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## Management Review

**Keith Rollag, Salvatore Parise and Rob Cross**

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# Getting New Hires Up to Speed Quickly

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The key to making new employees productive quickly, known as “rapid on-boarding,” is to help them immediately build an informational network with co-workers.

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Financial Corp. found that lost productivity resulting from the learning curve for new hires and transfers was between 1% and 2.5% of total revenues. On average, the time for new hires to achieve full productivity ranged from eight weeks for clerical jobs to 20 weeks for professionals to more than 26 weeks for executives.<sup>2</sup> In the past, managers were often content to wait months (or even years) for their new arrivals to get up to speed. But in today’s fast-paced, competitive environment, many managers simply don’t have that luxury.

The second challenge is tapping into the creativity of new hires. Newcomers represent one of a company’s most important and underutilized assets — a source of fresh ideas, perspectives, expertise and industry contacts that an organization can leverage to become more innovative and competitive. However, most newcomers (whether college recruits or senior executives) express frustration in getting their ideas heard and accepted. Inter-

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**H**ow do managers and organizations quickly transform new hires into productive employees, a process called “rapid on-boarding”? This question is hardly trivial. Whether a company is growing to take advantage of a new market opportunity, restructuring to remain competitive or simply trying to cope with attrition resulting from retirements and turnover, one thing is certain — more and more employees are newcomers to work groups, departments or organizations. In today’s volatile economy, more than 25% of all workers in the United States have been with their company less than a year and more than 33% less than two years. Americans will, on average, change jobs 10 times between the ages of 18 and 37.<sup>1</sup> And, of course, new employees are only part of the challenge — the constant state of internal restructuring in most organizations continually pushes managers to assimilate waves of employees suddenly transferred into new work roles and relationships.

## The Challenges

The first and most obvious challenge with newcomers is jump-starting their productivity. Initially, newcomers are typically a net drain on productivity, drawing a salary, incurring training and orientation expenses, and consuming co-workers’ time without providing much in return. A recent study by Mellon

estingly, this problem is particularly true at successful organizations with strong cultures. In most cases, newcomers at such companies are not really heard until they've gained visibility and legitimacy in the eyes of their peers. The challenge is to capture the fresh ideas and insights from newcomers before they either become socialized into old ways of thinking or simply

## About the Research

During the past few years, we have studied "rapid on-boarding" in several ways. We started by interviewing 25 CEOs, founders and HR managers in 22 fast-growing technology organizations to understand the challenges they faced in getting new employees up to speed quickly. Then we used social-network analytic techniques<sup>i</sup> in four fast-growing Silicon Valley startups (ranging in size from 34 to 89 employees) to understand the factors that help people make swift transitions from newcomer to old-timer.

Through these and other social-network studies, we identified rapid on-boarders — newcomers who are able to weave themselves into the social fabric of an organization much faster than their colleagues. (See "Rapid On-Boarders," p. 38) We conducted additional research to better understand the differences between those individuals and others who were unable to get up to speed so quickly. For example, in one department of a large global engineering company, we analyzed the pattern of information relationships among all 152 employees and conducted semistructured interviews with 16 newcomers in the group. We then compared the strategies and experiences of those who became connected quickly versus the strategies and experiences of those who remained on the periphery. At another software company we performed a similar comparison, but instead of conducting a social-network analysis, we asked top management to identify the rapid and slow on-boarders. We supplemented these studies with interviews of another 22 people in 18 organizations, asking them to describe both positive and negative on-boarding experiences.

Finally, to really get inside the mind of the newcomer and better understand the day-to-day activities that make a difference in rapid on-boarding, we asked 65 new employees in 57 entrepreneurial high-tech organizations to keep written diaries. We analyzed the resulting 2,500 pages of data, identifying activities and experiences that newcomers said were important and meaningful.

i. A social network is defined as a specified set of people and their relationships. Social-network analysis uses statistics to explore the patterns of emergent connections (such as work, friendship or advice relationships) between people in the social network. See, for example, S. Wasserman and K. Faust, "Social-Network Analysis: Methods and Applications" (Cambridge, United Kingdom: Cambridge University Press, 1994).

give up trying to change the system. Consider, for example, a consulting firm that recently hired a round of experienced professionals. One of them, a new partner, said that to be taken seriously, "we had to become an insider in the firm and of course this takes two or three years, during which I bet most of us forgot what insights we originally had or just got tired of trying to push the ideas uphill."

The third challenge is keeping newcomers in the company long enough to justify the costs of recruiting, hiring and training them. The probability of a new employee quitting reaches a peak at around 1.5 years and declines rapidly after that.<sup>3</sup> Clearly, helping newcomers past this awkward entry stage is critical, because even the most gregarious of individuals can find the experience stressful. In fact, newcomers tend to be more anxious about their performance, more risk-averse in their decision making and more reluctant to make innovative suggestions in group meetings.<sup>4</sup> And when a highly productive newcomer leaves, the organization not only loses its investment in that individual but also suffers from a loss of momentum as the remaining employees struggle to compensate for the absence of that person and then have to readjust to that worker's eventual replacement. According to a survey by Mercer Inc., 45% of companies estimate the turnover costs to replace and train a lost employee at more than \$10,000.<sup>5</sup>

## Five Myths of Rapid On-Boarding

To investigate how companies can overcome these challenges, we interviewed newcomers and managers in a variety of organizations and used a technique called "social-network analysis" to explore the patterns of collaboration and information flow between the new employees and their co-workers. (See "About the Research.") We found that most firms tend to use an *informational approach* to orienting new hires, providing them with a smorgasbord of information about company routines and technologies. The expectation is that newcomers have the background, skills and cognitive ability to filter, comprehend and internalize the information as needed to complete their initial tasks. Whether through formal training or on-the-job experiences, the pervasive belief seems to be that information and awareness about organizational resources will enable newcomers to seek out and obtain what they need to be productive.

In contrast, organizations that were more successful at integrating newcomers tended to use a *relational approach*, helping new hires to rapidly establish a broad network of relationships with co-workers that they could tap to obtain the information they needed to become productive. The co-workers were, for example, instrumental in helping the newcomers to (1) figure out the real issues that needed to be addressed and (2) identify the important people for a particular issue. Moreover, the early development of relationships with a variety of co-workers made newcomers feel more connected to the organization, which in

## Organizations that were not as successful at rapid on-boarding tended to have a number of mistaken beliefs about the factors that make the process effective.

turn drove their satisfaction and their commitment to the firm.

On some level, most organizations realize the importance of getting newcomers connected quickly to their co-workers. But many companies fail in this regard, even though the process is not as time consuming or expensive as might be expected. In our study, we found that organizations that were not as successful at rapid on-boarding tended to have a number of mistaken beliefs about the factors that make that process effective. Because of these misconceptions, managers relied on certain taken-for-granted practices that actually hindered new hires from becoming productive. A close look at those myths reveals how they can sabotage a company's earnest efforts to bring newcomers on board quickly.

**Myth #1: The best newcomers can fend for themselves.** According to many managers, rapid on-boarding is easy. Simply hire the right people and they will learn what they need on their own, asking others for help and advice when necessary. This expectation is especially true for experienced professionals who often command huge salaries. As one investment banker notes, "Our leadership thinks ... experienced hires ... damn well better be able to hit the ground running and get connected themselves." Such companies might provide training and orientation but little else, and failures are blamed on either the newcomer's perceived lack of effort or a poor fit with the organization.

The problem, though, is that many of the attributes desired in employees — intelligence, experience, independence and so on — can actually work against new hires. Newcomers often feel a strong pressure to prove themselves quickly, and they fear that (1) asking questions might reveal their ignorance and (2) engaging in exploratory conversations with colleagues might distract them from producing results right away. To protect their reputations, new hires will exploit all other information sources before requesting help. According to one newcomer, "I was terrified to ask people questions. ... [So] I would spend a lot of time trying to learn something that someone could tell me in a few minutes."

This reluctance to seek help hinders rapid on-boarding in two ways. First, when newcomers insist on going it alone, they often get frustrated and stymied by emergent issues and constraints that a timely conversation with a manager or expert could have avoided. They might also end up reinventing the wheel, pursuing ideas and approaches that have already been unsuccessful at the

organization (either technically, politically or culturally). Consider the case of the new but highly experienced programmer who spent his first two weeks on the job developing a feature for his company's flagship product. The task required a careful and meticulous combination of two existing pieces of software code, and the programmer worked diligently by himself to combine hundreds of lines of code manually to get the work done. Only after he was finished did the programmer discover through a casual conversation with a co-worker that the company had recently acquired a tool that could have automatically combined the two pieces of code in minutes.

Second, newcomers who are reluctant to ask questions or hold exploratory conversations will have trouble building the diverse network of relationships that might be needed to tackle more complex or interdependent projects later on. They also won't build the awareness of other people's knowledge and skills that allows them to tap into a network when future opportunities demand new information. Instead, they end up relying on a small subset of people whom they are initially more comfortable turning to for help. As a vice president at a large global engineering firm observes, "I've noticed that the first person you meet is often the person you go to all the time. But that person ... may only know a microcosm of the company."

In most organizations, new employees have a window of opportunity in which they are free to be exactly who they are — newcomers with a legitimate right to seek help from co-workers and engage in exploratory conversations to better understand the skills, abilities and knowledge of other employees. Few organizations actually dissuade new hires from asking questions. Instead, most of the reluctance seems to stem from newcomer ego and a desire to prove oneself quickly. To overcome that, savvy managers continually encourage new hires to ask questions while also reminding others to expect and respond to such requests on a timely basis.

**Myth #2: A massive information dump allows newcomers to obtain what they need.** Many managers see on-boarding as primarily a process of providing newcomers with abundant information about the company, their initial project and the resources available to complete their work. So new hires are given technical manuals, reports, memos and e-mails, and they are referred to electronic repositories like databases or intranet sites. At almost

every company in our study, the most common activity for new employees in their first few days on the job is to pore over manuals and other documents or to browse through scores of intranet pages. Another approach is to send newcomers to formal training and orientation sessions with myriad presentations.

Such mechanisms for transferring information have their value, but newcomers rarely cite them as the key to getting up to speed quickly. In fact, when comparing the experiences of rapid versus slow on-boarders, our study found that documentation and training were never the differentiating factors. Instead, they appear to be a “necessary but not sufficient” means to rapid on-boarding. Similarly, academic research in the field has generally been unable to find a consistent and robust correlation between initial training and productivity.

Furthermore, relying too much on documentation and training as the primary means of rapid on-boarding can have some unintended consequences because newcomers typically lack the ability to prioritize the information they encounter. So they might see everything as important, exhausting themselves trying to comprehend every manual, report and database they encounter. And those who feel overwhelmed might give up reading altogether.

Rather than focus exclusively on providing information, managers should also emphasize relationship development as a means of facilitating information transfer. Through relationships, co-workers can help a newcomer figure out what’s truly important

and what’s not, and they also can be valuable resources in the future. One bank in our study flies new recruits to the home office for several weeks of training but includes enough social time for the new hires to meet others. As a result, one newcomer who participated in the training noted, “I was able to develop a network of relationships with people all over the company, and five to six months later if I ran into a situation, I was able to pick up the phone and call them up.”

Managers can achieve a better balance between information delivery and relationship development in numerous ways. First, when they help orient a new employee, they can emphasize explanations of organizational roles and responsibilities instead of company technologies and work processes — especially the roles and responsibilities of people outside the newcomer’s immediate work group. (In our study, when newcomers complained of a lack of information, it was usually regarding what other groups did in the organization and how everyone’s work was interconnected.) Second, they can purposely withhold information and instead refer newcomers to in-house experts and other key resources. They can also contact those people in advance so that the newcomers won’t be “cold calling.” Third, they can periodically ask new hires to list all of the co-workers with whom they’ve developed relationships and then examine the list to identify any obvious gaps in their information network. Fourth, they can ensure that organized training and orientation programs include sufficient time for socializing.

## Rapid On-Boarders

Social-network analysis allows managers to identify “rapid on-boarders” — newcomers who have been able to build information relationships with co-workers more quickly than others who joined at the same time. These individuals tend to be higher performers, and other research has suggested that they are also more satisfied in their work.<sup>i</sup>

For example, we surveyed newcomers and experienced co-workers in a research group at a global energy company. The group consisted of geologists, geophysicists, managers, administrators and technical-support personnel. We asked everyone in the group to indicate how often they approached others for information to get their work done. With that data, we constructed a network diagram depicting connections of frequent communications between differ-

ent individuals. (See “Identifying Rapid On-Boarders.”)

As expected, most of the new hires were still on the periphery of the information network, interacting and exchanging information with only a few co-workers. However, one newcomer — Jake — has quickly become a central player, as both a provider and a seeker of information. In fact, interviews revealed that almost everyone in the research group was aware of Jake’s expertise, and people found him to be a source of extremely useful information. In general, others considered him to be accessible, helpful and knowledgeable. Jake also was proactive in seeking assistance from others. Rather than trying to solve problems on his own, he was quick to tap the knowledge of even colleagues he did not know.

By studying individuals like Jake, researchers can begin to identify the factors that help promote rapid on-boarding in organizations. Physical location, for instance, appears to be a major consideration — Jake was placed in a central location that made him very accessible, providing him with ample opportunities to collaborate with co-workers.

i. See, for example, R. Cross and A. Parker, “The Hidden Power of Social Networks: Understanding How Work Really Gets Done in Organizations” (Boston: Harvard Business School Press, 2004); R. Cross, T.H. Davenport and S. Cantrell, “The Social Side of Performance,” MIT Sloan Management Review 45, no. 1 (fall 2003): 20-21; D.J. Brass, “Structural Relationships, Job Characteristics, and Worker Satisfaction and Performance,” Administrative Science Quarterly 26 (1981): 331-348; and A. Mehra, M. Kilduff and D.J. Brass, “The Social Networks of High and Low Self-Monitors: Implications for Workplace Performance,” Administrative Science Quarterly 46, no. 1 (2001): 121-146.

**Many newcomers cite the lack of sufficient introductions to co-workers and other resources as a primary reason why they didn't get up to speed as fast as they had hoped.**

Beyond just cocktail hours, the most successful programs have structured activities that push newcomers to engage with a diverse set of employees, especially those who are well-placed in the organization's network. Fifth, they should consider inviting a newcomer to a key meeting even if it's not directly connected to that person's work. Such meetings can provide important information about the group dynamics, personalities, power structures and decision-making norms of the organization. Finally, they should remember that although online training might be cheaper than the traditional classroom, it affords little opportunity for personal interactions.

**Myth #3: cursory introductions are all that's needed.** Managers typically introduce a new employee in one of two ways. Either they give the newcomer a whirlwind "office tour" on the first day and randomly introduce the individual to whoever happens to be in the building, or they wait until the next group meeting and simply announce, "Hey everybody, this is Jennifer." Although these types of introductions are better than nothing, they are hardly effective. Newcomers are quickly overwhelmed by rapid-fire office introductions and rarely remember names, roles and responsibilities. And although groupwide introductions make co-workers aware of the new arrival, they don't provide the newcomer with the kind of personal interaction that helps reduce reluctance to ask for help in the future.

Apparently, the assumption is that newcomers will meet others on their own, so any manager-led introductions are just a formality. In our study, though, only about one-third of newcomers were really satisfied with the quality and quantity of introductions they received, and many cited that factor as a primary reason why they didn't get up to speed as fast as they had hoped. In comparing the experiences of rapid versus slow on-boarders, one of the most consistent differences between the two groups was the presence (or absence) of planned, strategic introductions between newcomers and key resources. For many newcomers, introductions represent the organizational "permission slip" for future interactions. Without them, newcomers are extremely reluctant to approach busy co-workers, especially those of higher status. As one newcomer said, "It's who you know that counts, and you have so much more mileage if you have already been introduced."

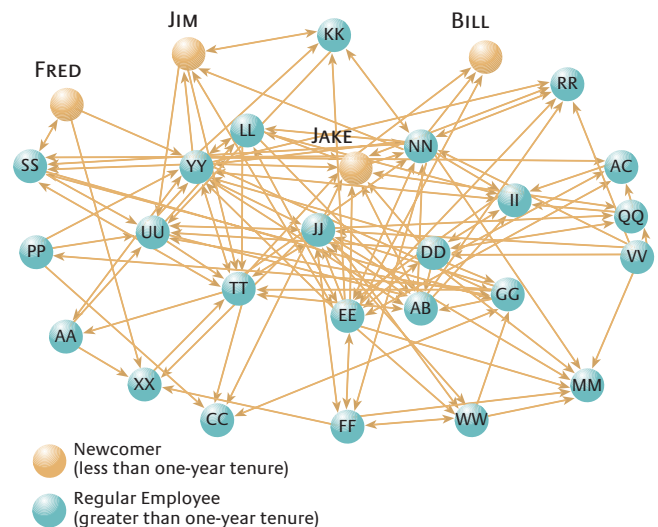
Ideally in an introduction, both the newcomer and the experienced

co-worker learn about the other's roles and responsibilities, which enables them to figure out how their work is interconnected. This then helps establish an organizational legitimacy for future interactions. Often the two people discover something personal in common that can be used as an icebreaker in future conversations. Throughout an initial exchange, the newcomer gauges the co-worker's potential helpfulness (and approachability), reducing the uncertainty of their interactions later on.

Managers also can use subtle and not-so-subtle ways to ensure that new hires are introduced to key resources. The simplest strategy is to leverage meetings, lunches and company gatherings as opportunities for newcomers to obtain face-to-face time with a variety of co-workers. Though some of this can happen ad hoc, many companies schedule special lunches between newcomers and key managers, or they request newcomers to make "About

**Identifying Rapid On-Boarders**

In this network diagram, arrows represent the direction of an information relationship, pointing away from information seekers and toward those they approach for information. Individuals who have many interactions with a wide variety of people tend to be at the center of the diagram, whereas those who have fewer interactions tend to be on the periphery. Note that only one newcomer — Jake — appears to be well connected, making him a "rapid on-boarder."



**A key factor in rapid on-boarding is the presence of a “buddy,” someone of whom the newcomer can comfortably ask questions that are either trivial or politically sensitive.**

Me” presentations at the next company gathering. Other companies use their computer-based expertise locators to help newcomers learn something about their co-workers (and vice versa), knowing that advance information helps reduce the awkwardness of introductions.

Creative approaches can be particularly effective. One well-known consulting firm posts baseball-card-like posters of newcomers on office walls to introduce them to co-workers. A Silicon Valley startup puts helium balloons in newcomers’ cubicles on their first day. The balloons are not only a festive way to welcome someone, they also help new hires find their cubes and “let others know that a new person has arrived,” asserts the HR manager at the company.

**Myth #4: First assignments should be small, compact and quickly achievable.** A classic study in the 1950s and 1960s at AT&T Corp. showed that the relative amount of challenge and success of a newcomer’s first assignment was strongly correlated with that individual’s performance and promotion level 10 years later.<sup>6</sup> Not only does the first assignment help establish work habits, it also enables newcomers to satisfy their fundamental need to prove themselves. An early success can also lead to more important and visible assignments, helping put the newcomer on an upward career path. Based on such thinking, many managers develop compact, challenging assignments that newcomers can quickly complete by themselves.

But our study found that one of the biggest, most consistent differences between rapid and slow on-boarders was the degree to which their first assignment required them to build relationships with a wide variety of people to get their work done. Newcomers with stand-alone projects tended to remain isolated and failed to build the relationships they needed to succeed in the long term. They also typically felt less connected to the social fabric of the organization, less satisfied with their progress in “fitting in” and were consequently more likely to leave.

Consider, for example, the experiences of new hires in the IT support group at a large global engineering company. The early assignment of one newcomer required him to work primarily with outside contractors. As a result, he never really built working relationships with co-workers and still felt like an outsider once the contractors had finished the project and left. In contrast, the first assignment of another newcomer in the same

group was to resolve a global file-naming issue with some of the firm’s server systems. The project required numerous interactions with all the network administrators responsible for the company’s servers.

Such networked assignments can sometimes be the most important career experience for an individual. A manager in our study recalled when he graduated with a degree in computer science and took a job at a large software company. He had learned the programming language C in school and had joined a group that was just about to make a transition to working in that language. Rather than assign the newcomer to an existing project, his boss initially told him to take two weeks to become the company expert on a software utility for compiling C programs. At the time, no one in the company possessed that knowledge, and as a result, the newcomer quickly became an important resource to other programmers in the group. Looking back at that first assignment, the manager says it was pivotal in helping him to build important work relationships while also establishing his reputation, all of which he was able to leverage in future projects.

Managers can provide valuable initial experiences for new hires in several ways. Specifically, they can (1) design the first project so that it can’t be completed without assistance from co-workers, (2) assign newcomers to cross-functional project teams that expose them to a broad network of resources, (3) give new hires the opportunity to develop a unique expertise that others must access to complete their own work, and (4) review progress on the first assignment by asking not only, “*What* have you accomplished?” but also “*Who* have you talked to?”

**Myth #5: Mentors are best for getting newcomers integrated.**

Research has shown that newcomers in supportive mentor relationships are more satisfied and committed to their organizations, and as a result, many companies emphasize mentoring soon after a person’s entry.<sup>7</sup> But what often separates rapid on-boarders from their slower counterparts is not the availability of a mentor but the presence of a “buddy,” someone of whom the newcomer can comfortably ask questions that are either trivial (“How do I order office supplies?”) or politically sensitive (“Whose opinion really matters here?”). Like mentors, buddies can be people who are officially assigned by a manager or who simply emerge informally (a nearby co-worker, for instance) as an easily accessible resource and confidant.

Buddies are initially more important than mentors for several reasons. First, newcomers are generally more concerned with deciphering organizational norms and routines than they are with career development. Through buddies, newcomers can quickly learn the lay of the land (for example, the appropriate dress for client meetings) as well as the myriad complexities and subtleties of how the organization really works (for example, the best way to get assigned to a high-profile project). Furthermore, buddies can help establish relationships with co-workers in ways that can't always be facilitated by a newcomer's manager or mentor.

Consequently, savvy managers are proactive in helping their new hires to build strong, comfortable relationships with at least one other co-worker, either through a formalized or ad hoc process. When a buddy has been assigned, the manager continually checks to confirm that the connection is taking hold. When a relationship fails to develop, another person is selected for the role. Some companies purposefully assign buddies from outside a newcomer's project group so that the individual can be immediately exposed to other parts of the organization. Granted, a danger exists that newcomers might come to over-rely on their buddies for information and therefore fail to develop their own networks, but our study found that new hires tended to use their buddies as a convenient springboard to identify and meet other co-workers.

### Toward a Relational Approach

If they focus on rapid on-boarding at all, managers tend to take an informational approach, providing exhaustive amounts of documentation and training. The assumption is that newcomers will somehow make sense of this information and augment it by seeking advice from co-workers. But the reality is that much of the organization's knowledge and expertise resides in people, and newcomers need to overcome their initial reluctance and develop a network of information relationships before they can truly become productive, creative employees who feel connected and satisfied.

But changing from an informational approach to a relational one is hardly a simple matter. To do so, managers need to adopt a whole new mind-set. Instead of asking themselves, "What does my new hire need to know?" they have to ask, "Who does my newcomer need to know?" This will then help them focus on generating a strategic list of key experts and information providers with whom the newcomer needs to meet, from which they can then structure the necessary interactions into the new hire's assimilation process.

Interestingly, although a relational approach to rapid on-boarding requires a concerted effort, it does not necessarily entail a greater commitment of managerial time or resources. In fact, in many cases, it will actually reduce the overall personal effort required by managers to get their new employees up to speed.

Consider that when newcomers are able to develop a set of co-worker relationships quickly, they will have far less need to approach their own bosses for information and advice.

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### REFERENCES

1. U.S. Department of Labor, "Employee Tenure in 2002" (Washington, D.C.: Government Printing Office, 2002); and U.S. Department of Labor, "Number of Jobs Held, Labor Market Activity, and Earnings Growth Among Younger Baby Boomers — Results From More Than Two Decades of a Longitudinal Survey" (Washington, D.C.: Government Printing Office, 2004).
2. These numbers are for external hires. Internal transfers get up to speed about twice as fast. See R. Williams, "Mellon Learning Curve Research Study" (New York: Mellon Corp., 2003).
3. This study was based on the U.S. Department of Labor's National Longitudinal Survey and uses a representative sample of mostly early-career workers in the United States. See D.N. Dickter, M. Roznowski and D.A. Harrison, "Temporal Tempering: An Event History Analysis of the Process of Voluntary Turnover," *Journal of Applied Psychology* 81 (1996): 705-716.
4. See, for example, R. Moreland, "Social Categorization and the Assimilation of 'New' Group Members," *Journal of Personality and Social Psychology* 48 (1985): 1173-1190; D.J. Nash and A.W. Wolfe, "The Stranger in Laboratory Culture," *American Journal of Sociology* 78 (1957): 399-417; and R.C. Ziller, R.D. Behringer and M.J. Jansen, "The Newcomer in Open and Closed Groups," *Journal of Applied Psychology* 45 (1961): 55-58.
5. Turnover costs include lost productivity resulting from a vacancy, search fees, management time for interviews and training the replacement. Ten percent of companies report the average cost as more than \$40,000. See R. McNatt and L. Light, "Job Turnover Tab," *Business Week*, April 20, 1998, 8.
6. The entire AT&T study is described in D.W. Bray and A. Howard, "The AT&T Longitudinal Studies of Managers" in "Longitudinal Studies of Adult Psychological Development," ed. K.W. Schaie (New York: Guilford Press, 1983). Further support for the importance of a challenging assignment is found in D.E. Berlew and D.T. Hall, "The Socialization of Managers: The Effects of Expectation on Performance," *Administrative Science Quarterly* 11, no. 2 (1966): 207-223; and H.G. Kaufman, "Relationship of Early Challenge to Job Performance, Professional Contribution, and Competence of Engineers," *Journal of Applied Psychology* 59 (1974): 377-379.
7. See, for example, S.C. de Janasz, S.E. Sullivan and V. Whiting, "Mentor Networks and Career Success: Lessons for Turbulent Times," *Academy of Management Executive* 17 (November 2003): 78-92; E.A. Fagenson, "The Mentor Advantage: Perceived Career/Job Experiences of Proteges vs. Non-Proteges," *Journal of Organizational Behavior* 10 (1989): 309-320; and G.T. Chao, P.M. Walz and P.D. Gardner, "Formal and Informal Mentorships: A Comparison on Mentoring Functions and Contrast With Non-Mentored Counterparts," *Personnel Psychology* 45 (1992): 619-636.

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