



**RETHINKING LEADERSHIP, OR  
TEAM LEADERS ARE NOT MUSIC DIRECTORS**

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Let us begin with a thought experiment. Think for a moment about one of the finest groups you have ever seen—one that accomplished its work superbly, that got better and better as a performing unit over time, and whose members came away from the group experience wiser and more skilled than they were before. Next, think about a different group, one that failed to achieve its purposes, that deteriorated in performance capability over time, and whose members found the group experience far more frustrating than fulfilling.

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Now comes the question. In your opinion, what one factor is most responsible for the difference between these two groups? If you are like most people I’ve asked to perform this little thought experiment, the first explanation that came to mind may have been the quality of the leadership of the two groups. Indeed, “great leader” is almost always a central feature of the image we conjure up when we think about a great team. An operating room team successfully executes a demanding surgical procedure. The lead surgeon emerges from the operating room to receive the gratitude of the patient’s family. An aircraft encounters serious problems in flight, but the crew finds a way to solve them and lands safely. The passengers applaud the Captain. An industrial team sets a new plant production record. The team leader receives an award and subsequently is promoted.

Our tendency to assign to the leader credit or blame for successes or failures that actually are team outcomes is so strong and pervasive that I’m tempted to call it the “leader attribution error.” It occurs for unfavorable as well as favorable outcomes—the standard remedy for an athletic team that experiences a string of losses, for example, is to replace the coach. Moreover, it is not just outside observers or bosses who over-attribute to leaders. Team members themselves, the people who actually generated the collective product, also are vulnerable. Organizational psychologist Richard Corn asked members of a diverse set of teams, ranging from community health groups to a mutual fund company to military units, to identify the “root cause” of their team performance. For teams that were performing well, over 60 percent of their initial explanations of why the team performed as it did had to do with someone’s personality or behavior—and that someone frequently was the team leader. For teams that were performing poorly, 40 percent of the initial attributions were about personality or behavior (Corn, 2000).

Even inaction by a leader is often viewed as causing what transpires in a team. For example, leaders of self-analytic groups whose purpose is to help members learn from analysis of their own group experiences typically remain silent for the first few moments to ensure that all behaviors that occur are spontaneously generated by—and therefore owned by—group members themselves. The leader attribution error is so strong that the leader’s silence itself often is viewed by members as the main cause of the rocky start that such groups invariably experience. Indeed, organizational psychologist Jim Meindl (1990) finds that the leader attribution error is muted only when there is significant ambiguity about whether a team’s performance was a success or a failure.

The leader attribution error is understandable because people generally attribute responsibility more to things they can see (and the leader and his or her behavior usually are quite salient) than to things that operate in the background (and structural and contextual features that may powerfully shape team performance often go unnoticed). Even so, the error would be little more than a modestly interesting research tidbit, something worth perhaps a journal article or two, except for what it has spawned: a veritable industry of training programs intended to help leaders learn and execute those behaviors and leadership styles that those who design the programs think facilitate team performance.

“To fix the team, train the leader” could be the slogan of more than one successful enterprise in the management training industry. Everything I know about team leadership courses (and I’ve participated in them both as a student and as a teacher) suggests that, when well executed, attendees absolutely love them. Moreover, participants report—not just at the end of the course, but weeks or months later—that the courses have been enormously helpful to them. The problem is that research evidence that would document the benefits for team performance claimed by the offerers of such courses and attested to participants is hard to find. I suspect, perhaps too pessimistically, that the evidence is hard to find because it does not exist.

In the pages that follow, I offer an alternative way of construing team leadership, one that is more in accord with research evidence about the factors that shape team behavior and performance. To begin, let us closely inspect a setting where leader-focused thinking is especially pervasive and deeply rooted.

## LEADERSHIP IN PROFESSIONAL SYMPHONY ORCHESTRAS

Nowhere is the leader attribution error more obvious than in the professional symphony orchestra. The images are vivid and compelling. The hushed anticipation of the conductor’s arrival on stage once the orchestra has settled on the stage and tuned. The conductor’s movement on the podium, as he or she (mostly he) plays the orchestra as if it were his very own cello. And the moment of fulfillment, as the final chords reverberate in the hall and the conductor, exhausted but beaming, turns to accept the ovation of the audience (although sometimes, after receiving their fill, conductors do signal to individual players or sections that they also may stand and share recognition for the performance).

Who could resist this imagery? Certainly not audiences and critics, who are quick to characterize an orchestral performance as the accomplishment (or, when things do not go well, as the failure) of the conductor. Even players, the ones who actually performed the music, are vulnerable. A member of a major U.S. symphony orchestra, describing to me an extraordinary performance by his orchestra, reported that the conductor had “pulled out of us a performance I didn’t know we had in us.” A player in a different orchestra, explaining an unsatisfactory concert, complained that the conductor “just couldn’t get us to play beyond the notes on the page.”

Those who sit in concert hall seats rarely wave their arms as if they themselves are on the podium, although sometimes they are tempted (or at least I am). It is exciting to imagine oneself up there, bringing into beautiful harmony the contributions of a diverse set of highly talented individuals, each playing her or his own instrument in a way that enriches the glorious sound of the ensemble. So it is no wonder that those conductors who offer management seminars in which they explicitly draw a parallel between conductors and organizational leaders find their students both receptive and appreciative. The metaphor is compelling and it works beautifully as a pedagogical device.

Here, for example, is an excerpt from a marketing letter I received, inviting me to attend a management seminar offered by Dr. Stephen Covey, of *The Seven Habits of Highly Effective People* fame:

*Imagine synergy as the blending of individual talents within an orchestra to produce a unified sound that far exceeds the capability of each musician. A great conductor can show each musician how to look within and find even more potential. Dr. Covey has often used the example of the conductor who said, “I always speak to the highest and best inside a person. I*

*see in them something that is beyond what they themselves see.” Like conductors, leaders who understand synergy will help their teams achieve similar dramatic improvements. ...*

And here is what management guru Peter Drucker had to say in a 1988 *Harvard Business Review* article, in which he proposed symphony orchestras as a model for other kinds of organizations in the information age:

*The typical large business 20 years hence will have fewer than half the levels of management of its counterpart today, and no more than a third of the managers. In its structure, and in its management problems and concerns, it will bear little resemblance to the typical manufacturing company, circa 1950, which our textbooks still consider the norm. Instead, it is far more likely to resemble organizations that neither the practicing manager nor the management scholar pays much attention to today: the hospital, the university, the symphony orchestra. ...*

*A large symphony orchestra is...instructive, since for some works there may be a few hundred musicians on stage playing together. According to organization theory, then, there should be several group vice president conductors and perhaps a half-dozen division VP conductors. But that’s not how it works. There is only the conductor-CEO, and every one of the musicians plays directly to that person without an intermediary. And each is a high-grade specialist, indeed an artist. ... (Drucker, 1988, pp. 45, 48)*

Leaving aside Drucker’s misapprehension about their being a few hundred musicians on the concert stage (even a big Mahler symphony does not require that many players), the model he proposes is in many ways both attractive and sensible. But it overlooks one important feature of professional symphony orchestras: they are, in their artistic work, autocracies. The music director has almost total control of repertoire and artistic interpretations, and orchestra musicians, each of whom is indeed a high-level professional, do precisely what they are told. It is not just the leader attribution error at work here. Music directors really are fully in charge of what happens on stage during rehearsals and concerts. It is altogether appropriate, therefore, that the conductor is the one who accepts the applause from the audience, takes the first bows, and is reviled by critics for poor orchestral performances.

But is this the model of team leadership we seek? It has some significant benefits, to be sure. For one thing, it is highly efficient. One person is in charge, and precious rehearsal time need not be spent debating what is to be played or how best to play it. By contrast, members of the Orpheus Chamber Orchestra, a superb 26-person orchestra that rehearses and performs without a conductor, spend perhaps three times as many hours in rehearsal for each concert hour as does a conductor-led orchestra (Lehman and Hackman, 2002). The Orpheus musicians would not have it any other way: they believe they get an extra ten percent of quality by spending that additional time in rehearsal and, besides, the Orpheus musicians explicitly chose to rehearse and perform orchestral music in chamber music style. But efficient Orpheus is not.

A second benefit of conductor-centric orchestral leadership—and it is a significant benefit indeed—is that symphony orchestras provide settings for the expression of the musical genius of those extraordinary individuals who lead the best of them. The world is much enriched by the musical insight and artistry of the finest symphony orchestra conductors, and to bar them from the concert hall podium would be akin to locking up Yo-Yo Ma’s cello.

The conductor-centric model of ensemble leadership also is in significant respects wasteful and costly, as Jutta Allmendinger, Erin Lehman, and I learned in our four-nation study of some 76 professional symphony orchestras a few years ago. (For a summary of findings, see Allmendinger, Hackman, & Lehman, 1996.) The level of musical talent in most symphony orchestras is nothing short of awesome. When a major orchestra has an opening for a section violin player, for example, the audition committee may receive as many as 200 applications from highly talented violinists. The applicant who wins the position is, understandably, overjoyed to have been selected as one of the relatively small number of talented musicians who will have the opportunity to be paid a living wage for performing some of the finest music ever composed.

But it does not take long, one violinist told me, for the joy of winning the audition to give way to the reality of orchestral life. As a section player, the violinist soon realized that she would be sitting with essentially the same people, playing essentially the same repertoire, possibly for the rest of her career. The playing would always be in unison with the nineteen other second violins, and always under the direct and close supervision of a conductor. No musician would speak aloud during rehearsals except to ask for clarification of a conductor's instructions, and offering an interpretive idea of her own about a piece being prepared was completely out of the question. This was not the kind of musical life she had imagined for herself, not even after she had accepted the fact that a career as a concertizing soloist was not within her reach.

In my research on professional symphony and chamber orchestras, I have encountered many players like that violinist, people who are struggling to stay fully alive musically while accommodating to the demands and routines of life as a section player. One told me: "I have to be very careful to make sure that my job, which is playing in this orchestra, does not get too much in the way of my career, which is making music." Another musician, who had just retired from a major symphony orchestra, put it this way in an interview with my colleague Josephine Pichanick: "The younger people, when I first came, who are now in their forties? I guess they sort of... 'mellow' is not the right word. They break down, they're broken down by the system. To the outsider, it may look like a glamorous job, but it's not. It's a factory job with a little bit of art thrown in" (Pichanick & Rohrer, 2002).

Our quantitative data affirm these gloomy reports, but also offer one hopeful sign. We have administered surveys to a wide variety of groups and organizations for many years now. Three issues have been addressed in all of them. First, how high is *internal work motivation*? Are people self-motivated to perform well, or do they rely on rewards or punishments administered by others, such as bosses? On the survey, people are asked how much they agree with statements such as these: "I feel good when I learn that I have performed well on this job," and "I feel awful when I do poorly in my work." People who agree with such statements are internally motivated. Second, how high is *general satisfaction*? To what extent do people agree with statements such as "Generally speaking, I am very satisfied with this job." And third, how high is satisfaction with *growth opportunities*? Respondents are asked how happy they are with "the amount of personal growth and development [they] get in this job."

Players' responses to questions about internal motivation provide the sign of hope. On this measure, symphony orchestra musicians push the top of the scale—their average score, across all orchestras and countries, is 6.2 out of a possible 7. No group or organization we have studied has scored higher. Orchestra players are, indeed, fueled by their own pride and professionalism.

**“Are people self-motivated to perform well, or do they rely on rewards or punishments administered by others, such as bosses?”**

The news is less good for the other two questions. For general satisfaction, orchestra players rank seventh among the thirteen groups we have studied and, as is seen below, they rank ninth on the measure of satisfaction with growth opportunities:

- 1 Professional string quartet (highest, average score of 6.2)
- 2 Mental health treatment teams
- 3 Beer sales and delivery teams
- 4 Industrial production teams
- 5 Economic analysts in the federal government
- 6 Airline cockpit crews
- 7 Airline flight attendants
- 8 Federal prison guards
- 9 Symphony orchestra musicians (average score of 4.9)
- 10 Operating room nurses
- 11 Semiconductor fabrication teams
- 12 Professional hockey team
- 13 Amateur theater company (lowest, average score of 4.1)

Clearly, much talent and many musical ideas and possibilities are left on the rehearsal stage in the persons of the orchestra members. Their work life is not fulfilling, nor are their contributions harvested at anywhere near the level they could be. The same is true, I venture, in many other leader-centric groups and organizations. The leader-centric model may be a fundamentally flawed way of thinking about the leadership of teams.

## THINKING DIFFERENTLY ABOUT TEAM LEADERSHIP

The symphony orchestra model is perhaps extreme in some ways, but it is consistent with the way many scholars and practitioners think about leadership—namely, that leader behaviors affect group processes, which in turn shape performance outcomes:

**LEADER BEHAVIOR ➡ GROUP PROCESS ➡ PERFORMANCE OUTCOMES**

This is a conventional input-process-output model, in which causality flows linearly from left to right, step by step. Yet, surprisingly, research on task—performing teams has failed to support the standard model (for a review, see Hackman, 1987). Indeed, there is evidence that, at least in some circumstances, causality flows in the opposite direction:

**LEADER BEHAVIOR ← GROUP PROCESS ← PERFORMANCE OUTCOMES**

In this unconventional alternative, how well a group is performing is viewed as one of the major influences on group interaction processes. Groups that are failing encounter more than their share of conflicts and other process problems, whereas groups that are performing well find the going significantly smoother. Moreover, the style of team leaders turns out to be significantly shaped by the behaviors of those who are led: If team members are behaving cooperatively and competently, leaders tend to operate more participatively and democratically, but if members are uncooperative or seemingly incompetent, leaders tilt toward a more unilateral, directive style (Farris & Lim, 1969; Lowin & Craig, 1968; Sims & Manz, 1984).

At the very least, causality runs in both directions—from leader to group, as in the conventional model, but also from group to leader, as in the unconventional alternative. Regardless of the direction of causal flow, however, both the conventional and the unconventional models posit linear, cause-effect relationships. Our research suggests that a robust and useful understanding of group leadership may require more than merely changing the direction of the causal arrows. Specifically, it may be necessary to focus less on the causes of group behavior and performance and instead address the structural and contextual *conditions* within which groups form and develop over time. That possibility is explored next.

## CONDITIONS RATHER THAN CAUSES

To think about the conditions within which groups chart their own courses is very different from conventional scholarly models (in which the attempt is to link external causes tightly to group effects) as well as from action strategies that derive from those models (in which practitioners attempt to manage team processes more or less continuously in real time). The basic idea is that certain conditions get established, sometimes deliberately and other times by happenstance, and groups unfold in their own idiosyncratic ways within them. Group behavior and performance is powerfully shaped by these conditions, but often without members even being aware of the ways (or the extent) to which they are being influenced by them.

As I have argued elsewhere, the difference between creating favorable conditions and actively managing causal factors in real time is evident in the two different strategies that can be used by a pilot in landing an aircraft (Hackman, 2002). One strategy is to actively fly the airplane down, continuously adjusting heading, sink rate, and airspeed with the objective of arriving at the runway threshold just above stall speed, ready to flare the aircraft and touch down smoothly. The alternative strategy is to get the aircraft stabilized on approach while still far from the field, making small corrections as needed to heading, power, or aircraft configuration to keep the plane “in the groove.” It is well known among pilots that the safer strategy is the second one; indeed, when a pilot finds that he or she is in the first situation, the prudent action is to go around and try the approach again.

To be stabilized on approach is to have the basic conditions established such that the natural course of events leads to the desired outcome—in this case, a good landing. The same considerations apply to the design and leadership of social systems, including work teams in organizations. Rather than trying to pinpoint and directly manipulate specific “causes” of group performance outcomes (the parallel of trying to “fly the airplane down”), scholars and practitioners would seek to identify the small number of conditions that, when present, increase the likelihood that a group will naturally evolve into an ever more competent performing unit (the parallel of getting stabilized on approach and then managing the landing by making adjustments at the margins).

To think about conditions rather than causes is to think differently about teams. And, as will be seen next, that simple change in how one construes the way team behavior is shaped has significant implications both for practitioners who create and lead work teams and for social scientists who study them.

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## WHAT CONDITIONS?

The conditions that most powerfully set the stage for great group performances are few in number, and are explored in detail in my book *Leading Teams* (Hackman, 2002). Those conditions are akin to Russian dolls, in that each one has within it subconditions that, in turn, spawn additional subconditions. There is no limit to the amount of learning a leader can do about the conditions that increase the likelihood (but, to reiterate, do not guarantee) excellent team performance.

Here, I briefly review four imperatives of those conditions for the behavior of those who would provide leadership to teams. First is to create a *real team* rather than a team in name only, and to make sure that the team has reasonable stability over time. Second is to provide the team with a *compelling direction* for its work. Third is to make sure that the team has an *enabling design*, one that encourages competent teamwork and provides ready access to the resources and contextual supports members need to carry out their collective work. And fourth is to make available to the team *expert coaching* that can help members take good advantage of their favorable performance circumstances.

### Real team

Managers sometimes attempt to capture the benefits of teamwork by simply declaring that some set of people (often everyone who reports to the same supervisor) is now a team and that members should henceforth behave accordingly. Real teams cannot be created that way. Instead, explicit action must be taken to establish and affirm the team's boundaries, to define the task for which members are collectively responsible, and to give the team ample authority to manage both their own team processes and their relations with external entities such as clients and co-workers.

Creating and launching real teams is not something that can be accomplished casually, as is illustrated by research on airline cockpit crews. It is team functioning, rather than mechanical problems or the technical proficiency of individual pilots, that is at the root of most airline accidents (Helmreich & Foushee, 1993). Moreover, crews are especially vulnerable when they are just starting out, as was found in a recent study by the National Transportation Safety Board (NTSB). Analysts discovered that 73 percent of the accidents in the NTSB database occurred on the crew's first day of flying together, and 44 percent of those accidents happened on the crew's very first flight (National Transportation Safety Board, 1994, pp. 40-41). Other research has shown that experienced crews, even when fatigued, perform significantly better than do rested crews whose members have not worked together (Foushee, Lauber, Baetge, & Acomb, 1986).

This body of research has a clear policy implication. Crews should be trained together and then remain intact long enough for members to develop themselves into the best performing unit that they are able to become. Moreover, on any given trip they would fly the same aircraft and work with the same cabin crew. And the leader of the crew, the captain, would conduct a team-oriented briefing before each trip to reduce as much as possible the crew's exposure to the liabilities of newness (Ginnett, 1993).

Yet in most airlines crew members are trained as individuals and crew composition constantly changes because of the long-standing practice, enforced by labor contracts, of assigning pilots to trips, positions, and aircraft as individuals—usually on the basis of a seniority bidding system (Hackman, 1993). In one airline my colleagues and I studied, for example, a normal day's flying could involve two or even three changes of aircraft and as many different cabin crews, and even one or two changes in the cockpit crew's own composition during its one- or two-day life span.

Why have airline managements, pilot unions, and federal regulators, all of whom are deeply committed to improving the safety of flight, not jumped to implement policies and practices based on the research findings just summarized? For one thing, to schedule crews as intact units whose members stay together for a significant period of time would be very costly—millions of dollars a year, according to one airline analyst. Moreover, airline managers, like most of the rest of us, are disinclined to believe research findings about the benefits of team stability. Everyone knows that if a team stays together too long members will become too comfortable with one another, lax in enforcing standard procedures such as checklists, and too ready to forgive teammates' mistakes and lapses. Yes, teams may become better at working together as they move through the early phases of their lives. But that learning happens quickly, then plateaus, and then, at some point, overfamiliarity sets in and dominates members' subsequent interaction. It is better, therefore, to have a constant flow-through of new members to keep teams on their collective toes.

Everyone knows such things—but they are not true. Members of competently designed teams do learn fairly rapidly how to work together, as claimed. But, except for one special type of team, I have not been able to find a shred of evidence to support the view that there comes a point at which the learning stops and the positive trend reverses, when compositionally stable teams function decreasingly well the longer members stay together. (The exception is research and development teams. Organizational researcher Ralph Katz [1982] found that the productivity of such teams peaked when members had worked together for about three years, and then began to decline. It appears that research is a type of team work for which a moderate flow-through of new members really does help, probably because the new arrivals bring with them fresh ideas and perspectives to which the team might not otherwise be exposed.) The very best teams get better and better indefinitely, like a great marriage that is stronger on the couple's fiftieth anniversary than it was on their first, or like the Guarneri String Quartet, whose members have continuously improved their music-making over more than three decades of playing together.

### **Compelling direction**

The “direction” of a group is the specification of its overall purposes. Our research suggests that a good direction for a team has three features: it is, simultaneously, challenging, clear, and consequential.

*Challenging.* The performance target set for a team must be neither too demanding nor too easy. Too great a stretch, and people do not even bother to try; too small a stretch, and they do not need to try. Research by Atkinson (1958) and others has shown that individual motivation is greatest when a performer has about a 50-50 chance of succeeding on a task; I see no reason to doubt that the same is true for work teams.

Also critical in energizing a work team is whether those who specify its direction focus mainly on the end-states to be achieved or on the procedures the team must use in carrying out its work. Leaders who create work teams should be insistent and unapologetic about exercising their authority to specify end-states, but equally insistent about not specifying the details of the means by which the team pursues those ends. That state of affairs, shown in the upper right quadrant of Figure 1, fosters energetic, task-focused work (in the jargon of the day, team “empowerment”). Specifying both ends and means (the lower right quadrant) mitigates the challenge to team members and, at the same time, under-uses the full complement of team members' resources; as was shown earlier, professional symphony orchestras exemplify this cell. Specifying neither (the upper left quadrant) invites anarchy rather than focused, purposive team work. And specifying means but not ends (the lower left quadrant) clearly is the worst of all possible cases.

**FIGURE 1** SETTING DIRECTION ABOUT MEANS VS. ENDS

		SPECIFY ENDS ?	
		NO	YES
SPECIFY MEANS ?	NO	RISK OF ANARCHY	ENGAGED, GOAL-DIRECTED WORK
	YES	TURN-OFF (worst of all)	WASTED HUMAN RESOURCES

*Clear.* A work team’s purposes must be clear as well as challenging. A clear direction orients the team toward its objective and is invaluable to members as they weigh alternative strategies for proceeding with the work. As a metaphor, consider a mountain-climbing team that has encountered a fork in the trail. Absent a clear and shared understanding of which peak is the team’s objective, members may waste considerable time and fall into unnecessary conflict as members debate which way to go. The same is true for work teams. There are numerous choices to be made in the course of work on almost any task, and decision making about such matters is almost always facilitated by a clear and concrete statement of direction. To have a purpose of “serving customers” or “creating value for the firm,” for example, is to have no real purpose at all, and to implicitly invite team members to spend excessive time wandering about trying to figure out what they are really supposed to do.

There is a twist, however, in that statements of direction sometimes can be too clear. When a team’s purposes are spelled out explicitly and completely, there is little room for members to add their own shades of meaning to those purposes, to make sense of them in their own, idiosyncratic ways. Such sense-making processes are an essential part of coming to experience “ownership” of a piece of work, and an overly explicit statement of direction can preempt those processes. Moreover, if a team’s direction is clear, specific, and of great consequence for team members (for example, if their jobs or a significant bonus hangs in the balance), then there is a real risk that the team will be tempted to engage in inappropriate behaviors such as fudging numbers to ensure their success, or that they will focus too intently on the measures used to gauge their success at the expense of the real purposes of their work (Kerr, 1975). Good direction for a work team is clear, it is palpable—and it is incomplete.

*Consequential.* When a piece of work has clear consequences for team members or for the well-being of other people, members are more likely to engage the full range of their talents in executing the work than they are when group purposes are viewed as of little real consequence. When its work is highly consequential, a team is unlikely to fall victim to the “free rider” problem in using member talents (that is, people not contributing what they know, or what they know how to do, to the team’s work). Moreover, the chances increase that the team will weight members’ contributions in accord with their actual expertise rather than use some task-irrelevant criterion such as status, gender, or equality of workload in deciding how to deploy member talents. When it is the championship game, the team cannot afford to let everybody play—even if that means that less talented or experienced members have to remain on the bench.

Leaders sometimes use rhetorical devices to try to make a team’s direction seem more consequential than it really is (this is akin to the oft-cited motivational ploy of trying to convince brick carriers that they actually are building a cathedral). If such devices work at all, their effect is temporary because it becomes clear soon enough that what one really is doing, day after day, is carrying bricks. It is impossible to generate a statement of direction that engages the full range and depth of members’ talents for work that is essentially trivial.

In sum, good direction for work teams is challenging (which *energizes* members), it is clear (which *orients* them to their main purposes) and it is consequential (which *engages* the full range of their talents). Direction has priority because so much else depends upon it—how the team is structured and supported, and the character of leaders’ hands-on coaching.

### **Enabling design**

Traditionally designed organizations often are plagued by constraining structures and contextual features that have been built up over the years to monitor and control employee behavior. When teams are used to perform work, structure often is viewed, by leaders and team members alike, as an unnecessary bureaucratic impediment to group functioning. Thus, just as some leaders mistakenly attempt to empower a team by relinquishing to members full authority to set the team’s direction, so do some attempt to cut through bureaucratic obstacles to team functioning by dismantling all the structures that they can. The assumption, apparently, is that removing structures will release the pent-up power of groups and make it possible for members to work together creatively and effectively.

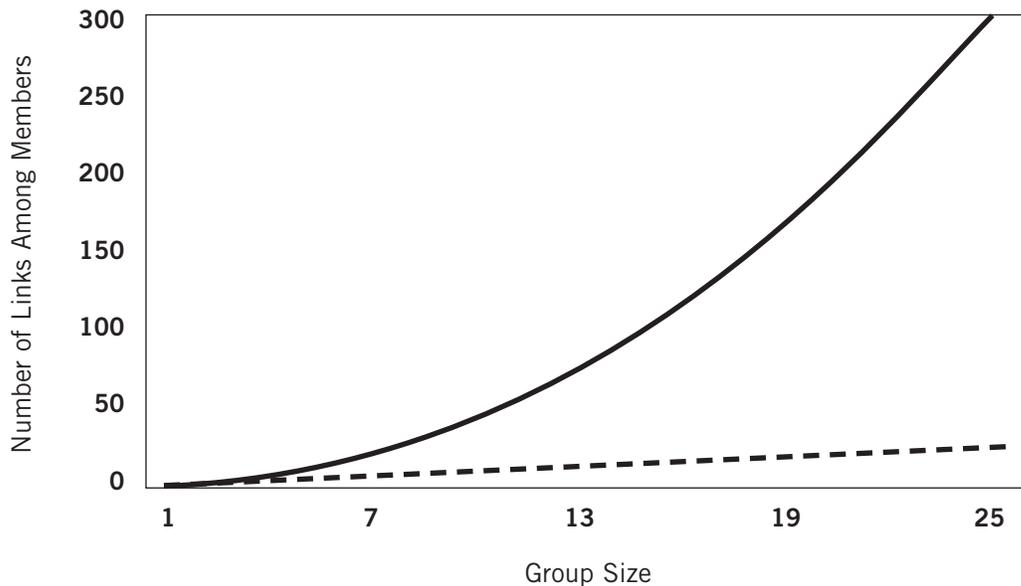
Leaders who hold this view often wind up providing teams with less structure and fewer contextual supports than they actually need. Tasks are defined only in vague, general terms. Lots of people may be involved in the work, but the actual membership of the team is unclear. Norms of conduct are kept deliberately fuzzy. Contextual features, such as the reward system, the information system, and educational supports are kept as they traditionally have been. In the words of one manager I spoke with, “the team will work out the details.” If anything, the opposite is true: Groups with appropriate structures and team-friendly contexts tend to develop healthy internal processes, whereas groups with insufficient or inappropriate structures tend to be plagued with process problems.

Among the most common design problems my colleagues and I have encountered in our research are flaws in how teams are composed. For one thing, teams often are far more homogeneous than they should be, because the managers who set up the teams assume that members who are similar to one another will work together more harmoniously and, therefore, more effectively. It is true that people who are similar tend to get along with one another, but it is not true that smoothly functioning teams

perform especially well. In fact, diverse groups that experience a measure of conflict about the best way to proceed with the work often generate products that are more creative than those whose members agree from the beginning about how they should operate (see, for example, McLeod, Lobel, & Cox, 1996, or Watson, Kumar, & Michaelsen, 1993).

Excessive size also is a common and pernicious problem in team design. It takes four people to play a string quartet, two crew members to fly a Boeing 737 aircraft, and twelve persons to form a full-size jury. Not a person more nor a person less will do, so those who compose such groups can focus on matters other than the size of the performing unit. More commonly, however, leaders who create work teams in organizations have considerable discretion about team size. Although they sometimes form teams that are too small to accomplish their work well, the far more common and dangerous mistake is overstaffing them.

**FIGURE 2** GROUP SIZE AND THE NUMBER OF LINKS AMONG MEMBERS



The larger a group, the more process problems members encounter in carrying out their collective work—social loafing, the misweighting of members’ contributions, and so on. Worse, the vulnerability of a group to such difficulties increases sharply as size increases. As is seen in Figure 2, it appears that process problems track not the simple number of members, but the number of *links* among members (the number of links is given by the formula  $[n * (n - 1) / 2]$ , where  $n$  is group size).

So what is the best group size? It depends on the size of the task, of course, but I do have a rule of thumb that I relentlessly enforce for student project groups in my Harvard courses: A team cannot have more than six members. Even a six-person team has 15 pairs among members, but a seven-person team has 21 and the difference in how well groups of the two sizes operate is noticeable.

If the evidence is so strong that small team size is better, why do we see so many large teams struggling along in organizations? Certainly the faulty assumption that “more is better” for team effectiveness is part of the reason. But the main driver may have less to do with team performance than with emotional issues, such as using large numbers of people to share responsibility and spread accountability, and political considerations, such as ensuring that all relevant stakeholders are represented in the group so they will accept its product. For these reasons, individuals from various constituencies may be appointed to a team one-by-one, or even two-by-two, creating a large and politically correct team—but a team that can find itself incapable of generating an outcome that meets even minimum standards of acceptability, let alone one that shows signs of originality.

But what if one really does want one’s board of directors (or top management team, or some other team whose work requires many members) to be an effective performing unit? One possible model is provided by the Orpheus Chamber Orchestra, the conductorless ensemble briefly described earlier. Although all 26 players (or even more) are needed to perform many works in the chamber orchestra repertoire, a 26-person team is far too large to operate as collegially as does a string quartet. With everyone chiming in with thoughts and ideas, rehearsal could become a cacophony. So orchestra members came up with the idea of the “core,” a small group consisting of the principal players for the piece being rehearsed. The core meets prior to the first full-orchestra rehearsal to work out the basic frame for the piece being prepared. Then, when the rest of the orchestra joins in, these individuals have special responsibility for helping other members of their sections understand and implement the ideas the core has roughed out. Any musician still can offer up new musical ideas for consideration by the ensemble, of course, but the starting point is the interpretive direction the core has set.

With size, as with all other aspects of team design, there always is a choice. But it takes the courage of informed conviction, plus a good measure of willingness to innovate and experiment, for leaders to find ways to exercise that choice that can simultaneously both harvest the diverse contributions of team members and foster efficient collective action.

### **Expert coaching**

It is not always easy for a team to take advantage of positive performance conditions, particularly if members have relatively little (or relatively negative) experience in teamwork. A leader can do much to promote team effectiveness by helping team members learn how to work interdependently. The role of the help provider is not, of course, to dictate to group members the one best way to proceed with their collaborative work. It is, instead, to help members learn how to minimize the process losses that invariably occur in groups (Steiner, 1972), and to consider how they might work together to generate synergistic process gains.

Such coaching can be provided at any point in the course of a team’s work, but there are three times in a team’s life when members are likely to be especially open to particular coaching interventions: (1) at the beginning, when a group is just starting its work, it is especially open to interventions that focus on the *effort* members will apply to their work; (2) at the midpoint, when the group has completed about half its work (or half the allotted time has elapsed), it is especially open to interventions that help members reflect on and refine their *performance strategies*; and (3) at the end, when the work is finished, the team is ready to entertain interventions aimed at helping members *learn from their experiences* (for details, see Hackman & Wageman, in press).

## GETTING THE ORDER RIGHT

A *New Yorker* cartoon some years ago, as I recall it, depicted a bleary-eyed man sitting on the side of his bed, looking at a sign he had posted on the bedroom wall. The sign read: “First slacks, then shoes.” Direction and design are the slacks. Coaching is the shoes. Unfortunately, coaches sometimes are called upon by their organizations to do the shoes first, to try to salvage a team that operates in a performance situation that is fundamentally flawed. Even expert coaching can make little constructive difference in such circumstances—and may even do more harm than good by distracting members’ attention from more fundamental aspects of their design or context that they ought be addressing.

**“Clearly, design features do have causal priority over leader coaching in shaping team performance processes and outcomes.”**

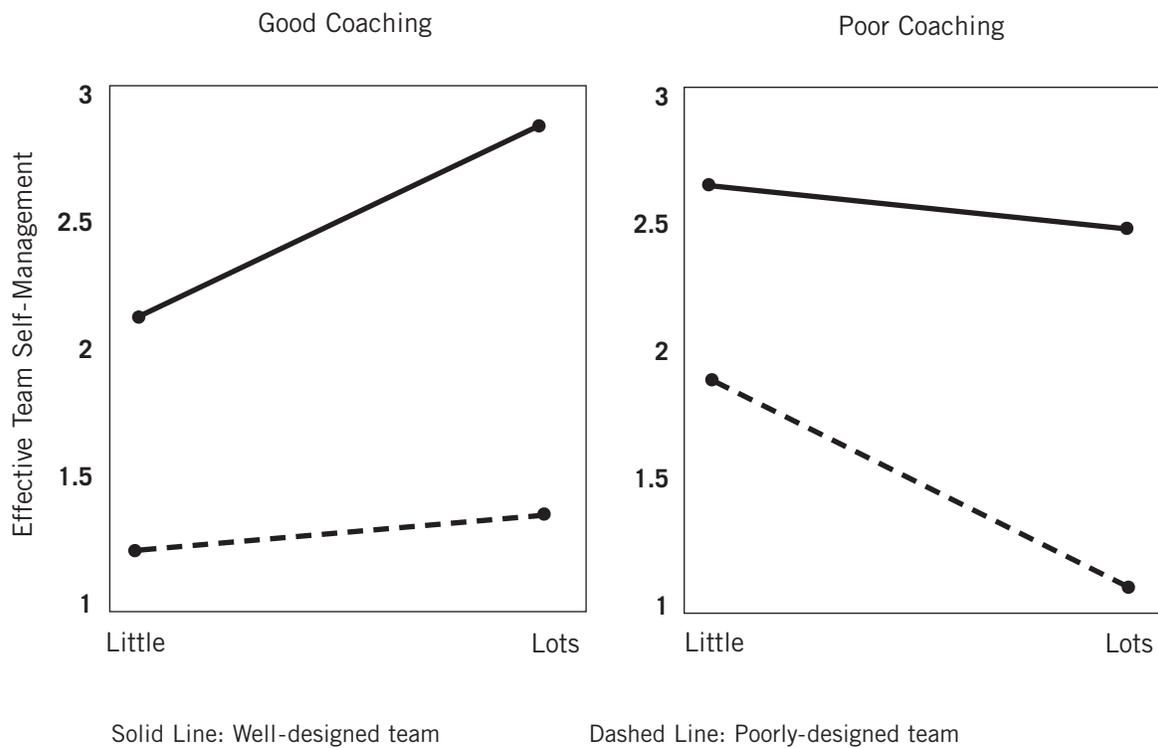
For example, consider a team working on a mechanized assembly line where inputs are machine paced, assembly procedures are completely programmed, and performance operations are simple and predictable. How could a coach help that team? Not by encouraging members to work harder or more efficiently, because the amount of work processed is under control of the engineers who pace the line, not the team. Not by helping them develop more task-appropriate performance strategies, because the way the work is to be done is completely pre-specified. And not by helping them develop or better use members’ knowledge and skill, because the required operations are so easy that an increase in team talent would merely mean that an even smaller proportion of the team’s total pool of talent would be used. In this situation, team performance processes are so severely constrained and controlled that the team has almost no leverage to improve them. For the same reason, there is little that even a great coach can do in working with the team to better its performance. Through no fault of the members, the team is essentially uncoachable.

Even when a performance situation is not as team-unfriendly as the one described above, the quality of a team’s design strongly conditions the impact of leaders’ coaching interventions, as was documented by organizational psychologist Ruth Wageman in a study of self-managing field service teams (Wageman, 2001). For each team studied, Wageman obtained independent assessments of the team’s design, the coaching behaviors of its leader, the team’s level of self management, and its objective performance. She predicted that a team’s design features would make a larger difference in both level of team self-management and in team performance outcomes than would the leader’s coaching behaviors, and she was right. Design was 4 times as powerful as coaching in affecting a team’s level of self-management, and almost 40 times as powerful in affecting team performance. Clearly, design features do have causal priority over leader coaching in shaping team performance processes and outcomes.

Perhaps the most fascinating finding of the Wageman study turned up when she compared the effects on team self-management of “good” coaching (such as helping a team develop a task-appropriate performance strategy) with those of “bad” coaching (such as identifying a team’s problems and telling members exactly what they should do to fix them). Good coaching significantly helped well-designed teams exploit their favorable circumstances but made almost no difference for poorly-designed teams. Bad coaching, on the other hand, significantly compromised poorly designed teams’ ability to manage themselves, worsening an already difficult situation, but did not much affect teams that had an enabling team structure and a supportive organizational context.

We have here yet another instance in which the rich get richer (well-designed teams are helped most by good coaching), and the poor get poorer (teams with flawed designs are hurt most by bad coaching). Great coaching can be enormously valuable to a team in exploiting the potential of a sound performance situa-

**FIGURE 3** WAGEMAN'S FINDINGS ABOUT THE INTERACTION BETWEEN TEAM DESIGN AND LEADER COACHING



tion but cannot reverse the impact of poor direction or a flawed team structure. The key to effective team leadership, then, is first to ensure that the team's basic performance conditions *are* sound and then to help team members take the greatest possible advantage of their favorable circumstances.

### LEADING TEAMS WELL

The main work of team leaders is to do whatever needs to be done to get the handful of conditions that foster team effectiveness in place—and to keep them there. Is the work team a *real* team, or just a collection of individuals who go by that name? Does it have a compelling direction? Does the team's structure and context enable rather than impede competent teamwork? And does the team have available ample and expert coaching to help members get over rough spots and take advantage of emerging opportunities?

Some of these conditions are best created before the team even meets for the first time, others when it is launched, others around the midpoint of its work, and still others when a significant piece of work has been completed. Serendipity and history play important roles in determining when the enabling conditions can be created or strengthened, how that might best be accomplished, and how hard it will be to do so. Sometimes most of the conditions will already be in place when a team is formed and fine-tuning them will not pose much of a leadership challenge; other times, such as in an established organization that has been tuned over the years to support and control *individual* work, it can take enormous effort and ingenuity to establish even the basic conditions required for competent teamwork.

## SHARING LEADERSHIP

There is no one best strategy or style for accomplishing team leadership, nor any one person who is solely responsible for providing it. Instead, team leadership involves inventing and competently executing whatever actions are most likely to create and sustain the enabling conditions. Anyone who helps do that, including both external managers and team members who hold no formal leadership role, is exercising team leadership. What is important is that the key leadership *functions* get fulfilled, not who fulfills them and certainly not how they go about doing it (Hackman & Walton, 1986).

**“The richer the set of leadership skills held by team members and organizational managers, the greater the number of options available for getting the enabling conditions in place.”**

The richer the set of leadership skills held by team members and organizational managers, the greater the number of options available for getting the enabling conditions in place. It is like the difference between driving and taking the train. When driving, there are always alternative routes to the destination if one road is blocked. A train, however, has but one set of tracks. If there is an obstruction on the tracks, the train cannot proceed until it is removed. Relying on any single person to provide all of a team’s leadership is the equivalent of taking the train. By contrast, having multiple individuals with diverse

skills pitching in to help create and sustain the enabling conditions provides more maneuvering room. If one strategy for moving forward is blocked, perhaps by a recalcitrant manager or by technological constraints that would be enormously expensive to change, there are other strategies that also could work.

The more members who contribute to the real work of leadership (that is, helping to create, fine tune, and exploit the benefits of the enabling conditions) the better. The Orpheus Chamber Orchestra again illustrates. Although that orchestra has no conductor on the podium, it has much more *leadership* than do orchestras known for their famous music directors. Every member has the right—and the responsibility—to do whatever he or she can to help the ensemble achieve the highest possible level of excellence. During rehearsals, for example, it is not uncommon to see a member quietly depart the stage and take an audience seat to listen to the orchestra’s sound for a few moments. At the next pause in the rehearsal, that person reports on what he or she heard, perhaps suggesting some changes to improve the balance among the sections. Other members may spontaneously offer suggestions about tempo, or how best to manage the transition of a melodic line from one section to another, or even how the composer meant a solo passage to be interpreted.

Even so, shared leadership in Orpheus is far from a one-person-one-vote democracy. For each piece of music the orchestra performs, one violinist is selected by his or her peers to serve as concertmaster. That person manages the rehearsal process for that piece—beginning each rehearsal, fielding suggestions from members about interpretive matters, deciding when spirited disagreements among members must be set aside to get on with the rehearsal, and taking the lead in figuring out how to handle transitions in the music that in a traditional orchestra would be signaled by a conductor’s baton.

Orpheus learned early in its life that is a good idea to have one person identified as the individual who will facilitate communication and coordination for a particular piece of work, and the same principle holds for teams that do other kinds of work. Who the designated leader is for a given piece of work can be selected by members themselves and can change from time to time, just as is done at Orpheus. But for virtually all task-performing teams making sure things do not fall between the cracks and that infor-

mation finds its way to the people who need it are activities usually handled most efficiently by a single individual who has an overview of the entire work process.

## CHOOSING AND TRAINING LEADERS

If it is a good idea to identify someone as team leader, how should that person be picked and trained? At Orpheus, members are very choosy about who gets to have a special “say” in the preparation of each piece. Players are not treated as equals, because in fact they are not equals: Each member brings special talents and interests to the ensemble, and also has some areas of relative disinterest and lesser strength. The orchestra’s willingness to acknowledge, to respect, and to exploit the individual differences among members in the interest of collective excellence is one of its greatest strengths as a self-managing team.

Those who are selected by their peers for special leadership responsibilities at Orpheus are a highly diverse lot—some are quiet, others are exuberant; some are easygoing, others seem to be a tightly wrapped bundle of nerves; some jump at the chance to exercise leadership, others have to be coaxed into it. There is no discernible template that distinguishes those who are most often turned to for leadership from those who are less often asked to take the lead. What one observes at Orpheus is affirmed by the chastening findings from researchers’ decades-long search for the personal traits of effective leaders. It was clear as long ago as the 1950s that researchers were unlikely to identify any set of universal traits that would reliably distinguish effective from ineffective leaders (for an early review, see Mann, 1959; for a more contemporary assessment, see Hogan, Curphy, & Hogan, 1994).

Neither hope nor the leader attribution error dies easily, however, and the commonsense belief that a leader’s personal traits somehow determine his or her effectiveness in leading teams continues to guide both research and practice. The power of such thinking is perhaps best exemplified by the readiness of many to accept the claim that a leader’s “emotional intelligence” is the key determinant of his or her effectiveness. The irony is that many of the skills that are grouped under the emotional intelligence label are not only helpful for leaders to have but also trainable. But use of the word *intelligence* as part of the label implies that whatever it is that emotionally intelligent leaders possess is at least an enduring personal attribute and perhaps even innate. It is bad enough that analytic intelligence, the kind of thing often referred to as “IQ,” is so widely viewed as wired in at birth; it is even more troublesome that trainable leadership and interpersonal skills sometimes are labeled in a way to suggest that they are as well.

My own research points to four personal qualities that distinguish excellent team leaders from those for whom team leadership is a struggle. First, effective leaders *know* some things—they are aware of the conditions that most powerfully shape team effectiveness. Such knowledge, briefly summarized in these pages, can be taught. If a team leader does not already know what it takes to foster team effectiveness, he or she can readily learn it. Second, effective leaders know *how* to do some things—they have skill both in extracting from the complexity of performance situations those themes that are consequential for team performance and in taking actions to narrow the gap between a team’s present reality and what could and should be. These skills also can be taught, but not by reading books, listening to lectures, or doing case analyses. Skill training requires the provision of positive models, coupled with repeated practice and feedback, which is a far more time-consuming (and expensive) training activity than merely transferring content knowledge from an instructor to a trainee.

**“ If it is a good idea to identify someone as team leader, how should that person be picked and trained?”**

The third attribute is of a different kind: Effective team leaders have sufficient *emotional maturity* to deal competently with the demands of the leadership role. Leading a team is an emotionally challenging undertaking, especially in dealing with anxieties—both one’s own and those of others. Leaders who are emotionally mature are willing and able to move toward anxiety-arousing states of affairs in the interest of learning about them rather than moving away to get anxieties reduced as quickly as possible. Finally, team leaders need a good measure of *personal courage*. Leadership involves moving a system from where it is now to some other, better place. That means that the leader must operate at the margins of what members presently like and want rather than at the center of the collective consensus. To help a team address and modify dysfunctional group dynamics, for example, often requires challenging existing group norms and disrupting established routines, which can elicit anger and resistance from group members. Leaders who behave courageously are more likely than their more timid colleagues to make significant and constructive differences in their teams and organizations—but they often wind up paying a substantial personal toll in the bargain.

The four qualities just discussed are differentially amenable to training—and in the order listed. It is relatively straightforward to help team leaders expand what they know about the conditions that foster team effectiveness. It is more challenging, but with sufficient time and effort entirely feasible, to help them hone their skills in diagnosis and execution. To foster team leaders’ emotional maturity is harder still, and is perhaps better viewed as a developmental task for one’s life than as something that can be taught. Courage may be the most trait-like of the four attributes. Although there indisputably are differences in courage across individuals, it is beyond me to imagine how one might help leaders become more willing than they already are to take courageous actions with their teams, peers, and bosses to increase the chances that their teams will excel.

These four personal attributes may seem strange to those who are accustomed to thinking of leadership qualities mainly in terms of personality or behavioral style, and I offer my views in speculative spirit. But it is nonetheless true that the superb team leaders I have observed over the years have most, if not all, of these very qualities. It may be worthwhile to give new thought to old questions about how team leaders might be selected and trained on attributes such as the four just discussed.

## HOW LEADERS MAKE MAGIC

Michelle Walter, former executive director of the Richmond Symphony, tells of that orchestra’s performance of Beethoven’s fifth symphony for an audience of local youngsters and their parents, many of whom were making their first foray into the concert hall. Although neither Michelle nor the musicians could explain afterwards why it happened, the orchestra that day gave a transcendental performance of a symphony that is surely one of the most-played pieces in the repertoire. As the final chords echoed and faded, complete silence held for four or five seconds, a sure sign that something special had just happened. Then the hall, filled with people who knew not the first thing about classical music, simply erupted.

The Richmond orchestra, that day, had a magical moment. We all have experienced such moments, times when a team somehow comes together in a way that produces an extraordinary outcome—a great performance, a brilliant insight, an amazing come-from-behind win. It would be wonderful if leaders could create magic at will, if they could somehow engineer it, but they cannot.

There are two certain ways leaders can ensure that team magic does not occur, however, both of which are seen far too often in work organizations. One way to go wrong, to stay with music for another

moment, is to act like a maestro on the podium, body and limbs in constant motion in an effort to pull greatness from an orchestra. Team leaders in maestro tradition would prefer to do the work all by themselves, without having to engender and coordinate the efforts of others. But since that is not possible, they do the next best thing and personally manage every aspect of the work process, keeping a close eye on all that is transpiring and issuing to team members an unending stream of instructions and corrections. Magic is not commonly observed in teams whose leaders act like maestros.

The other way leaders can get it wrong is to do nothing much at all, on the assumption that the magic of teamwork comes automatically and therefore the best thing to do is to stay out of the way. A guest conductor who was rehearsing a symphony orchestra for an upcoming “pops” concert took exactly this strategy. “You people know this music better than I do,” he said, “so just go ahead and play it. I’ll wave my arms around a lot at the concert to please the audience, but don’t pay much attention to what I’m doing.” I am not making this up. It was the purest, most beautiful example of leader abdication I have had the pleasure to observe.

So what *should* a leader do to increase the likelihood that a team will have a magical moment every now and then? Split the difference between the maestro and the abdicator, being half controlling or being icontrolling half the time? Of course not. What is required, as I have argued throughout this chapter, is a different way of thinking about the leadership of teams. A leader cannot make a team be great, but a leader can create conditions that increase the chances that moments of greatness will occur—and, moreover, can provide a little boost or nudge now and then to help members take the fullest possible advantage of those favorable conditions.

This model, too, is sometimes seen on the podium in concert halls. Some years ago, I had the opportunity to watch Russian conductor Yuri Temirkanov conduct a major U.S. orchestra in a performance of a Mahler symphony—the kind of piece that can invite the grandest arm-waving, body-swaying pyrotechnics. But not from Temirkanov. He cued the musicians to begin, and then his hands went to his sides. The orchestra played, and he *listened*. When some adjustment or assistance was needed, he provided it—signaling players with his eyes or body, or guiding a transition with his arms and hands. But that was about the extent of it. He had prepared the orchestra well during rehearsals, and all the right conditions were in place. Now, at the performance, when it counted the most, he was managing at the margin. And the orchestra responded by creating a little magic for itself and its audience.

## CONCLUSION

The approach to team leadership summarized in these pages is more complex than any list of “principles of good management” or “one-minute” prescriptions. Yet it also is simpler (there are just a few key conditions) and more flexible (create and sustain those conditions any way you can) than either contingency models of leadership or those that require fundamental reprogramming of leaders’ personal models of intervention. This way of thinking differs from common sense notions about leadership, in which influence is viewed as flowing dominantly from the person identified as “leader” to the team rather than in all directions—upward to bosses and laterally to peers as well as downwards from formal leaders to regular

**“ A leader cannot make a team be great, but a leader can create conditions that increase the chances that moments of greatness will occur—and, moreover, can provide a little boost or nudge now and then to help members take the fullest possible advantage of those favorable conditions.”**

members. It differs as well from leadership theories that focus mainly on identifying the personal characteristics of effective leaders, or that specify the best leadership styles, or that lay out in detail all the major contingencies that researchers have documented among traits, styles, and situational properties.

Throughout, my aspiration has been to generate a way of thinking about team leadership that can be useful to *both* scholars and practitioners. That is a challenge, because scholars and organizational actors construe influences on work team performance differently. We scholars want to know specifically what causes a team's level of performance. To find out, we take the performance situation apart piece by piece—we carefully think through what might be the ingredients that are most critical for team effectiveness, and then we collect data to test our ideas empirically. We do whatever we have to do to pin down the *true* causal agent. Organizational actors, on the other hand, are not much interested in teasing out the relative influence of various possible causes of performance. Instead, they are prepared to draw upon all resources at their disposal to overdetermine outcomes in the direction they prefer. They welcome rather than shun both the confounding of variables and redundant causation (which are sure signs in scientific work that one has not thought carefully enough about one's phenomena).

Although the preferences of scientists and practitioners do differ, they are not mutually exclusive. I believe it is entirely feasible to generate models of social system phenomena that are, at the same time, conceptually sound, capable of guiding constructive action, *and* amenable to empirical assessment and correction. The model of team performance summarized in these pages was generated in that spirit. Rather than specify the main causes of group performance (or provide a long list of all possible causes) I have proposed a small set of conditions which, when present, increase the chances—but by no means guarantee—that a group will develop into an effective performing unit.

The challenge for social scientists is to take more seriously than we have heretofore the implications of thinking about social systems in terms of conditions rather than causes. Moreover, we need to find ways of studying the evolution of social systems that do not destroy or caricature systemic phenomena in order to make them amenable to study using conventional cause-effect conceptual models and research methodologies.

The challenge for practitioners is to make sure that team leaders are carefully selected and competently trained, to be sure. But even fine leaders can make little constructive difference if they have little latitude to act—for example, if all team performance processes are dictated by technology or pre-specified operating procedures. It is the difference between a jazz musician and a section player in a symphony orchestra: The former has lots of room to improvise, whereas the latter must follow exactly a detailed score, and do so under the direct and constant supervision of a conductor. Team leaders should be more like jazz musicians.

Both scholars and practitioners compromise their own espoused objectives when they hold constant conditions that may be among the most substantial influences on their phenomena of interest. Yet we regularly do this: researchers do it to achieve experimental control, and practitioners do it to preserve established organizational structures, systems, and authority hierarchies. Until both scholars and practitioners accept the risks of breaking out of our traditional ways of construing and leading social systems, we will remain vulnerable to the leader attribution error—and we will continue to mistakenly assume that the best leaders are those who stand on whatever podium they can command and, through their personal efforts in real time, extract greatness from their teams.

## NOTE

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