

Part One

Setting the Stage

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Chapter One

Introduction: Career Imprints and Senior Executive Mobility

Baxter International, a global medical products and services company based in Deerfield, Illinois, has spawned a disproportionate number of top managers in the U.S. biotech industry. In fact, the company, through those managers, has had a significant influence on how the thirty-year-old biotech arena has evolved and grown. Consider: former Baxter managers were on the IPO teams of nearly one-quarter of all of the biotechnology companies that went public between 1979 and 1996. What's more, Baxter generated a disproportionate number of entrepreneurs in the field—that is, people who went on to lead and manage biotech firms after their time at Baxter.

Why has this one company had such a significant effect on the biotech industry?

Headhunters for years have used the mantra, “if all else fails, pick a senior executive from GE,” meaning essentially that they couldn't go wrong picking an executive developed by such a company. Yet a fair number of former General Electric (GE) managers have had a tough time in their post-GE careers. As one 1998 headline from *The Wall Street Journal* summed up, “A Jack Welch Disciple Finds the GE Mystique Only Takes You So Far.”¹

Why is it so hard to predict the relative success of a senior executive's move from one company to another?

The answer to both questions is something I call “career imprinting.” In the first instance, career imprinting is a reason Baxter alumni have had such an impact on the biotechnology industry. In the second, it is a reason that a pedigree from a company like General Electric doesn’t guarantee a good “fit” for senior executives at their next job in a different organization or industry.

In a nutshell, an organizational career imprint is the set of capabilities and connections, coupled with the confidence and cognition that a group of individuals share as a result of their career experiences at a common employer during a particular period in time. After a time at Baxter, a significant number of managers were “imprinted” with the qualities sought after in the biotech field just as it was starting a steep growth curve. The Baxter organizational career imprint, which was imbued with entrepreneurial spirit, was a relatively good match with what venture capitalists perceived as the requirements for running a biotechnology firm; the “career imprint” also influenced a significant number of Baxter managers to look to biotech as a possible next step in their careers.

But it is important to understand that a career imprint can be perfectly suited to one type of job or industry, while clashing irrevocably with another. Organizational career imprints can bring with them both opportunities and constraints, depending upon the organizational context into which they are imported.

Consider the case of GE alumnus Larry Johnston, who, in April 2001, became CEO of Albertsons Inc., a supermarket chain with over two hundred thousand employees. At Albertsons, the effectiveness of invoking the GE career imprint was anything but obvious. As *The Wall Street Journal* reported:

[Mr. Johnston] draws on his twenty-nine years at GE in hopes of guiding Albertsons through hard times. It’s been a bumpy path, and some employees grumble that the new CEO invokes his old company too often. “I don’t care,” the 54-year-old Mr. Johnston says. “It’s what I know best.”²

GE alumni at different periods in the company's history have shared similarly strong career imprints and have often been sought after because they were groomed at GE. Larry Bossidy, who joined Allied Signal after spending thirty-four years at GE, provides a classic example. Bossidy exported one aspect of the GE career imprint—a disciplined, bottom-line-focused approach to management—to Allied Signal, where he became a ruthless cost-cutter. Within his first two years at Allied Signal, Bossidy cut the number of suppliers by about one-third, a move that yielded cost savings in the hundreds of millions of dollars a year. And now, Bossidy has taken GE's career imprint on the road to Honeywell and to wider circles, with his book (coauthored with Ram Charan) *Execution: The Discipline of Getting Things Done*.³

Career imprints also vary widely by company, and within companies they can vary substantively depending on the time of employment. Managers sharing a career imprint from one organization at a given time, for example, might be inclined to become turnaround experts; managers from that same company at a different time, or managers with another company's career imprint, might instead be "branded" as great marketers. One career imprint may include certain connections—for example, connections with, or particular awareness of, governmental agencies such as the U.S. Food and Drug Administration (FDA)—as was the case at Baxter; other career imprints might include entirely different kinds of networks.

A simplified example of the career imprints of IBM and DEC during the 1970s is telling. Organizational research and historical accounts suggest that a consistent hallmark of IBM's career imprint is an ability to build strong relationships with major customers.⁴ People who worked for IBM in management positions during the 1970s in particular were extraordinarily customer-oriented. Managers often rotated through an intense series of sales assignments and so became particularly effective at identifying and servicing core client needs. In contrast, during the same time period, DEC was known for its focus on technology. DEC management's capabilities lay more in identifying new possibilities for innovation and less in servicing

existing market needs.⁵ Two companies: similar time periods; similar product markets—different capabilities; different career imprints.

In biotechnology, Baxter's entrepreneurial career imprint, which was cultivated primarily during the 1970s, influenced the spawning of a disproportionate number of top managers in biotechnology. The majority of Merck alumni from that same time period, on the other hand, ended up taking on advisory roles in young biotech firms by sitting on their boards while holding scientific positions elsewhere, reflecting Merck's "scientific career imprint."

A manager's career imprint, then, can have an enormous bearing on what that person brings to his or her new post; it can also be a predictor, to a certain degree, of their behaviors and performance. And that means that understanding the origins and outcomes of career imprints has significant implications for senior executive mobility—for individual managers, but also for headhunters, boards and top management teams, companies, and even industries.

Consider how much executives move around. According to recent Booz Allen estimates, CEO turnover increased by a factor of 53 percent in the United States from 1995 to 2001, and 10 percent of big-company CEOs leave their jobs every year.⁶ Some of this movement is voluntary, but the fact is that CEOs appointed today are three times more likely to be fired than was the case prior to 1980.⁷ Expectations are high for outsiders, and when they are not met within the first few months, boards and investors become impatient. Understanding career imprinting can significantly increase the chances of a senior manager's move being successful.

Consider also where headhunters generally turn to fill jobs in emerging industries. Putting aside for a moment the Internet industry (in which it often seemed as though anyone, no matter what his or her prior experience, could start a dot-com company), most new industries draw upon well-established firms for management talent. Career imprints, then, have enormous implications for the direction and success of new industries. In biotech, it was Baxter. In Silicon Valley, it was Hewlett Packard that spawned a large number of executives for new technology ventures. In the semiconductor

industry, Fairchild generated a great number of senior executives who became CEOs of start-up firms.

As these and other examples suggest, senior executive career moves from well-established companies to new ventures can be critically important. A tremendous amount is at stake. For the individuals who make these bold moves, their careers may be at stake; for the young firms themselves, their survival may be at stake; for venture capital firms, their reputations may be at stake, particularly at the start of an industry. And when collectives of individuals from well-established firms such as HP, Fairchild, or Baxter leave to run young companies in a new industry, such senior executive moves can affect the industry's ability to raise funds, go public, and get off to a good start. Finally, to the extent these new industries generate jobs, capital flows, and related services, these kinds of career moves can have important implications for the economy.

This book primarily explores the concept of career imprinting through an in-depth study of former Baxter managers (the "Baxter Boys," as they are called) and the spawning of these executives into the biotech industry. But the greater context is critically important when thinking about senior executive mobility; that is why this book also includes a discussion of career imprinting beyond the Baxter case.

A handful of studies have examined senior executive mobility and the particular phenomenon of well-established firms spawning leaders who go on to influence other companies or industries. However, these studies have done so from a wider-angle lens. Most suggest that phenomena such as spawning are the result of a multitude of environmental factors such as the legal, regulatory, and political environments. Often, the focus is on how these factors all co-evolved to create a self-perpetuating ecological system in a particular industry.

In a related fashion, other research has focused on the collocation of such institutional players, leading to explanations that revolve around systems of growth or "regional advantage."⁸ For example, research on Silicon Valley suggests that the success of this

region, relative to the Route 128 region, hinged on the flexibility of the industrial systems that were built on regional networks and open to experimentation across firms and institutions, rather than confined to learning within dominant firms.⁹

The problem is that focusing on environmental factors like these ignores questions such as “How did these individuals all become general managers and subsequently, leaders of entrepreneurial firms?” and “Why did all of these individuals leave well-established firms to join new ventures at the start of this industry?” Individual career transitions—from generative firms to new ventures—lie at the very heart of this kind of matching process and senior executive career mobility.¹⁰ This book focuses squarely on individuals’ career experiences and the resulting imprints on them; the result is thus a different and complementary explanation. This research is the first to explore senior executive mobility through this lens.

A More Detailed Definition

In order to get the most out of the Baxter case and its implications for other companies, industries, and individuals, it’s important to have a clear understanding of how organizational career imprints differ from other types of imprints, and how the study of career imprinting differs from other studies of executive mobility.

The Concept of Imprinting

In many respects, the idea of imprinting is not new. Studies in the biological sciences as well as the social sciences have vetted the general term of *imprinting* for decades. For example, the well-known phenomenon of filial imprinting in which newborn chicks imprint or attach themselves to the first prominent, moving object they see—whether that be a living thing, such as their biological mother, or an animate object in a laboratory study such as a bouncing ball—has received close examination in psychological studies since 1935.¹¹ In organization and management literature, renowned scholar Stinchcombe published a landmark article in 1965 in

which he argued that certain kinds of organizational structures vary systematically according to the environmental context and time period in which firms are founded in an industry. Over time, as organizational forms prove effective, certain basic organizational structures become institutionalized, or imprinted, and so come to dominate within industries.¹²

Biological imprinting and the filial studies refer to linkages within the brain; Stinchcombe's work refers to linkages between an organization and its environment. Here, the term *career imprinting* refers to linkages between individuals' careers and a specific organizational context. The notion of a career imprint, then, is a new way of thinking about imprinting and is applied in a different context. Further, whereas prior studies of imprinting suggest that imprints are automatic or even inevitable, here the idea is that since career imprints are associated with an organization, individuals do ultimately have a choice as to how they will respond to an organizational career imprint they picked up at a particular company. As we will see later in the book, although early career imprints can affect the kinds of design choices individuals are likely to make later on as leaders of subsequent organizations, even leaders who have cultivated very strong career imprints from previous employment experiences have latitude in what they do and do not export to another firm.

The Dimensions of Career Imprints in the Context of Management Research

The career imprinting concept reflects the central idea that there are observable patterns in the types of *capabilities*, *connections*, *confidence*, and *cognition* that groups of people develop as a result of a common set of career experiences in a particular organization.¹³ *Capabilities* refers to the specific kinds of human capital, skills, knowledge, and know-how regarding work and getting work done. *Connections* refers to the kinds of social capital, including both intraorganizational and extraorganizational relationships related to work and getting work done, including the strength and structure

of such connections. *Confidence* refers to the types of individual-level efficacy associated with work and getting work done. *Cognition* refers to the taken-for-granted assumptions, beliefs, and worldviews regarding work and getting work done.¹⁴

When thinking about each of these different dimensions *individually and/or with one individual in mind*, there is a substantial stream of management research to draw upon. Regarding the development of capabilities among senior executives, studies have shown how early on-the-job experiences that involve supervisory responsibilities are critical in developing leadership skills needed later on in their careers. Senior executives frequently cite early career challenges as an important source of learning that can affect their professional development over the long term.¹⁵ In addition, studies of minority advancement emphasize the timing and development of certain competencies such as management and interpersonal skills early on in one's career.¹⁶

Regarding connections, management studies have focused on the cultivation of particular kinds of early career connections, such as helpful bosses, for the development of high-potential managers.¹⁷ In addition, a substantial stream of research on social networks has examined the ways in which different kinds of relationships and the structure of such relationships affects individuals' access to valuable information and resources that can benefit individuals' career development.¹⁸ Further, studies of mentoring relationships and developmental networks stress the significance of particular kinds of relationships that provide both career as well as psychosocial kinds of support for personal and professional development.¹⁹

Regarding confidence, scholars, including Warren Bennis, have emphasized the cultivation of particular kinds of confidence such as "hardiness" for leader development.²⁰ Further, recent research by Kanter explains how the best leaders produce outstanding results by building the confidence of individuals in organizations—activating the firm's talent and producing superior results.²¹ Finally, there has been a growing stream of management research on the

ways in which individuals' cognition or worldviews shape career development.²²

Each of these dimensions is important to address when exploring what an individual learns at any one particular organization. However, the notion that *these dimensions taken together may constitute an organizational career imprint* hasn't been explored until now. The concept of career imprints takes these dimensions and suggests that the sum can be greater than any single dimension because the career imprint is an organization-level construct, not an individual-level construct. That's why we can talk about a "GE career imprint" or a "Baxter career imprint" but not a "Monica Higgins *career* imprint." (Although individuals naturally pick up other kinds of imprints in their lives, as a result of shared experiences at other kinds of institutions—for example, among students of certain educational institutions—these would not be "career" imprints.)

Additionally, since career imprints are evident from patterns in the career experiences of *many* individuals, not one, we can examine the implications of career imprints as groups of people make career moves from a single organization, such as a Baxter or Hewlett Packard, and how those moves and the career imprints that accompany them affect growth and change in industries.

In these ways, then, a career imprint complements other career constructs, such as Schein's "career anchor" construct, which focuses on a single person's career history; the idea of a career imprint reflects experiences that are *shared* among individuals who work for a common employer.²³ From observations of *shared* career experiences within a particular organization, we can distinguish among different career imprints of different organizations and can then consider, as well, implications of dominant career imprints for firms and industries. The career imprint construct thus extends the purview of the vast majority of human resources and self-assessment practices, which are often aimed specifically at understanding a single individual's career history.

The Career Imprinting Process in the Context of Prior Research

Career imprints evolve as a result of the combination of three factors: the *place*, including the company's strategy, structure, and culture; the *people* hired; and the career *paths* that people follow at a particular firm. The greater the alignment or match among *people*, *place*, and *paths*, the stronger the career imprint.

Several chapters in this book are devoted to in-depth discussions of these career imprinting factors. For introductory purposes, though, consider the following: when thinking about organizational career imprints and the kinds of capabilities, connections, confidence, and cognition that an individual picks up by working at a particular organization, it is natural to try and pin our understanding on one or another narrow explanation. For example, observing that GE alumni seem to all share a certain "way" or "style," we might attribute this to a particular "personality" and so ignore other psychological aspects, such as developmental stage, that are more dynamic and influenced by the organizational context in which individuals are situated. Stable traits like personality are but one factor that might play a role in the career imprinting process.

Alternatively, it would be natural to sway in the opposite direction and attribute observations about aspects of a career imprint solely to the place or organization in which people worked—positing, for example, that GE was a "talent machine." In this respect, it is tempting to narrow the purview to considerations such as how people are socialized or "learn the ropes" at a particular company.²⁴ Organizational socialization focuses on certain boundary passages within organizations and how individuals take on new and different organizational roles.²⁵ At its core, the goal of organizational socialization is to control employees such that they come to share the same norms and values as other members of the organization.²⁶ Although this linkage is real, it is also misleading because it limits the range of factors that affect the development of career imprints. The career imprinting process is also shaped by

elements of the organizational context—including the organization's structure and strategy—that can affect the kinds of stretch opportunities individuals are given at an organization.

Regarding organizational structure, for example, GE's highly decentralized organizational structure shaped managers' norms and values and, specifically, their belief in the importance of delegating responsibility. In addition, GE's structure shaped the kinds of capabilities that were developed—for example, GE managers' skills in tracking and measuring operating results.²⁷

Regarding strategy, for example, individuals working in a firm that is pursuing a globalization strategy may, necessarily, pursue different kinds of career paths, affecting not only the kinds of values adopted but also the kinds of capabilities and connections that are cultivated as well. Thus, in addition to factors such as organizational culture and socialization, a company's business strategy and structure are also important factors affecting the career imprinting process.

Situating career development in a firm's larger business context extends traditional management research on careers and organizational behavior, which has tended to focus inward on local aspects of an organization, such as an organization's culture.²⁸ The assumption here is that the larger business context in which careers in an organization are situated is an important factor as well.²⁹ Additionally, the assumption here is that people are not entirely passive in this process; people can and do shape their careers and thus the people—including both the backgrounds and stage of adult development of individuals—are also factors that can affect the career imprinting process.^{30, 31}

The Consequences of Career Imprints in the Context of Prior Research

The notion of a career imprint encompasses the idea that while career imprints originate from shared career experiences at a single organization, people take career imprints with them as they

traverse organizations.³² Thus, as mentioned early on in the chapter, career imprints may have important consequences beyond what happens in the original company. Executives who leave to join new organizations, and organizations that are founded and/or led by executives who carry with them strong career imprints, have much to gain from understanding career imprinting. There are also lessons in this research for mature companies whose career imprints may be resistant to change, and there are significant implications at the industry level. At the start of new industries, powerful intermediaries such as venture capital firms may prefer certain organizational career imprints over others and so facilitate the movement of collections of individuals from one firm into new industries.

Yet this notion of leaders “exporting” an imprint based on their prior career experiences has received scant attention in management research. To be clear, management scholars have often warned about the problems of selective perception, tunnel vision, perceptual screens, and other forms of myopic behavior and perception.³³ The thrust of these arguments is that managers have limited ability to process all of the information they are exposed to and so selectively attend to information, which can lead to biases that negatively affect their ability to make decisions. However, the idea that such biases may reflect a shared set of career experiences associated with a particular employer has received almost no attention. Further, and of particular importance here, the link between career experiences and changes in organizations and industries has not been examined until now. These consequences are explored in depth much later in the book.

The Impact of Baxter’s Career Imprint

The research that forms the basis of this book and the ideas generated regarding organizational career imprints stems from a study of the career development and transitions of managers who worked at Baxter primarily during the 1970s. Baxter was a particularly generative institution for entrepreneurs in biotechnology and so provides

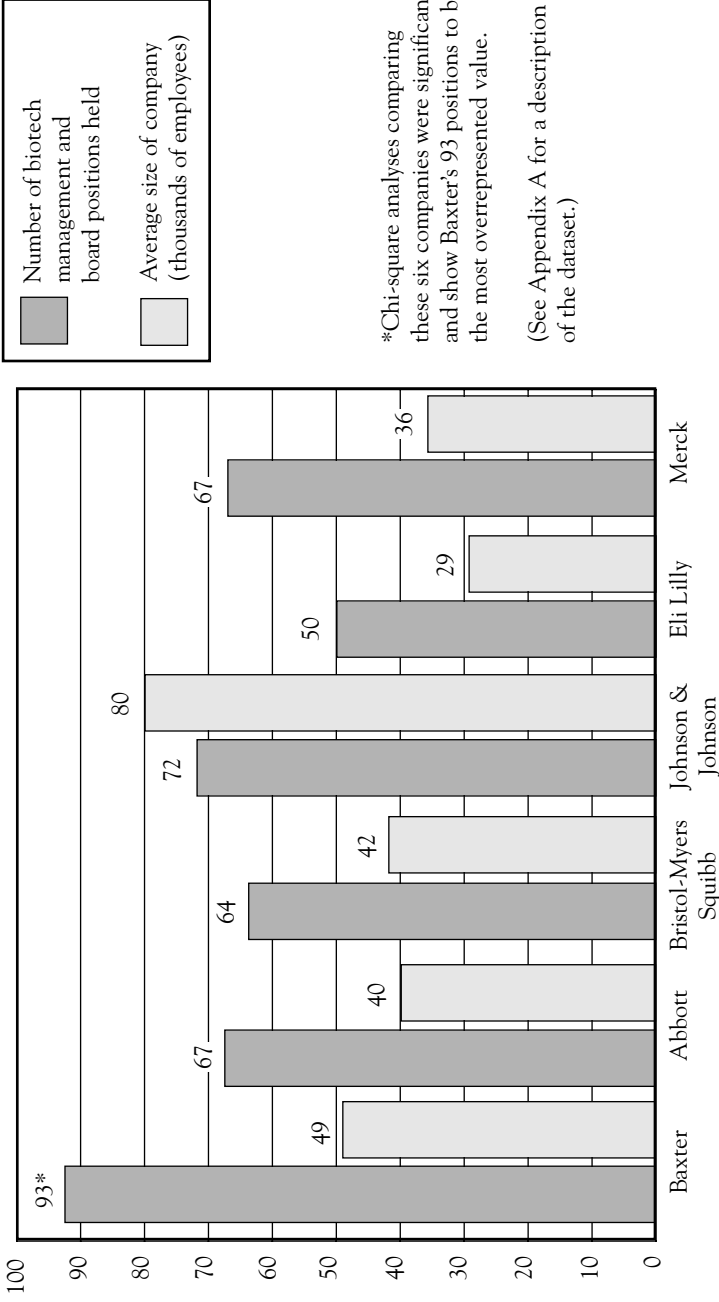
a good example of the particular type of senior executive mobility that is studied here—the movement of executives from a large organization to new ventures at the start of an industry. The particular case of Baxter is also compelling because of the significant influence that Baxter’s alumni have had on the growth of the biotechnology industry.

In what ways did Baxter alumni ultimately make a difference to the evolution of biotechnology? We can think about the impact of the movement of Baxter managers into biotechnology in three ways.³⁴ First, Baxter alumni contributed to the growth of the biotech industry by taking a disproportionate number of biotech firms public. As Figure 1.1 shows, from 1979 to 1996, approximately 23 percent of the biotech companies that went public had at least one member of their IPO team who had worked at Baxter. Next in line was Johnson & Johnson, with 19 percent, followed by other companies, including Abbott, Merck, Eli Lilly, and Bristol-Myers Squibb. No matter how these data are sliced, Baxter comes out as the top healthcare/pharmaceutical generator of senior executives of biotech firms that were able to go public during the formative years of the industry. In addition, as we will see, these companies spawned people into different kinds of positions in biotech firms. Baxter was the most prolific spawner of top managers (as opposed to scientists or board members, for example).

Further, as Figure 1.1 shows, these effects hold, even after we account for company size. Baxter was a smaller firm (even after considering their acquisition of American Hospital Supply in 1985) than firms that were also top generators of senior executives for biotech (such as J&J). Thus, Baxter had a disproportionate impact in terms of the sheer numbers of executives generated for the public biotech marketplace.

Second, even before reaching IPO stage, Baxter contributed to the very genesis of the biotech industry by spawning a disproportionate number of entrepreneurial teams. In their study of “entrepreneurial spawning,” Gompers, Lerner, and Scharfstein analyzed private company data to determine which companies generated a

Figure 1.1 Baxter's Overrepresentation in Biotechnology IPO Firms (1979–1996)



*Chi-square analyses comparing these six companies were significant and show Baxter's 93 positions to be the most overrepresented value.

(See Appendix A for a description of the dataset.)

significant number of entrepreneurial teams.³⁵ And, they did so comparing firms across industries. Their analyses demonstrate that Baxter was a top “entrepreneurial spawner.” Baxter was the first healthcare-related firm among their list of top entrepreneurial spawners, following other well-known spawners such as GE and IBM. Thus, Baxter generated a disproportionate number of entrepreneurs—not just businesspeople—who led young firms in this industry.

Third, beyond Baxter’s contributions to entrepreneurial activity at the dawn of the biotechnology industry, Baxter-led firms simply performed better early on in the IPO marketplace. Specifically, biotech firms that had Baxter alumni on their senior management teams raised more cash when they went public and were able to attract more and higher-quality institutional investors as well. Not only do these results hold after accounting for the aforementioned market factors, such as the receptivity of the equity markets, these results hold after accounting for the spawning of other generative institutions such as J&J, Merck, Lilly, Abbott, and Bristol-Myers. Appendix B provides additional detail on these analyses.

Taken together, these data provide compelling evidence that the career moves of Baxter managers into biotechnology had a significant influence on the evolution of the biotechnology industry.

Points of Departure

The power of the Baxter story and the contribution of the idea of career imprints as one explanation for this phenomenon are bolstered by comparison. Although many firms spawned executives into biotech, they did so to a lesser extent than did Baxter; further, they spawned people into predominantly different kinds of roles in young firms. That is why this book examines, in a more limited fashion, the organizational career imprints and consequences of other healthcare firms during this same time period. Looking across these firms illuminates what was unique about Baxter’s career imprint. It also highlights the facilitating conditions that led to the

disproportionate and entrepreneurial kind of spawning we see out of Baxter.

Three particular healthcare firms—Abbott, Johnson & Johnson, and Merck—are particularly useful as points of comparison to Baxter, for two primary reasons. First, interview data suggest that all three organizations were in the consideration set of venture capitalists (VCs) who were looking for business people to run biotechnology companies at the start of the industry. Given the important role played by VCs in these senior executives' career moves, it is therefore critical to compare these companies and their career imprints.

Second, each of these firms was comparable to Baxter in some specific and important way. Abbott was Baxter's fiercest competitor in one major product line, intravenous (IV) solutions containers. Additionally, the two firms were located within ten miles of one another. Stories about their "enemy, Abbott," in the Baxter interviews were extensive, and the reverse was the case for Abbott alumni. J&J was a firm that Baxter's CEO at the time, Bill Graham, often compared Baxter to—not so much in terms of its product lines or strategy but in terms of its decentralized organizational structure. In some respects, Graham appears to have modeled some of his own practices after this much larger firm, and so J&J is also important to consider. Merck, for its part, was one of the quintessential scientific enterprises at the time and so was likely to have managers who were well versed in the emerging science that eventually became known as "biotechnology."

These firms and their career imprints are compared to Baxter (principally in Chapters Six and Seven), after the ground has been set for using Baxter as the benchmark and after the conditions that enable the cultivation of a strong organizational career imprint have been explored in depth (in Chapters Two through Five). As the data will show, whereas all of these firms had relatively strong organizational career imprints, the career imprints that were cultivated were different. Thus, as we will explore in the latter section of the book (in Chapters Eight and Nine), these differences in

career imprints have had important consequences—not just for the evolution of an industry, but for organizations and for individuals as leaders and architects of young firms as well.

As a final point of departure, it is important to emphasize that this account of the spawning that occurred out of Baxter and other firms at the dawn of the biotechnology industry does not reflect an historical accident (a “perfect storm” of sorts), nor was this spawning behavior “bound to happen.” The theory of career imprints counters that position. The movement of Baxter managers into biotech was heavily influenced by the actions of powerful intermediaries. Venture capitalists had a plethora of top managers to choose from to lead these new biotech companies. And reduced to the essentials, Baxter’s career imprint most closely resembled the VC perspective of what was seen as required for the industry at that point in time. Thus, the idea that Baxter’s career imprint matched the evolving requirements of the industry reflects much more than pure circumstance or functional fit. It reflects also the role of proactive players such as VCs who recognized and then made the matches possible. It is thus important to emphasize that without Baxter or its major competitor, Abbott, for example, the biotechnology industry may well have “happened.” However, the early leadership of the industry and the shape and character of some of the early firms could arguably have been quite different.

To gain a better understanding of these Baxter managers as individual people, and the context in which they began their careers at Baxter, the next chapter tells the story of one particular exemplar who made the move from Baxter to biotechnology, Gabe Schmergel. In addition, Chapter Two sketches the experiences of the other members of the first wave of managers who left Baxter for biotechnology during the late 1970s and very early 1980s and thus provides a sense of this group of individuals, the “Baxter Boys,” as a whole.

