

ORIENTATION TO PROFESSIONAL PRACTICE

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Orientation to Professional Practice

For Engineers, Analysts, Programmers,
Technicians, and Scientists

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About the Authors

While both authors have experience in industry and education, it is not by coincidence that most of Dan Nilsson's experience is in industry, while Phil Hicks's expertise is in education. This particular combination is a deliberate attempt to blend the authors' knowledge in order to stress general principles and their application in industry, rather than merely to enumerate the details of professional practice. Dan Nilsson has worked for 14 years at several International Business Machine locations as an industrial engineer, systems analyst, programmer, planner, and manager. Phil Hicks has 15 years of engineering experience as a professor, consultant, and chairman at several leading universities. Recently, both authors have established their own consulting firms to implement many of the principles stressed in their book.

Preface

Almost all executives and professors agree that today's college graduates and professionals are better equipped with technical knowledge than were their predecessors. At the same time, there is general agreement as to the need for additional awareness of career aspirations; increased professionalism; enhanced ability to express ideas; and continued self-development and improvement. This situation is neither isolated nor exceptional, but is commonly found throughout the fields of education, government, and industry. This book is intended to aid in the improvement of the nontechnical skills required for successful professional practice.

PURPOSE

The purpose of this book is to provide students and professionals such as engineers, scientists, analysts, technicians, and programmers an opportunity to evaluate career objectives and goals, personal effectiveness, professional responsibilities, and development activities.

OBJECTIVES

By reading the book, the college student, inexperienced professional, or experienced professional should achieve an increased self-awareness of abilities, skills, and desires. This understanding will help the student or the professional make more significant contributions, obtain objectives and goals, and prepare to meet the challenges of the future.

CONTENTS

Orientation to Professional Practice is divided into four parts. It begins by providing fundamental information on career analysis and the job search process. It then provides several suggestions on how to achieve personal effectiveness in the work environment. Next, it describes the responsibilities that a professional has in daily work situations. The text concludes by providing several suggestions on self-improvement and personal development. The four parts of the book are interrelated and the information is presented as a continuum.

Part One provides a detailed explanation of career analysis and the job search process in today's sophisticated marketplace. Anyone seeking and applying for a new position—whether just graduating from college, temporarily stalled in midcareer, dissatisfied with the current work situation, or unemployed—should benefit from this information. The first chapter discusses the concept of career planning as well as how to do it. Chapter 2 provides a quantitative assessment of occupations and career paths by depicting the interrelationships among salary, geographical locations, career paths, and future employment prospects. In chapter 3, the job attack process is explored. It includes topics such as where to find out about job openings, how to obtain an interview, how to prepare for an interview, and what type of correspondence you will be expected to write. Finally, chapter 4 provides some guidelines on how to construct an effective résumé and some techniques on how to improve the interviewing process.

Part Two discusses several factors that affect personal effectiveness in the work environment. The first chapter provides an overview of the work environment and the interdependencies among organizations, positions, government, society, and the economy. Particular emphasis is given to organizational characteristics and line-staff relationships. The next chapter discusses how professionals are employees in complex organizational structures and can work effectively with management, fellow professionals, and support personnel. Attention is also given to management considerations. The following chapter provides suggestions on how to plan, organize, and control specific assignments. Next, the text explores the criteria for success and effective time management. The last two chapters of Part Two stress communication skills by illustrating types of effective written correspondence (chapter 9) and techniques for making oral presentations and chairing or participating in meetings (chapter 10).

Part Three discusses the responsibilities of the professional. The first chapter provides an historical approach to ethics, followed by a discussion of professional

codes, the Canon of Ethics for Engineers, and business ethics. The next chapter analyzes the advantages and disadvantages of registration and certification for professionals. The final two chapters discuss legal responsibilities of the professional and the Occupational Safety and Health Act (OSHA).

Part Four explores the opportunities that are available for professional development and improvement. The first chapter describes the benefits of membership in professional societies. The following chapter provides a description of several ways to continue your education. The next chapter offers techniques for monitoring and evaluating personal progress toward career objectives. Finally, the authors provide several suggestions on how to achieve physical fitness and use stress concepts in daily work situations.

POSSIBLE USE

This book is intended as a text for a senior-year seminar course, as a guide in professional development programs, and as a reference work for professionals engaged in the private or public work sectors.

Use of *Orientation to Professional Practice* in a senior-year seminar course should help the student bridge the gap between college and the work environment. For instructional purposes, each chapter is designed as a "stand alone" topic of appropriate length for one session of a typical fifteen-meeting course. Although it is possible arbitrarily to select chapters for class discussion, utilization of the text sequence is recommended as it builds from immediate career needs and the job search process to the longer-term requirements of professional practice.

The material in the book is also well suited to serve as a guide in a development program for professionals. In this program, the emphasis should be placed on personal effectiveness (Part Two), responsibilities of professional practice (Part Three), and professional development (Part Four); however, the material on career analysis (Part One) is also important. The material could be used to stimulate increased self-awareness and behavioral changes that would assist the professional in becoming more successful. Although the chapters could be used independently, the material should be blended and structured to fit the organization's unique needs.

This book can be used advantageously as a reference by professionals in the private and public sectors. Suggestions for improving nontechnical skills are illustrated by realistic examples so that self-improvement can be acquired by studying the text. Since additional authoritative sources are listed following each chapter, this text serves as a guide to obtaining additional information. Also, each contains review questions, that provide thought-provoking activities to attempt to stimulate the reader both to understand more fully and to apply the material.

ACKNOWLEDGMENTS

It would be inappropriate to conclude these opening remarks without acknowledging the contributions of others. Dan Nilsson thanks IBM for allowing him to

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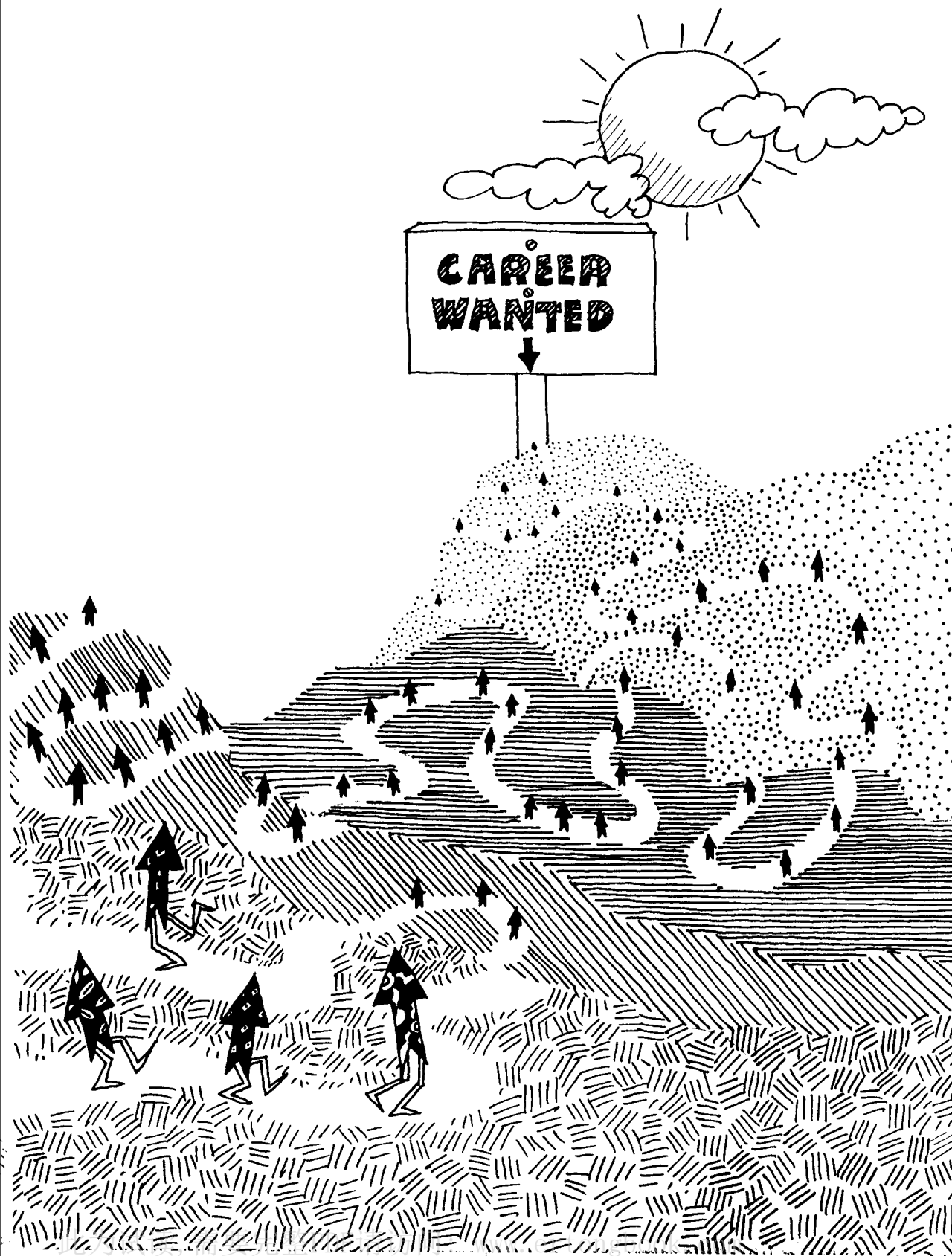
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The Career-Planning Process

The most difficult thing in life is to know yourself.

—Thales

Welcome to the world of hunting for a new position, whether you are undertaking it for the first time or have done it several times before. The idea of seeking a new opportunity occurs to everyone, so you are not alone or different. Yet, since most seekers are not adequately equipped, they view the career-planning process as a baffling and frightening experience. We can learn from others who have successfully faced your situation. This chapter will discuss several aspects of career planning to help you achieve your career goals.

The need to seek a new position may occur for different reasons. You may be graduating from college, temporarily stalled in midcareer, dissatisfied with your current situation, or unemployed. Whatever the reason for the search, the selection of a new position must synchronize with your career plan and goals. Richard Bolles (1, p. i), an authority on the career-planning process, estimates that the average worker will change careers three to five times. He also estimates that while the average worker over 35 undergoes a hunt for a new position once every 3 years, the average worker under 35 searches every year and a half.

If the career-planning process is thoroughly understood, planned, organized, and controlled, it can be a revealing and beneficial experience. During this process, a feeling of self-confidence and self-fulfillment usually develops. This is due in part to the creation of a personal continuity that spans your past experience, present situation, and future plans. You will feel more secure in knowing that career alternatives have been investigated and that the best one is being pursued. This analysis helps to reduce wasted time and allows you to channel your efforts in a much more competitive manner. Career planning is a necessary and vital process that helps you achieve your goals. Successful career planning is not something that happens instantly. It is a continuing process that needs to be carried out in sequential steps and that requires your total effort.

WHAT IS CAREER PLANNING?

It is important that the term "career"* be understood, since there is a misconception that career, job, and position can be used interchangeably. Career planning is a process that entails four major efforts: taking a complete inventory of your life (autobiography); evaluating potential positions in the current and future business environment; establishing position objectives and career goals; and documenting your notes and plan of action. If any one of the interdependent parts is neglected or omitted, the career-planning process will not be complete and failure may result. It is suggested that the process be sequentially undertaken to reduce frustration and duplication of effort. The four parts of the career-planning process and their interrelationship are shown in Figure 1-1.

Benedetto Greco (2), who has written several books on how to make effective career decisions, offers a six-step approach to developing a career strategy. His steps and their interrelationship are depicted in Figure 1-2.

HOW CAREER PLANNING IS DONE

Career planning begins when you take a personal inventory and write an honest and realistic autobiography. To ensure that it is comprehensive, include information on your background, personal characteristics, and work preferences. The questions in Table 1-1 are provided as a guide for ensuring that this important information is fully considered. In developing the background section, evaluate your previous experiences in a logical sequence by answering the questions in the résumé checklist (Tables 4-1 or 4-2). This helps you recall many of the minor as well as major events that may be omitted if left to memory alone. By reviewing your education, experience, activities, and background, trends and tendencies may be revealed. For example, the autobiography may show that you have both considerable experience and the desire to work in community development activities even though your expressed goal is to be an administrative aide in a large manufacturing corporation. Such a

*In our discussion, a *career* is considered to be the pursuit of professional goals through progressive achievement; a *job* is the immediate work accomplished; and a *position* is employment for salary or wages.

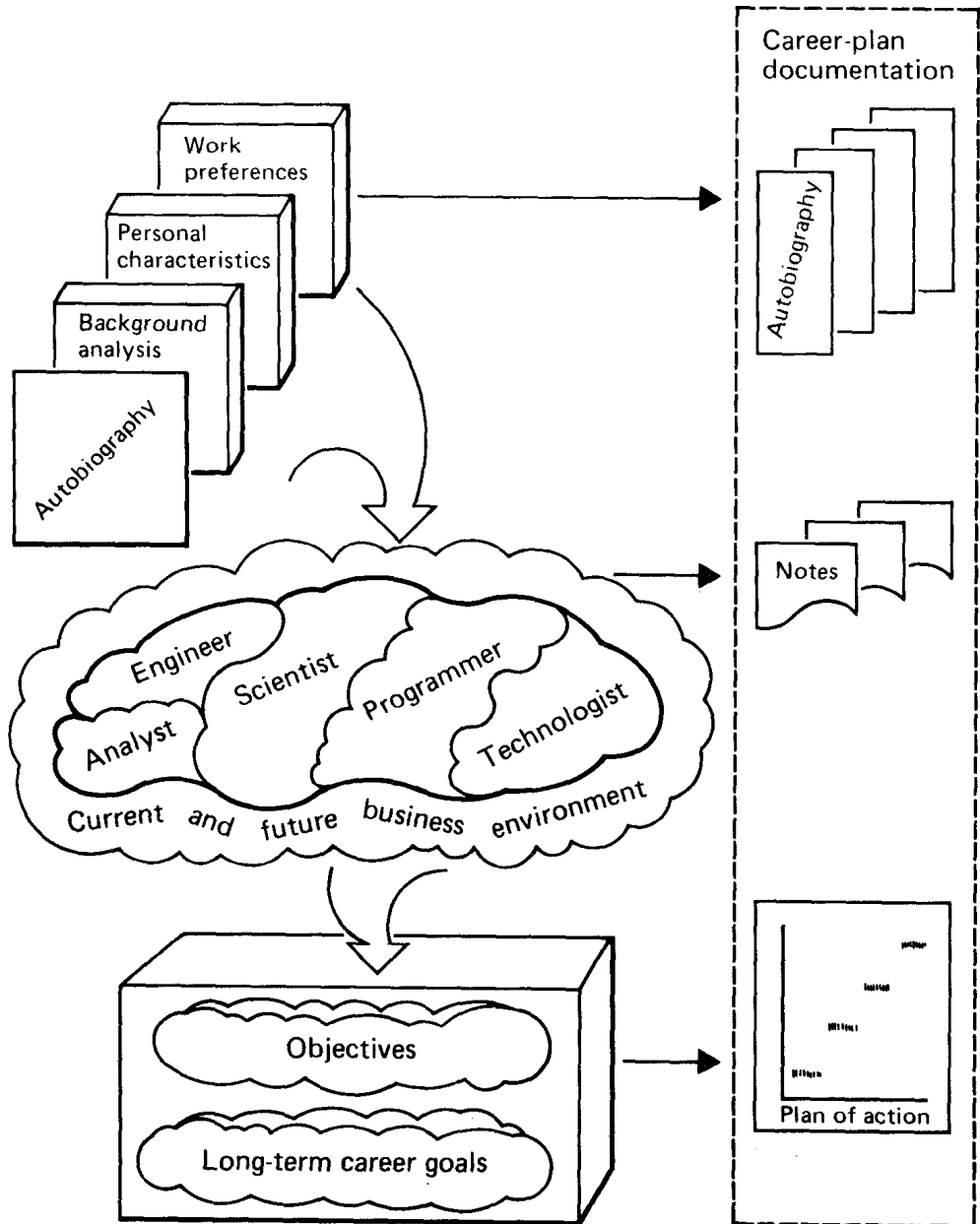


Figure 1-1 Career-planning process.

dichotomy should make you question your career path and reassess your goals. The autobiography may also show that you are more interested in a hobby than you previously realized. It is often possible to observe more than one trend. In this situation, each trend must be fully evaluated.

The next consideration in your autobiography is an evaluation of your personal

Step 1. Realize that you're looking for a career objective and the sequence of jobs you'll need to achieve it.

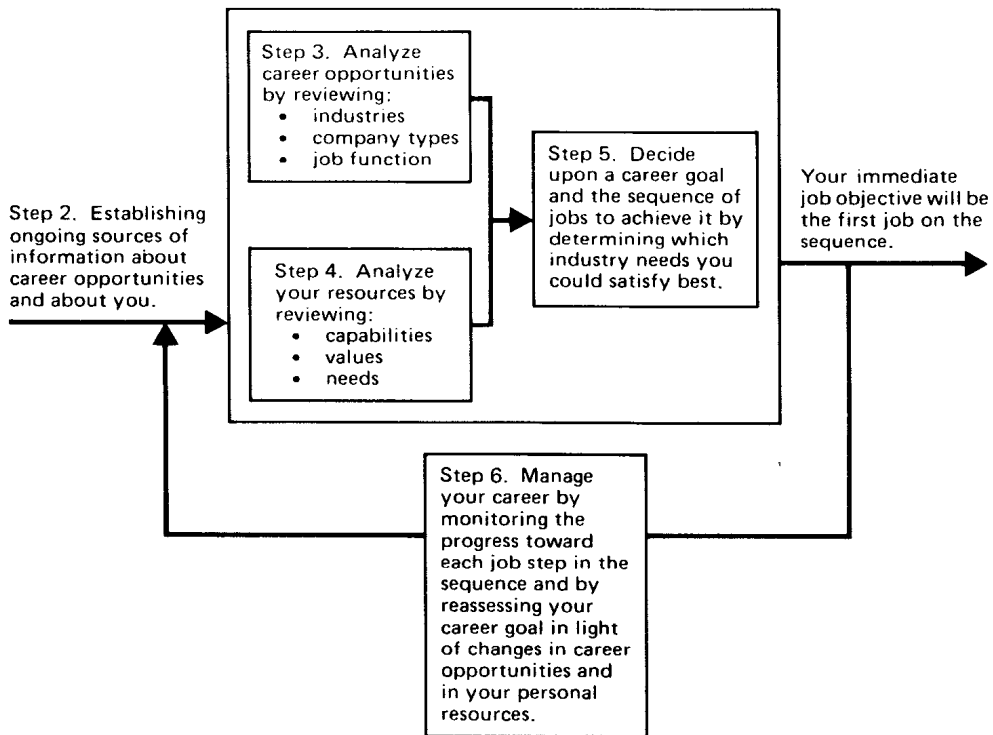


Figure 1-2 Career-decision strategy. (*Benedetto Greco, How to Get the Job That's Right for You, p. 22. © 1975 by Dow Jones-Irwin, Inc.*)

characteristics. Use the Personal Inventory Checklist (Table 1-1) as a guide in writing a detailed description of each characteristic. Ask yourself whether you like to work with people, ideas, or things. Determine how outgoing you are by classifying yourself as either an introvert or an extrovert. Assess the degree of responsibility you want to assume—whether or not you want supervisory or staff responsibility, and how much of it you want. Determine the level of security and prestige you expect. Then, list your strengths and weaknesses. Assess your personal health to see if it would have any influence on your performance. Finally, decide if there is any desire for further education or training.

The last part of your autobiography should deal with work preferences relating to the present, to 5 years from now, and to 10 years from now. You may be willing to accept a less than optimal work situation now with a planned improvement on the 5- or 10-year horizon. For example, you may be willing to work a 65- to 70-hour week now so that your business will make a profit and grow—and reduce to a 40-hour week in 5 years, and perhaps a 20-hour week in 10 years.

There are several factors pertaining both to you and your job that need to be evaluated and understood if satisfaction is to occur; they are work environment,

Table 1-1 Personal Inventory Checklist

I. Background analysis*	Yes	No	
A. Answered questions in education section of résumé	_____	_____	
B. Answered questions in experience section of résumé	_____	_____	
C. Answered questions in activities section of résumé	_____	_____	
D. Answered questions in background section of résumé	_____	_____	
II. Personal characteristics			
A. Desire to work with people, things, or ideas?	_____		
B. Introvert or extrovert?	_____		
C. Desire high, medium, or low responsibility?	_____		
D. High, medium, or low security expectations?	_____		
E. High, medium, or low prestige expectations?	_____		
F. Any attitudinal considerations?	_____		
G. Areas of strength?	_____		
H. Areas of weakness?	_____		
I. Any health considerations?	_____		
J. Desire for further education?	_____		
III. Work preferences	Now	5 years	10 years
A. Number of hours of travel per week?	_____	_____	_____
B. Number of work hours per week?	_____	_____	_____
C. Geographical location?	_____	_____	_____
D. Size of company?	_____	_____	_____
E. Type(s) of companies?	_____	_____	_____
F. Salary range?	_____	_____	_____

* Use Résumé Checklist (Tables 4-1 and 4-2).

style, friends, and job preferences. These factors are described in Table 1-2. To find out where you stand, check the range where you feel most comfortable.

The next logical step in the career-planning process is to evaluate potential positions in both the current and future business environment. It is not suggested that you consider all the positions, but only those that complement the trends discerned in your autobiography and that are stepping stones to your career goal. As an example, if you are currently working in computer operations and enjoy playing bridge and working mathematical puzzles, then there is a strong indication that you may want to advance to a programmer's job in a short period of time and eventually become the senior-level programmer. The next chapter provides a quantitative assessment of career paths by depicting the interrelation of alternative careers, salaries, geographical locations, organizational characteristics, and future employment prospects. There are two simple rules to follow in evaluating future positions: (1) select positions in a logical sequence that allows continual learning and growth,