

COMPARATIVE ANALYSIS OF CAREER ANCHORS OF
BLACK PROFESSIONALS AND MANAGERS
IN THE PRIVATE AND PUBLIC SECTORS

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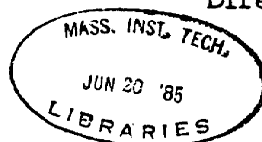
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ABSTRACT

This research provides a comparative analysis of the career anchors of black technical/professionals and managers in the private and public sectors of our economy.

With Dr. Edgar H. Schein's career anchor concept as a model, forty black technical/professionals and managers (twenty in each sector) were studied using individual interviews and a questionnaire to determine the self-perceived talents, motives, and values which function as a determinant of their individual career decisions and choices.

The population studied consisted of 29 black males and 11 black females ranging in age from 28 to 57 years. In the private sector, 45 percent of the individuals surveyed had a technical/functional anchor, 25 percent a managerial anchor, 10 percent an autonomy anchor, 10 percent a security anchor, and 10 percent a service anchor. In the public sector, 45 percent of the individuals surveyed had a technical/functional anchor, 20 percent a managerial anchor, 20 percent an autonomy anchor, 10 percent a security anchor, and 5 percent a service anchor. Based on these findings, it was concluded that there was no significant differences in career anchors between the two sectors.

As increasing numbers of blacks achieve managerial status within the public and private sectors of our economy, it is hoped that this work will further stimulate inquiry into the process of matching and managing career development of blacks to the needs of organizations.

Thesis Supervisor: Dr. Edgar H. Schein
Title: Professor of Management

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CHAPTER 1

INTRODUCTION

In recent years the focus of considerable research has been on the need to match and manage career development of individual human resources with organizational structure and strategy. In their book Strategy Implementation: The Role of Structure and Process, Galbraith and Nathanson indicate that, indeed, there is something to be gained through systematically matching structure, strategy, and people.^{1/} Such matching gives both human satisfaction and effective organizational performance.

Over the years, researchers have developed several models to describe career development behavior. These models have been useful in the development of career counseling concepts and practices as well as allowing management to better match individual and organizational needs.

Several of these models are summarized by Osipow in his book Theories of Career Development:

Trait-Factor Theories: This approach assumes that it is possible to match an individual's abilities and interests with vocational opportunities. Having accomplished this, the individual's vocational choice is then established.

Sociology and Career Choice: This approach assumes that societal circumstances beyond the control of the individual contribute significantly to career choices and what remains for the individual is to develop techniques to cope with his or her environment.

Vocational Choice and Personality: This approach assumes that people select their careers because they see the potential for the satisfaction of their needs. A corollary to this approach is that exposure to a job gradually modifies the personality characteristic of the employee.

Development/Self-Concept Theory: This approach assumes that (1) individuals develop more clearly defined self-concepts as they grow older; (2) they develop images of the occupational world which they compare with their self-image in trying to make career decisions; and (3) the adequacy of the eventual career decision is based on the similarity between an individual's self-concept and the vocational concept of the career eventually chosen.^{2/}

While considerable research and literature is currently available using white males as a sample universe to support the various career models described previously, much less is available regarding the career choices and motivations of black managers and professionals.

The authors, in performing this study, have as their main purpose the desire to extend the current body of knowledge regarding career choices of black professionals and managers. The work draws primarily on the "career anchor" concept suggested by E.H. Schein, in his book Career Dynamics: Matching Individual and Organizational Needs.^{3/} In this work, Schein proposes that new employees gradually gain self-knowledge through successive trials and job-related challenges, therefore developing a clearer occupational self-concept. He views these self-concepts as forming the basis for the individual's career anchor.

While building primarily on Schein's career anchor concept, this work also attempts to look at the impact of sociological factors as they may relate to or affect career choices of black managers and professionals. Osipow notes that supporters of the sociological approach to career choices suggest that the degree of freedom of occupational choice a person has may be far less than one might assume and that one's self-expectations are not independent of society's expectations.^{4/} Related to this is the sociologist's view that chance plays a major role in occupational decisions. For those black managers and professionals entering the workplace twenty or thirty years ago, career choices, to a large extent, may have been dictated by the organization.

The authors have chosen to compare the career development of black technical/professionals and managers employed in the public and

private sector. The individuals in the study are all currently employed in technical disciplines or have been at some stage of their career. A comparative analysis of similarities and differences in career development of blacks employed in the private and public sectors should provide useful insight to managers involved in human resource planning and management.

As increasing numbers of blacks achieve managerial and professional status within the public and private sectors of our economy, it is hoped that this work will further stimulate inquiry into the process of matching and managing career development of blacks with organizational needs.

FOOTNOTES TO CHAPTER 1

1. Jay R. Galbraith and Daniel A. Nathanson, Strategy Implementation: The Role of Structure and Process, (St. Paul, MN: West Publishing Company., 1978), p. 88.
2. Samuel H. Osipow, Theories of Career Development, (Englewood Cliffs, NJ: Prentice-Hall, Inc., 1983), pp. 9-11.
3. E.H. Schein, Career Dynamics: Matching Individual and Organizational Needs, (Reading, MA: Addison-Wesley Publishing Company, 1978), p. 1.
4. Osipow, op.cit., p. 225.

CHAPTER 2

CONCEPT OF CAREER ANCHORS

Introduction

Schein has put forth a concept that asserts that certain self-images formed through work experience function to guide and constrain the entire career.^{1/} These basic self-images are, in effect, "career anchors" that not only influence career choices but serve to shape what individuals are looking for in life. As Schein indicates, the career anchor concept tries to focus not only on what the person wants or thinks is important but also on what the individual feels he or she "is good at."

Schein is also quick to point out that it is important to recognize that the individual and the organization in which he works both exist within a society—a social structure, a culture, a value system which defines occupations, criteria for success, and the expected path through life.^{2/} He states further that the culture, through its value system, influences both the organization and the individual in terms of what is considered to be a good career, appropriate work, a good place to work, an appropriate level of ambition, what success is, etc.

While "developmental" types of career theories recognize the impact of societal conditions on career choices, they place increased emphasis on the influence of self-perceived abilities and values gained through actual work experience in determining individual career choices.

Concept Origin

Schein's concept evolved out of a study of 44 male graduates of the Sloan School at M.I.T. After extensive interviews of the 44 panelists prior to graduation in the early 1960s, Schein conducted a follow-up interview approximately 10-12 years after graduation. This second interview focused on the detailed job histories of each individual and the reasons for the choice or decisions made by the individual which determined his career direction. As Schein examined the reasons given for the actual decisions which were made, he discerned a clear pattern of responses. The career anchor concept emerged as a way by which Schein could explain the pattern of reasons given by the 44 panelists.

A career anchor is defined as that pattern of self-perceived talents, motives, and values that serves to guide, constrain, stabilize, and integrate the person's career. The anchor functions in the work life as a way of organizing experience, identifying one's area of contribution in the long run, generating criteria for kinds of work settings in which one wants to function, and identifying patterns

of ambition and criteria for success by which one will measure oneself. The career anchor can be viewed as that concern or value that the individual will not give up, if a choice has to be made.

Career Anchor Descriptions

Eight types of career anchors have thus far been identified.^{3/}

Technical/Functional Competence

People in this grouping are primarily motivated by the content and challenge of the actual work they perform. Their self-image is tied up with their feelings of competence in a particular area. While many people in this group achieve high-level managerial positions, it is the content of the work that gives them satisfaction, not the managerial process. In many cases, they will often change companies to remain in their area of expertise.

Managerial Competence

People in this category are primarily interested in the managerial process and perceive themselves as being able to analyze a variety of complex problems, having good interpersonal skills, and being able to control their emotions under the most difficult of organizational circumstances. They tend to be able to work and thrive in areas where there are high levels of uncertainty and conflict. Their fundamental objective is to achieve high-level positions within the organization as general managers.

Security

People in this category, for a variety of reasons, are primarily content to accept an organizational definition of their careers. They are usually interested in having a career that offers long-term organizational security and stability. This security is often based on financial benefits and rewards or geographical location.

Autonomy

These individuals are primarily concerned about their own sense of freedom and wish to be free of organizational restrictions or intrusions into their lifestyles. They seek or wish to work in organizations where they can pursue tasks at their own pace or according to their own priorities.

Entrepreneurial

People in this category appear to have a need to build or create something that is entirely their own product. While they often demonstrate traits characterized by other anchors, their overarching goal is to see the successful product of their own efforts.

Schein has suggested that additional anchors may exist and has proposed the following as candidates:

Service

Individuals in this grouping may be primarily concerned in working with others in a helping or supportive role or in dedication to a cause they view as worthwhile.

Pure Challenge

These individuals seek situations where they face perpetually more difficult challenges and problems. In contrast to the technically/functionally anchored person, their concern is not in the specific nature of the challenge but simply the challenge itself.

Lifestyle

People who are primarily concerned with the integration of their own personal needs with that of family and career. These individuals apparently want flexibility more than anything else but unlike the autonomy-oriented person, they are willing to work for an organization only if the right options are available. Their concern is more with organization attitude as it affects personal and family life.

FOOTNOTES TO CHAPTER 2

1. E.H. Schein, Career Dynamics: Matching Individual and Organizational Needs, (Reading, MA: Addison-Wesley Publishing Company, 1978), p. 1.
2. Ibid., p. 1.
3. E.H. Schein, "Individuals and Careers," J. Lorsch (ed.), Handbook of Organizational Behavior, Englewood Cliffs, NJ: Prentice-Hall, Inc., (forthcoming in 1985).

CHAPTER 3

METHODOLOGY

Introduction

The purpose of this chapter is to describe the methods and procedures used in gathering data to determine and compare the career anchors of black technical/professionals and managers in the public and private sector. The study sample consists of twenty individuals working in high technology industries in the private sector and twenty individuals working in various technology fields for the Department of the Air Force.

The primary data used in the study were obtained by personal interviews with each of the subjects. The interviews were structured using Schein's Career Anchor Interview Guide.^{1/} In addition, the Career Orientations Inventory developed jointly by T.J. DeLong and Schein was used as a basis for further analysis after the interviews were conducted.

To ensure consistency in the data gathering, a series of trial interviews were conducted with both authors present and, where necessary, procedures or questions were modified. Specific details of the methods used in each of the sectors is also described in this

chapter. Additional data were gathered through a search of the relevant literature on career development theories and models.

Private Sector

Sample Criteria

The individuals selected for study were chosen according to the following criteria:

1. The subjects should be black males or females with at least five years of full-time work experience and should have been employed for some part of their career as either a technical/professional or as a manager of technical/professional employees.
2. At least five of the subjects would be black females.
3. As many different companies would be represented in the sample as possible considering the time constraints of the research period.
4. Age guidelines were established to try to encompass a range of individuals whose work history would have begun prior to the civil rights movement and programs of the 1960s to the present.

Possible candidates were obtained from a variety of sources. In some cases, the Personnel Department of a company was contacted and apprised of the nature of the study and then asked to recommend possible candidates for study. In other cases, subjects were recommended to us by individuals who were aware of the study and felt the subjects would be of interest. From these sources a list of candidates was developed and the final candidates to be interviewed were selected by the criteria previously described.

Interview Process

The potential interview candidates were contacted by telephone and an interview date and time was established. At this point, candidates were given a broad outline of the purpose of the study and were asked to reserve at least two hours of time.

In most cases the interviews were conducted on company premises and typically lasted about 2-1/2 hours. Prior to the verbal interview, candidates were asked to complete the Career Orientations Inventory questionnaire. The results of the questionnaire for individuals employed in the private sector are given in Appendix C. All of the candidates indicated that the interview process was enjoyable and had caused them to reflect on their future career directions.

In addition to the information normally requested through the interview guidelines, as much detailed information regarding the candidates' early life and surroundings was obtained as time permitted. It was felt that this information would be useful in examining any sociological factors that might impact career anchor choices.

As soon as practical following the conclusion of the interview, the candidate's responses to the questions were recorded on a portable tape recorder. This was done to capture as much of the essence of the interview as possible while it was still fresh in mind.

Based on the interview summaries, the subjects were classified as to individual career anchors. The combination of interview summaries and literature is the basis for the findings and conclusions on individuals employed within the private sector.

Public Sector

Sample Criteria

The individuals studied were twenty black federal civil service employees of the U.S. Air Force. They were both staff and managerial employees who had a technical orientation. That is, they were either engineers or computer programmers or were managers who had come up through the engineering/computer organizations.

All subjects are employed by the U.S. Air Force at Wright-Patterson Air Force Base. They work for one of the major organizations of the Air Force Systems Command's Aeronautical Systems Division or the Air Force Logistics Command. The subjects were chosen for the study by researching the major organizations and by using the personal knowledge of the author of the organizations and its people. From this research a candidate list of fifty individuals was prepared. To be a candidate for the study, an individual must have had at least five years' experience and be a staff or managerial technical/professional employee.

The desired matrix of individuals to be included in the study consisted of at least five individuals near 30 years old, at least five individuals who were in their 40's, and at least five individuals who were over 50 years old. Also, at least five had to be female. The age guidelines were chosen to include blacks who had begun their careers prior to the civil rights movement and programs of the 1960s; those who were beginning their careers at that time; and a younger group who began their careers after the social programs of the 1960s and after the Vietnam era.

Twenty individuals were selected from the candidate list to fill the matrix. Since the list of potential candidates included two married couples who met all of the other requirements, it was decided to include them in the sample. One couple was near 30 years old, and the other couple was over 50.

With the exception of the dual career couples, no criteria other than age and sex was used to select the participants from the candidate list. The organization, time in the organization, civil service grade, current position, educational level, when and where they began their civil service career were not factors in the selection of the final twenty from the original list of fifty.

Interview Process

The candidates were contacted by telephone and appointments made to conduct the interviews. It was hoped that the interviews would

take approximately one hour. As it turned out, however, the average interview lasted approximately 2-1/4 hours. The shortest was about one hour and twenty minutes, and the longest was over three hours. It was found that all the individuals enjoyed the experience and were more than willing to share information on their background, education, and career choices. In most cases, the interviews were conducted "away from the office." It was felt that this neutral territory might encourage the individual to be more open and candid with his comments. However, as it turned out, no difference could be distinguished in the information gathered in the office as opposed to away from the office. The only obvious difference was that the in-office interviews were shorter and more rushed because of the time constraints imposed by conducting the interviews within the appointed time.

In order not to bias the data, the subjects were not given the specifics of what constituted the various career anchor categories. They were only told what a career anchor was "...that which one would not give up...". At the conclusion of the interview, the subjects were given a copy of the Self-Scoring Career Orientation Inventory questionnaire. The results of the questionnaire for public sector employees is given in Appendix C.

FOOTNOTES TO CHAPTER 3

1. E.H. Schein, Career Dynamics: Matching Individual and Organizational Needs, (Reading, MA: Addison-Wesley Publishing Company, 1978), p. 257.

CHAPTER 4

STUDY POPULATION

Introduction

This chapter describes the significant demographics of the population of forty individuals studied in this report. The population consisted of forty black technical/professionals and managers, twenty each from the public and private sectors, ranging in age from 28 to 57 years, with an average age of 40.5 years.

The demographics were studied first from the perspective of each sector. The sectors were then combined to note any significant characteristics that might apply to the total population but not readily seen in the individual sectors. The first section of this chapter is, therefore, devoted to a discussion of the differences and similarities between and among the two sectors.

The final section of this chapter is devoted to a more general discussion of significant characteristics of the study population as a whole.

Public/Private Sector Demographics

To facilitate comparisons between and among the sample population in the respective sectors, they were classified according to the following occupational categories:

- (1) Technical/Professional--those individuals currently performing technical work without responsibility for the work of others.
- (2) Technical Management--those individuals working in a technical functional area having responsibility for the work of others.
- (3) Non-Technical Management--those individuals working in a non-technical functional area having responsibility for the work of others.
- (4) General Management--those individuals having responsibility for the work of others in more than one functional or technical area.

Shown in Figure 4.1 is a breakdown of individuals in both sectors as a function of age and occupation. It is interesting to note that most of the older population (41+) in the private sector has remained in the technical areas. However, the younger individuals, all of whom started their careers in a technical discipline, have migrated to non-technical management. In addition, considerably more than half of the sample in the private sector are now employed as managers in various functional or technical areas.

In the public sector it is noted that the majority of managerial positions are filled by people over 40 years old. In fact, half of

Figure 4.1

Age versus Occupation

AGE	<u>O C C U P A T I O N</u>			
	<u>Tech/Prof</u>	<u>Tech/Mgr.</u>	<u>Non-Tech/Mgr</u>	<u>Gen Mgmt.</u>
30 & under	XXXXXX			
31-40	OOO XX	OO	OOO	O X
41-50	OOO XXX	OOOO XX		OO X
51+	O XX		XXX	

O = Individual Private Sector
 X = Individual Public Sector

those studied in managerial positions in the public sector are over the age of 50.

Figure 4.2 shows an analysis of formal education versus the current occupation. Except for the category of general management where the population size is too small to draw a meaningful conclusion, there appears to be only a slightly larger number of people in management in the private sector with advanced degrees than without. It is interesting to note that two-thirds of the people with advanced degrees in the private sector have continued their careers in either technical or technical management disciplines.

Of significance is the educational level of the individuals in our sample employed in the public sector. Approximately one-half of the twenty people studied in the public sector have advanced degrees and of those employed in managerial positions, again, approximately half have advanced degrees.

Figure 4.2

Education versus Occupation

EDUCATION	<u>O C C U P A T I O N</u>			
	<u>Tech/Prof</u>	<u>Tech/Mgr.</u>	<u>Non-Tech/Mgr</u>	<u>Gen Mgmt.</u>
Some College	O	O	O	
Bachelors Degree	O O O O O X X X X X X X X	O X X X X	O	O
Masters Degree	O X X X X X	O O O X	O	O O X X
Doctoral Degree	O	O		

O = Individual Private Sector
X = Individual Public Sector

No significant difference is found in the formal education levels of the sectors with the exception of three individuals in the sample population from the private sector not having college degrees. The level of formal education of the parents of these individuals is shown in Figure 4.3. Again, no significant difference is found between the two sectors.

Figure 4.3

Educational Level of Parents

	Sec School	Hi Sch Degree	F A T H E R S			Doct Degree
			Some College	Bach Degree	Mast Degree	
<u>MOTHERS</u>						
Sec School	XXXXXXXX OOO	X O				O
Hi Sch Degree	XXX OOOO	X	X OO	O		
Some College	XX OO	X	O	X		
Bach Degree		O				
Mast Degree	O	X	X	OO	X	
Doct Degree				O		

O = Individual Private Sector
X = Individual Public Sector

Overall Population Demographics

After reviewing the separate sectors for significant demographic characteristics, the universes were combined to see if any pattern not found in a single sector might appear with the sectors combined.

In looking at individuals over the age of 30 versus the time they have been with their present employer, it was noted that 40 percent of the individuals in the private sector have been with their current employer ten years or more compared with about 26 percent in the

public sector. If we compare groups in the sectors over the age of 40, no significant difference is noted.

The vast majority of individuals in our sample spent their childhood years in the northeastern, southeastern, and mid-western areas of the United States. Regarding their childhood years, individuals in the private sector were essentially split between the northeast and southeast and individuals in the public sector were split essentially between the mid-west and the southeast. Over 80 percent of the people from the private sector were reared in urban environments compared with approximately 50 percent in the public sector.

We note that approximately 1.5 percent of the engineers and computer specialists employed in the U.S. in 1970 were black.^{1/} This is about the time when the majority of our sample would have been entering the workforce. Out of approximately 20,000 black engineers, about one-third were employed by the government, with about 65 percent employed at the federal level. This can be contrasted with the engineering population in general in the U.S. where only about 16 percent were employed by government agencies. While neither parental education, employment stability, nor other factors reviewed in this study were significantly different for either sector, it is interesting to note that the public sector attracted a significant share of the black engineers employed in the United States in 1970.

FOOTNOTES TO CHAPTER 4

1. U.S. Bureau of the Census, Census of Population 1970, Subject Reports, Final Report PC(2)-7A, Occupational Characteristics, p.1.

CHAPTER 5

FINDINGS

An immense amount of data was collected on the forty black managers and professionals in this study. The comparisons that could be made between these groups and the general population are countless. Some of our data could be the source of further studies not dealing specifically with the concepts of career anchors.

The primary thrust of this work was to perform a comparative analysis of career anchors of black professionals and managers in the public and private sectors. In order to perform the comparison, the two sectors were analyzed separately, then comparisons were made where applicable.

The findings from each sector are reported separately in order that a user of this information may direct his/her attention to the area of interest. Although this method of presentation does result in a small amount of repetition, the authors feel it will be most useful to the reader. The comparative findings between the two sectors and results are presented at the end of this chapter.

Typical cases and generic characteristics of the individuals in each career anchor category are presented in Appendices A and B.

PUBLIC SECTOR

This section presents the results of the career anchor studies for the twenty public sector technical managers and professionals. The individuals range in age from 28 to 57, with an average age of 41.3 years. There were fourteen males and six females in the sample. Eleven of the fourteen males and four of the six females are married. All participants had at least a Bachelor of Science degree. Eight participants had a Masters degree. Eleven of the twenty participants earned their bachelors degree at historically black colleges.

Most of the findings are summarized in the charts on the next few pages. The charts are self-explanatory. However, a few highlights are offered to add some insight to the data. Figure 5.1 shows the career anchors by sex and age, identified for the public sector individuals in the study. Nearly half of the individuals had technical/functional anchors. The largest percentage of both men and women are in the technical/functional category. The average participant in the technical/functional, service, and autonomy categories is younger than the overall average age of the sample. The managerial and security anchored individuals are, as a group, older than the sample average age. It is interesting to note that the security individuals are the oldest.

Figure 5.1

Career Anchors--Public Sector

ANCHOR	MALE		FEMALE		TOTAL	
	Number	Percent	Number	Percent	Number	Percent
T/F	5	36	4	67	9	45
MGR	4	29	0	0	4	20
AUT	2	14	2	33	4	20
SEC	2	14	0	0	2	10
SERV	1	7	0	0	1	5
Total	14	100	6	100	20	100

AGE

	30 or under	31-40	41-50	Over 50	Average
T/F	5		3	1	37.7
MGR		1	2	1	47.0
AUT		2	2		40.2
SEC			1	1	53.5
SERV	1				30.0

Overall average 41.3

Figure 5.2 shows the educational level attained and the racial nature of the undergraduate college or university that the participants attended. All of the individuals have bachelors degrees and 40 percent have masters degrees. Over half of the participants received their bachelors degree from a historically black college or university.

The mobility of the public sector participants is demonstrated in Figure 5.3. Of interest is the number of years that the individuals have worked in their present organization. As might be expected, the security anchored individuals have been with their organizations the longest, the average being 17.5 years, while the autonomy anchored individuals have been with their organizations the shortest time, the average being 5.2 years. Also depicted are the number of different employers the individuals have had since beginning their careers. It should be noted that these data do not include time spent in military service. The bottom of Figure 5.3 shows all the major job changes the individual has made during his/her career. These data include changes within an organization as well as moves outside the organization. The managerial and autonomy anchored individuals have made the most changes.

Figure 5.2

Educational Level and Undergraduate School Attended—
Public Sector

ANCHOR	<u>BACHELORS</u>		<u>MASTERS</u>		<u>TOTAL</u>
	Number	Percent	Number	Percent	
T/F	7	78	2	22	9
MGR	1	25	3	75	4
AUT	1	25	3	75	4
SEC	2	100	0	0	2
SERV	1	100	0	0	1
ALL ANCHORS	12	60	8	40	20

UNDERGRADUATE SCHOOL ATTENDED

ANCHOR	<u>HISTORICALLY BLACK</u>		<u>PREDOMINANTLY WHITE</u>		<u>TOTAL</u>
	Number	Percent	Number	Percent	
T/F	4	44	5	56	9
MGR	3	75	1	25	4
AUT	2	50	2	50	4
SEC	2	100	0	0	2
SERV	0	0	1	100	1
ALL ANCHORS	11	55	9	45	20

Figure 5.3

Mobility--Public Sector

ANCHOR	NUMBER OF YEARS IN PRESENT ORGANIZATION					AVERAGE
	0-5	6-10	11-15	16-20	>20	
T/F	4	4			1	8.6
MGR	2	2				6.5
AUT	3		1			5.3
SEC			1		1	17.5
SER		1				7.0

Overall average 8.3

	NUMBER OF DIFFERENT EMPLOYERS				AVERAGE
	1-2	3-4	5-6	>7	
T/F	7	2			1.7
MGR	3	1			2.3
AUT	2		2		3.5
SEC	2				1.5
SER	1				1.0

Overall average 2.1

	NUMBER OF DIFFERENT SIGNIFICANT POSITIONS, ALL EMPLOYERS				AVERAGE
	1-5	6-10	11-15	>15	
T/F	6	3			4.2
MGR	1	1	2		8.8
AUT	2	2			7.3
SEC	1	1			5.0
SER	1				3.0

Overall average 4.4

Fifteen of the participants are married. Three are divorced and two have never been married. Figure 5.4 shows that the educational level of the spouses is also high. Eleven of the spouses have a bachelors degree or higher. Fourteen of the fifteen work outside of the home. Thirteen were described as having a career by the interviewed spouse. It should be noted that the sample contains two dual career couples where both parties were included in the interview process.

The educational level and occupation of the parents of the participants are shown in Figure 5.5. The data shows that the mothers as a group were better educated than the fathers. Six of the mothers graduated from college while only two of the fathers were college graduates, albeit one father had a Ph.D. It is also noted that eleven of the twenty mothers held jobs outside of the home. If the four farm families are not included, eleven of the sixteen worked outside of the home, supporting the fact that the working black female is not a new phenomena.

Figure 5.4

Spouse Education/Career--Public Sector

ANCHOR	TOTAL MARRIED	DUAL CAREER MARRIAGE	SPOUSE EDUCATIONAL LEVEL				
			HIGH SCHOOL	ASSOC	BACHELOR	MASTER	PH.D
T/F	7	6	2	1	3	1	
MGR	4	3	1		2	1	
AUT	1	1				1	
SEC	2	2			2		
SERV	1	1					1
TOTAL	15	13	3	1	7	4	

4 of 6 females in sample are married

11 of 14 males in sample are married

13 of 15 spouses have a career as opposed to "just working."

Figure 5.5

Parents' Educational Level and Occupation--
Public Sector

EDUCATION	A N C H O R					TOTAL
	T/F	MGR	AUT	SEC	SERV	
Primary School	2/2	2/2	2/1	1/1		7/6
Secondary School	2/1	1/0	1/1		1/0	5/2
High School Grad	2/3	1/0	0/1	1/1		4/5
Some College	2/1					2/1
Assoc/Tech Degree	0/1	0/1			0/1	0/3
Bachelors	1/0					1/0
Masters	0/1	0/1	0/1			0/3
Ph.D			1/0			1/0
<hr/>						
<u>OCCUPATION</u>						
White Collar	3/4	0/2	1/1			4/7
Blue Collar	2/0	3/0		1/0	1/0	7/0
Domestic Worker	0/1	0/1		1/1	0/1	1/4
Farmer	1/0	1/0	2/0			4/0
Self-Employed	2/0		1/0			3/0
Military	1/0					1/0
Homemaker	0/4	0/1	0/3	0/1		0/9

Code: Father/Mother

The number of years the male participants served in the military is shown in Figure 5.6. Of the fourteen males in the sample, eleven served in the military for two or more years. The majority of these served as officers in the U.S. Air Force. Military personnel are eligible to retire after twenty years of service. One technical/functional individual completed a career in the military where he received his bachelors degree in engineering. After retiring from the military, he began a career in civil service, working in the same area of expertise.

Figure 5.6

Number of Years in Military

ANCHOR	Y E A R S				
	0	2-4	5-10	10-20	>20
T/F	2	2			1
MGR	1	2	1		
AUT		1	1		
SEC		2			
SERV		1			
Total	3	8	2	0	1

The largest percentage of the sample came from the southeastern part of the U.S. as shown by Figure 5.7. Seventy-five percent of the individuals with a managerial anchor came from a rural area of the southeast. The only managerial anchor not from this area came from an urban area in New England. Interestingly, all of the autonomy anchored individuals came from the southeast. It is also noted that only one of the technical/functional anchors is from the southeast, while all of the individuals in the study who were from the midwest or southwest, except one, turned out to have technical/functional anchors.

Figure 5.7

Childhood Location--Public Sector

REGION	A N C H O R					TOTAL
	T/F	MGR	AUT	SEC	SERV	
Urban	6	1	1	2	1	11
Rural	3	3	3			9
Northeast	1	1				2
Southeast	1	3	4	1	1	10
Midwest	5			1		6
Southwest	2					2

Summary of Findings and Observations--Public Sector

Forty-five percent of the black managers and professional civil service employees in this study had technical/functional career anchors. The highest percentage of both males and females in the study were in this category. The data indicates that the technical/functional anchored employees are generally younger than employees in other categories.

There was a difference in the distribution of males and females in the various anchor categories. Males were found in technical/functional, managerial, autonomy, security, and service career anchor categories. Females were found only in the technical/functional and autonomy anchor categories. It must be noted, however, that the sample size of females was small, six females versus fourteen males. In spite of this apparent difference in distribution, when we examine the interview responses, look at secondary anchors, and review the results of the Self-Scoring Career Anchors Orientation scores, we find virtually no difference between male/female responses (see Appendix C).

It is also possible that since widespread acceptance of women in the engineering/computing field is a relatively new phenomena, the females in the technical field were more firmly oriented in engineering and mathematics at the time their initial education and career choices were being made. Those less technically oriented or those interested in management may have made other choices.

The results of this study are in sharp contrast with results published by Weaver^{1/} in his investigation of career anchors of civil servants in another government R&D organization. The specific racial breakdown of his sample is not known. However, they were chosen from the general population. The Weaver study indicated that 75% of his population was anchored in security/stability. Our study indicates

that only 10% of the black managers and professionals are so anchored. A lack of security anchored individuals was also found in a study by Morton.^{2/} In his study of twenty Air Force former Sloan Fellows, he found no security anchors. Most of Morton's sample also worked for the Air Force at Wright-Patterson Air Force Base. Fifty-five percent of Morton's sample were anchored in managerial, 20% were technical/functional, and the rest were autonomy and service. Although the distribution of the Air Force Sloans was different, the same four anchor categories were found in both studies.

A key issue that must be addressed is whether the civil rights programs and social changes of the 1960s has had an impact on career development of blacks. It is observed that virtually all of the younger employees in this sample are anchored in the technical/functional category. Many stated that they were greatly influenced to become engineers or computer specialists as a result of the moon shot and space program. They are civil servants because they choose to work for the Air Force. This is in contrast with the older employees who stated in their interviews that the government was the only job offer they received when they graduated from college. Also, many of

the mid-age participants who were graduates of historically black colleges reported that the government was the only engineering position they were offered after graduation. This is supported by the fact that approximately one-third of all black engineers and computer specialists were employed by the government in 1970.^{3/}

It may be asked why these employees continue to work in government service when "opportunities" now exist in the private sector? As was pointed out, some came because at the time it was the only job offer they received after college. They appear to stay, however, for very different reasons. They stay for the very same reasons that the younger employees choose careers in civil service. Certain points appeared repeatedly in the interviews when the participants were asked the reasons for their career choices. The reasons they gave for their choice centered primarily around the following: responsibility, experience, authority, and control. Typical comments on the subject are as follows:

"...nowhere else could I get this much responsibility at an early age..."

"...I did not want to do detailed analytical work... I like the big picture."

"...I like the influence and responsibility."

"...I can contribute more by working on this program as a member of civil service."

"...working on aircraft fulfills my life dream..."

"...I did not want to be a quota filler so I stayed here."

"...I was looking for something that encompassed broad design responsibility..."

"...I have more control of my dual career situation working for civil service."

"I left to go to work for industry, but I came back when I realized that it would take years to get back to an equivalent responsible position in industry that I had left in government."

"...I have control and authority to make decisions, not just participate."

"I wanted to get a broader experience base and felt I could get this experience better by working for the government..."

"...I like to bring it all together..."

It was interesting that very few of the participants mentioned security as a reason for their career choice. What effect did service in the military have on the choice to work at this installation? Five of the fourteen males were first exposed to Wright-Patterson as a result of their military service. However, only one of the five is less than 40 years old. The observation here is that although it may have had some effect in the past, it is not a predominant factor at the present.

What does this all mean for the public sector? A number of key points immediately come into focus. Many of the younger employees have technical/functional anchors. In order to best utilize these employees, the organization must continue to provide challenging technical assignments. The dual chain in career progression that now exists should be maintained or expanded.

The managerial anchored individuals expressed some dissatisfaction with the present policy that awards the very top-level management positions to uniformed military personnel. This supports an observation made in Morton's study.^{4/} He found that as a group the managerial anchored former Sloans did not fare as well in promotions as other anchor groups. He also cited the policy of requiring major programs to be managed by military officers as a factor in their dissatisfaction.

PRIVATE SECTOR

This section presents the results of the career anchor studies for the twenty black professionals and managers in the private sector. Of the twenty candidates, fifteen were black males and five were black females. The males ranged in age from 31 to 54 and the females from 31 to 42. The average age of the participants is 39.6 years. All of the candidates had attended college with about half of the candidates having a degree beyond the bachelors level. Five of the candidates earned their degrees at a historically black college.

Most of the data are presented in the charts on the following pages. The charts are self-explanatory. A few comments are offered here to highlight some of the more significant points depicted.

Figure 5.8 shows the career anchor breakdown by age and sex for the subjects interviewed. Forty-five percent of the individuals had technical/functional anchors. The largest percentage of both men and women are in the technical/functional category with managerial being the next largest segment. The technical/functional and service categories have the highest average age.

The educational level attained and the racial nature of the undergraduate college that the participants attended are shown in Figure 5.9. All of the subjects who attended historically black colleges have degrees. It is interesting that most of the

participants who attended predominantly white colleges are anchored in technical/functional, autonomy, and security.

Mobility of the private sector individuals is demonstrated in Figure 5.10. As anticipated, the security anchored individuals have the longest service with their organizations. The least amount of service in the present organization is shown by individuals anchored in autonomy. Also shown are the number of different employers the subjects have had since the beginning of their careers, and the number of significant positions they have held. In terms of numbers of employers and numbers of different assignments, the autonomy anchored individuals show the highest numbers.

Figure 5.8

Career Anchors--Private Sector

ANCHOR	MALE		FEMALE		TOTAL	
	Number	Percent	Number	Percent	Number	Percent
T/F	6	40	3	60	9	45
MGR	4	27	1	20	5	25
AUT	1	7	1	20	2	10
SEC	2	13	0	0	2	10
SERV	2	13	0	0	2	10
Total	15	100	5	100	20	100

AGE

	30 or under	31-40	41-50	Over 50	Average
T/F		4	4	1	40.8
MGR		3	2		37.2
AUT		1	1		36.5
SEC		2			37.5
SERV			2		45.5

Overall average 39.6

Figure 5.9

Educational Level and Undergraduate School Attended--
Private Sector

ANCHOR	COLLEGE ATTENDANCE		BACHELORS DEGREE		MASTERS DEGREE		DOCTORATE DEGREE		TOTAL
	No.	%	No.	%	No.	%	No.	%	
T/F	1	11	4	44	4	44	0	0	9
MGR	1	20	1	20	3	60	0	0	5
AUT	1	50	1	50	0	0	0	0	2
SEC	0	0	1	50	0	0	1	50	2
SERV	0	0	1	50	0	0	1	50	2
ALL ANCHORS	3	15	8	40	7	35	2	10	20

UNDERGRADUATE SCHOOL ATTENDED

ANCHOR	<u>HISTORICALLY BLACK</u>		<u>PREDOMINANTLY WHITE</u>		<u>TOTAL</u>
	Number	Percent	Number	Percent	
T/F	1	11	8	89	9
MGR	3	60	2	40	5
AUT	0	0	2	100	2
SEC	0	0	2	100	2
SERV	1	50	1	50	2
ALL ANCHORS	5	25	15	75	20

Figure 5.10

Mobility--Private Sector

ANCHOR	NUMBER OF YEARS IN PRESENT ORGANIZATION					AVERAGE
	0-5	6-10	11-15	16-20	>20	
T/F	3	3	2	1		8.3
MGR	3		2			7.8
AUT	2					3.5
SEC			2			13.0
SER	1			1		9.5

Overall average 8.3

	NUMBER OF DIFFERENCE EMPLOYERS				AVERAGE
	1-2	3-4	5-6	>7	
T/F	3	3	2	1	3.9
MGR	3	1	1		3.0
AUT				2	7.5
SEC	2				1.5
SER	1		1		3.5

Overall average 3.8

	NUMBER OF DIFFERENT SIGNIFICANT POSITIONS, ALL EMPLOYERS				AVERAGE
	1-5	6-10	11-15	>15	
T/F	1	5	2	1	9.2
MGR	1	3	1		8.4
AUT			2		11.3
SEC	2				4.5
SER		2			9.0

Overall average 8.7

Figure 5.11 shows the educational level of the spouses. Two out of the five females are married and twelve out of the fifteen males are married. All but one of the spouses attended college, with a little more than half having attained at least a bachelors degree.

Of interest was the education level and occupation of the parents. Figure 5.12 shows the education and occupation of both mother and father of the subjects by anchor. As a group, the mothers appear to be slightly better educated than the fathers. Fifteen of the mothers had completed at least a high school education while twelve of the fathers had completed high school. A very high percentage of the individuals found to be in the technical/functional and security anchors had parents who were high school or college graduates.

Figure 5.11

Educational Level of Spouse--Private Sector

ANCHOR	TOTAL MARRIED	HIGH SCHOOL	SPOUSE EDUCATIONAL LEVEL				
			SOME COLLEGE	ASSOC	BACHELOR	MASTER	PH.D
T/F	8	1	3		2	1	1
MGR	3		1		1	1	
AJT	1		1				
SEC	1					1	
SERV	1				1		
TOTAL	14	1	5		4	3	1

2 of 5 females, and 12 of 15 males in the sample are married

Figure 5.12

Parents' Educational Level and Occupation--
Private Sector

<u>EDUCATION</u>	A N C H O R					<u>TOTAL</u>
	<u>T/F</u>	<u>MGR</u>	<u>AUT</u>	<u>SEC</u>	<u>SFRV</u>	
Primary School		2/0			1/0	3/0
Secondary School	2/1	3/3	0/1			5/5
High School Grad	3/5	0/1	1/0	0/1		4/7
Some College	1/0			1/0	1/2	3/2
Assoc/Tech Degree	0/1					0/1
Bachelors	2/0		0/1	1/0		3/1
Masters	1/1	0/1	1/0	0/1		2/3
Ph.D	0/1					0/1
<hr/>						
<u>OCCUPATION</u>						
White Collar	5/6	1/1	1/1	1/1	0/2	8/11
Blue Collar	3/0	3/0	1/0	1/0	1/0	9/0
Domestic Worker	0/1	0/1				0/2
Farmer		1/0				1/0
Self-Employed	1/0				1/0	2/0
Military						0/0
Homemaker	0/2	0/3	0/1	0/1		0/7

Code: Father/Mother

By far the largest percentage of this sample came from urban areas with the largest portion coming from the northeastern part of the country. It is interesting that all of the technical/functional individuals came from urban areas, most from the northeast. Most of the managerial anchored individuals come from the southeast or southwest. For purposes of this study, Texas and Oklahoma were considered southwest.

Figure 5.13

Childhood Location--Private Sector

REGION	A N C H O R					TOTAL
	T/F	MGR	AUT	SEC	SERV	
Urban	9	3	2	2	1	17
Rural		2			1	3
Northeast	6	1		1		8
Southeast	1	3		1	2	7
Midwest	1		1			2
Southwest		1				1
West Coast	1					1
West Indies			1			1

Summary of Findings and Observations--Private Sector

We have shown the results of a study of career anchors of twenty black technical/professionals and managers employed in the private sector of our economy. The sample consisted of fifteen males and five females ranging in age from 31 to 54. These individuals work for twelve different companies all engaged in competitive global markets with high technology products and processes common to all.

The analysis shows that 45 percent had a technical/functional anchor, 25 percent had a managerial anchor, and the remaining 30 percent were evenly distributed across security, autonomy, and service anchors. Of the five females in the sample, three were in the technical/functional category and one each in autonomy and managerial. While our sample of females is too small to draw general conclusions, it is interesting to note that none were anchored in security or service. On average, the youngest individuals were found in the autonomy and managerial categories. This may imply that younger blacks now feel free to be more independent of control by large organizations and more readily aspire to positions of greater responsibility and authority.

Of interest is the fact that all but one of the individuals in the technical/functional anchor category attended predominantly white colleges or universities. This is in contrast to three out of five managerially anchored individuals having attended historically black

colleges or universities. When coupled with the fact that the individuals appearing to have the greatest line responsibility within the study sample (general manager) all attended historically black colleges and universities, it makes this an item worth further study for large organizations concerned about their recruiting procedures.

The impact of the social changes of the 1960s and the increased attention focused by large organizations on career development of blacks in the 1970s is unclear. Even though the distribution of career anchors across the study group is not too dissimilar (especially managerial anchors) from other studies, one quickly notes the absence of the entrepreneurially anchored individual.

Three items were mentioned often enough by most of the candidates interviewed to warrant inclusion in this summary:

- (1) I chose to enter a technical field because the results of my work would be quantitative and my work and I would be less vulnerable to subjective criticism.
- (2) Most, if not all, of the subjects interviewed discussed the positive impact that role models had played either in their initial choice of college, functional disciplines, or career in general.
- (3) Most felt a desire to share their experiences and act in a supportive role to younger blacks entering the workforce.

In conclusion, career anchors of black technical/professionals and managers in the private sector are not significantly different than those of previous studies of predominantly white groups.

COMPARISON OF PUBLIC AND PRIVATE SECTORS

The results indicate that the career anchor concept can be applied to black managers and professional/technical employees in both the public and private sector. In most cases, a clear career anchor was easily identifiable for the individuals interviewed.

The distribution of career anchors was very similar in the two groups. The largest number of individuals in both groups were found to have technical/functional anchors. Forty-five percent of both groups were found to have the technical/functional anchor. An overwhelming number of females, 60 percent of the private sector, and 67 percent of the public sector, were found to be in the technical/functional anchor categories. As discussed earlier in this study, the concentration may be due to the fact that females who decide to enter engineering or other highly technical fields may be already more firmly "anchored" in these areas when the initial decision is made to pursue this type of career.

In both the public and private sectors approximately 40 percent of the sample held advanced degrees. One interesting observation was that 55 percent of the public sector sample obtained their bachelors degree from a historically black college or university, while only 25 percent of the private sector received their undergraduate education at one of these universities. This is perhaps influenced by the

geographical location of the two samples. The public sector sample came from Wright-Patterson Air Force Base, which is located in southwestern Ohio and closer to many of the historically black institutions than the New England area where the private sector sample was located. Or it could be due to the fact that the government more heavily recruits from historically black institutions than does the private sector. This is supported by the observation that many of the public sector individuals from these institutions reported that a position with the Air Force at Wright Patterson was the only offer they received when they graduated from college.

Another interesting, though perhaps not surprising observation is the number of years that individuals with different career anchors have been with their present employer. The distribution is similar for both the public and private sectors. Individuals anchored in autonomy have been with their organizations the shortest time while individuals anchored in security have been with their organizations the longest time. Overall the individuals in the public sector have had fewer different employers, 2.1, than those in the private sector, 2.8; and fewer changes in significant positions, 4.4 versus 8.7 on average for the private sector.

When we look at the parents of the sample population, we find that in both sectors the mothers were slightly better educated than the fathers. More graduated from high school and college than did fathers. Also in both sectors, over 65 percent of the mothers worked

outside of the home. Approximately 90% of the individuals were reared in homes where both parents were present.

The samples were then combined to try to ascertain whether the career anchors relate systematically to any other variables. The data for the combined samples is shown in the following chart:

Figure 5.14

Career Anchors--Entire Sample

ANCHOR	M A L E		F E M A L E		T O T A L	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
T/F	11	38	7	64	18	45
MGR	8	28	1	9	9	23
AUT	3	10	3	27	6	15
SEC	4	14	0	0	4	10
SERV	3	10	0	0	3	7
TOTAL	29	100	11	100	40	100

AGE

	30 or under	31-40	41-50	Over 50	Average
T/F	5	4	7	2	39.2
MGR		4	4	1	41.6
AUT		3	3		39.0
SEC		2	1	1	45.5
SERV	1		2		40.3

Overall Average 40.5

Figure 5.14 shows that 45% of the individuals had technical/functional career anchors, while 23% had managerial career anchors. Most of the females (64%) had technical/functional career anchors while only 9% had managerial anchors. None of the females were found to have security or service career anchors.

It is also noted that there is very little difference in the age distributions, with the average age for each anchor category being very near the overall average of 40.5. The biggest difference is in the security career anchor category. Here the average age is 5 years higher than the overall average.

Figure 5.15 shows combined educational level and origin. Here we see that a higher percentage of those anchored in managerial have masters degrees, 75 percent, more than any other anchor group. It also shows that a higher percentage, 66.7 percent, received their undergraduate education at historically black colleges. On the other hand, 72 percent of the technical/functional anchored individuals received their undergraduate education at historically white colleges.

Figure 5.15

Education Level

EDUCATION LEVEL	CAREER ANCHOR					TOTAL	
	T/F	MGR	AUT	SEC	SERV		
PH.D.	0	0	0	1	1	2	
MASTERS	6	6	3	0	0	15	
BACHELORS	11	2	2	3	2	20	
SOME COLLEGE	1	1	1	0	0	3	
<hr/>							
UNDERGRADUATE COLLEGE ATTENDED							
<hr/>							
HISTORICALLY BLACK	NUMBER	5	6	2	2	1	16
	PERCENT	28	66.5	33.3	50	33.3	40
PREDOMINANTLY WHITE	NUMBER	13	3	4	2	2	24
	PERCENT	72	33.3	66.7	50	66.7	60

FOOTNOTES TO CHAPTER 5

1. Jackie Lee Weaver, "Career Anchors of Civil Service Employees," Masters Thesis, Alfred P. Sloan School of Management, M.I.T., June 1984, p. 32.
2. David G. Morton, "Executive Development: United States Air Force Sloan Fellows," Masters Thesis, Alfred P. Sloan School of Management, M.I.T., June 1984, p. 36.
3. U.S. Bureau of the Census, Census of Population 1970, Subject Reports, Final Report PC(2)-7A, Occupational Characteristics.
4. Morton, op cit., p. 39.

CHAPTER 6

DISCUSSION AND OBSERVATIONS

This study has provided a comparative analysis of career anchors of black technical/professionals and managers in the private and public sectors of our economy. The purpose of the study has been to increase the existing body of knowledge regarding career choices of blacks and to better understand the process by which organizations can match organizational and individual needs. With this in mind, the following observations are put forth.

Both sectors had at least one individual in each of the five anchor categories identified in our study. These categories were managerial, technical/functional, security, autonomy, and service. It was noted that no females were identified as having either a security or service anchor and neither sector identified anyone as having an entrepreneurial anchor. Age was not seen to be a significant factor in the frequency of occurrence of different career anchor categories.

It was found that 45 percent of the individuals sampled in both sectors had a technical/functional anchor. In addition, the largest percentage of females in both sectors were found to be in this category. Two-thirds of the individuals in the technical/functional

anchor category in our sample of forty had attended predominantly white colleges or universities.

The next largest career anchor category in the private sector was managerial. In the public sector, managerial and autonomy career anchor categories had equal numbers of individuals and were the largest categories after technical/functional. It is noted that approximately two-thirds of the individuals in the total sample who had managerial career anchors had attended predominantly black universities or colleges. This is in sharp contrast with the technical/functional anchored individuals, where approximately two-thirds had attended predominantly white institutions. Ten percent of the combined population of both sectors had a security anchor. This is less than had been anticipated and less than has been noted in career anchor studies of populations having similar technical orientations.

It was observed that over 90 percent of the sample were reared in two-parent homes, with the parents better educated than the general population. Our sample population was heavily dominated in both sectors by individuals who spent their early childhood years in the south.

It was noted that two-thirds of those people currently employed in general managerial positions in both sectors were reared in the south and had attended historically black institutions. Of the individuals

in our sample 40 years of age and older, approximately 55 percent had attended historically black colleges or universities. This is contrasted with only 22 percent under the age of 40. This percentage decline in attendance at historically black institutions is noteworthy when one considers that of the individuals currently employed as general managers in the sample, the majority had attended historically black institutions. Although the sample size is too small to be conclusive, one explanation might be that blacks on campuses that are historically black have a greater opportunity to develop their leadership and interpersonal skills which may lead them to the general management career fields. On the other hand, those blacks on predominantly white campuses may develop those talents which lead them to choose some particular technical/functional career field.

In summary, we find that the career anchors identified in our sample were not significantly different between the sectors. In addition, after reviewing career anchors studies of relatively similar populations having a technical orientation,^{1/} we find no significant differences in the frequency of occurrence of different career anchor categories with the exception that fewer individuals in our sample were identified as having a security anchor.

FOOTNOTES TO CHAPTER 6

1. E.H. Schein, "Individuals and Careers, J. Lorsch (ed.), Handbook of Individual Behavior, Englewood Cliffs, NJ: Prentice-Hall, (forthcoming in 1985).

APPENDIX A

CAREER ANCHOR CASES AND CHARACTERISTICS—PUBLIC SECTOR

Introduction

In this Appendix, "typical" case studies are presented for each of the anchors observed in the study of the public sector. In order to protect the identity of the subjects, names, dates, and other details have been omitted or changed. However, all relevant career and background data has been included. The subjects' reflections on the past and future have been included where possible.

Following each case study, a section describing the characteristics of the individuals in each of the career anchor categories is presented. Although fictitious names are used in the case studies, for purposes of identification in discussing characteristics of each anchor category each subject has been identified by a code. The code is G-1 through G-20 for each of the public sector subjects. See Appendix C for the code listing.

MANAGERIAL CAREER ANCHOR

CASE STUDY 1 -- PAUL

Background

Paul is the director a major organization. He is 48 years old and has been married 24 years. He was born in the rural south. His parents were farmers and had seventh and ninth grade educations. Paul has thirteen brothers and six sisters. One brother and one sister are college graduates.

Education

He attended segregated schools in the rural county where he grew up. He was president of his class in high school and vice president of his National Honor Society chapter, as well as a number of other organizations. It was early in his life when he decided that he wanted to go to college. He had saved his own money since the fifth grade from farm jobs he had held. His father told Paul he would help him, although he did not have the money to send Paul to college. He helped his son open a savings account. Paul remembers his father said that "if you want to make it in life, you've got to go to college." However, Paul recalls that at that time teachers and preachers were the only professional blacks that he knew. However, while he was in high school, he began to dream of becoming an engineer and going to MIT or Cal Tech. However, because of his background, he felt he was very limited in math and would not be able to enter one of these

colleges. He enrolled instead in a historically black college. During this time he decided to change from electrical engineering to mechanical engineering and received a Bachelor of Science degree in mechanical engineering. He received his MBA degree in the mid-1970s after seven years of off-and-on, part-time work. He chose to get an MBA because his supervisor told him that if he wanted to get into management and advance in the Air Force as a civilian, he should have an MBA degree. He says now he feel good about that decision and would do it again if he had the chance, only he would get it earlier.

Employment History

When Paul got out of college he had a number of offers. As he recalls, two were from government and two from industry. He had visited Wright-Patterson AFB (WPAFB) while he was in ROTC and liked the location and the work that was done there. He had one interesting offer from Boeing which was in Seattle. However, he stated that it was too far from the East coast, but he did want to work in aircraft. For this reason, he took the job at WPAFB since the other job offers were in power plants.

At that time he liked detailed engineering work. His long-range goal and ambition was to become the director of a laboratory or to become the assistant or chief engineer. He remained in his first job for approximately two years. When I asked him who initiated the change, he said emphatically that he did and the reason was that he was working for a "bigoted boss", to use his words, and he would have

done anything to escape working for him. Thereafter, he was able to get a job in a new program office. In this position, he was promoted twice. When the program was cancelled, he found another job working on another program as an engineer and he worked there for a short time. However, he could see no future there because there were a number of senior engineers above him.

Paul then decided to broaden his experience base and accepted a promotion in another organization as a design engineer. He stayed in this job for two years. He described the job as interesting and said he really enjoyed it and wished he had started there. He said it would have been very beneficial to his career because he now had "nuts and bolts" design experience. He decided to leave after two years because he felt there was no future there. He intended to be more than a journeyman working-level engineer for the rest of his career.

At this time he began looking at the people whom he trusted and admired. He saw that they were moving into management and he decided that he would go into management. His first management job was that of development systems engineer. He worked on this job for six years. When this particular job and its organization moved from WPAFB in Ohio to the New England area, although he could have remained at WPAFB, Paul decided he would move with the organization to the new location. He saw this as a good opportunity for advancement. He was promoted and he also said he liked the area.

After working there for three years, he decided that he would look for another job, primarily because of the cost of living in New England. A position opened up at WPAFB as a program manager and he applied for the job and was appointed to it. He stayed in this program manager job for two years.

He then went to the Defense Systems Management College. He did this because the top civilian in his organization became his mentor and told him that if he wanted to advance and if he were interested in moving up the ladder, he would give him his wholehearted endorsement to go to this school. He says that, after the fact, he is glad he went. In 1976 when he came back from school, his mentor was in another job. His mentor sent him to talk to another person who told him he needed supervisory experience. He was able to find a job in management that was a supervisory job. He was now completely out of engineering. He stated that at this time he had mixed emotions as to whether or not he had made the right move.

In the late 1970s he decided to take another job, completely different from any that he had before, in the personnel department. Again, his mentor had been pushing him and stated that this would be a promotion and he was the right person for the job.

His career, at this time, had progressed across all the functional and managerial lines. He saw the benefits of these frequent changes so he took them. His motive in moving was to gain experience and also

the opportunity for promotion. He stated that he firmly believed working in an area outside of the mainstream was good so long as you didn't stay out of the mainstream too long.

After a year, Paul moved to a staff job. He stayed in this position for two years until he was promoted to Deputy Director of his current organization. He held this position until recently, when he was promoted to Director. He states that he hopes to hold this job until he is finally appointed as Assistant Program Director, which is the highest civilian job one can obtain at WPAFB.

Reflections—Past/Future

As he looks back over his career, Paul says the times he especially enjoyed were in the early programs that gave him an opportunity to do the things he had learned in school. Also, he was able to discuss the problems they were having at the contractor facilities and follow through on these problems to the test site. He said this gave him a great sense of accomplishment because he could see what he had done and see the end result.

He says the biggest transitions in his career were when he escaped the "bigoted" manager, and when he went from being an engineer to a program manager. If Paul had it to do again, he would have more interaction with someone who was a good program manager while he was still an engineer. That way he felt he would have a model that he could have learned from.

His ambitions and long-range goals have changed to some degree since he started his career, namely the change from being an engineer to being a manager. The reason was that he could see where the successful people were.

As he looks ahead in his career, he states the thing he is looking forward to is becoming a program director of a major program. He is looking forward to this because he feels good about coordinating efforts and getting things accomplished with people and contractors. He likes to bring it all together and see the fruits of his efforts. He says he wants to be the boss, he wants to be the one who takes the blame as well as the one who gets the credit. The thing he would like especially to avoid, as he looks forward in his career, is testifying before Congress. He states he thinks this is counterproductive. He also states that he is not afraid of anything in his career.

In the next ten years he thinks he will become assistant program director of a major weapons program. When asked to review the answers to see what common factors there were, he stated it looked like he would take any job in industry or in government so long as it was an upward movement.

Career Anchor

Paul is anchored in general management.

MANAGERIAL CAREER ANCHOR CHARACTERISTICS

Background

Four participants were found to have careers clearly anchored in managerial. Some others who were anchored in technical/functional and autonomy may have had secondary managerial anchors or may not have discovered a clear managerial anchor. The four managerial anchored individuals were all males. Their average age was 47. This compares to an overall average age for the public sector participants of 41.3 years. The youngest was 36 and the oldest was 57. On average, they come from a large family, having 5.5 brothers and sisters. Three of the four grew up on farms in the south.

Over half of the parents were not high school graduates. Only two of the parents, both mothers, had attended college, and one of these had a masters degree. The fathers, for the most part, were skilled and unskilled laborers and farmers. Two of the mothers were teachers. Only one did not work outside the home. All of the managerial anchored participants were married. Three are in dual career marriages. As a group, their spouses were better educated than spouses of the other anchors. Two spouses had Bachelors degrees and one had an MBA.

Two of the participants were former military officers, having reached the rank of Captain while on active duty in the Air Force.

Educational Background

All had at least a bachelors degree in engineering. Two also had MBAs. Another had two masters degrees, one in management and one in engineering. Three of the four (75 percent) received their undergraduate education at historically black colleges or universities. One received his at MIT. As a group, the managerial anchored participants and the autonomy anchored individuals had the highest percentage of Masters degrees: 75 percent of both groups held masters, compared with an average of 40 percent.

Work Experience

The average number of years spent in the present organization was 6.5 years. Only autonomy anchored individuals had spent less time in their present organization. The average for the entire public sector sample was 8.3 years. Managerial anchored men were also second only to autonomy anchored participants in the number of different employers they had had. Managerial anchors had 2.3 different employers, compared to an average of 2.1 overall. Although the number of different employers is not significantly different than the overall public sector average, managerial anchored individuals have held significantly more different jobs within the public sector. Managerial anchored men have held an average of 8.8 different positions, both internal and external. This compares to an average of 4.4 for the entire sample.

Reflections/Goals

It is interesting that all four have bachelors degrees in engineering, but each said that early in their careers they did not want to be "analytical types." They wanted to be generalists, not specialists. All are satisfied with the career decisions they have made. Three of the four (75 percent) expressed great dissatisfaction with the system that exists within the Air Force where the top positions are held by members of the military, colonels and generals, and top civilians are usually deputies. Three of the four expressed a strong desire to be the top man in his organization. The fourth said he could live with the system so long as he could be the chief civilian in his field.

TECHNICAL/FUNCTIONAL ANCHOR

CASE STUDY 2 -- ED

Background

Ed is a lead engineer. He is 47 years old and has been married for 23 years. He was born in the southwest and grew up on a farm in that area. His father's occupation was primarily as a carpenter, however, he was also an entrepreneur and was involved in many things, including a blacksmith shop, store, filling station, trucking company, and owning a farm. His mother was a housewife. Neither parent graduated from high school. Ed was one of eleven children. He described his early economic situation as middle class because his father was one of the top competitors and entrepreneurs in the area.

Education

Ed went to the black consolidated school in the community. This school went from the first through the twelfth grades. While he was in the twelfth grade, he was elected president of his senior class. He stated that his high school was really an agricultural training school. It was lacking in science, had no chemistry, no trigonometry or other higher math courses, and had no advisors.

He was exposed to college life when he was a member of the 4-H Club and his class visited a nearby historically black university. Although this was his first exposure to college, he states that he

never thought about not going to college, even though his parents did not encourage an education. He knew he did not want to be a farmer and he was technically inclined. He became technically inclined at an early age because he remembers tearing down his father's tractors, trucks, and other equipment without any instructions. When he graduated from high school, he enrolled in an all-black college in the southwest. He says he did not consider going to any other school in the area since he could not have been admitted at that time because of his race. He states that he chose mechanical engineering as his field of study by accident. He said no one told him what an engineer was or what an engineer did. He knew he did not want to be a teacher or in agriculture. Since his inclination at that time was toward industrial education, he wanted courses which would give him technical training, training in actually fixing machinery. After talking to advisors at the college and taking aptitude tests, they put him in engineering. As he looks back on that decision, he says he has no regrets. He would not have changed it if he had known any different.

He also holds a Master of Science degree in Engineering Management. He received this Master of Science degree when he was provided paid time off work for long-term, full-time training from the Air Force. The reason he chose this field of study was that at that time he was a branch chief and was involved in engineering management. He wanted to get more management training and he wanted to get a masters degree. He felt this would be a good combination since he did not want to be out of engineering but also wanted management.

Employment History

The first job Ed had was in a WPAFB laboratory. He was asked what he was looking for in his first job and he said he wanted it to be mechanically related. The reason he took this job, he says, was that it was the first good offer he received after graduating from school. At that time he said blacks were not getting good engineering jobs in the southwest so when the government offer came along, he took the job. He said although he sent out numerous resumes, he received no offers from private industry.

His ambitions and long-range goals, when he started his career, were to get well established and progress up through the chain. He saw this chain as being training-level engineer, journeyman engineer, branch chief, and division chief. After a few months, he was drafted into the Army. He served two years in the Army and came back to WPAFB where he was employed as a mechanical engineer in a different organization.

In this organization he received three promotions. These promotions were all at the lower levels. When he reached the journeyman level, he did not get promoted. He said he asked his supervisor why and he was told that the organization was top heavy and that he could not be promoted. He noticed that others in the organization were being promoted routinely. He then started a crusade after he spoke to his branch chief about the situation but was given no encouragement and told that he could not be promoted. He went to

his division chief and received the same story. Finally, he decided to go to the director of the organization. The director, whom he described as a very fair man, told him he would look into the situation. Two days after the director spoke with him, he was promoted. However, after receiving the promotion, he realized he would have to laterally transfer out of the organization because he felt that he had no future in an organization that had treated him as they had done. He took a job in a different organization as a project engineer. He takes pride in stating that he worked on one of the first composites programs in the Air Force. After two or three years, he decided that there was no additional potential for promotion in this organization so he requested a transfer. He became project engineer for a larger program. Still trying to be promoted, he served in this position for five years. At this time, with the backing of the head of the organization, he was promoted. He stated that throughout his career he has always done a good job and the promotions seemed to come afterward, unlike others who seemed to get promoted into jobs.

After his last promotion, he was asked if he would like to get more managerial experience. He said he had discussed this possibility with his supervisor so when an opportunity came along he accepted a staff position for one year. When a new organization for the development of aircraft components was formed, he decided to go to work in the new organization. His job was the technical integrator. He served in this position for about two or three years before moving

to another technical organization. Here he served as branch chief. Also, at the same time, he was serving as the lead engineer for one of the systems.

It was at this time when he was given an offer to go to school full time at the government's expense. Originally he was not going to accept this offer because he felt he had better promotion potential in the job he was in since it gave him high visibility. However, his supervisor advised him to go to school for the good of his long-range career. After school, he returned to the organization where he was assigned as lead engineer for two new programs. Because of the nature of the programs, the responsibility is shared among the organizations. He would liked to have a position where he is the only responsible person on the program. He does not like having to share the responsibility with other persons.

Reflections--Past/Future

He believes he is going down the path that he charted for himself originally. However, he feels that he is not going fast enough. His long-range ambitions and goals have not changed since he started his career. Now he says he has other alternatives. When he started his career it was necessary to move from the technical side into management if he wanted to progress. Now that a dual chain is available, he sees the opportunity to move up the technical side of the chain.

As he looks ahead in his career, the thing he is especially looking forward to is to progress and gain additional responsibility. He said he is not going to change areas. He would rather stay on the technical side but would like to have jobs of higher responsibility on the technical side. As he looks ahead, the thing he would like to avoid is the conflict he had in his progression. When asked what he thinks will actually happen in the next ten years, he stated that he will either be promoted or he will switch jobs and get out of engineering into management. However, he said the management job he would take would still be a technical job. He would like a job as a technical manager on some system or program. When asked which part of his occupation he really identifies with, he said he had not done it yet. He believes that engineering management does not allow the engineering people to be prepared for the responsibility that they should assume. He said they do not disseminate responsibility on the engineering side like they do on the management side. He noted that when new trainees come in, whether they be civilian or military, if they are on the management side they are often given program management jobs at a very low level. However, new engineers are treated as aids and it takes a very long time for them to get the responsibility commensurate with their management counterparts. He feels that this should be corrected.

Career Anchor

Based on the interview with Ed, I would say that he is anchored in the technical/functional area.

TECHNICAL/FUNCTIONAL ANCHOR

CASE STUDY 3 -- SHEILA

Background

Sheila is an aerospace engineer. She is 28 years old. She has been married for three years and is the mother of two children. She was born and raised in the midwest. Her father is a computer systems analyst and attended college for two years. Her mother is a secretary and has a high school education. She described her life while living at home as that of a middle class, black family. She was no better off or worse off than the other children in her neighborhood.

Education

Sheila attended grade school and the beginning part of high school in the inner city where she was living. In her sophomore year, her parents moved to the suburbs and she finished school there. She chose engineering as her career, she says, when she was in the eighth grade. She was influenced by the moon shot. She became interested in astronauts. Sheila knew at the time that there were no women astronauts and she decided she wanted to be an astronaut. Since she learned that astronauts were all engineers, she decided that this was the career that she would pursue. She took college preparatory courses in her high school to prepare her for aerospace engineering.

When she graduated from high school, she wanted to attend UCLA, Cornell, or Georgia Tech. However, she was awarded a scholarship from

the Air Force and decided to attend school in the midwest in compliance with her scholarship. Her feelings are that the location of the school was not important. The important thing was to get a degree and she really wanted to be on her own. She did not want her parents to pay for her education and she wanted to be independent and do it herself. She graduated with a Bachelors degree in aerospace engineering. She is presently competing for an Air Force program to allow her to pursue a Masters degree in mechanical engineering. She would like to get a mechanical engineering Masters degree because she does not want to be specialized in one particular field. That way she feels she will have the technical background to go in any direction she would like. She can do research in a specialized field and she believes this research is the route she will take to eventually become an astronaut.

Employment History

While a student, Sheila was a co-op employee at WPAFB. During this time, she got a reputation as an aircraft artist. She wanted, at this time, to be an aircraft designer and design airplanes from the ground up. However, when she began her co-op career, she found that one single person no longer designs aircraft by themselves, so she decided that she would find a career that would enable her to get as close as possible to being an aircraft designer. She spent three co-op terms working in this area and then she decided to get some other experience by going to a different area. This is when she went to a laboratory.

After graduation from college, Sheila took a full-time job at the laboratory as an aerospace engineer. In her first job, she was looking for something that encompassed a broad design responsibility. She realized she would not reach her dream of designing an entire aircraft herself and she felt this job was the closest she could get to working on the whole aircraft. She wanted to be responsible for it all. The reason she took this position was because she said it was a good spot because of her background and experience. When she graduated from college, she graduated ahead of her husband and she looked at other locations, including the West coast and southeast. She went on a number of job interviews and stated that she did not like the jobs that were offered her because she felt they would be too dull.

Her long-range ambition and goals when she started her career were to build up her experience in her own field and make a name for herself so she could get into the astronaut program. She wanted to go to the top of her engineering field. She stated she does not want to be a manager, she wants to be the best in her technical field. She has received four promotions as she moved up the technical ladder in aerospace engineering. She stated that she would not leave this location unless her husband, who is also an engineer, was able to get a job in the new location. She said there was a dual career consideration. She would, however, go off to school for a year and then return to WPAFB. She stated that the reason she chose to work for civil service was that here people were more willing to help out.

She said she had talked to her friends and had observed that this was not true in industry. She said in industry people are more protective of their expertise and would not share it. They do this to protect their own security. She felt she could learn the most in the least amount of time and get the most responsibility if she pursued a career as an aerospace engineer for civil service.

Reflections--Past/Future

As she looks back over her career so far, Sheila says she has especially enjoyed all of the work. She enjoys working with all types of people. She has enjoyed working with the government and with contractors. She says she likes the diversification that she has encountered in her job and this will enable her to switch to other career fields in the technical area and move up the chain. She stated that the only time she did not enjoy work was her initial job as a co-op. That was because they gave her nothing meaningful to do.

The major transition that she sees in her career so far, she says, is marriage and her children. She said that this has caused her to think about her career moves and how it affects her family. The travel that is required in her job has become more difficult because she must know in advance to make arrangements for sitters for the children. She says she always goes on the trips because it is necessary for her career and she will do whatever is necessary for her to move on in her career.

Her long-range goals and ambitions have not changed since she started her career. She states that she still would like to become an astronaut. If she fails in her goal to become an astronaut, she would like to become a chief engineer or technical specialist. She said she does not see herself becoming a branch or division chief because she is not interested in the management aspects.

As she looks ahead, the thing she would like to avoid is becoming complacent. The only thing she is afraid of is being overlooked for a promotion because of her marriage and children. She believes that sometimes this does affect the career opportunities of a woman because of male attitudes. In the next ten years, she thinks she will be promoted two more times and move up the technical chain. She says she is still trying to be an astronaut but, being realistic, she would not be surprised if that does not happen. She said she is really good at details. The part of her occupation that she identifies with personally is working with the technical details, the analysis, and the computer programs. She said knowing what is inside of the computer programs interests her more than the average person. She is persistent and thorough in everything she does.

Career Anchor

Based on the interview, it is obvious that Sheila is a very strong technical/functional career anchor.

TECHNICAL/FUNCTIONAL CAREER ANCHOR CHARACTERISTICS

Background

Nine of the participants in the study had technical/functional anchors. Five of the nine were male and four were female. The females in the group represented 67 percent of the female participants in the study. The average age of the individuals in this category was 37.7 years. This compares with an overall average of 41.3 years for the entire public sector sample. It is interesting to note that of the six participants in the study who are 30 years old or younger, 5 (83 percent) are in the technical/functional category.

Seven of the nine technical/functional anchors are married. All of their spouses work outside the home. Three of the seven are female. Two of the three females are part of the dual career couples who are included in the study. The younger (30 and under) female has a spouse who is also anchored in the technical/functional area, while the older (50 and over) female has a spouse anchored in security. The parents of this group tended to have higher status jobs than the average.

Educational Background

All of the participants had at least a Bachelor of Science degree, while 2 have Masters degrees. Of the participants over 30 years old, 75 percent received their undergraduate education at a historically black college. On the other hand, of the participants 30 or younger, only 20 percent received an education at a historically black college.

Work Experience

Even though the average age of the technical/functional group is below the overall average of the entire public sector sample, they have been in their present organization longer than any other group except the security anchored individuals. The technical/functional men and women have had an average of 1.7 different employers and 4.2 significant job changes, which is about average. However, when their lower average age is considered, the normalized data would indicate that they change jobs more than average.

Reflections/Goals

The younger members of this group all said that they want to rise to the top of the technical field. Most said they would like to become technical managers for large, important programs. Most did not want to be people supervisors, preferring instead to manage systems. This, as it turns out, was the career path that had actually been followed by the older members of the technical/functional group. Two of the four older technical/functional anchors had at some time in their career been promoted into a management job, where supervising people was the primary function. Neither liked the position, and both found a way to get back to the technical side of the organization.

AUTONOMY CAREER ANCHOR

CASE STUDY 4 -- ANN

Background

Ann is a computer programmer. She is 37 years old, has been married for 14 years, and has two children. Ann was born in the south. Her father was self-employed. He had a grade school education. Her mother was a housewife and a high school graduate. Ann has one brother and one sister, neither of whom is a college graduate. She attended segregated schools in a large southern city. She graduated from high school in the mid-1960s. In high school, she was a class officer, a cheerleader, and very active in school functions. She remembers no particular influence from her parents for her to go to college. The idea to attend college was her own. When she graduated from high school, she secured a job and began to go to college part time.

Education

After graduating from high school, Ann attended a predominantly white college in the south. While working and attending college, she married. She moved with her husband to the midwest where she enrolled in a local university and received a Bachelor of Science degree. Her main interest at that time was social work and sociology. She became interested in this while working in the south with the Martin Luther King Foundation. At this time, Ann decided that she wanted to work

with and help people. As she looks back at that decision now, she says she should have gone a different way. She would not have taken sociology courses and would have taken a more technical career path, probably computers or some other technical field.

Ann later received a Masters degree in management after attending classes part time in evenings and on weekends for two years. She chose this field of study because she wanted to get into management and felt the degree would help her. She says she would do it again if she had the opportunity. At this time she felt she was firmly entrenched in counseling and education, and she did not want this. She felt the degree would be a path out of counseling and into a more technical area. She said it was a bridge between the various disciplines. Ann later enrolled in an Air Force computer programming course set up for Air Force employees who held Masters degrees in other fields who were also interested in getting into computer programming. She said she would like to take this course again because she was working so hard that she did not have time to contemplate. She would like to retake the course without these restrictions and in a more relaxed atmosphere.

Employment History

Ann held numerous clerical and administrative jobs in various hospitals and schools in the south. She did this because she needed a job to support herself and she wanted to get an education. At that time she did not know exactly what field she wanted to go into, but

she knew she wanted to do something where she could make some money and be independent. She had no long-range goals. She liked helping people, but she stated she was foolish to major in social work. At the time, she thought it was interesting and, more importantly, it helped people. In later years, Ann felt this was the greatest mistake of her career because it limited her freedom of job choice. She feels that a technical degree would have given her a greater choice of jobs.

After marrying and relocating, she was working, but did not consider herself as having a career. She was employed as a substitute teacher while caring for her family.

After her second child was born, Ann decided she wanted to have a real career of her own and not be dependent on any other person. She took the civil service test with the intention of taking any job just to get into government service. She stated she was willing to do anything to start a career in civil service. Since her husband's occupation required frequent moves around the country for the next few years, she believed a career in civil service would enable her to get a job in most locations. This, she said would allow her to be self-sufficient. She wanted to do something for herself; she emphasized again that she did not want to be dependent on anyone or anything. She secured a position as a clerk. She remembers getting much unasked-for advice about the wisdom of taking such a job when she had a college degree. She said she was told by others on numerous occasions that she should not be working at all since her husband had

a promising and successful career. She should be supporting him by giving teas and other social functions. She said she really resented this attitude.

In the late 1970s, her husband was transferred to Ohio. Since she had a civil service job, she was able to transfer her job also. She said she resented the type of job she had because she felt her degree was doing her no good. She continued to search out a more promising career that was close to her major in college with the idea that she could transfer to some other area later.

After one year, Ann was promoted to a counselor position. She states that she worked very hard to get that job. Once she had it, she felt she finally had a job worthy of her qualifications. Shortly after getting this position, her husband was transferred to another location. Since he would only be gone one year, she said she did not give up her position to accompany him. During this time she had two promotions and moved to the top of the group. She describes the job as that of counseling, evaluating, and screening potential applicants for higher education programs in science and engineering. She says she liked the job.

However, after three years, she decided she wanted a more challenging job and in a more technical area. She felt this would make her more marketable and independent. She began to see what she could do to be qualified for such a position and decided to take the

special computer course. At this time, she was offered a promotion to stay in the counseling field as a supervisor. She said she did not take the promotion because the supervisor's job was too restrictive and was not worth the short-term monetary gain. She said her long-range goals were more important. She wanted to move into the technical area. She turned down the promotion and actually took a grade reduction to start as a computer programmer. This is the position she presently holds.

Reflections--Past/Future

As she looks back over her career, the time Ann especially enjoyed was when she was a counselor. She liked dealing with people, she was excited about getting a new job, and she liked the learning and anxiety that went with the job. The times she did not enjoy were when she was a clerk in her early days. She did not enjoy these times because someone else was doing all the thinking and all she was doing was functioning. She sees a major transition when she decided to give up the counseling/education area and go into the computer area. She points out that neither of these jobs were what her B.S. prepared her for; however, she said she prepared herself for what she wants to do and does not rely on institutions or systems. She said the changes in her career were self-initiated and she feels very good about them. It is not likely that she will leave this career path. She would reluctantly go to another location if her husband again must relocate. She states she will stay with civil service as long as her husband is working for his present organization. Thereafter she will take a job

in private industry since moving for his career will not be a family problem. This will happen, she said, in less than ten years.

Her long-range goals have changed. She says originally her career goal was to get into the procurement area. However, when she got into computers and found that she could readily do something more technical, she enjoyed it. She likes the freedom. She looks forward to becoming a system manager in this area. This, she said, means she will have reached the top of her career field. She prefers managing systems to people, but says when you manage systems, you are also managing people. She would like to avoid a nonchallenging, routine job. The only thing she is afraid of is being a failure, although she does not feel this is possible because if she were in a position in which she felt she would fail, she would move. She said she was hesitant about working in a male-dominated field at first since her previous work had been in areas with many females, but now this has been put in the back of her mind.

She said in the next ten years she will not be working for the government, but she will be working in the computer or technical field in the private sector. Ann says what she is really good at is making up her own mind, deciding what she wants to do, and sticking to it.

Career Anchor

Although progressing in the technical area is important, Ann's anchor is autonomy.

AUTONOMY ANCHOR CHARACTERISTICS

Background

Two males and two females in the study had autonomy career anchors. This represents 20 percent of the public sector participants. They were in the middle of the age groupings, ranging in age from 37 to 43, with an average age of 40.2 years. It is interesting to note that all are from the south, and all attended segregated high schools in that area. Three of the four, (75 percent) are divorced. All are parents and their children live with them. The one that is married is female and part of a dual career marriage. Both she and her husband have Masters degrees.

One of the group has parents who attended college, the mother holding a masters degree and the father holding a Ph.D. Of the other three sets of parents, only one is a high school graduate, and only one of the mothers worked outside of the home. Three of the fathers were self-employed, two as farmers and one with his own construction business. It appears that the fathers were relatively autonomous for their time. Both of the males in this group were former military officers.

Educational Background

All four of the participants have Bachelor of Science or engineering degrees. Three of the four also have Masters degrees in management. Half received their undergraduate education at

historically black colleges or universities. All attended college in the south during the period of rapid change in the 1960s. Along with the managerial anchors, this group has the highest percentage of Masters degrees.

Work Experience

As might be expected the autonomy individuals have spent the least amount of time in their present organizations--an average of 5.2 years. The average of the entire sample was 8.3 years. Also, they have changed employers (outside the government) the most, having had an average of 3.5 employers compared to an overall average of 2.1. They are second only to managerial anchored participants in the number of different positions they have held, with an average of 7.5 different positions compared to an average of 4.4 overall.

Reflections/Goals

Everyone in this group had managerial skills and a variety of interests. The common theme echoed by all four participants with autonomy anchors is that they do what they want to do, the way they want to do it, and not depend on anyone else. Their attitudes might best be illustrated by looking at what all four of them had to say.

Participant G-1 has announced to his organization that he will be leaving government service in August 1985 to go into business full time for himself. He is an individual who volunteered for duty in

Southeast Asia two times while he was in the military. He became disillusioned and resigned his commission when he was unable to go back the second time. He has been a project engineer since joining civil service. On starting his own business he says, "...you can't depend on anyone else, you must depend on yourself. I've always wanted to do more than I've had time to.It will be a lot more fun now that I am free to call my own shots and do what I want, as I want to do it."

Participant G-3, a computer programmer, is the only married member of the autonomy group. She is the mother of two children. On the subject of her last job move she stated, "...they wanted to give me a promotion to stay in my old organization. I was in line for the chief's job. I didn't want the position because the job was too restrictive and not worth the short-term money gain. I took a downgrade to take this position because it is what I want to do."

Participant G-7 is an engineering manager. She is the mother of three children. She has worked for six different firms/ organizations. Concerning one of her job moves from a predominantly white medical school to a predominantly black medical school, she states, "...I was being exploited. I was doing all the research and others were getting all the credit. I didn't like being exploited but I felt as long as that was the way the system worked, I might as well be exploited at a black institution." Looking forward in her career she says, "...having control is very important to me. As long as one has control and can see the results, they will be happy."

Participant G-8 is a Senior Project Engineer and a single parent. Looking back over his career, he said, "...I especially enjoyed that job because I was working alone and I had the authority to do what I wanted to do for the program." When asked what he is good at, he replied, "...getting people around to my point of view."

SECURITY ANCHOR

CASE STUDY 5 -- DAVE

Background

Dave is a supervisor in the computer field. He is 50 years old, married, with three children. He was born in the south. His parents were both domestic employees. Both attended but did not graduate from high school. He was one of nine children. One of his brothers also graduated from college. He describes his life at home as that of borderline poverty. He said they did not starve but they were certainly struggling. He said this was typical of most blacks in the small city in which he grew up.

Education

Dave attended the segregated schools in the town where he grew up. In high school, he was active in music, various clubs, and drama. It was his senior year when he decided to go to college. He says it was his own idea because he had looked at his parents' situation and decided he wanted to progress further and this was the best way to progress. He enrolled in a historically black college. He originally majored in music. After two years in music, he decided to switch his major to mathematics. He believed the prospect for financial gains were not in music and he felt there would be more opportunity in math. With his music degree the only way he could make a living would have been as a music teacher.

As he looks back on this decision, he says it was a good idea. He said he did not want to teach so it was a good decision to switch to math. He said he still likes music but he likes money more. Throughout his career, Dave has attended various colleges in the area on a part-time basis. Each time, he takes mathematics and computer courses so that he is able to maintain his current technical competence in his field. He says this was necessary for him to advance in his job.

Employment History

In his senior year at college, Dave was recruited to come to work at WPAFB. He stated he got an offer from this organization and he took the job. It was the only offer that he received. He had only worked at WPAFB for three months as a mathematician in the field of computers when he was called into the Army. He left his position to serve two years as a lieutenant in the Army. After serving his time, he came back to WPAFB to the job he had held previously. Coming to work for the government was all he had considered. He did not even think about working in industry. He said the government had more benefits and was more receptive to young blacks at that time. He said his long-range goals were not very long range at that time. He did not think long term. David stated all he wanted to do was progress as far as he could and he would make it one step at a time.

Shortly after returning as a civilian, he took another job. This was basically a computer programming job but for a different

organization than that in which he worked. He served in this job for approximately three years and received one promotion. Then, because of a reorganization, the organization was consolidated with his old organization. Therefore, he went back to the old organization. He stayed in this position for seven years and received three promotions. He describes these promotions as progressions within the same job and of receiving increased responsibility as a computer programmer. In 1969 he was promoted to a group leader position. He stayed in this position for eleven years, at which time there was a reorganization and he was chosen to be the chief of the organization. He has had this position ever since.

He states that given his choice, he would rather be an analyst than a supervisor, because it is more challenging to work on technical problems than it is to work on personnel problems. However, he also states that because of his position he is able to do some of the computer programming from time to time. He stated he would take a technical job if it meant a promotion but he would not go back to the technical side unless there was a promotion, and this would be very unlikely.

Reflections--Past/Future

As Dave looks back over his career, the time he especially enjoyed was when he was a programmer. He enjoyed it more when he was working on the scientific side of the house. He said the problems were more varied and interesting and he worked on a wide range of problems, none

of them taking more than two or three weeks. He said when he became involved with the management system, these jobs tended to last a very long time.

Dave said that there really had not been any times he did not enjoy but there were some that were less pleasant than others. He said he became uneasy when he got on a job that lasted a long period of time because it stagnated his career growth possibilities. Also, he says some of the policies in this organization have resulted in undeserving people getting promoted to the higher positions.

The major transition in Dave's career has been that of going from a programmer and analyst to one of supervision, although he says this is not really a large transition because he has always thought of the money and not the job. He said he would switch jobs for more money. However, since he is now a supervisor, he enjoys it very much because he is now in a position to help young people progress. He feels the decision to switch to supervision was a good one.

He says his long-range goals and ambitions have not changed since he started his career. He has never refused a job move or promotion within civil service. However, he has turned down a number of opportunities to move to industry. He states that in the mid-1960s, he was heavily recruited by industry and went on a number of interviews. However, he did not take any of the positions offered. The reason was that he could see no long-range job security in these

areas. He said he felt at that time most contractors wanted blacks to satisfy the government contract requirements. He personally felt that when the contracts were gone, he would be gone. In reflecting back, he said this may not have been a good decision because some people he knows of that were in his position and took these jobs have done very well in industry.

As he looks ahead in his career, Dave says he is especially looking forward to retirement. He said he is satisfied with the job that he has; he is satisfied with the position he has attained. He says he is looking forward to doing something else. He has been in the business for thirty years and in five more years it will be time for him to retire and do something different.

As he looks ahead in the next five years, he says he would like to avoid the potential personnel problems that he sees coming. He has some employees who are not performing satisfactorily and it will be necessary for him to take action to dismiss them. He says he does not want to do this and would like to avoid it if possible. He thinks for the rest of his career he will have the same job. He said he does not anticipate any more promotions. He feels he has reached the ceiling.

Dave says he is a very good analyst and a very good manager and he has the ability to communicate up the chain of command and down to his people. He says that he is particularly good at communicating with younger people, minorities, and females and this is the part of his

occupation that he identifies with. He says he has a unique ability to talk "management" when that is required and to talk "young" or "minority" when that is required and to communicate well with both groups. When he started out working, he was working for the money and he still is. He would prefer to work on the technical side rather than the management side, but he was promoted into management and if another promotion comes along, he will take it. However, he would not move back to the technical side unless it meant a promotion.

Career Anchor

Dave is anchored in security, based on job tenure.

SECURITY CAREER ANCHOR CHARACTERISTICS

Background

Two participants, or 10 percent, were found to have security anchors, stability based on job tenure or geographic location. Both were male, and both were 50 years old or more. The average age was 53.5. This represents the highest average of any anchor group. Both served in the military, one as an officer. Both are married and their wives have careers. One is part of one of the dual career couples included in this study. His spouse is one of the female technical/functional anchors. Both of their spouses have bachelors degrees.

Both of the participants come from large families. One had eight and the other nine brothers and sisters, the highest average of any

group. None of the parents attended college, but two were high school graduates.

Educational Background

Both of the participants attended primary and secondary school in urban segregated school systems. They each have Bachelor of Science degrees from historically black colleges.

Work Experience

They have been with their present organization for an average of 17.5 years. As might be expected, this is longer than any other group. The average for all the groups is 8.3 years. They have had 1.5 different employers, compared to an overall average of 2.1. However, they have held an average of 5.0 different significant positions, which is more than the overall average of 4.4, but when one considers the higher age, the number is typical of that for the entire study. Both are technical managers or supervisors and are highly respected in their fields.

Reflections/Goals

One common thread that these individuals seem to share is a feeling of self-fulfillment. Both said they were happy with their jobs, but they indicated that jobs were a way of making money so that they could enjoy the other things in life that were important to them. In the words of Participant G-12, "...I get a lot of satisfaction out of my music (his original college major) but I cannot

make a living out of it. ...I like music but I like money more... I started out working for the money and I still am." His satisfaction could also be seen when he said, "The part of the job that I identify with personally is working with younger employees, minorities, and females."

This same type of personal satisfaction can be seen in Participant G-14 when he said, "...I have enjoyed all of my career... I have enjoyed the type of people that I have worked with, I have no hangups. My basic philosophy of life is to kill with kindness. I cannot be made angry. Life is too short to get upset over insignificant things."

SERVICE CAREER ANCHOR

CASE STUDY 6 -- BOB

Background

Bob is a project mechanical engineer. He is 30 years old and has been married for three years. He is from the urban south. He grew up in an extended family situation—living with his mother, grandfather, grandmother, and other relatives. Since the adults in the family were able to pool their income, their economic status was much greater than the average black family in the area. His grandfather was one of the few black businessmen in the area. His mother attended a teaching/training school.

Education

Bob attended a segregated elementary school until the fifth grade. While in the fifth grade, the schools in that area became integrated. He was sent to another school which was racially integrated. However, it was very economically segregated because all of the whites who could afford to left the public school systems for the academies and Catholic schools. He attended an integrated college preparatory high school from the eighth grade through the twelfth grade.

Bob wanted to become an Air Force officer. After he graduated from high school, he applied to the Air Force Academy. He was one of

the finalists; however, he was not accepted. He then decided to go to a predominantly white college in the south. He enrolled in the ROTC program and majored in mechanical engineering. He chose this university because of its size. He felt that he would be better off attending this university which had been integrated for approximately four years and now had a significant number of black students. As he looks back, he feels he made the right choice. The disadvantage to this decision was that the university did not have aeronautical engineering.

He plans to get an advanced degree in management science with a minor in communications. He is pursuing this on a part-time basis. The reason he has chosen this field of study is because he feels very strongly about evaluating his strengths and weaknesses and trying to turn his weaknesses into strengths and he feels that he needs communications and management science to do this.

Work Experience

Upon completion of college, Bob's first job was as a lieutenant at WPAFB. He chose WPAFB because it was the most technical area he could find. He did not like his first assignment, so after two months of constantly telling his superiors that he wanted out, he was transferred to another organization of his choice. At this time, his primary goals were to make captain and to leave the Air Force, feeling that he had served his country as required, and then become a project engineer for the government and progress up the technical management chain.

Early in his college career he decided he did not want to specialize because he had a mentor who told him the specialist would eventually be left out. He wanted to maintain an open attitude and be able to pursue a career in a number of technical activities. He primarily wanted to stay technical, but had no interest in becoming a detailed technical specialist.

His next assignment was as an engineer in another organization. He pursued this job because he was getting bored with the technical details that he was working on in his previous job. As he looks back on his previous job, he said he is glad he did it because it taught him a lot about systems. However, he felt that two years was more than enough time to work on details.

His next job was that of project engineer. He initiated this change because he decided it was time to get out of the service and pursue his career as a civilian. He said he would have more control over his life and still be able to pursue a technical career in the same field.

He got out of the service and after a few months was hired as a project engineer civilian at WPAFB. At this time, he had numerous offers from private industry. However, he wanted to stay with the government and not go to work in industry because during his military career he had developed a particular management program. He felt very strongly that the Air Force had a need for the program. He had

actually extended for a fifth year as a military officer just so he could work on this program. When he got out of the service, he wanted to come back so he could continue the program. He admits there are both selfish and unselfish reasons for wanting this. He feels very strongly that it is a good program for the Air Force and he also feels very strongly that he is the man who should be implementing it. He likes the versatility of his work and he feels that he could not get this in industry. He says that the security offered by the government was a secondary reason to stay at WPAFB. Everyone that he interviewed within industry wanted him for his expertise in the management program. He felt he could contribute more by working on this program as a member of civil service. He also says he is motivated by self-initiation. In industry, he would be working in a group and he was more interested in working by himself in this area.

As he looks back over his career, the thing he especially enjoyed was developing the management program. He strongly believes this program will benefit the Air Force.

The only transition that he sees was early in his career when his dream to go to the Academy did not materialize. However, he is very happy that he pursued the career that he did. His long-range goals and ambitions, he states, have changed somewhat since he started his career. He now has more intensive goals toward management communication. As he looks ahead in his career, the thing he is especially looking forward to is being able to manage a plant for the

Air Force. He would like to be the Air Force plant manager in some defense plant in the southeast. He likes working on projects because there is more variety. He wants to go to the southeast primarily because of family ties. He would prefer to remain with the government. However, he would not hesitate to move if a good job in industry came along. He would especially like to avoid stagnation. He says he does not want to be an engineer with twenty years of experience doing the same routine jobs over and over again. He believes in doing a good job and getting credit for what he does. He is afraid the present administration of government will make changes in the salary and benefit programs of civil service employees. He states that this will force his hand earlier than he wants because if the game changes, he will have to review his options and possibly move up his time schedule for moving to the southeast as a plant representative for the Air Force or with industry.

He thinks that in the next ten years of his career he will finish his Masters degree, move into a mid-level technical position, and also continue to develop a consulting business that he and his wife have on the side, working with youth. Helping young people, he says, is the most rewarding part of his life. He says his ultimate goal would be to marry his full-time job with his part-time hobby, which would enable him to satisfy his life to the fullest.

He is very strong in helping people. He is a very people-oriented individual, very active in the church, and in youth fellowship

programs. He believes that he has found his niche in life and also found his vocation and he states that his niche and vocation are not necessarily the same. His desire is to help and be of service to people.

He ultimately would like to remain a manager in the technical community. He would rather manage people who manage projects directly. He wants to be in the general technical management field, as he describes it, and not be tied to a particular area. He has no desire to be the world's best engineer. Bob states that he believes a technical manager must be able to discipline himself for the project logic and also make realistic choices based on the people and emotions involved. He believes that most engineers have problems in this area. He says engineers tend to be problem solvers, using logic and they project this to their entire life without balancing emotions with logic. He believes he is able to balance emotion and logic, and would like to be able to pass this talent on to others.

Career Anchor

Bob's anchor is service. He has a strong sense of dedication to programs that will help other people.

SERVICE CAREER ANCHOR CHARACTERISTICS

Since there is only one person in this category, no separate discussion of characteristics is provided.

APPENDIX B

CAREER ANCHOR CASES--PRIVATE SECTOR

Introduction

In this Appendix a "typical" case study and the general characteristics are presented for each of the anchors observed in the private sector. To insure confidentiality in the typical cases illustrated, names, dates, and other unique details have been omitted or changed where necessary. However, all relevant career and background data has been included. In all cases, the subject's reflections on his career and future goals have been included where possible. Following each typical case study, a description of the generic characteristics of the individuals exhibiting the specific anchor is presented.

MANAGERIAL ANCHOR

CASE STUDY 1 -- JAMES

Background

James is currently employed by a large multi-divisional chemical corporation as a plant manager at one of its many chemical processing plants. At 41 years of age, he is married, with two children, and lives in a suburban community near his plant. James, who is one of eight children, grew up in a rural environment in the southwestern part of the United States. His father, who attended school through the ninth grade, was typical of many blacks who made a living by a combination of ranching and farming in small rural communities. His mother was one of the few black women who received a college degree and was employed as a school teacher. His wife has an advanced degree in education and is employed as a school teacher in the community where they live.

Education

James attended a segregated black high school that was the only high school for blacks in the county. As there were no electives offered at the school, everyone took the same subjects. He liked all subjects about the same but did particularly well in math, history, and science. Had there been more options at the high school level, he would have studied more math and science to better prepare himself for college.

He enrolled at a historically black university in his home state where he majored in chemical engineering. He chose this school because it was the only black college in his home state which offered a degree in engineering. Since several members of his immediate family had gone to this school previously, he felt very comfortable with his choice of schools and never considered going out of state. In retrospect, he indicated that had he been given the opportunity, he might have attended one of the white universities in his state because of the recognition associated with obtaining a degree from those schools. James feels that attending a black university provided him with positive role models since there were black professors on the staff.

After working for five years, he enrolled at a local university where he received a masters degree in engineering management. He pursued a degree in engineering management because he did not want a masters degree in a strictly engineering discipline and didn't see the benefit in an MBA. At the time, he was working as an engineer and saw engineering management as his career path. He feels that the degree and course of study he pursued has served him well and would do the same thing again.

Employment History

His first job was with a large chemical corporation in his home state. He was hired as a production engineer responsible for support of manufacturing operations. He indicated that one of the reasons he

chose this job was because of the broad and diverse nature of the work. He was married at the time and to be located in his home state was important to him and his family. While pay was a consideration, it was not a major factor in job selection.

James feels that he did not have a good appreciation of his career choices when he selected his first job and his primary goal was to advance in the engineering field. He remained on this job for about four years.

He next took a job with a large chemical corporation based in the eastern part of the United States as a design engineer on the central engineering staff. He made the job change in order to become involved in large-scale projects, since his former company had most of their major projects handled by outside contractors. James also indicated that salary was not a factor in the move and by this time he and his family felt comfortable enough to leave their home state. He remained on this job for about five years and then was promoted to Engineering Supervisor.

As an engineering supervisor he supervised the activities of twelve to eighteen engineers. He indicated that he was the primary initiator of this move because he had made it known to management that he was interested in being a supervisor. He remained on this job for approximately two years and was then promoted to Engineering Superintendent.

This job was very similar to his previous job with only a slight increase in responsibility. While he was happy with the increased salary and recognition, he was disappointed with the scope of the job. He was on this assignment for about six months when he requested a line assignment.

He was laterally transferred to a plant in the southern part of the United States as District Superintendent of Distribution. He indicated that he wanted this job because he viewed it as a line job rather than staff and because he wanted to be a part of the decision-making process. The fact that he was the first black engineer and engineering supervisor on the central engineering staff may have had some influence on the organization. He was on that assignment for one year when he was promoted to Plant Engineer. He was responsible for all engineering activities at the plant with a staff of 45 to 50 engineers. While he reported directly to the plant manager, he viewed this as a staff job and not in the mainstream of the decision-making process at the plant. He felt that while on this job he did much to build up the esteem and morale of this engineering force. He remained on this job for 1-1/2 years before he was laterally transferred to the job of General Superintendent of Manufacturing at the plant.

He enjoyed this assignment since he had responsibility for all manufacturing operations. He remained on this job for two years when he was promoted to his current job as Plant Manager.

James feels that he helped to initiate this promotion by making sure that management was aware of his desire to be a plant manager.

Career Review

During his career, he has enjoyed seeing the tangible result of his work. He enjoyed the work at the plant location in the south because he felt he had a positive impact on the engineering workforce and because he participated in the decision-making process. He enjoys the diversity of his current job because he's involved in everything from public relations to union negotiations and likes being responsible for running his own show.

He views the major transitions in his career as the move from engineering design to engineering management and the subsequent move from engineering management to general management. James views himself as having initiated most of the transitions in his career because he wanted the increased responsibility and challenge of running his own show. He is extremely pleased with his career to date and would not change anything.

James has never refused a move but has refused promotions that he felt would take him away from real decision making. He refused a promotion to the human resources area of the company, feeling that it was not in his overall best interest.

He is looking forward to being a business director which would give him responsibility for business development/business growth for various product lines. He believes that this would be a good career-broadening experience.

There are no specific areas that he would like to avoid even though he feels some are quite unlikely given his background. He sees himself as continuing to progress in general management and possibly being at the managing director level in the company where he would have total responsibility for a given product line.

Anchor Assessment

Throughout his career James has been the prime initiator of changes in his career that have led to positions of increasing responsibility. James' career anchor is managerial.

MANAGERIAL CAREER ANCHOR CHARACTERISTICS

Background

Twenty-five percent of the individuals studied fall into this category. Of the five people in this category, four are male. The career anchors of this group were probably the clearest to identify in the private sector. All had started initially in their firms as technical/professionals and had rapidly climbed to positions of increasing responsibility and managerial oversight.

The individuals ranged in age from 31 to 44 years, with the average being 37 years. As a group, their average age was slightly lower than that of the total universe studied. Three of the five are married and, in these cases, their spouses have either graduated or attended college.

Three of the five were reared in medium-size cities and two were reared in rural areas. All but one grew up in the southern part of the United States. Two are from rather large families but, in all cases, a significant number of their siblings have also attended college.

Their parents are relatively uneducated by formal measures of years of schooling. In general, their mothers have attained a higher level of formal education of the two parents. Only two of the parents had finished high school. Both of them were mothers, of which one had graduated from college. One of the mothers was employed as a teacher, one as a domestic, and the others as housewives. The fathers, for the most part, were skilled and semi-skilled laborers and farmers.

None of the individuals with managerial anchors had spent time in the military service.

Educational Background

Three of the five individuals have advanced degrees. Of the other two individuals, one has a bachelors degree and the other attended a

community college but did not graduate. Three of the five received their undergraduate degree from historically black universities or colleges. Of those receiving degrees from black institutions all indicated that based on the choices available to them and their own stage of personal growth at the time, they would attend a similar institution again. These individuals usually stressed the impact of positive role models at these schools.

Work Experience

These individuals have been in their present organizations, on average, 7.8 years. They are currently employed by companies that emphasize technological leadership and all are involved in the manufacturing side of the business. Their responsibilities range from production manager to plant manager. On the average, they have worked for three different firms since leaving college and only one is still with the firm he initially joined out of college.

Reflections

All of the individuals expressed a strong desire to work with people in group situations as opposed to being "individual contributors." In general, they found their greatest satisfactions in solving problems and seeing the tangible results of their activities.

They view their career changes as being driven by their own activities and feel that the transitions have all been beneficial. They view their future in an optimistic way and see themselves as

continuing to have greater responsibilities in the future and seek positions of further accountability and authority. In general, while their backgrounds are rooted in technical disciplines, they feel comfortable working through people to accomplish organizational objectives.

TECHNICAL/FUNCTIONAL CAREER ANCHOR

CASE STUDY 2 -- TIM

Background

Tim is a customer technical support manager for a large electronics manufacturer. At 41 years of age, Tim considers himself content with his career and the choices he has made. He is married, with two children, and lives in a small rural community in the northeastern part of the United States. Tim grew up in a large city in the Northeast and has never moved far from his original home town. One of two children, his father was a high school graduate and was employed as a factory worker. His mother attended high school but did not graduate and was an urban housewife. Tim was married immediately following his graduation from college. His wife attended college for one year and is currently self-employed in a part-time business.

Education

Tim attended a well-known and respected technical high school in his community where he took the college preparatory course. He especially liked the math and science courses in high school and indicated that he was influenced by a high school teacher toward these subjects. Tim feels that his high school experience was enjoyable and would not do anything differently.

He commuted from home to a local university where he majored in electrical engineering. He chose this school because it was affordable and offered a work/study program. In addition, he was influenced by his family to attend school locally. A friend of the family had previously attended this school and this influenced him as well. He chose electrical engineering because he liked math and science and thought that electrical engineers made excellent salaries in industry. The only change that he indicated he might make would be to attend college away from home.

He attended graduate school in the evenings and received a graduate degree in engineering management. He felt that with his technical background an engineering management degree was more appropriate than a degree in business administration. The only change he would make would be to consider attending graduate school on a full-time basis.

Employment History

His first job was a design engineer for a defense contractor where he designed components for weapons systems. Salary was the key factor in his decision to accept this job. In addition, Tim indicated that he chose to remain in the immediate area due to the influence of his family. His initial ambition was to be an outstanding design engineer but he became unhappy at the lack of enthusiasm at this company and decided that he wanted to work in an industry not associated with government contracts. He remained with this company for two years.

His next job was as a design engineer at a computer manufacturer. He went there because he wanted to get into a more dynamic corporation (as he saw it) and because he wanted to be associated with the computer industry. He remained on this job for 2-1/2 y rs.

His next job was as an applications engineer for his current company. He was recruited by this company and made the move because the company he had previously worked for was de-emphasizing their work in computers. He also made the move because he felt he had proven himself as a competent design engineer and wanted to be in a new area that would position him for jobs in management or marketing. He was an applications engineer for two years and then was promoted.

His next job was as a business manager responsible for the management of a variety of technical, marketing, and other resources. He considers this move to have been initiated by him and the organization because he had demonstrated his competence and ability as an applications engineer. He had previously informed the organization of his desire to be a business manager. He remained on this job for seven years.

His next job was as a planning manager of a manufacturing plant where he was responsible for helping to develop manufacturing strategies at the local plant level. This change was initiated by the organization because they wanted to give him an experience in a different functional area. He remained on that job for a year.

His next job was a promotion to Group Planning Manager where he again assisted in the development of manufacturing strategies for a group of manufacturing plants. He had expressed an interest in this job and when it opened up, he was promoted into it. He indicated that he understood most of the activities at the plant level and felt that the new job was a career opportunity. He remained there for two years and then moved to his current assignment.

He indicated that he initiated the move to his current job as a technical support supervisor because he wanted to move closer to the organization that had business responsibility. He also wanted to be back in an area where he was managing technical people.

Career Review

In reviewing his career, Tim indicated that he especially enjoyed his work as a design engineer and later as an applications engineer. He also enjoys his current job where he can help customers to resolve a variety of technical problems.

He didn't enjoy his work at the defense contractor because he thought the environment did not challenge people. He also did not enjoy his work as a planning manager because he felt isolated from the customer and viewed the assignment as a staff job.

Tim feels he has had several major transitions in his career, including the move from design engineer to applications engineer, from

applications engineer to business manager, and business manager to manufacturing. He feels that he initiated most of the transitions and overall he feels very good about them.

He feels that his career goals have broadened and that he now wants to be involved in the management of people. He feels that this change came about when he had proven to himself that he was a competent design manager.

He has refused a job move but not a promotion. He refused a job move to California because he had just made a move and the benefit to his career was unsure. He indicated that he has refused offers from other companies because he is satisfied with his current work.

While he is not sure what he wants in his future career, he would like to continue doing work related to technical support of a marketing organization. He doesn't want to be assigned to another staff job. He indicated that he was not sure what would actually happen in his career in the next ten years.

He describes his occupation as being responsible for technical sales support. He indicated that he helps to develop sales strategies and that he spends a lot of time establishing relationships with internal organizations that impact the sales effort. He identifies and enjoys all of the functions that his organization is responsible for carrying out.

Career Anchor

Tim admits that he is reluctant to take an assignment outside of a technical area. While he wants to be a manager, he is careful to indicate that he wants to manage an organization with technical responsibilities. Tim's career anchor is technical/functional.

TECHNICAL/FUNCTIONAL CAREER ANCHOR CHARACTERISTICS

Background

The largest percentage of the individuals studied fall into this category. Of the nine individuals in this group, six are male and three are female. Sixty percent of the females in the sample fall into this category. In general, anchors in this category were less clear since some of the individuals had strong secondary anchors in managerial competency and autonomy. These individuals were currently employed by a diversity of firms and their job descriptions ranged from technical writer to plant manager. Their average length of time in the workforce is 17+ years.

The group ranges in age from 31 to 54 years, with an average of 41 years. As a group, their average age was slightly higher than that of the total universe studied. All but one of the group is married. Their spouses are well educated, with all but one having attended college.

All were reared in urban or suburban communities on the eastern seaboard of the United State with but one exception . Even in that case, much of her adolescent years were spent on the east coast. The formal educational level of the parents of this group appears to be slightly higher than that of the managerially anchored individuals. While 33 percent of both fathers and mothers of this group have received a degree beyond high school, the mothers are slightly more educated than the fathers with all but one having graduated from high school. More than 66 percent of the mothers of these individuals were employed outside of the home. For the most part, the fathers of these people appear to have jobs of higher stature than are seen in the managerially anchored group.

Educational Background

They are a well-educated group with all but one of them having a college degree and 33 percent having graduate degrees. They attended predominantly white colleges or universities for their undergraduate education with but one exception.

Work Experience

As a group, they've been in their present organizations an average of 7.8 years and have worked for four different firms in their careers, on average. They've worked for more different firms than any career anchor group with the exception of the autonomy anchored individuals. All but two are still in the technical or functional area they chose when entering the workforce.

Reflections

When asked what they have enjoyed most about their careers, they usually responded that they enjoy the technical side of their work and being recognized as the "best" in their area or discipline. They have enjoyed their work in the past and generally look forward to achieving a managerial position in their chosen discipline. They, like most of the individuals in the sample, feel that they have initiated most of the transitions in their careers. More than half of the group has refused job moves or promotions that they considered not in their best interest as regards type of assignment or job location.

SERVICE CAREER ANCHORS

CASE STUDY 3 — JOHN

Background

John is currently employed by a large diversified manufacturing company as a program control engineer. At 49 years of age, he is single and lives in a suburban community near his work. One of five children, he was reared in a rural town in the south. John's father attended school through the ninth grade and runs a small business. His mother attended college for two years and was employed as a school teacher. All of his brothers and sisters have graduated from college.

Education

John attended a racially segregated high school in his home town. John liked the trade shops as well as the sciences in high school and indicated that they studied physics and chemistry with only a book since there were no laboratory facilities available. He especially liked math and used to watch and learn as his mother taught algebra to the local neighborhood children. He indicated that he was always taught that there was a better way to make a living than he could see in his home town. He indicated that the norm for black professionals at that time was as ministers, teachers, and sometimes doctors. He viewed education, even in high school, as a way out of his environment. He indicated that he would not change his high school experience except to wish that the school had more facilities.

The dean of a local black college visited his high school to attract to the college students who were interested in science and math. This presentation by the dean was influential in his decision to attend a black college. He enrolled at this school and attended there for two years before finishing his education at a university in the mid-west.

At the time, the school offered a five-year program in engineering where the first three years were spent at that school in pre-engineering and the final two years were spent at a predominantly white school in the north. He decided to go to the mid-western university because he could finish his undergraduate education in four years and save his family some financial expenses. He indicated that the only engineer he knew at that time was a train engineer.

In retrospect, John indicated that he would probably go to a historically black school for his undergraduate and a white school for his graduate work. He feels that interpersonal skills may be more easily developed in a black environment and that would help with leadership skills.

John has done graduate work in engineering at a number of different colleges.

Employment History

His first job after graduation was as a janitor at a steel company. He graduated in 1958 during a recession and this was the only job available to him at the time. He indicated that his fellow classmates, both black and white, suffered similarly. After about two months he was able to get a job as a lathe operator at the plant through a friend. John feels that at that time companies only wanted to hire one or two blacks anyway and there were no affirmative action programs to speak of. While he was discouraged, he did not give up.

His ambition at the time was to work in either the utility or heating/air conditioning industry and gather experience so he could start his own business. He indicated that he didn't really know what career options were available to him.

After being on the job for four months he was drafted into the Army and served two years.

After returning from the Army he spent the first three months trying to find a job as an engineer. Since he could not find a job, he returned to the steel company as a lathe operator. During this time, he continued to look for employment as an engineer and finally found a job with a contract engineering company.

The company had a contract to write equipment specifications for telephone company central offices and John worked as a power

engineer. He did this work for about a year and left to work for an aircraft company in the mid-west. John feels that at this time industry was becoming more aware of blacks as another source of engineers but for less money.

He was hired as a design engineer and worked on the structural design of various aircraft parts. He remained on this job for 3-1/2 years and left because he felt he was not being rewarded financially for his work. At his exit interview, the reason he was given for not getting better raises was that he had gone to a black engineering school.

His next job was as a design engineer at another aircraft company where his duties were similar to those of the company he had just left. He remained there for almost two years before joining his present company.

He was hired initially as an evaluation engineer responsible for testing of aircraft instruments. He remained as an evaluation engineer for about three years and was then promoted to Planning Supervisor of manufacturing operations.

He initiated the move to Planning Supervisor because his engineering organization was running out of work. He wanted the job because it involved a promotion and an advance in his career.

While on the job he became interested in how he could help other people and got involved in activities at the plant that concerned the welfare and progress of blacks. He felt that this work was an important part of his life and wanted to share his experiences with students at historically black colleges. John considers this work an important part of his career. He remained as a Planning Supervisor for two years and then went to work as a project manager in the international sales division. As a project manager he worked on three major foreign projects. John was responsible for all phases of these projects and enjoyed the work. He remained on the job for nine years before returning to his current assignment as program control manager about six months ago.

Career Review

John especially enjoyed his work as a project manager in the international arena. He indicated that while doing this work he had a feeling that what he was doing in an underdeveloped area was going to benefit people. He enjoyed working with people where neither party spoke the other's language but they could still communicate. He didn't enjoy his early years when he had a college education and was unable to put it to use.

John feels that a major personal transition in his career was the fact that he started out naive and thought that hard work alone would make him successful.

He feels that his ambitions have not changed very much over his career and he still would like to have his own business. However, he now feels that he would like to work with young people and share his experience with them.

He has never refused a promotion or a job move. He is looking forward to working for another five or six years and then getting involved in community affairs and working with young people. He says that too many people take from society and never give anything back. He would like to have people remember him as having helped young people rather than to have achieved a high position in a company.

Career Anchor

John's anchor is service.

SERVICE ANCHOR CASE CHARACTERISTICS

Background

Two participants of the study, or 10 percent, were found to have service-based anchors. Both are male, over 40, and both are believed to have strong secondary anchors in security. Their average age of 46 years is the highest for any anchor category. Both were reared in the south, one in a rural environment and the other in an urban area. Their parents have the highest level of formal education of any group, with all but one having attended college. In their cases, both

parents were employed either as professionals or skilled laborers. Of the two, one is married and both were in the military.

Education

They are highly educated, with one having a doctoral degree and the other having done extensive graduate-level work at a number of universities. They attended segregated schools in their local communities and both attended historically black undergraduate colleges after high school. In looking back at their educational experiences as they relate to predominantly black institutions, both were satisfied.

Work History

Their work experiences are completely different, with one having spent much of his career in the military and only recently entering private industry. They have the usual pattern of several work assignments in their career but each has found time to become involved and supportive of young blacks and their career aspirations.

Reflections

They especially enjoyed those times in their careers where they felt they were contributing to the welfare of people. In the future, both would like to work with young people to better prepare them for future job opportunities. As one of these individuals said, "I would like to be remembered for the number of people I have helped rather than the job title I have achieved."

SECURITY CAREER ANCHORS

CASE STUDY 4 -- PETE

Background

Pete is currently employed by a medium-size chemical company as a senior engineer working on the development of new reagents for chemical processing. At age 41, he is married, with one child, and resides in the urban community where he grew up as a child. His wife has an advanced degree in education and is pursuing further studies. She is currently employed as an administrator in the local school system.

Pete is one of four children, all of whom have graduated from college. His father received an associates degree in business and worked in a management position in the post office. His mother graduated from high school and was a housewife.

Educational Background

Pete attended a technical high school in his home city where he particularly enjoyed and did well in math and science subjects. He indicated that those subjects came easy for him and he had a natural affinity for geometry. Pete views his high school years as a positive experience and would not change anything.

He commuted to a local university where he majored in chemical engineering. He chose this school because of its work/study program which made his college attendance financially easier. Pete originally wanted to major in chemistry but was accepted by the university only in chemical engineering. He indicated that he would today choose to go away from home to college so that he could get broader exposure to college life.

Pete chose not to go to graduate school immediately following because he felt that he had accumulated enough debt during his undergraduate years and wanted to work to become financially sound.

Employment History

Pete joined his current company right out of college and has been there for fourteen years. His first job was as a process engineer where he worked at improving manufacturing processes. He indicated that this was a typical job for an engineer fresh out of college. He went to work for this company primarily because he wanted to stay in the local area where he grew up and because it was the only offer that he had locally. At this time he had not given much thought to his career goals but thought he wanted to be a high-level manager. He remained on this job for two years and was laterally transferred to the quality control laboratory as a technical supervisor.

As a technical supervisor he had fifteen hourly people reporting to him and was responsible for in-process evaluation of various

chemical processes. His original engineering organization was being phased out and the company gave him three choices for a new assignment, of which the technical supervisor job was one. He chose the supervisory job because he wanted the experience and because he thought it might enhance his career. Pete remained on this job for 1-1/2 years.

He then initiated a move to a job as a technical supervisor for a new product line that was expected to expand rapidly. On this job he had both hourly and salaried people reporting to him. He viewed this job as a way to get additional supervisory experience and one which offered the potential for promotion. After four years, this job was phased out and he indicated to his management that he wanted to get back into the technical area.

Pete was promoted to senior engineer where he was responsible for analyzing the properties of chemicals and determining process stability. He took this job because, after six years of supervision, he was tired of the job and felt that he could be more effective as an individual contributor. After three years on this job, he moved to his current assignment.

He took his present job because he wanted a change and he felt that this job would be a challenge. He likes the self-motivational aspects of the job and the degree of freedom and autonomy that he is afforded. He indicated that because of technical staff reductions,

all of the engineering personnel tend to function across many technical areas.

Career Review

In reviewing his career, Pete feels that he has enjoyed the technical assignments more than his supervisory jobs. He indicated that he always approached the supervisory jobs as a technical person and not as a manager.

He feels that he can adapt to almost any job and sees the only major transition in his career as the return from supervision to engineering. While he felt a loss of power and influence when he returned to engineering, he has no desire to go back into hourly supervision.

Pete's ambition is no longer to be a high-level manager but instead he prefers to tinker and invent. He feels that he is not "political enough" to be a high-level manager. He has never refused a promotion or a job move because his views and the organization's have always matched with regard to promotions and moves.

In looking to the future, he indicated that he was not sure what he wanted to do but that he did want a change. Pete feels strongly about not wanting to move to a different part of the country and would not want to be a supervisor of hourly people. He actually thinks that

he will have a job change in the next ten years and the work will still be in a high-tech company, probably in electronics.

He describes his occupation as being 20 percent data analysis and then a large portion of time spent between experimentation, software development, and meetings.

Career Anchor

Pete has strong feelings about remaining in his home city and little desire for high-level management. Pete's anchor is security.

SECURITY CAREER ANCHOR CHARACTERISTICS

Background

Two people, both males and representing 10 percent of the sample, have anchors in this category based on their strong desire to remain geographically stable. Their average age is 38 years which is slightly lower than that of the total universe studied. One of the two is married and his wife has a college degree and is employed outside the home.

Both are from urban communities. One was reared in the southern part of the United States and the other in the northeastern part. Their parents are among the best educated in the study, with three of the parents having degrees beyond high school and the remaining parent having a high school diploma. In this category, the fathers and

mothers have approximately equal formal educations. With the exception of one mother employed as a housewife, the remaining parents are employed as professionals or skilled workers.

Educational Background

They are well educated, with one having received a doctoral degree in a technical discipline and the other having received a bachelors degree. They attended predominantly white universities in the northeastern part of the United States. Each feel good about his educational experience and would make no significant changes.

Work History

They have been with their present organizations an average of thirteen years. This is significantly higher than any other career anchor category. Except for an early career job change by one of the individuals, each has worked for his current firm for twelve to fourteen years. They have averaged five significant different assignments during this time which is the lowest of any anchor category. One is employed as a technical manager and another as a senior engineer. Both are respected in their firms for their expertise.

Reflections

The common theme with both individuals is their strong desire not to relocate to another geographical area. Both indicated that they would or have refused promotions or job offers that would force them

to leave their current communities. They enjoy their current jobs both from a technical and managerial view and exhibit a strong technical/functional secondary anchor.

AUTONOMY CAREER ANCHORS

CASE STUDY 5 -- CAROLYNE

Background

Carolynne is currently employed by an electronics equipment manufacturer and is responsible for managing a technical workforce that provides technical support to customers. At age 41, she is single and resides in a suburban community quite a distance from her job location. Her father has a masters degree and is employed as an agricultural consultant. Her mother did not attend high school and was employed as a housewife. Carolynne is one of four children and the only girl to finish college.

Education

Carolynne attended a church-affiliated high school where she liked biology and geography as well as languages and literature. She did not particularly enjoy her high school experience because the school provided a very restrictive atmosphere. She feels that the system emphasized the memorization of facts as opposed to developing strong analytical skills. She would have preferred not to have attended that type of high school.

She went to a small liberal arts college where she received a degree in political science. Her father essentially determined the college that she attended. Carolynne chose political science because

she thought that she might want a career in international relations. She indicated that she would not do anything differently except that she might major in English.

Employment History

Carolyn's first job was as an administrative assistant at a local college. Her function was essentially clerical and she did "anything and everything" in support of a fund-raising project. She did not want to be strictly a secretary upon graduating college and the prospect of being involved in fund raising appealed to her. At this time she had no real career aspirations and considered her employment as only temporary. She remained on this job for about six months and then became the secretary to the college president.

This job came about because her previous boss, who was in charge of fund raising, left the college and the job of secretary to the president became available. This was, in her words, "her first exposure to power and influence," because she came in contact with people who had considerable wealth and power. She remained on this job for two years.

Her next job was as a secretary at a company which processed film for Hollywood. She left her job at the college because her boss left the school and she wanted a change. The job at the film processing company also brought her into contact with very famous people which she enjoyed. She remained in that job for five years.

Her next job was as office manager for a small computer services company. She accepted this job because she wanted to see and be involved in a new business. She liked working with people and the fact that a younger age group was in key positions at this company made it enjoyable. She remained as an office manager for six months.

Her next job was as a customer service representative where she had to respond to customer complaints. Since she had no formal technical background, she had to learn the system and how to help customers resolve their problems. She initiated this change because she wanted to better understand the business in which the company was involved. She remained on that job for about two years.

Carolyne's next job was as a system designer and analyst responsible for the actual design of customer systems. These systems were essentially data processing systems which served customer requirements in accounting, payroll, and other business applications. She again initiated this change because it gave her a chance to get involved in the applications end of the business and gave her a further understanding of the overall business. Since her father had been employed in the public sector she had no feeling for the private sector and the way in which business corporations operated. She remained on this job for two years.

Her next job was as system design and analysis manager where she supervised a group of six or seven technical people. Again, she

initiated the change because she had not previously been a manager and wanted to see what it was about. While the job meant more money, that was not the major reason why she took it. She remained on that job for two years.

Over the next five years Carolyne worked for four different companies in a variety of technical positions. These were small companies all involved in providing computer and communications services.

She joined her present company about four years ago as a design engineer where her function was to be the bridge between the design organization and the maintenance people to ensure that computer systems had the proper diagnostics. She remained on this job for three years and was then promoted to her current assignment.

Career Review

Carolyne has particularly enjoyed those times when she felt the challenges and problems to be the greatest. She likes solving problems that she considers to be important. Carolyne doesn't like to do things she doesn't understand and she does not consider herself good at organizational infighting.

She considers the major transitions in her career as moving from a clerical to technical job, technical to management, and from a small company environment to a large company environment. She feels

good about the transitions and feels that she has initiated all her career transitions.

Her goals have broadened and she would now like to run her own business. She likes her independence and autonomy and recently refused a promotion to another company.

While she is not looking forward to anything in particular at her current company, she would like to do something in the future that would allow her to be creative. Carolyn feels strongly that she doesn't want to do any more technical work. She feels that she was not a trained engineer and got into the technical side of the business just to see what it was like.

Career Anchor

Carolyn's anchor is autonomy.
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AUTONOMY CAREER ANCHOR CHARACTERISTICS

Background

One male and one female in the study sample had autonomy career anchors. They represent 10 percent of the private sector individuals studied. Their average age of 37 is the lowest average of any anchor category and slightly below that of the total universe. One of them has been in the workforce for eleven years and the other for seventeen

years. Only one of the two is married. In this case, the spouse has attended college but is not currently employed outside of the home.

They come from medium-size families and were reared in urban environments. Their parents were relatively well educated, with two of the parents having received college degrees. This is the only career anchor category where the mothers of the individuals had less formal education than the fathers. Three of the four parents were employed in a professional or skilled capacity and the remaining parent, a mother, was employed in the home.

Educational Background

While both of these individuals attended college, only one has received a degree and that was in a non-technical discipline. They both received their high school and undergraduate college education at predominantly white institutions. What is unique about these individuals compared to others in the study is that they have acquired much of their current expertise through on-the-job training and sheer determination.

Employment History

They have been in their current organizations an average of 3-1/2 years which is considerably less than any other anchor category. They have each been employed by seven to eight different firms remaining, at most with any firm, three or four years. Both have left firms when they felt restricted by the organization.

Reflections

Both have enjoyed the times in their careers when they felt challenged by the work and when they could increase their knowledge of the business. For their future careers, they expressed an interest in working for organizations that would allow them to pursue their own interests essentially free from unwarranted organizational influence. They have both refused job promotions and offers that were perceived to inhibit their freedom and flexibility.

APPENDIX C

CAREER ORIENTATIONS INVENTORY

The Self-Scoring Career Orientations Inventory Test^{1/} was given to each subject at the conclusion of the interview. A copy of the test is presented at the end of this Appendix.

The scores for the individuals in the public and private sectors, along with some identifying information, are shown in Figures C-1 and C-2.

Figure C-1

Self-Scoring of Career Orientations--Public Sector

SUBJECT	AGE	SEX	ANCHOR	T/F	MGR	AUT	SEC1	SEC2	SER	ID	VAR	ENT
G-11	48	M	MGR	2.2	5.2	2.8	2.3	1.3	4.8	3.0	4.2	4.4
G-11	36	M	MGR	2.2	5.2	4.6	1.0	4.0	2.2	1.8	4.6	4.6
G-17	47	M	MGR	4.0	4.8	4.6	4.7	1.0	4.4	2.8	5.0	4.4
G-20	57	M	MGR	2.2	5.8	2.0	4.7	1.0	4.8	3.6	5.0	2.4
G-2	29	F	T/F	2.8	6.0	5.4	6.0	1.3	5.0	4.8	5.0	5.2
G-4	46	M	T/F	3.4	3.2	3.4	4.0	1.0	3.6	2.4	2.8	1.6
G-5	28	F	T/F	4.6	4.0	4.4	5.0	2.0	4.8	2.0	5.2	4.0
G-6	47	M	T/F	3.2	4.4	3.2	4.0	3.3	3.8	3.2	4.0	4.0
G-10	30	M	T/F	5.0	4.2	4.8	2.3	3.0	4.2	2.2	4.0	3.4
G-13	53	F	T/F	6.0	3.2	2.3	4.7	6.0	4.4	3.2	4.6	3.4
G-15	50	M	T/F	1.8	5.8	3.4	4.0	1.3	6.0	2.0	5.8	5.0
G-18	29	M	T/F	3.0	4.4	3.2	5.7	5.0	5.8	1.8	4.8	5.2
G-19	28	F	T/F	4.8	4.4	3.4	2.0	2.7	3.2	2.6	4.0	4.0
G-1	40	M	AUT	3.4	3.4	5.8	3.0	2.3	4.8	2.8	3.6	5.0
G-3	37	F	AUT	5.0	5.2	4.6	4.3	3.3	2.8	4.6	4.4	4.6
G-7	43	F	AUT	2.0	5.8	3.0	2.7	2.0	3.6	2.8	5.2	4.0
G-8	41	M	AUT	3.2	5.0	4.0	3.3	3.0	4.0	3.4	5.0	4.4
G-12	50	M	SEC	2.8	6.0	5.4	6.0	1.3	5.0	4.8	5.0	5.2
G-14	57	M	SEC	4.2	3.4	3.0	5.7	6.0	4.4	2.0	4.0	2.8
G-9	30	M	SERV	2.0	4.6	3.2	3.3	2.0	5.2	2.8	5.4	4.0
AVERAGE				3.4	4.7	3.9	3.9	2.6	4.3	2.9	4.6	4.1

Figure C-2

Self-Scoring of Career Orientations--Private Sector

SUBJECT	AGE	SEX	ANCHOR	T/F	MGR	AUT	SEC1	SEC2	SER	ID	VAR	ENT
I-1	33	F	MGR	2.8	5.8	5.4	4.3	2.7	5.2	5.2	5.4	3.8
I-8	41	M	MGR	2.8	5.4	3.6	3.0	2.0	4.6	4.0	5.2	4.6
I-10	31	M	MGR	2.4	5.6	3.6	3.0	1.3	5.2	2.6	4.6	4.6
I-12	37	M	MGR	1.2	5.4	3.8	3.0	2.0	4.6	4.2	5.0	4.2
I-15	44	M	MGR	2.2	5.2	3.2	4.7	2.7	5.4	3.6	3.8	3.4
I-17	36	M	T/F	1.0	5.1	3.2	1.0	1.0	4.4	1.8	5.8	4.0
I-18	39	F	T/F	1.6	5.0	4.6	2.0	1.0	5.6	3.6	5.6	4.6
I-3	42	M	T/F	3.2	4.2	3.4	4.0	4.3	4.2	4.2	5.0	3.6
I-11	54	M	T/F	3.8	4.4	3.0	2.0	5.0	2.4	2.6	3.4	1.6
I-6	32	F	T/F	3.0	5.8	1.2	1.7	1.7	5.0	3.2	4.8	5.8
I-14	46	M	T/F	2.8	4.8	2.6	4.3	2.3	4.6	3.6	5.2	5.0
I-16	41	M	T/F	2.8	5.2	3.8	3.3	3.7	3.6	2.8	4.6	4.0
I-19	31	F	T/F	1.4	5.8	4.2	3.3	1.3	5.0	3.6	4.8	2.8
I-20	46	M	T/F	2.8	5.2	4.6	2.3	4.0	3.8	4.2	5.6	5.8
I-9	39	M	SEC	1.8	5.4	3.0	4.7	4.3	4.2	4.2	4.4	1.6
I-5	36	M	SEC	1.6	3.8	3.6	3.7	5.3	2.6	2.0	3.0	4.0
I-7	31	M	AUT	3.2	2.8	5.2	3.0	3.7	3.8	2.6	4.8	4.4
I-13	42	F	AUT	3.5	5.0	5.6	1.7	1.0	3.8	2.6	5.8	4.0
I-4	49	M	SER	2.8	4.5	3.8	3.7	1.0	5.8	2.6	3.8	5.0
I-2	42	M	SER?	3.8	5.0	4.0	3.7	3.0	4.0	4.6	4.2	4.0
AVERAGE				2.6	5.0	3.8	3.0	2.5	4.4	3.4	4.7	4.0

The data from the Self-Scoring Career Orientations Inventory Test was not sufficient to predict career anchors. The managerial scores tended to be higher than the interviews would have indicated. Perhaps this is because people in program and project positions tend to view themselves as general managers, when the career anchor concept classifies them as technical/functional. This is an area where further research is warranted. Perhaps program management warrants consideration for a separate anchor category.

The statistical data of the self-scoring test for the two samples is as follows:

Career Orientations Inventory

Statistical Data

	<u>Sample Average</u>	<u>Sample Variance</u>	<u>Sample Deviation</u>	<u>Sample Max</u>	<u>Sample Min</u>
PUBLIC					
T/F	3.4	1.4	1.2	6.0	1.8
AUT	3.9	1.0	1.0	5.8	2.0
MGR	4.7	0.8	0.9	6.0	1.0
SECL	3.9	1.9	1.4	6.0	1.0
SEC2	2.6	2.4	1.5	6.0	1.0
SER	4.3	0.9	0.9	6.0	2.2
ID	2.9	0.8	0.9	4.8	1.8
VAR	4.6	0.5	0.7	5.8	2.8
ENTR	4.1	0.9	0.9	5.2	1.6
PRIVATE					
T/F	2.6	0.6	0.8	6.0	1.0
AUT	3.8	1.0	1.0	5.6	1.2
MGR	5.0	0.5	0.7	5.8	2.8
SECL	3.1	1.1	1.0	4.7	1.0
SEC2	2.7	1.9	1.4	5.3	1.0
SER	4.4	0.8	0.9	5.8	2.4
ID	3.4	0.8	0.9	5.2	1.8
VAR	4.7	0.6	0.8	5.8	3.0
ENTR	4.0	1.2	1.1	5.8	1.6
PUBLIC/PRIVATE COMBINED					
T/F	3.0	1.2	1.1	6.0	1.0
AUT	3.8	1.0	1.0	5.8	1.2
MRG	4.8	0.7	0.8	6.0	2.8
SECL	3.5	1.7	1.3	6.0	1.0
SEC2	2.7	2.2	1.5	6.0	1.0
SER	4.4	0.8	0.9	6.0	2.2
ID	3.2	0.9	0.9	5.2	1.8
VAR	4.7	0.5	0.7	5.8	2.8
ENTR	4.1	1.0	1.0	5.8	1.6

We hesitate to make too much of this data since primary determination of career anchor categories was based on the personal interviews.

APPENDIX C (continued)

CAREER ORIENTATIONS INVENTORY

Think back to your recent years in your career. By what kinds of criteria have you made decisions about job moves, company moves, whether or not to accept new assignments, and other career decisions. This also about the kinds of criteria which are important to you as you think about future career decisions you will be making.

The items below are designed to help you identify what kind of criteria you have used in the past and which may be important to you in the future.

For each criterion, circle a number which best describes how important that criterion has been and continues to be in your career decisions.

If you feel that your present or future criteria are different from past ones, answer in terms of the present or future. We want to understand how you look at these criteria now and how they will influence future career decisions, even though some of them are worded in terms of the past.

There are no right or wrong answers, except in terms of their importance to you. So be honest with yourself.

HOW IMPORTANT IS EACH ONE OF THE FOLLOWING STATEMENTS FOR YOU?

	<u>Of no</u> <u>Importance</u>						<u>Centrally</u> <u>Important</u>
1. To build my career around some specific functional or technical area is.....	1	2	3	4	5	6	
2. The process of supervising, influencing, leading and controlling people at all levels is.....	1	2	3	4	5	6	
3. The chance to pursue my own lifestyle and not to be constrained by the rules of an organization is..	1	2	3	4	5	6	
4. An organization which will provide security through guaranteed work, benefits, good retirement program, etc. is.....	1	2	3	4	5	6	
5. The use of my interpersonal and helping skills in the service of others is.....	1	2	3	4	5	6	

c Delong & Schein, 1981. Based on Schein, E.H., Career Dynamics. Reading, MA: Addison-Wesley, 1978.

	<u>Of no</u> <u>Importance</u>			<u>Centrally</u> <u>Important</u>		
6. Being identified with and gaining status from my occupation is.....	1	2	3	4	5	6
7. An endless variety of challenges in my career is.....	1	2	3	4	5	6
8. To be able to create or build something that is entirely my own product or idea is.....	1	2	3	4	5	6
9. Remaining in my specialized area as opposed to being promoted out of my area of expertise is.....	1	2	3	4	5	6
10. To be in a position of leadership and influence is.....	1	2	3	4	5	6
11. A career which is free from organization restrictions is.....	1	2	3	4	5	6
12. An organization which will give me long-run stability is.....	1	2	3	4	5	6
13. The process of seeing others change because of my effort is.....	1	2	3	4	5	6
14. To be recognized by my title and status is.....	1	2	3	4	5	6
15. A career which provides a maximum variety of types of assignments and work projects is.....	1	2	3	4	5	6
16. The use of my skills in building a <u>new</u> business enterprise is.....	1	2	3	4	5	6
17. Remaining in my area of expertise rather than being promoted into general management is.....	1	2	3	4	5	6
18. To rise to a position in general management is.....	1	2	3	4	5	6
19. A career which permits a maximum of freedom an autonomy to choose my own work, hours, etc. is..	1	2	3	4	5	6
20. Remaining in one geographical area rather than being prompted into moving because of a promotion is.....	1	2	3	4	5	6
21. Being able to use my skills and talents in the service of an important cause is.....	1	2	3	4	5	6
22. Being identified with a powerful or prestigious employer is.....	1	2	3	4	5	6

HOW TRUE IS EACH ONE OF THE FOLLOWING STATEMENTS FOR YOU?

	<u>Not at</u> <u>all true</u>					<u>Completely</u> <u>true</u>
23. The excitement of participating in many areas work has been the underlying motivation behind my career.	1	2	3	4	5	6
24. I have been motivated throughout my career by the number of ideas or products which I have been directly involved in creating.	1	2	3	4	5	6
25. I will accept a management position only if it is in my area of expertise.	1	2	3	4	5	6
26. I would like to reach a level of responsibility in an organization where my decisions really make a difference.	1	2	3	4	5	6
27. During my career I have been mainly concerned with my own sense of freedom and autonomy.	1	2	3	4	5	6
28. It is important for me to remain in my present geographical location rather than to move because of a promotion or new job assignment.	1	2	3	4	5	6
29. I have always sought a career in which I could be of service to others.	1	2	3	4	5	6
30. I like to be identified with a particular organization and the prestige that <u>accompanies</u> that organization.	1	2	3	4	5	6
31. An endless variety of challenges is what I really want from my career.	1	2	3	4	5	6
32. Entrepreneurial activities are an important part of my career.	1	2	3	4	5	6
33. I would leave my company rather than be promoted out of my area of expertise.	1	2	3	4	5	6
34. I want to achieve a position which gives me the opportunity to combine analytical competence with supervision of people.	1	2	3	4	5	6
35. I do not want to be constrained by either an organization or the business world.	1	2	3	4	5	6
36. I prefer to work for an organization which provides tenure (lifetime employment).	1	2	3	4	5	6

	<u>Not at</u>			<u>Completely</u>		
	<u>all true</u>			<u>true</u>		
37. I want a career in which I can be committed and devoted to an important cause.	1	2	3	4	5	6
38. I want others to identify me by my organization and my job title.	1	2	3	4	5	6
39. I have been motivated throughout my career by using my talents in a variety of different areas of work.	1	2	3	4	5	6
40. I have always wanted to start and build up a business of my own.	1	2	3	4	5	6
41. I prefer to work for an organization which will permit me to remain in one geographical area.	1	2	3	4	5	6

SELF-SCORING OF CAREER ORIENTATIONS

Under each of the orientation headings transfer your answers to the items indicated. Then add the total score for the column and divide by the number of items in that column to get your average for that orientation.

TF.	MGR.	AUT.	SEC.1	SEC.2	SER.	ID.	VAR.	ENTR.
1__	2__	3__	4__		5__	6__	7__	8__
9__	10__	11__	12__		13__	14__	15__	16__
17__	18__	19__		20__	21__	22__	23__	24__
25__	26__	27__		28__	29__	30__	31__	32__
33__	34__	35__	36__		37__	38__	39__	40__
				41__				
TOTAL								
____	____	____	____	____	____	____	____	____
+5	+5	+5	+5	+5	+5	+5	+5	+5
AVERAGE								
____	____	____	____	____	____	____	____	____

The nine scale scores are based on a statistical analysis of which items tend to cluster together. Six of the scale scores are identical to the career anchor categories previously identified:

- TF. -- Technical/Functional
- Mgr. -- Managerial
- Aut. -- Autonomy/Independence
- Sec.1 -- Security based on job tenure
- Sec.2 -- Security based on geographic stability
- Ser. -- Service/Dedication to a cause
- Entr. -- Entrepreneurial Creativity

Notice that the security items divided into two kinds based either on organizational tenure or geographic stability. In addition two other scales were identified:

- ID. -- Organizational/Occupational Identity
- VAR. -- Variety

If you scored high on either of these, look back at the items to see what values were important to you.

APPENDIX D

BACKGROUND INFORMATION

SUBJECT NAME: _____ SEX _____

MARITAL STATUS _____ NO. OF CHILDREN _____

EDUCATIONAL BACKGROUND

HIGH SCHOOL ATTENDED _____

COLLEGE(S) _____ YR GRAD. _____ DEGREE _____ MAJOR _____

_____ YR GRAD. _____ DEGREE _____ MAJOR _____

DESCRIBE YOUR LIFE WHILE LIVING AT HOME: _____

MILITARY SERVICE: _____

BRANCH _____ YEARS OF SERVICE _____ HIGHEST RANK _____

SPOUSE

EDUCATION: _____ OCCUPATION _____

FATHER

EDUCATION: _____ OCCUPATION _____

MOTHER

EDUCATION: _____ OCCUPATION _____

HOME TOWN: _____

CURRENT JOB: COMPANY _____ DIVISION _____

TITLE: _____

JOB DESCRIPTION: _____

NO. OF YEARS SERVICE: _____

INTERVIEW GUIDE

1. **EDUCATION:** LET'S START WITH YOUR EDUCATION. WHAT DID YOU CONCENTRATE ON IN SCHOOL? (EXPLORE ESPECIALLY UNIVERSITY AND POST-GRADUATE EDUCATION)

A. **HIGH SCHOOL**—WHY DID YOU CHOOSE THOSE AREAS AND HOW DO YOU FEEL ABOUT IT NOW? WOULD YOU DO ANYTHING DIFFERENT AND IF SO, WHAT?

B. **UNDERGRADUATE**—WHY DID YOU CHOOSE THOSE AREAS AND HOW DO YOU FEEL ABOUT IT NOW? WOULD YOU DO ANYTHING DIFFERENT AND IF SO, WHAT?

C. **GRADUATE**—WHY DID YOU CHOOSE THOSE AREAS AND HOW DO YOU FEEL ABOUT IT NOW? WOULD YOU DO ANYTHING DIFFERENT AND IF SO, WHAT?

2. **FIRST JOB:** WHAT WAS YOUR FIRST REAL JOB AFTER YOUR EDUCATION?

WHAT WERE YOU LOOKING FOR IN YOUR FIRST JOB? WHY DID YOU TAKE THE JOB YOU TOOK (I.E., SALARY, CLOSE TO HOME, ETC.)

3. **WHAT WERE YOUR AMBITIONS OR LONG-RANGE GOALS WHEN YOU BEGAN YOUR CAREER?**

4. **NEXT JOB:** WHAT WAS YOUR FIRST MAJOR CHANGE IN JOB OR EMPLOYING ORGANIZATION?

WHO INITIATED THE CHANGE? YOU OR THE ORGANIZATION? WHAT WERE THE REASONS?

(Questions 5-11 are a repeat of Question 3, in order to provide sufficient space for multiple job entries.)

12. **AS YOU LOOK BACK OVER YOUR CAREER SO FAR, ARE THERE SOME TIMES WHEN YOU ESPECIALLY ENJOYED IT? WHAT, ABOUT THOSE TIMES, DID YOU ESPECIALLY ENJOY?**

APPENDIX D (continued)

13. ARE THERE SOME TIMES WHEN YOU HAVE NOT ENJOYED IT? WHAT, ABOUT THOSE TIMES, DID YOU ESPECIALLY NOT ENJOY?

14. DO YOU SEE ANY MAJOR TRANSITIONS IN YOUR CAREER SO FAR? WHAT ARE THEY? DESCRIBE THE TRANSITION OBJECTIVELY.

WHO INITIATED THE TRANSITIONS? WHAT WERE THE REASONS? HOW DO YOU FEEL ABOUT IT NOW?

OTHER TRANSITIONS?

15. HAVE YOUR AMBITIONS OR LONG-RANGE GOALS CHANGED SINCE YOU STARTED YOUR CAREER? WHEN? WHY?

16. HAVE YOU EVER REFUSED A JOB MOVE OR PROMOTION? WHY OR WHY NOT?

17. AS YOU LOOK AHEAD IN YOUR CAREER, WHAT ARE THE THINGS YOU ARE ESPECIALLY LOOKING FORWARD TO? WHY ARE YOU LOOKING FORWARD TO THAT?

18. AS YOU LOOK AHEAD, ARE THERE THINGS YOU WOULD ESPECIALLY LIKE TO AVOID? ARE THERE THINGS YOU ARE AFRAID OF? WHY?

19. WHAT DO YOU THINK WILL ACTUALLY HAPPEN IN THE NEXT TEN YEARS OF YOUR CAREER?

20. HOW WOULD YOU DESCRIBE YOUR OCCUPATION TO OTHERS? WHAT IS IT YOU REALLY DO? WHAT PART OF YOUR OCCUPATION (IF ANY) DO YOU REALLY IDENTIFY WITH PERSONALLY? (THE PURPOSE IS TO GET YOU THINKING ABOUT YOUR SELF-CONCEPT WITH RESPECT TO YOUR CAREER AND OCCUPATION.)

APPENDIX D (continued)

21. LET'S REVIEW YOUR ANSWERS, ESPECIALLY THE REASONS YOU GAVE FOR THE VARIOUS EVENTS. WHAT THEMES OR COMMON FACTORS DO YOU SEE IN YOUR ANSWERS?

22. DO YOU SEE ANY CONFLICTS OR CONTRADICTIONS IN WHAT YOU HAVE IDENTIFIED? CAN YOU IMAGINE HYPOTHETICAL SITUATIONS WHICH WOULD HELP YOU RESOLVE THOSE CONFLICTS?

DATA SHEET

NAME: _____ CODE: _____

AGE: _____ SEX: _____ MARITAL STATUS _____

ORGANIZATION: _____

CURRENT POSITION: _____

NUMBER OF YEARS IN WORK FORCE: _____

NUMBER OF YEARS IN PRESENT ORGANIZATION: _____

HOME TOWN: _____ RURAL: _____ URBAN: _____ SUBURBAN: _____

PRIMARY SCHOOL LOCATION: _____ SEGREGATED: _____

HIGH SCHOOL LOCATION: _____ SEGREGATED: _____

UNDERGRADUATE SCHOOL: _____ DEGREE: _____

YEAR: _____ LOCATION: _____ HISTORICALLY BLACK? _____

GRADUATE SCHOOL: _____ PART TIME: _____ FULL TIME _____

MASTERS: _____ YEAR: _____

DOCTORATE: _____ YEAR: _____

NUMBER OF YEARS MILITARY SERVICE: _____ HIGHEST RANK: _____

SPOUSE'S EDUCATION: _____ SPOUSE'S OCCUPATION: _____

FATHER'S EDUCATION: _____ FATHER'S OCCUPATION: _____

MOTHER'S EDUCATION: _____ MOTHER'S OCCUPATION: _____

NUMBER OF BROTHERS/SISTERS: _____ COLLEGE GRADUATES: _____

NUMBER OF JOB CHANGES INTERNAL: _____ EXTERNAL: _____

SELF-SCORES: T/F MGR AUT SEC1 SEC2 SER ID VAR ENTR

ANCHOR: _____

REMARKS: _____

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