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DEVELOPING THE EXPERT LEADER

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Executive Summary

In this article, we look at leadership through the *lens of expertise* and relate the findings of a wide range of research on experts, expertise, and expert performance to how we think about leaders and leadership development. This perspective supports some of the current development practices, suggests modifications to others, and identifies some neglected areas. It also provides a potentially unifying framework for understanding how leadership expertise develops and why some practices are more effective than others.

Developing the Expert Leader

“When I went into that job, everything was new and didn’t have any meaning. I didn’t know what was important or what wasn’t. I knew I couldn’t make any technical contribution, so my contribution would have to be at a broader level. So, I listened, watched things happen, and learned what the pieces were and how they were connected. I thought about it continuously for months.

“After a while things began to make sense, I could see the patterns, how the processes worked, what mattered and what didn’t, and what I could do to guide the entire area. Once the pieces made sense and I could put them together, I could run things by the numbers. But then, after a while I could go on “automatic pilot”. And I wasn’t learning anything new—there was no longer anything to spur me to figure things out.”

The two of us, researchers conducting interviews into how executives go into new leadership situations, listened intently to this Silicon Valley executive. From this and similar stories from other executives, we concluded that these executives are *expert leaders* in the same sense that there are expert chess players, climatologists, and surgeons. Although we don’t ordinarily think of leaders as experts, talented leaders fit the profile nicely.

Research on experts and the acquisition of expertise is extensive, including studies in the domains of surgery, software design, music, ballet, chess, mathematics, and sports, to mention only a few (see Ericsson et al, 2006, for a comprehensive survey of the field). In most of these studies an expert is defined as a person who generates “superior reproducible performances of representative tasks” relevant to the domain of activity, and “expertise” refers to “the characteristics, skills, and knowledge that distinguish experts from novices and less experienced people” acting in that domain (Ericsson, 2006, 3). In this article, we look at leadership through the *lens of expertise* and relate the findings of a wide range of research on experts, expertise, and expert performance to how we think about leaders and leadership development.

We begin with eight conclusions from research on experts that have the most immediate implications for understanding leadership. In no particular order they are:

- I. Expertise is Learned
- II. Expertise is Domain Specific
- III. Expertise is Based on Knowledge and How it is Organized
- IV. Expertise Requires More than Just Knowledge
- V. Expertise Requires more than just Experience.
- VI. Other People Matter in Becoming an Expert
- VII. Expertise is Intentional
- VIII. Expertise is Personal

I. Expertise is Learned

Are experts born or made? Watching an expert at work, whether Tiger Woods, Bobby Fischer, or Leonard Bernstein, it is hard to imagine that the ability on display is not the result of innate talent, a gift. Intriguingly, however, the expertise research overwhelmingly comes down on the side of expertise as a learned, not an innate, phenomenon.

Perhaps the most prolific of the expertise researchers, K. Anders Ericsson writes: "We argue that the differences between expert performers and normal adults reflect a life-long period of deliberate effort to improve performance in a specific domain." (Ericsson et al., 1993, 400). And, quoting from an internet blog following Ross's (2006) recent Scientific American article, "If there is a genetic element linking Mozart and Michael Jordan it is the talent for practice itself, a willingness to endure the endless hours of sweat and toil required of all great performers."

Despite the failure of research on experts to find innate ability differences between experts and "normals," many of us find it difficult to believe that differences in fact, do not exist. An internet blog response to the above illustrates this nicely: "Mozart is a recognized child prodigy, memorizing symphonies at the age of 4 by listening alone, and composing and playing blindfolded by the age of 5. He was genetically endowed with exceptionally rare musical capabilities, and to think that anyone would have this ability if they simply started earlier and

had "a willingness to endure the endless hours of sweat and toil" is absurd to anyone who ever played a musical instrument as a child."

We doubt that this debate will be settled any time soon because it represents so fundamental a way of thinking about people. The point is, however, that whether indeed expertise is totally learned or some mix of innate talent and the learning from "endless hours of sweat and toil," research shows that expertise is to a large degree LEARNED. Even Mozart was not born reading music!

One can't help but notice the similarity between the expertise debate and the leadership debate. No leadership book or chapter can be written without addressing the question of "are leaders born or made," and most of them side with the "leaders are made" point of view. Kouzes and Posner (2002) in their widely used "Leadership Challenge" text describe in detail what outstanding leaders learned and how they learned it, and how leaders behave, not how they are. McCall, et al. (1988) in The Lessons of Experience changed the way companies viewed the importance of job experiences as the learning crucibles that made executives. Perhaps our most widely read leadership "guru", Warren Bennis, has been asked so many times over the years "Can leadership be taught" that he can no longer remember where he first responded: "No, but it can be learned" (Bennis, 2006). He originally made the case for that perspective in his classic book, On Becoming a Leader (1989a).

That leadership, like expertise, can be learned is hardly a new lesson, but we are surprised at how often companies expect executives to perform as expert leaders with little if any development. They dive or are thrown into challenging assignments and left to sink or swim; or worse, they are left in the "swamp" without the competence to carry out the mission. Until we

accept that leadership IS learned, despite whatever gifts budding leaders may have, we will not plan and support the learning experiences required to develop leadership expertise.

II. Expertise is Domain Specific

The expertise research across many fields shows convincingly how very specific expertise is to particular areas. This widespread finding is both obvious and surprising. Obviously we don't expect the expert golfer or tennis player to also be an expert at playing chess or performing surgery. But it is surprising that some of the remarkable abilities we attribute to experts don't carry over to other activities.

Chess masters' extraordinary memory in recalling the positions of the chess pieces while playing several games simultaneously (and/or blindfolded) does not carry over to general memory tasks, *or even to remembering the placement of chess pieces if the positioning is random*. One of the most gifted athletes of our age, basketball player Michael Jordan, failed in his attempt to become a professional baseball player. Certainly the broad abilities may carry over—golf teachers relate the remarkable athletic ability that helps some professional football players learn to play golf—but newcomers to any area *still have to learn the game*.

The lesson for leadership, that leadership too is domain specific, is both obvious and surprising. Kotter (1982; 1990) and Gabarro (1987) make the case quite convincingly that knowledge of one's industry and organization are keys in the successful performance of executive leaders. Anne Mulcahy's impressive turnaround of Xerox was in large part attributable to her extensive knowledge of the company (expertise) garnered in her 26 years in the organization (Morris, 2003).

And yet, we seem continuously surprised when our assumption that “a leader is a leader is a leader” turns out to be false. Mulcahy's knowledge-based turnaround of Xerox was

preceded by a succession of failed external hires. A more recent example is that of Carly Fiorina, hired by the board to initiate major changes at Hewlett Packard. Forced out after proving unable to complete the task, "...she failed to understand what she had set out to transform" (Rivlin & Markoff, 2005).

A seeming contradiction to this lesson of expert leadership, Lou Gerstner's dramatic turnaround at IBM, is in fact the exception that proves the lesson. Although Gerstner had not spent his career at IBM and did not have a technical background in computers, Gerstner was indeed an expert—his expertise had been developed first as a long-time customer of IBM who knew what it did well and poorly from that perspective, and he had extensive experience in how to revive declining, large organizations, as a McKinsey consultant, executive at American Express, and CEO at RJR Nabisco. As it turned out, this was the expertise IBM needed at that time (Gerstner, 2002).

Like other experts, there are few, if any "super-leaders." Expert leaders can and do achieve remarkable things, but *within* their domains. Talent management activities must be directed to producing, both through selection and development, the expert leaders that a specific organization needs to meet its current and future needs.

III. Expertise is Based on Knowledge and How it is Organized

Expert performance in any field is so far beyond our everyday experience that it seems magical. But attributing their extraordinary feats to "natural ability" masks the depth of experts' domain-specific knowledge and how it is organized. Experts have vast stores of "declarative knowledge", represented by formal knowledge like the facts and principles found in textbooks, but they also have prodigious stores of tacit knowledge, learned informally, and not so "visible,"

about the world they live in. (See Bereiter and Scardamailia, 1993, Chapter 3 for a discussion of the knowledges of experts.)

Not only do experts know more than non-experts, their knowledge is organized differently. Simon and Chase (1973) described how chess masters organize their bits of chess knowledge into “chunks”; they estimate that a master’s chess “vocabulary” is equivalent to the vocabulary of an adult English speaker—about 50,000 words.

Given the enormous amount of different types of knowledge demanded, it is not surprising that no one, no matter how talented, becomes an expert without a long period of learning and practice. Time and time again, and across field after field, research confirms that it takes a long time to perform at expert level. How long?

Simon and Chase in 1973 reported that at least 10 years of intense preparation was required to become an international level chess player; they suggested that equal amounts of preparation are required in other domains. So consistent have been subsequent research findings that this has come to be called the “ten-year rule,” -- it takes a *minimum* (not an average) of ten years of intensive effort to achieve expert performance in any field (Ross, 2006). Some fields take longer--classical stringed instrument players typically require 16 years to reach “professional” level—but only with rare exception does anyone require less—Bobby Fischer became a sensation in the chess world when he reached that level in 9 years at the age of 15—the exception that would seem to prove the rule!

The lesson for leadership is that extraordinary leaders, like experts in other fields, base their performance on many different kinds of knowledge acquired over a long time--at least ten years. There are no “one minute” experts--either chess players or organization leaders; not only

must they learn, they must develop the knowledge structures that enable them to use that knowledge.

IV. Expertise Requires More than Just Knowledge

Although depth of knowledge separates experts from the rest of us, other abilities, interests, and personality factors also go into becoming an expert. Experts don't just "know more," they have an array of capabilities that helped them achieve expert status. They include the willingness to endure long hours of practice, the physical and intellectual energy and stamina to keep at the task at hand, the resilience to pick oneself up and try again bad shot after bad shot until the technique is mastered, the relationship skills to engage those who provide opportunities, and the self-management skills to avoid the temptations to be distracted from the road to expertise.

To maintain one's pre-eminence at an expert level is a constant endeavor as new and better competitors emerge, as the field changes, as the bar gets higher. Learning may no longer be enough; being able (and interested in) re-inventing oneself for a changing world is the new challenge. Re-invention to meet higher and higher levels is perhaps most evident in sports. For example, Tiger Woods, despite being at the "top of the heap" of golfers, has gone through the agonizing process of developing a new and better golf swing in order to reach higher levels of performance. And, even further beyond the talents, drive and determination of most of us, he has done it more than once!

The lesson for leadership is that in becoming an expert leader, just having "natural leadership ability," whatever that is, is not enough. Many will fall short along the way, not because of lesser leadership ability but for lack of the motivation, interests, and personal management skills required to attain expert level.

V. Expertise takes more than just Years of Experience.

One of the obvious “not so obvious” maxims of expertise is that years of experience alone are not enough. We have all seen very experienced artisans-- whether computer repair technicians or plumbers or physicians-- whose years of experience have not taken them beyond journeyman level.

What matters in becoming an expert is the quality and appropriateness of the experiences for each individual. Schools designed to train expert-level performers in the arts (e.g., dancing, music) and athletics (e.g. gymnastics, tennis, football), for example, try to provide experiences that contribute to better and better performance. They require of their students intense focus, extremes of hard work and extra effort, and progress in their learning.

Ericsson, Krampe, and Tesch-Romer (1993) have stressed the critical role of “deliberate practice” to obtain the most effective learning--“...a well-defined task with an appropriate difficulty level for the particular individual, informative feedback, and opportunities for repetition and corrections of errors.” In fact, they argue that concentrated, long term, deliberate practice is the key to developing expertise.

VI. Other People Matter in Becoming an Expert

In an increasingly complex and global society, it is not an exaggeration to say that no one can become an expert in anything without substantial help from other people. This is especially true since the development of expertise often begins at an early age.

Biographies of experts describe the financial (e.g., the money for lessons and travel), emotional (encouragement at an early age and empathy in times of failure) or intellectual (teaching, mentoring) resources provided by other people. The 10-20 year path to expert performance is expensive in a number of currencies, help from others.

Although the average parent may get an inkling of how expensive it is to nurture a student, current estimates surprise even them. Those who reach expert levels have had coaches or teachers who were themselves experts or who have had students who have reached the expert level.

The leadership lesson is easily drawn here—expert leaders do not develop by themselves. Developing leadership expertise requires a variety of coaches and teachers, available at the right time with the right level of expertise.

VII. Expertise is Intentional

Human beings develop many remarkable talents, like walking, talking and understanding (sometimes more than one language), running and climbing, thinking and problem solving. Although individuals may be more or less skillful in these endeavors, everyone does them—for the most part these talents develop naturally.

Expertise, however, does not develop naturally. Nor does it happen accidentally—one doesn't just “happen” to find oneself one day to be a master chess player or an accomplished violinist or a surgeon. *Expertise is intentional*. The intention (the budding expert's and perhaps of other people also!) to become an expert is essential to becoming one (of course, not all who *intend* to be experts make the grade). People who eventually become experts decide to pursue excellence and, over a long period of time (often beginning at an early age and extending for years), do the things required to achieve it.

Expert leadership will not just happen. It requires deliberate, sustained, focused effort over time.

VIII. Expertise is Personal

A theme in the observations of experts and of their performance is that it is personal. There is no one best way. In fact, a theme is that the performers must find their own ways to make more than a perfunctory contribution to an area. Songstress Barbara Cook, conducting a Master Class at the Julliard School of Music that one of us attended, had no need to critique the technical mastery of the accomplished singers who offered up themselves for learning. Instead, Ms. Cook focused on helping each student find the unique meaning which he or she could bring to the music. And the learning begins at an early age: when we asked a 9 year old student at a private school in Dallas, Texas, what she was learning, she replied, “We are learning to express our inner selves.” Video analysis of every televised golf tournament shows the uniqueness of every expert’s swing.

Experts, whether at chess or surgery, bring “personalities” that provide the artistry and the magic; each puts together his or her highly practiced skills in different ways that are highly individual.

If expertise is personal, and leaders are experts, then we should expect and encourage leaders to be personal, to be different from other leaders, and to perform in different ways in order to “make their music.”

Implications for Developing “Expert” Leaders

What if highly successful leaders are considered experts and acquiring leadership expertise happens in the same way as acquiring expertise in other fields? How does what we know about how experts become experts impact what we do to develop executive leaders? In this section we examine the implications of each of our eight observations from research on experts as they apply to executive development.

So what that expertise is learned? First of all, data showing that experts are mostly made and not born is consistent with recent studies of twins and leadership (Arvey, et al., 2006), supporting the case for investing in leadership development. But examining how experts learn raises questions about what is happening with leadership development in organizations. Specifically...

- Where are the countless hours of deliberate practice?
- Where are the criteria for reproducible superior performance as a leader that parallel the criteria for mastery as a pianist, chess master, or athlete?
- Where are the leadership “teachers” with increasing levels of mastery appropriate to the level of the developing leaders—a resource so critical to developing experts in other domains as they progress to higher and higher levels of mastery?

We need to better understand where “practice fields” can be found for leaders who, unlike most other experts, are expected to “perform” full-time and can’t practice four or more hours a day. We need better indicators than bottom-line results (that are influenced by many things other than a leader’s competence) and competency ratings (that aren’t necessarily related to results) to assess increasing mastery (or lack of it) in the leadership domain. And we need better research on what kinds of bosses or coaches or mentors are needed at what turning points in leader development, and what roles those “teachers” need to play as developing leaders progress across stages of mastery. The parallel in mastering a craft is the progression naïve, novice, initiate, apprentice, journeyman, expert, and master (Chi, 2006).

So what that expertise is domain specific? Experts operate within relatively narrow and well defined domains. The leadership domain, while vast, also is limited, but it is much different than that of most fields associated with experts. Leaders operate in a huge domain requiring both specific (e.g. knowledge of specific individuals, businesses, organizations, and industries) and general (e.g. dealing with people, making decisions, innovation) knowledge, and a wide variety of behavioral and cognitive skills. People in leadership roles simply must deal effectively with a much broader array of activities than, say, a chess master or a world class pianist.

Competency models that isolate a handful of characteristics said to describe effective leadership in a given organization are widely used to narrow and define the domain of leadership. But such simplistic models sacrifice one key aspect of what we know about experts—each expert brings something unique to how he or she performs. In other words, there is a bit of art or style in leadership that cannot be captured in a standardized report card of skills (see our observation VIII).

While there is some evidence that, like any other expert, leaders must master some basic or foundation abilities, and that there is a progression as they become more capable, it is also true that leaders bring something unique to the role. In other words, leaders like other experts bring who they are and what they know to the increasing challenges of mastery and each follows a somewhat different path. Because of that, we need to follow individuals through their careers rather than the current practice of looking annually across cohorts. To understand Mozart one would have to follow him across time rather than settle for comparing him to Haydn or other masters of his generation.

Organizations are particularly prone to losing the thread of individual growth because talented managers tend to move frequently into different jobs with different bosses. As a result, they appear to “start over” with each move rather than evolve based on the experiences to which they have been exposed. Approaching leadership as the acquisition of expertise makes it essential that somehow individuals are tracked across time in context against some domain-related criteria of mastery.

So what that it takes a minimum of 10 years to become an expert? The “ten year rule” for experts has been documented for executives as well, and it has implications for accelerating leadership development, moving people across functional and business boundaries, when

development should start, and how much to invest in a person who at some point might leave the organization. It is not just the size of the leadership expert domain that is the limiting factor, although the sheer magnitude of knowledge and skills to be acquired obviously takes a lot of time. Rather, the limiting factor may be the development of the ability to absorb and effectively use increasingly complex and large amounts of information.

How is it that people can get past the limits on simultaneous processing? Our favorite example from the expertise literature (Ross, 2006, 68-9) suggests an analogy to convey the growth of ability to deal with cognitive complexity: “Take the sentence ‘Mary had a little lamb.’ The number of information chunks in the sentence depends upon one’s knowledge of the poem and the English language. For most native speakers of English, the sentence is part of a much larger chunk, the familiar poem. For someone who knows English but not the poem, the sentence is a single, self-contained chunk. For someone who has memorized the words but not their meaning, the sentence is five chunks, and it is 18 chunks for someone who knows the letters but not the words.”

Long story short, we may want to accelerate development by giving people necessary experiences sooner or moving them faster, but unless they have developed the concomitant ability to process and learn from the experiences, such practices may be ineffective or even counterproductive.

In doing research on how executives learn from experience (McCall, et al., 1988) we saw that having a big experience (say a challenging turnaround assignment) before having learned the basic lessons taught in earlier, smaller assignments (like the first supervisory job), results in learning the basic lessons rather than the more sophisticated lessons offered by the big experience. This suggests that some sequential steps are needed, both in terms of the learning

ability of the candidate and of the experiences themselves. We need a lot more research to move past our crude understanding of these passages and what they require (c.f. Charan et al., 2001), but in the meantime we need to be mindful of the constraints when we try to accelerating development by moving people quickly through challenging assignments.

These constraints about how fast a learner can grow also confirm that development requires a long term investment. The alternative, hiring executives with the needed experience from the outside, is appealing except that the domain of leadership expertise includes organization-specific knowledge about people, culture, processes, etc., that is not easily acquired in the short term by an outsider.

So what that expertise has to be kept up to date and even at times renewed? Anyone can grow bored, out of date, calcified, or alienated over time. Why should leaders be any different? Like experts in other fields who deliver exceptional performance and then are pressured to deliver the same thing repeatedly, organizations like their successful executives to continue doing what they do well, rather than risk moving them on to something different—even if the move might mean increasing their expertise. Who do you choose for the next turnaround if not the person who has successfully done turnarounds before? And people, even experts, like doing what they do well, so they may be reluctant to push themselves to the next level, especially when they are richly rewarded for their current level of competence.

The implications are two-fold. First, organizations must overcome their conservative bias by providing both the opportunity for, and the expectation of, growth through taking on new challenges—blasting talented people out of complacency if necessary. Second, those chosen should evidence a willingness to renew, to leave success at one kind of performance to develop

ability at the next. As with other experts, expert leaders must demonstrate the motivation, breadth of interest, dedication, and personal management skills to maintain an edge.

So what if acquiring expertise takes practice and lots of it? This is one of the toughest findings when translated to leadership development. The large, complex, multifaceted domain for leadership makes extended practice problematic. Many people in demanding leadership roles in organizations are already working 70+ hours a week just getting the job done (performing) so even if “practice” were a viable concept in this context, time for it would not be. Accountability for organizational leaders is usually measured by bottom-line results, not by knowledge acquisition or increased expertise, so attention is focused on getting immediate results.

Leadership requires no formal training or certification (with the possible exception of an MBA for some positions in some companies), and what training is available most often comes in the form of optional two- to five-day programs available a few times in a career.

World-class experts in most domains, as noted earlier, usually have extensive formal training, are exposed to dedicated teachers all along the way, and spend innumerable hours practicing.

Leadership training isn't even close. How can we at least incorporate some kind of practice into the ongoing stream of managerial work?

First we can rethink how programs for managers are constructed, perhaps seeing them as possible venues for leaders to share experience and ideas for experimenting with different approaches to the challenges comprising mastery at the next higher level of performance.

Simulations might allow for some practice around some specific skills, but the domain is too large for that to be a practical solution. More likely, frequent interludes for reflection under the guise of leadership training might be the most effective approach, but only if coupled with some complementary intervention on the job.

Second, we don't think it likely that organizations will declare two hours each afternoon for leadership practice. However, the ongoing stream of experience is ripe for exploiting. As part of a research project, one of the authors spent a year follow newly-promoted executives, asking two simple questions: "What did you do last week?" and "What did you learn from it?" At first the executives had trouble remembering what they had done during all the "busyness" of the preceding period, much less what they might have learned. But as the project went on, they began to pay more attention to what was happening, and, as attention increased, became more aware of the learning that was available to them. As a result of paying attention, many of them began to try informal experiments or changed their approach just to see what would happen.

At the end of the project one executive commented that he had learned two things as a result of his participation. First, he said, when he took the job he hadn't realized he was supposed to learn anything. He had challenging business goals and he went to work each day prepared to meet them. Now he realized that indeed there was much to learn if he approached the challenges with a learning mindset.

Second, he said, he learned that stupid questions could be very powerful. He now asks his subordinates the same two simple questions he had answered periodically for all those months.

Long ago Warren Bennis (1989b) wrote about the importance of "the management of attention" in effective leadership. One might say that managing attention is at least as important in developing effective leaders.

So other people are important in developing experts... what else is new? Bosses occasionally make good coaches and occasionally are development-oriented, but for the most part the pressures on them are for results, and they are not rewarded for developing others. So despite

the enormous impact the immediate boss has on whether or not people develop, many (maybe most) bosses lack the skills, motivation, and incentives to devote much effort to this aspect of their job.

Yet when we look at how experts become experts, we see the critical role played by teachers, mentors, coaches, advocates, competitors—the list is a long one. We also see that just as practice by experts is deliberate, so too is finding the right teachers at the right times. The crucial role of other people for development of leadership expertise has not been lost on organizations, and there is a proliferation of programs to provide coaches (both internal and external), use senior managers as mentors, to train bosses to be better coaches of their people, and even to provide systematic behavior modeling sessions to build skills in goal setting and feedback. These activities are expensive, so their continued use is a sign that they are seen as helpful.

Despite the formal programs, however, many if not most of these developmental relationships result from accident, serendipity, or luck, and as such cannot be programmed. Still, organizations can do more to make better use of this powerful component of development.

Many organizations already hold their managers and executives need to be held accountable for the development of talented potential leaders. Best practice includes setting specific goals for developing others, measuring progress in doing so, and sanctions (positive and negative) for how well it's done. In addition, managers are given quality data on the talent pool, and processes from succession planning to performance management include significant developmental components.

Further, best practice reflects the reality of the pressure put on managers to keep their most talented people rather than letting them take developmental assignments, and the pressure

to fill open slots with known quantities rather than take a risk on outsiders or unproven though talented individuals. Organizations need to be proactive in responding to these pressures by making sure to support managers who act contrary to their perceived self interest. Support can be found in the values of senior management when they not only model what is desired, but also see to it that people are not punished for allowing their talented folks to make developmental moves. Sometimes actions are more coercive, such as using candidate slates for key positions to prevent managers from only choosing people they know.

Less frequently done is to systematically identify the managers and executives who best represent the behavior and values the organization desires, and make sure that talented potential leaders have significant exposure to them (not just in presentations or training courses but in meaningful work contexts).

So what that developing expertise is intentional? Experts don't become experts by chance. The dedication and hard work required is intentional, sustained, largely self-directed, and, depending on the field, guided over a long period by factors ranging from parents to certification standards and testing. It would be considered a waste of talent in most fields if someone with potential and desire was not supported in a variety of ways to bring that potential to fruition.

Imagine a gifted athlete without good coaches or access to challenging competition, or a gifted musician with no teachers or access to music. Yet in organizations, in spite of all of the HR programs with their 360 feedback, training, coaching, etc., an all-too-common philosophy of talent management is throw-them-in-and-see-if-they-float. Nissan and Renault CEO Carlos Ghosn describes it well when he says "Tomorrow's leaders get their training by dealing with today's challenges. You have to take the ones with the most potential and send them where the action is....Leaders are formed in the fire of experience" (Ghosn & Ries, 2005, 152).

No doubt about it, throwing them into the fire is intentional. We would suggest, however, that the picture is not complete unless the intention includes seeing the person grow, become more expert, as a result of the experience. The objective is to help people grow, not to test whether they have the right stuff. A development mindset sees the larger picture, much as we have described in this section—beginning early in a career, tracking individual growth over time, real accountability, experience and teachers at the heart of the process, some kind of logical progression through stages of mastery, feedback on learning, and the like.

And ultimately it is personal. No surprise here. Intentional does not mean applying a cookie cutter to development, but rather recognizing the individuality of the artist or the athlete or the leader and allowing for an individual path across common ground. You can't make someone develop. You can only do what you can to provide the fertile ground, resources, and support so that those who have the desire and dedication to seek mastery can get on with it. With any luck and a lot of hard work, organizations can develop the leadership talent that is essential for sustained success.

References

- Arvey, R., Rotundo, M., Johnson, W., Zhang, Z., & McGue, M. (2006). "*The Determinants of Leadership Role Occupancy: Genetic and Personality Factors.*" *The Leadership Quarterly*, Volume 17:1, 1-20.
- Bennis, W. (1989a). *On Becoming a Leader*. Reading, MA: Addison-Wesley.
- Bennis, W. (2006). Telephone conversation with one of the authors, August 2006.
- Bennis, W. (1989b). *Why Leaders Can't Lead*. San Francisco: Jossey-Bass.
- Bereiter, C., & Scardamalia, M. (1993). *Surpassing Ourselves: An Inquiry into the Implications of Expertise*. Chicago: Open Court.

- Charan, R., Drotter, S., & Noel, J. (2001). *The Leadership Pipeline*. San Francisco: Jossey-Bass.
- Chi, M. (2006). “*Two Approaches to the Study of Expert’s Characteristics.*” In Ericsson, K., Charness, N, Feltovich, P., & Hoffman, R. (eds.). *The Cambridge Handbook of Expertise and Expert Performance*. Cambridge: Cambridge University Press.
- Ericsson, K. (1996). “*The Acquisition of Expert Performance: An Introduction to Some of the Issues.*” In Ericsson, K. (ed), *The Road to Excellence*. Mahwah, NJ: Lawrence Erlbaum, 1-50.
- Ericsson, K. (2006). “*An Introduction to Cambridge Handbook of Expertise and Expert Performance: Its Development, Organization, and Content.*” In Ericsson, K., Charness, N, Feltovich, P., & Hoffman, R. (eds.). *The Cambridge Handbook of Expertise and Expert Performance*. Cambridge: Cambridge University Press, 3-19.
- Ericsson, K., Charness, N, Feltovich, P., & Hoffman, R. (eds.) (2006). *The Cambridge Handbook of Expertise and Expert Performance*. Cambridge: Cambridge University Press.
- Ericsson, K., Krampe, R., & Tesch-Romer. (1993). “*The Role of Deliberate Practice in the Acquisition of Expert Performance.*” *Psychological Review*, Volume 100:3, 363-406.
- Gabarro, J. (1987). *The Dynamics of Taking Charge*. Boston: Harvard Business School Press.
- Gerstner, L. (2002). *Who Says Elephants Can’t Dance?* New York: HarperBusiness.
- Ghosn, C. & Ries, P. (2005). *Shift*. New York: Currency.
- Kotter, J. (1990). *A Force for Change*. New York: Free Press.
- Kotter, J. (1982). *The General Managers*. New York: Free Press.
- Kouzes, J. & Posner, B. (2002). *The Leadership Challenge* (Third Edition). San Francisco: Jossey-Bass.
- McCall, M., Lombardo, M., & Morrison, A. (1988). *The Lessons of Experience*. Lexington, MA: Lexington.
- Morris, B. (2003). “*The Accidental CEO,*” *Fortune*, June 23, 2003, 58-66.
- Rivlin, G., & Markoff, J. (2005). “*Tossing Out a Chief Executive.*” *The New York Times*, February 14, 2005.
- Ross, P. (2005). “*The Expert Mind,*” *Scientific American*, August 1, 64-71.
- Simon, H., & Chase, W. (1973). “*Skill in Chess,*” *Scientific American*, Volume 61, 394-403.