices will create a body of literature useful to the interior design industry and profession, business associations, career counselors, and entrepreneurs interested in this type of small business.

The results of the study do show a larger number of ESFJ and ISFJ types as home-based business owners. These particular types could be the result of the particular occupation chosen as the home-based business. Additional research into specific occupations within the skilled services area could produce information which would add to the vocational choice and personality type literature. The results of such a study would

enable career counselors and individuals interested in home-based businesses to determine if their personality type was congruent with their vocation. In addition, the results of the study could be used by home-based business associations to counsel individuals interested in a home-based business.

As it is projected that more individuals will gravitate toward home-based businesses, it is important to understand how the choice of occupation and the type of home office environment can impact the individual. Aspects of personality type and environment can affect home-based business owners and this data can be useful to those individuals interested in this trend toward the future.

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Table V
 Type Distribution of All Subjects
 N=131

The Sixteen Complete Types

ISTJ n=13 (9.9%)	ISFJ n=14 (10.7%)	INFJ n=1 (0.8%)	INTJ n=8 (6.1%)
ISTP n=4 (3.1%)	ISFP n=3 (2.3%)	INFP n=11 (8.4%)	INTP n=5 (3.8%)
ESTP n=9 (6.9%)	ESFP n=6 (4.6%)	ENFP n=9 (6.9%)	ENTP n=5 (3.8%)
ESTJ n=10 (7.6%)	ESFJ n=15 (11.5%)	ENFJ n=10 (7.6%)	ENTJ n=8 (6.1%)

Table VI
 Type Distribution of All Subjects
 N=131
 Dichotomous Preferences

E	n=72	(55%)
I	n=59	(45%)
S	n=74	(56.5%)
N	n=57	(43.5%)
T	n=62	(47.3%)
F	n=69	(52.7%)
J	n=79	(60.3%)
P	n=52	(39.7%)
ST	n=36	(27.4%)
SF	n=38	(29.0%)
N F	n=31	(23.6%)
N T	n=26	(19.8%)
S J	n=52	(39.6%)
S P	n=22	(16.7%)
NP	n=30	(22.9%)
NJ	n=27	(20.6%)

Figure 1

Framework for Home-Based Business Occupations and Personality Type

<p>SP</p> <p><u>Strengths:</u></p> <ul style="list-style-type: none"> • Realistic • Perform well in crisis situations • Work is play • Want freedom, action and risk • Learn as they go along • Flexible and adaptable <p><u>Cautions:</u></p> <ul style="list-style-type: none"> • Impulsive • Focus on the present • Easily bored with the status quo • Can respond too quickly to immediate needs • May avoid decision-making <p><u>Occupations:</u></p> <ul style="list-style-type: none"> • Product Manufacturing • Agriculture • Product Sales 	<p>SJ</p> <p><u>Strengths:</u></p> <ul style="list-style-type: none"> • Want to belong and to serve • Learn from the past • Appreciate rules and traditions • Motto is “Be Prepared” • Organize projects and people • Oriented to tasks, action, & bottom line <p><u>Cautions:</u></p> <ul style="list-style-type: none"> • Focus on the present • Focus on impact of decisions on others • Fail to use logic occasionally • Fail to see wider ramifications of a decision • Fail to see alternatives in procedures <p><u>Occupations:</u></p> <ul style="list-style-type: none"> • Consulting Services • Skilled Services • Educational Services
<p>NF</p> <p><u>Strengths:</u></p> <ul style="list-style-type: none"> • Value meaning and significance • Value integrity • Are future oriented • Draw out the best in others • Work in burst in energy • Contribute to the good of humanity <p><u>Cautions:</u></p> <ul style="list-style-type: none"> • May make decisions on limited information • Can be too focused on pursuit of a vision • May be easily distracted from task at hand • May overextend themselves • Routine work can become boring <p><u>Occupations:</u></p> <ul style="list-style-type: none"> • Product Manufacturing/Fine Arts • Tourism/Recreation • Skilled Services 	<p>NT</p> <p><u>Strengths:</u></p> <ul style="list-style-type: none"> • Value competency and knowledge • Desire to control nature • Continually seek self-improvement • Natural leaders and organizers • Good with short and long term goals • Good at researching problems <p><u>Cautions:</u></p> <ul style="list-style-type: none"> • Can miss specifics necessary for goal • May have trouble communicating • May be insensitive to needs of others • May be impractical with daily activities • May edit information in decision making <p><u>Occupations:</u></p> <ul style="list-style-type: none"> • Consulting Services • Product Sales

Chapter VI

RECOMMENDATIONS AND CONCLUSIONS

This chapter will synthesize the preceding chapters and results of the study. First, the implications for this research in home-based business will be discussed. Second, areas for future research connected with this topic will be examined. Third, an evaluation of the process used in this study will be discussed to suggest modifications for future research.

Implications

The results of the personality types involved in home-based business could be implemented within career counseling arenas. Individuals who are currently involved in home-based businesses might be counseled with information from this research concerning personality type and vocational choice. If a person seems dissatisfied with their present situation, counseling efforts could be made to determine a better fit for the individual in regards to their occupation.

Also, for those persons interested in creating a home-based business, counseling could be undertaken to ensure the satisfaction and success of the business with screening for the individual and their occupation. Preventative measures might increase the number of home-based businesses which survive. The success in turn would enable research into the area of failure rates for home-based businesses. The success rate for this particular type of working environment still needs to be studied to determine how successful these home-based business owners over time.

Another area to be researched is that of telecommuters. As more major corporations telecommute their employees home to work, the home office environment and the individual's personality type could impact upon the employee's job satisfaction. Companies might choose to keep certain employees within the traditional organizational setting to ensure their satisfaction with their work environment and ultimately their job satisfaction. Some of the home-based research have reported feelings of isolation with the home office environment. Certain personality types who are energized and oriented to the external world for their data gathering process could feel a lack of stimulus and therefore be less satisfied.

Areas for Future Study

Further research in this area of home-based business concerns several factors. The instruments used to report the job satisfaction and work environment need to be further revised and refined. By revising the instruments, data could be obtained for an ordinal level analysis. The nominal data in the present study limited the level of analysis for the results. Options could include looking for a more suitable job satisfaction instrument which would still address the isolated individual in the home office environment and also enable the researchers to conduct higher level analyses. The work environment scale might be revised or otherwise replaced with a more appropriate instrument. The environment has always been descriptive and therefore has required more qualitative efforts in obtaining data regarding the elements involved in the work environment. The taxonomy created by Davis (1984) still has possibilities for studying the structure, stimuli and symbolic artifacts which are unique to the home office environment.

The factors involved in the entrepreneurship of the home-based business owner need to be addressed in future research. Why individuals choose to create and operate home-based businesses could be studied to help others who are interested in the future to create and sustain successful small businesses. Results concerning entrepreneurs and their reasons for starting new businesses would benefit vocational counselors and consultants who advise small business owners.

As stated previously, the segment of the working population who are telecommuters has great potential for research. A sample of telecommuters could be studied to determine similarities and differences with home-based business owners. In studying telecommuters, results could be disseminated to major corporations who are interested in telecommuting employees home to work. With predictions forecasted that more and more employees will telecommute, the impact of this type of setting would be beneficial to a number of interested parties.

One such party could be the design profession. Both practitioners and design educators will be impacted as more people work from their home. Residential design will change as the need for a more dedicated office environment increases. No longer will an individual have only a desk and chair to support their work functions. As technology increases, more support furniture will be necessary to enable the individual to function in their work environment and be productive.

Commercial design also will change as more hotelling sites will be created within the traditional organizational setting. These hotelling sites will be office spaces which will allow for a multitude of individuals to use as needed when they are present in the office. If

the person works in the office only one to two days a week, corporations can no longer afford to keep offices for all individuals present in the company.

As these trends impact the design profession, so shall it impact the design industry. Several office furniture already have begun efforts to address the needs of individuals who work at home. Furnishings have been designed to be smaller in scale, more residential in look and feel, and affordable for the home office environment. Further research might enable these office furnishings companies to further refine these current furnishing product lines.

Evaluation of Study

In reviewing the data gathering process for this research, several factors are present which should be addressed for further research efforts. Funding for a study such as this one is imperative to ensure the success of the data collection and the results. Efforts need to be targeted toward funding sources which would be interested in data such as would be generated from research of home-based business owners. Also, a more specific targeted sample is necessary to generate a suitable response rate for analysis. The National Association of Home-Based Business Association does not give out or otherwise sell their mailing list to anyone. The self-reported questionnaire used by Survey Sampling, Inc. possesses the potential for individuals who are only thinking about operating a home-based business, though in actuality, the individual may be months to years away from the actual operation of the business.

The instruments used for job satisfaction and the work environment need to be either refined or replaced to enable the researchers to obtain more pertinent data

concerning these areas. By using either revised or substituting other instruments for these dimensions, the research would help to advance the knowledge base in the area of home-based business owners and their satisfaction with that particular environment.

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APPENDIXES

APPENDIX A
MYERS-BRIGGS TYPE INDICATOR

MYERS-BRIGGS TYPE INDICATOR
FORM G SELF-SCORABLE (REVISED)

Published by Consulting Psychologists Press
3803 Bayshore Road P. O. Box 10096
Palo Alto, California 94303
(415) 969-8901

APPENDIX B
WORK ENVIRONMENT AND
WORK SATISFACTION INSTRUMENT

Research Number _____

HOME-BASED BUSINESS SURVEY

PART 1. WORKSPACE NEEDS ASSESSMENT — It is essential for this study that we learn about people's home office environment.

INSTRUCTIONS: Please check yes or no to indicate whether the item or feature described exists in your workspace. Please do not leave any of the items blank.

- | | Yes | No |
|--|--------------------------|--------------------------|
| 1. Do you have a private office? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. If no, is your workspace part of another room?
If your workspace is part of another room, please explain. | <input type="checkbox"/> | <input type="checkbox"/> |
| <hr/> | | |
| 3. Do you use a traditional desk in your workspace as your primary work surface?
If no, please explain. | <input type="checkbox"/> | <input type="checkbox"/> |
| <hr/> | | |
| 4. Do you have multiple work surfaces other than your primary work surface? | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Is your desk chair ergonomically designed (i.e., lumbar back support, etc.)? | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Do you meet with people in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. If yes, does the arrangement of your office require you to talk across a desk or table when you meet with people? | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Do you use a conference table within your workspace?
If yes, how many chairs do you need for a conference? | <input type="checkbox"/> | <input type="checkbox"/> |
| <hr/> | | |
| 9. If a conference table is present, is it also used for other purposes, such as, to store papers, documents, or to serve as another work surface? | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Are the furnishings in your workspace arranged to encourage interaction with other people? | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Are the furnishings and seating arrangements in your work space set up so they can be easily arranged? | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Do you have much control over how your workspace is furnished or arranged? | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Is your workspace relatively open and free of barriers? | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Do you have any physical barriers within your workspace that subdivides your work space? If yes, please explain. | <input type="checkbox"/> | <input type="checkbox"/> |
| <hr/> | | |
| 15. Do you have enough room to do all your work in one location rather than having to move among several different locations? If no, please explain. | <input type="checkbox"/> | <input type="checkbox"/> |
| <hr/> | | |
| 16. Are there clearly defined physical divisions between work areas in your work space? | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Would you describe your workspace as small and intimate? | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. In your workspace, can you easily reach the things you use? | <input type="checkbox"/> | <input type="checkbox"/> |

- | | Yes | No |
|--|--------------------------|--------------------------|
| 19. During a typical work day, is there evidence of work in process on most of the available surfaces in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Do you use file cabinets in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 21. Do you have storage cabinets in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 22. Are most of your files, desk drawers and shelves more than 3/4 full? | <input type="checkbox"/> | <input type="checkbox"/> |
| 23. Are reports, magazines, and folders sequentially arranged in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 24. Are separate storage spaces designated for various categories of filed materials? | <input type="checkbox"/> | <input type="checkbox"/> |
| 25. Are there many colors present in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 26. Are the colors in your workspace bright and stimulating as opposed to muted and restful? | <input type="checkbox"/> | <input type="checkbox"/> |
| 27. Is at least part of the light in your workspace natural light? | <input type="checkbox"/> | <input type="checkbox"/> |
| 28. Is task lighting (incandescent bulbs) available at your work surface? | <input type="checkbox"/> | <input type="checkbox"/> |
| 29. If a task light is present, is it easily moveable? | <input type="checkbox"/> | <input type="checkbox"/> |
| 30. Is overhead fluorescent lighting available in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 31. Does your workspace have adequate lighting? | <input type="checkbox"/> | <input type="checkbox"/> |
| 32. Is a VDT/CRT (microcomputer) present in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 33. If a VDT is present in your workspace, has adequate attention been paid to reducing eye strain (placement planning, lighting, adjustable stands, screens, etc.)? | <input type="checkbox"/> | <input type="checkbox"/> |
| 34. Is a planning calendar that displays more than one day at a time present in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 35. Is a daily calendar with spaces for detailed activities (hourly meetings, expenses) present in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 36. Do you have more than two reference books easily accessible in your workspace? (Include a dictionary, thesaurus, etc., but do not count operations manuals). | <input type="checkbox"/> | <input type="checkbox"/> |
| 37. Are models, mock-ups, conceptual frameworks, computer printouts (to be used in decision making) present in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 38. Are control charts, project management time schedules, "to-do" lists etc., visibly present in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 39. Have you provided yourself with comfortable furniture to sit on at work? | <input type="checkbox"/> | <input type="checkbox"/> |
| 40. Is your workspace neat and orderly? | <input type="checkbox"/> | <input type="checkbox"/> |
| 41. Is a chalkboard, marker board, or flip chart present in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 42. If you have a chalkboard, marker board, or flip chart, do you leave things displayed on it (them)? | <input type="checkbox"/> | <input type="checkbox"/> |
| 43. If things have been displayed on the chalkboard, marker board, or flip chart, are they mostly work related in content? | <input type="checkbox"/> | <input type="checkbox"/> |

- | | Yes | No |
|--|--------------------------|--------------------------|
| 44. Do you have a bulletin board (or tack board) in your workspace? | <input type="checkbox"/> | <input type="checkbox"/> |
| 45. If you have a bulletin board (or tack board) in your workspace, are things displayed on it? | <input type="checkbox"/> | <input type="checkbox"/> |
| 46. If things are displayed on the bulletin board (or tack board), are they mostly work related in content? | <input type="checkbox"/> | <input type="checkbox"/> |
| 47. Are displayed items on the chalkboard, marker board, flip charts, bulletin board or tack boards, arranged in some logical order? | <input type="checkbox"/> | <input type="checkbox"/> |
| 48. Are displayed items on the chalkboard, marker board, flip charts, bulletin board or tack boards, drawn in a sketchy rather than precise manner? | <input type="checkbox"/> | <input type="checkbox"/> |
| 49. My workspace is visually attractive. | <input type="checkbox"/> | <input type="checkbox"/> |
| 50. My workspace is designed to enhance my comfort. | <input type="checkbox"/> | <input type="checkbox"/> |
| 51. My workspace is designed to stimulate my imagination. | <input type="checkbox"/> | <input type="checkbox"/> |
| 52. My workspace is designed to be very convenient and efficient. | <input type="checkbox"/> | <input type="checkbox"/> |
| 53. My workspace is designed to impress people. | <input type="checkbox"/> | <input type="checkbox"/> |
| 54. My workspace is large enough for my work needs. | <input type="checkbox"/> | <input type="checkbox"/> |
| 55. My physical work environment is set up in a way that I can easily focus externally by interacting with people and things. | <input type="checkbox"/> | <input type="checkbox"/> |
| 56. My physical work environment is set up in a way that I can easily focus internally by reflecting on ideas and concepts. | <input type="checkbox"/> | <input type="checkbox"/> |
| 57. My physical work environment is designed to help me focus on the practical facts and immediate realities of my job. | <input type="checkbox"/> | <input type="checkbox"/> |
| 58. My physical work environment is designed to stimulate me to generate creative possibilities and find pattern among the information relevant to my job. | <input type="checkbox"/> | <input type="checkbox"/> |
| 59. My physical work environment is arranged in a manner that promotes my use of objectivity and logic in decision making. | <input type="checkbox"/> | <input type="checkbox"/> |
| 60. My physical work environment is arranged so that it promotes my use of personal values, aesthetics and beliefs in decision making. | <input type="checkbox"/> | <input type="checkbox"/> |
| 61. My physical work environment is arranged to promote my ability to gather information to help understand situations. | <input type="checkbox"/> | <input type="checkbox"/> |
| 62. My physical work environment is designed to promote my ability to bring closure to work projects/issues (i.e., to reach conclusions). | <input type="checkbox"/> | <input type="checkbox"/> |

PART 2. WORK SATISFACTION — Another important purpose of this study is to learn more about people's job satisfaction.

Instructions: The following statements are about the place in which you work. Decide which statements are true of your work environment and which are false. If you think the statement is *true* or *mostly true* of your work environment, make an X in the box labeled T (True). If you think the statement is *false* or *mostly false* of your work environment, make an X in the box labeled F (False).

	True	False
63. My work is really challenging.	<input type="checkbox"/>	<input type="checkbox"/>
64. I pay a lot of attention to getting my work done.	<input type="checkbox"/>	<input type="checkbox"/>
65. There is constant pressure to keep working.	<input type="checkbox"/>	<input type="checkbox"/>
66. Things are sometimes pretty disorganized.	<input type="checkbox"/>	<input type="checkbox"/>
67. It sometimes gets too hot.	<input type="checkbox"/>	<input type="checkbox"/>
68. The atmosphere is somewhat impersonal.	<input type="checkbox"/>	<input type="checkbox"/>
69. I have a great deal of freedom to do as I like.	<input type="checkbox"/>	<input type="checkbox"/>
70. There is a lot of time wasted because of inefficiencies.	<input type="checkbox"/>	<input type="checkbox"/>
71. There always seems to be an urgency about everything.	<input type="checkbox"/>	<input type="checkbox"/>
72. Activities are well planned.	<input type="checkbox"/>	<input type="checkbox"/>
73. I am always trying new and different ideas.	<input type="checkbox"/>	<input type="checkbox"/>
74. I rarely "put off things until tomorrow".	<input type="checkbox"/>	<input type="checkbox"/>
75. I cannot afford to relax.	<input type="checkbox"/>	<input type="checkbox"/>
76. My office would be one of the first to try out a new idea.	<input type="checkbox"/>	<input type="checkbox"/>
77. My work space is awfully crowded.	<input type="checkbox"/>	<input type="checkbox"/>
78. I can use my own initiative to do things.	<input type="checkbox"/>	<input type="checkbox"/>
79. I have a highly efficient, work-oriented space.	<input type="checkbox"/>	<input type="checkbox"/>
80. Variety and change are not particularly important to me.	<input type="checkbox"/>	<input type="checkbox"/>
81. My office has a stylish and modern appearance.	<input type="checkbox"/>	<input type="checkbox"/>
82. I put quite a lot of effort into what I do.	<input type="checkbox"/>	<input type="checkbox"/>
83. Getting a lot of work done is important to me.	<input type="checkbox"/>	<input type="checkbox"/>
84. There is no time pressure.	<input type="checkbox"/>	<input type="checkbox"/>
85. I have used the same methods for a long time.	<input type="checkbox"/>	<input type="checkbox"/>
86. My office could use some new interior design.	<input type="checkbox"/>	<input type="checkbox"/>
87. It is very hard to keep up with my work load.	<input type="checkbox"/>	<input type="checkbox"/>
88. I am often confused about exactly what I am supposed to do.	<input type="checkbox"/>	<input type="checkbox"/>
89. I rarely try new approaches to things.	<input type="checkbox"/>	<input type="checkbox"/>
90. I work very hard.	<input type="checkbox"/>	<input type="checkbox"/>
91. I can take it easy and still get my work done.	<input type="checkbox"/>	<input type="checkbox"/>
92. Things tend to stay just about the same.	<input type="checkbox"/>	<input type="checkbox"/>
93. It is rather drafty at times.	<input type="checkbox"/>	<input type="checkbox"/>
94. It's hard to get me to do any extra work.	<input type="checkbox"/>	<input type="checkbox"/>

	True	False
95. There are always deadlines to be met.	<input type="checkbox"/>	<input type="checkbox"/>
96. There is a fresh, novel atmosphere about the place.	<input type="checkbox"/>	<input type="checkbox"/>
97. My work is usually very interesting.	<input type="checkbox"/>	<input type="checkbox"/>
98. I have a tendency to come to work late.	<input type="checkbox"/>	<input type="checkbox"/>
99. I often have to work overtime to get my work done.	<input type="checkbox"/>	<input type="checkbox"/>
100. I encourage myself to be neat and orderly.	<input type="checkbox"/>	<input type="checkbox"/>
101. If I come in late, I can make it up by staying late.	<input type="checkbox"/>	<input type="checkbox"/>
102. Things always seem to be changing.	<input type="checkbox"/>	<input type="checkbox"/>
103. My rooms are well ventilated.	<input type="checkbox"/>	<input type="checkbox"/>
104. I emphasize the need to follow policies and regulations.	<input type="checkbox"/>	<input type="checkbox"/>
105. I am expected to follow set rules in doing my work.	<input type="checkbox"/>	<input type="checkbox"/>
106. I seem to take pride in my organization.	<input type="checkbox"/>	<input type="checkbox"/>
107. My workplace is quite a lively place.	<input type="checkbox"/>	<input type="checkbox"/>
108. Things tend to stay just about the same.	<input type="checkbox"/>	<input type="checkbox"/>
109. I generally do not try to be unique and different.	<input type="checkbox"/>	<input type="checkbox"/>
110. I emphasize "work before play" for myself.	<input type="checkbox"/>	<input type="checkbox"/>

PART 3. Finally — we would like to ask a few questions about yourself and your business to help interpret the results.

111. Which of the following best describes your current situation? (Check one)
- Principal owner/operator of a home based business.
 - Operator of a franchise as my home based business.
 - Employee working for a company as my home based business.
 - Other _____
112. What kind of business are you involved in? Check the category that best describes your business. If you check more than one category, please number your primary business (1) and your secondary business (2), etc. Describe your business(es) in the space provided.
- CONSULTING SERVICES: Such as insurance, interior design, accounting/taxes, real estate, etc.

 - SKILLED SERVICES: Such as computer, alterations, dressmaking, lawn care, child/adult care, catering, etc.

 - EDUCATIONAL SERVICES: Such as tutoring, music lessons, etc.

 - PRODUCT MANUFACTURING/FINE ARTS: Such as crafts, wood products, machinery, foods, etc.

 - PRODUCT SALES: Such as gift baskets, sporting goods, cosmetics, home products, etc.

AGRICULTURE/FORESTRY/FISHERIES: Such as herbs, you-pick-it, Christmas trees, fish farms, etc.

TOURISM/RECREATION: Such as bed & breakfast, amusement center, travel, etc.

OTHER, please describe _____

113. What is the average number of hours per week you work at your home-based business(es)?

- 8 or less 36-40
 9-20 OVER 40
 21-35

114. Does your business employ others? Yes No

If yes, indicate hours worked Hours Worked

Person 1 _____
Person 2 _____
Person 3 _____
Person 4 _____
Person 5 _____

115. How long have you worked from home?

- 12 Months or less 6 - 9 Years
 13 Months - 23 Months 10 Years or more
 2 - 5 Years Other _____

116. What range best describes the annual GROSS (before taxes) income generated from your home based business for 1995?

- Less than \$1,500 \$10,000 - \$19,999 \$50,000 - \$59,999
 \$1,500 - \$2,999 \$20,000 - \$29,999 \$60,000 - \$69,999
 \$3,000 - \$4,999 \$30,000 - \$39,999 \$70,000 - \$79,999
 \$5,000 - \$9,999 \$40,000 - \$49,999 \$80,000 +

117. Your gender: Male Female

118. Your age: _____

119. Your marital status (check one).

- Single
 Married
 Other _____

120. Your highest level of formal education (check one).

- Grade school or some high school Associate degree
 High school, graduate or GED Bachelor's degree
 Trade - vocational school Master's degree
 Some college Doctor's degree

121. Your race (check one)

- White (not Hispanic) Hispanic
 African American Asian American
 Pacific Islander American Indian, Eskimo or Aleut
 Other

APPENDIX C
COVER LETTER FOR INSTRUMENTS

OKLAHOMA STATE UNIVERSITY



College of Human Environmental Sciences
Office of the Associate Dean for Research
and Graduate Studies
108 Human Environmental Sciences
Stillwater, Oklahoma 74078-6113
405-744-5054

March 11, 1996

Dear Home Based Business Owner:

Home based businesses often are viewed as ideal working arrangements and a trend for the future. However, few studies have looked at an individual's job satisfaction. Job satisfaction may depend upon an individual's establishment in a type of work, a work situation, and a way of life that they find congenial and appropriate. The kind of person you are and how you prefer to interact with people, data, and ideas are components of a person's personality. The extent to which one will enjoy various careers and settings is determined to some degree by the type of person one is. The growing trend toward individuals operating home-based businesses creates a need to understand the interaction of environmental factors with personality and the impact on job satisfaction.

Your home based business is one of many in which people are being asked to give their opinion concerning job satisfaction with your home office environment. Your business was randomly selected from a national sample. In order for the results to truly be representative, it is important that both questionnaires be completed and returned.

You may be assured of complete confidentiality. One questionnaire has an identification number for mailing purposes only. This is so that we may check your name off of the mailing list when your questionnaires are returned. Your name will never be placed on the questionnaires.

The results of this research will be made available to home based business organizations and all interested parties. You may receive a summary of the results by writing "copy of results requested" on the back of the return envelope, and printing your name and address below it. Please do not put this information on either questionnaire.

I would be most happy to answer any questions you might have. Please write or call. The telephone number is (405) 744-5116.

Thank you for your assistance.

Sincerely,

Randall R. Russ, ASID
Graduate Research Associate

Margaret J. Weber, Ph.D.
Associate Dean for Research
and Graduate Studies



The Campaign for OSU

APPENDIX D

POSTCARD FOR SECOND MAILING

March 29, 1996

Last week a questionnaire seeking your opinion regarding your home office environment and job satisfaction was mailed to you. Your name was drawn in a random sample of home-based business owners across the country.

If you have already completed and returned the questionnaire to us please accept our thanks. If not, please do so today. Because it has been sent to only a small but representative sample of individuals who work at home, it is extremely important that yours be included in the results to accurately represent the opinions of home-based business owners.

If by chance you did not receive the questionnaire, or it was misplaced, please call right away, (405-744-5116) and I will send another one in the mail to you today.

Sincerely,



Randall R. Russ



APPENDIX E

COVER LETTER FOR THIRD MAILING

OKLAHOMA STATE UNIVERSITY



College of Human Environmental Sciences
Office of the Associate Dean for Research
and Graduate Studies
108 Human Environmental Sciences
Stillwater, Oklahoma 74078-6113
405-744-5054

April 17, 1996

Dear Home Based Business Owner:

About three weeks ago I wrote to you seeking your opinion on your home office environment and its impact on your job satisfaction. As of today we have not received your questionnaires.

This research was undertaken to determine opinions of home based businesses as ideal working arrangements and their relationship to job satisfaction. The growing trend toward individuals operating home-based businesses creates a need to understand the interaction of environmental factors with personality and the impact on job satisfaction.

I am writing to you again because of the significance each set of questionnaires has to the usefulness of this study. Your business was randomly selected from a national sample. In order for the results to truly be representative, it is important that both questionnaires be completed and returned by April 30, 1996.

Your cooperation is greatly appreciated.

Sincerely,

A handwritten signature in black ink, appearing to read 'Randall R. Russ'.

Randall R. Russ

P. S. A number of people have written to ask when results will be available. We hope to have them out sometime during the summer.





VITA

Randall Ray Russ

Candidate for the Degree of

Doctor of Philosophy

Thesis: PERSONALITY TYPE AND JOB SATISFACTION IN THE
HOME OFFICE ENVIRONMENT

Major Field: Human Environmental Sciences

Biographical:

Personal Data: Born in Salina, Kansas, April 24, 1959, the son of Ronald R. and Donna L. Russ.

Education: Graduated from Wichita West High School, Wichita, Kansas, May, 1977; received Bachelor of Science degree from Kansas State University, May, 1986; received Master of Science degree from Oklahoma State University, May, 1993; completed requirements for the Doctor of Philosophy degree at Oklahoma State University, July, 1996.

Professional Experience: Interior Designer, Gilliam Design Associates, 1986-1993; Interior Designer, self-employed, 1993-present; Research Associate, Research and Graduate Studies, 1993-1996; Graduate Teaching Associate, Department of Design, Housing, and Merchandising, 1995-1996.

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 02-02-96

IRB#: HE-96-030

Proposal Title: PERSONALITY TYPE AND JOB SATISFACTION IN THE HOME OFFICE ENVIRONMENT

Principal Investigator(s): Margaret J. Weber, Randall Russ

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

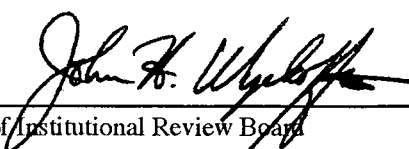
ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.

APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.

ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Signature:


Chair of Institutional Review Board

Date: February 9, 1996