Economists' Perspectives on Leadership*

Patrick Bolton†
Columbia University

Markus K. Brunnermeier‡
Princeton University

Laura Veldkamp§
New York University

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Abstract

What is leadership to an economist? This article provides an overview of formal models of leadership in economics. After briefly reviewing the role of formal control rights and the delegation of authority, the article puts in perspective economic models that capture several key functional aspects of leadership. The article also outlines a conceptual framework that includes five key elements of leadership: vision, communication, execution, integrity, and empowering others.
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†Department of Economics and GSB, Columbia University, New York, NY 10027, e-mail: pb2208@columbia.edu, http://www0.gsb.columbia.edu/faculty/pbolton

‡Department of Economics, Bendheim Center for Finance, Princeton University, Princeton, NJ 08544-1021, e-mail: markus@princeton.edu, http://www.princeton.edu/∼markus

§Department of Economics, Stern School of Business, New York University, New York, NY 10012-1126, e-mail: lveldkam@stern.nyu.edu, http://pages.stern.nyu.edu/∼lveldkam

1 Introduction

It is fair to say that leadership in organizations is not a topic that has received a lot of attention by economists. It is only very recently that a small but rapidly growing economics literature on leadership has emerged. The goal of this survey article is to review this literature and to consider how the leadership problem is embedded in the broader context of the managerial theory of the firm.

It is not just the notion of leadership that is foreign to most economists. Even the *raison d'être* of firms in a market economy, the boundaries of firms, and their internal organization is still imperfectly understood. For a long time economists have simply represented firms as a black box, or a production function turning inputs such as labor and raw materials into outputs for consumption. As **?**, **?**, **?**, and **?** have pointed out, the difficulty with this representation of firms is that it leaves unanswered the role of firms in a market economy and what the boundaries of the firm should be.

The modern economic theory of the firm pioneered by these authors and others has started addressing these issues, by opening this black box, and representing the firm as a machine operated by a manager. What is now known as the Principal-Agent approach has dominated recent economic analysis of firms. In its simplest representation, the Principal is the owner of the firm and the agent is the firm's manager. In a few more sophisticated representations the owner of the firm is the head of a hierarchy of managers and workers. The central issue addressed in this literature is an incentive issue: how to align managers' objectives with those of shareholders (or other stakeholders). Under this approach the basic organization design problem boils down to a contracting problem between the principal and agent, where the principal (or owner) determines the plan of action for the firm as well as a compensation package for the agent (or manager), and the manager executes the plan. In other words, *the principal-agent approach to the firm makes no room for leadership.* What is worse, it makes no room for any significant role for management, as the strategy and operation of the firm is determined in the initial contract between the principal and agent, so that the only role of the manager is to execute the pre-determined strategy. In the basic theory there is no room for initiative by the manager, let alone for any leadership role by management.

Although the Principal-Agent paradigm is a major advance over the neoclassical black-box representation of firms, it is nevertheless deficient and unrealistic. Indeed, more often than not shareholders are in reality looking for guidance by the manager and not the other way around. Similarly, when a firm appoints a new CEO, it may define in broad terms the CEO's compensation package, but otherwise gives *carte blanche* to the CEO in defining and implementing the firm's strategy (subject, of course, to the approval of the board of directors).

Thus, a more accurate representation than the Principal-Agent model, of how managers run firms, is to allow for some form of managerial initiative and a leadership role for the CEO. Introducing managerial leadership into the modern economic theory of the firm, however, involves a major departure from the Principal-Agent model of the firm.

A first step in that direction is to introduce *incomplete contracts* as Grossman and Hart (1986) have done, so that the entire future of the corporation is no longer determined in a single contract between the owners and the manager. With incomplete contracts, not all decisions are made at the time when the contract is signed. As a consequence, the manager has more of a role than just executing what has been agreed. That is, in situations when the manager has *control rights* he gets to determine how to run the firm when new decision problems arise.

But in reality, CEOs don't always have such formal control rights and yet they are expected to play a leadership role in the firm. To be able to account for an initiative role of CEOs even when they do not have formal control of the firm, the property rights theory of the firm of Grossman-Hart-Moore has to be augmented to introduce the notion of *delegation* of authority as Aghion and Tirole (1997) have shown.

We begin our discussion of economists' perspectives on leadership in organizations by briefly reviewing the role of incomplete contracts, formal control rights and delegation of real authority to CEOs with superior expertise or information, as these elements provide the underpinnings that connect the economic models of leadership to the theory of the firm.

Second, we turn to a review of the first generation of economic analyses on leadership and discuss the question of what leadership means to an economist. As we shall see, economists' notions of leadership are much more basic and elementary than the leadership notions discussed in the voluminous management, sociology, organizational psychology and organizational behavior literatures. However, this does not mean that this burgeoning economics literature should be dismissed as too simplistic or naïve to be of any practical interest. The value of economists' modeling efforts lies in the focus on the *functional aspects* of leadership, the *mechanisms* of leadership, and on what leadership can accomplish for an organization.

Third, after reviewing the main approaches to leadership explored by economists, we outline a general conceptual framework that, in our view, captures some key elements of leadership that economists have focused on. We discuss the key attributes of a leader that are captured by this framework and attempt to identify which important facets it leaves out. We also touch on possible ways of extending the basic framework to incorporate the main missing dimensions of leadership.

To give a first flavor of the aspects of leadership which the economic framework is set-up to capture and which it is not, consider the perspectives on leadership recently offered by one of the leading US corporate executives, Richard Parsons (CEO of Time Warner), in a lecture at Columbia Business School.[1] Parsons identifies five main ele-

[1] See "Parsons Speaks on Elements of Leadership", 5 December 2007 by Aynesley Toole, *The Bottom Line*, Columbia Business School, see e.g. http://www.socialwork.columbia.edu/wedseries/spr08/parsons.html

ments of effective leadership in corporations: 1) Set a *Vision*; 2) *Communication*; 3) *Empower others*; 4) *Execution*; and 5) *Integrity*. This may not be an all-encompassing view of leadership, but it includes several elements that are likely to be on many other CEOs or commentators' lists. In particular the *vision thing* has to be a basic attribute of a leader. This is indeed one important aspect that economists have focused on.

Communication also has to be an integral part of leadership, as a leader's vision can help coordinate an organization's activities around a common goal only if it is clearly and convincingly communicated to all the agents in the organization. Interestingly, Parsons stresses not only the importance of the leader conveying a clear and effective message to all the members of the organization, but also the *two-way street* part of communication and the importance of getting good feedback, ideas and information from others. Again, economists have suggested and discussed similar aspects.

By empowering others, Parsons means that an effective leader cannot take on the whole burden of running a large organization onto himself and has to be able to delegate to other collaborators in the organization specific managerial roles. This is clearly an important aspect of leadership, but also one that often poses a difficult dilemma for the CEO, as the effectiveness of leadership would be undermined if the organization *speaks with several voices* or if delegation of important leadership roles to *young turks* invites the most successful and gifted among them to challenge the leader. As important as this aspect of leadership is, it has not received any attention by economists (with a few recent exceptions in the political economy literature).

The fourth element on Parsons' list, *execution*, refers to the responsibility of a leader for seeing things through and for getting his vision implemented. Parsons also alludes to the fact that a leader should be accountable for failing to successfully implementing his mission statement. Accountability is an essential aspect of leadership that economists have also highlighted. However, the execution and monitoring role of a leader has generally not been emphasized in the economics literature and clearly merits further attention.

Finally, the fifth element, *integrity*, is a very important and often stressed quality of a good leader in the management literature. An effective leader should do what he thinks is right and not be overly influenced by market sentiment, or by the changing moods of the common wisdom of the time. As we shall see, the economics literature has also focused on some facets of this element, in particular the idea that a good leader follows his own convictions and is not unduly influenced by others' opinions. However, part of the notion of integrity is also that a leader should be honest to himself and should not cave in to the influence of powerful members of the organization or to controlling shareholders, particularly if he thinks that they are wrong and are trying to steer the organization in the wrong direction. If a leader is unable to resist such pressures or is seen to kowtow to the dominant line, he will loose his power to convince others to follow him. This aspect of integrity is essentially absent from the economics literature, but it is also not clear whether economists have much to say about it.

2 Control, Delegation and Leadership

The starting point for Grossman and Hart's (1986) property-rights theory of the firm is the assumption of contractual incompleness. When contracts are incomplete, new decisions have to be taken or new agreements have to be reached in contingencies not covered by the contract. In their theory, the party who has control, the owner, takes these not pre-specified decisions. As noted in the introduction, although their framework can account for the notion of control rights and the importance of ownership, it cannot explain any role for management unless the manager has formal control. To be able to introduce a role for management even when managers do not have formal ownership of the firm, one has to allow for the possibility of delegation of authority by the owners to the manager.

This is not as straightforward as it appears, for the delegation of authority has to be credible. The owner must find a way to commit not to overrule the manager, or not to fire the CEO if she does not like what he proposes to do. Although economic models of leadership do not make this explicit, any notion of leadership obviously rests first on the ability of the firm's owners to credibly commit to delegate auhtority to the CEO. To give an example, it will be crucial for the ability of the Wall Street Journal's new managing editor whether its new owner Rupert Murdoch will be able to credibly delegate editorial authority to the editor. How can this delegation be made credible without transferring formal control?

This is the question that **?** set out to address. Their proposed answer is that delegation can be credible if the CEO acquires information or expertise superior to the owners'. In particular, when shareholders are widely dispersed and removed from the day-to-day operations of the firm, then the CEO naturally gains real authority over the firm and can begin to assume a leadership role. Aghion and Tirole mainly consider a model with two players, where each player can first invest in information and where at a subsequent stage the two agents have to make a decision on which direction to take their organization. In their setup agents may or may not get a valuable piece of information, and the probability of getting that information is higher the more they invest in information acquisition. If one of the agents has formal control and gets the relevant piece of information then that agent makes the ultimate decision about which direction to take the company. If the agent with formal authority does not get the piece of information, but the other agent does, then the uninformed agent defers to the informed agent even when he has all the control rights.

This is the sense in which expertise or superior information can give real authority to a manager who has no formal control rights. The extent to which the manager will have real control in their model depends on two key parameters: the relative costs of information acquisition for each player and the *congruence* of their objectives (or, the extent to which they have aligned interests). If a CEO has different goals than the investor(s), the latter may want to retain formal control, so as to ensure that they get their way at least some of the time. In other words, one reason why shareholders do not want to relinquish formal control is that they then get to monitor the CEO and thus can avoid the worst excesses of CEO power. But holding on to power in this way comes at a cost. It undermines the CEO's incentives to acquire information. Or, to put it in context of our broader discussion on leadership, formal control in the hands of shareholders may undermine the CEOs ability to be an effective leader, as the other members of the organization may worry that the mission statement of the CEO may not be carried out and could be blocked in the future by the board of directors.

As Aghion and Tirole show, the desirability of holding on to formal control and the power to overrule the CEO is less valuable the more congruent the CEO's preferences are with the owners'. Similarly, the more the CEO's goals are aligned with the owners', the less the owners will want to invest in information themselves and the more likely the CEO will be to gain real authority by investing in information himself. The owners may even prefer to give up formal control to the CEO, for example by letting the CEO hand-pick his own board of directors, as a way of commiting not to interfere and thus maximizing the CEO's incentives to invest in information. This admittedly extreme outcome provides an important insight, which is not generally stressed in either the literature on leadership or corporate governance. Namely, that an important prerequisite for successful leadership by a CEO may be a weak board, and generally a weak governance structure. For example, when the financial press criticized the board of *General Electric* (GE) for granting excessive pay, pension contributions, and perks to its departing CEO, Jack Welch, there were virtually no commentators pointing out that these excesses may have been the price to pay for the exceptional leadership benefits that Jack Welch was able to bring to GE.

In an interesing recent study Song (2007) looks at CEO-Board congruence and considers the difference in performance of firms with more or less congruent CEOs and boards. He finds that firm performance is positively correlated with CEO-board alignment and also with CEO longevity. This is consistent with the view that when the board is more friendly to the CEO, the latter's leadership is more credible and therefore more effective.

Of course, for every Jack Welch one can find a Konrad Black, the former CEO of the newspaper empire Hollinger International, who has been sentenced for corporate fraud in February 2008. In Konrad Black's case, a more independent and watchful board might in all likelihood have been able to prevent the worst excesses he committed without inhibiting his leadership (see the Breeden Report (2004)**?** for a description of the dysfunctional board meetings at Hollinger under Konrad Black's leadership). Corporations thus face an important dilemma: on the one hand they need to ensure that the corporation is well governed by monitoring the CEO, but on the other hand they also need to make room for managerial leadership and give CEOs the scope to commit to an overall strategy for the firm as a whole. If, as a result of too much board meddling, the CEO's actions and communication are stifled, the sense of commitment to a clear strategy may be compromised and the firm may perform poorly as a result, thus defeating the whole purpose of CEO oversight.

This dilemma is particularly acute at the level of the board of directors. The trend in corporate governance at the level of the board of directors has been towards ever greater independence and accountability of the CEO to the board. While the benefits of this trend in terms of better monitoring are clear, insufficient consideration has been given to the implications of this trend for the ability of CEOs to fulfill their leadership role. If anything, the economic analysis of CEO leadership in the next sections points away from independence and toward greater CEO accountability and more sensitive long-term performance-based compensation.

3 First Generation Models of Leadership

3.1 Leadership, communication and continual improvement

Perhaps the earliest economic analysis on leadership in organizations is by **?**. A main goal of their article is to propose a first rigorous formulation of what leadership is, how it works, and what it can achieve for an organization. Inevitably, given this objective, their focus is narrower than the broad picture and the five main elements of leadership suggested by Parsons. Rotemberg and Saloner's proposed view of the leadership problem in an organization is that the leader's objective is to try to motivate the other agents in the firm (the *followers*) to perform. Thus, just as in the Principal-Agent problem we have mentioned above–where the principal's problem is to incentivize the agent to perform–the leader's problem is to get the followers to exert effort to find and propose improvements to the firm's overall performance.

Their setup focuses mainly on the *communication* element of leadership and specifically on a *bottom-up* vision of leadership, where the leader gets to induce followers to exert effort in finding improvements by listening to their proposals and by being open to their suggestions. The very prospect that their suggestions for improvement might be carefully evaluated and taken into account by the leader is a sufficient incentive in their model to get followers to exert costly effort. Thus, the fundamental leadership problem they consider is the question of how a leader can credibly become a good listener or communicator. How do followers trust that the leader listens to them when they have already exerted costly effort to find and propose improvements?

Rotemberg and Saloner suggest an idea that is related to the problem of delegation of authority in Aghion and Tirole. They argue that if the leader's objective is mainly to maximize short-term profits he will not always engage in costly communication with the followers, or he will not implement their proposed improvements as often. Just as the agent with formal authority in Aghion and Tirole can deter the other agent from investing in information, the profit-maximizing leader may deter followers from exerting costly effort to find and propose improvements. In contrast, if the leader has the welfare of the whole organization at heart–as Japanese CEOs who typically follow a lifetime career at their firm–then he can get followers to exert more effort. As one might expect, for some parameter values in their model, this *Toyota-way* leadership model can dominate the more bottom-line oriented American approach to leadership even in terms of profitability.

The *kaizen* (or continual improvement) model successfully applied by Toyota has been a major managerial innovation in the past quarter century. It has led to fundamental changes in automobile manufacturing around the world and it has been an inspiration for many corporations in other sectors. The Rotemberg and Saloner article proposes an interesting first model of a key aspect of what *kaizen* means and points to an important prerequisite for its implementation: a long-term orientation of management and good communication between employees and management. While it emphasizes one of the five elements of leadership, the Rotemberg and Saloner model leaves out all other key aspects of leadership, however–in particular the role of the leader in determining a direction or strategy for the firm and thus helping to coordinate the organization's activities around a common goal.

In a later article, **?** extend this model by introducing a role for the leader to define a general direction for the organization. The leader, in their model, does this by outlining in advance which future courses of action the company is unlikely to pursue. For Toyota this might mean announcing that the company will not get involved in any software operating system development for its automobiles and that the company plans to outsource all such information technology activities. The benefit of limiting the firm's activities in this way is that employees will not waste their efforts pursuing too many leads. It can also help coordinate multiple improvements proposed by different workers on the same production process. As Rotemberg and Saloner emphasize, a visionary leader, who is able to detect early which directions are worth pursuing could bring enormous benefits to the organization by clearly communicating the general direction the company will take. An obvious example of what the authors have in mind is Toyota's early commitment to the development of a low-cost electric motor for automobiles, and to the hybrid technology. It took vision to see that the technology was within reach and that climate change and the rise of gasoline prices would bring about suffient demand for hybrid automobiles to make this venture profitable.

Of course, the *Toyota-way* and the technological lead the company has established in hybrid technology is a spectacular example of successful leadership. At the time when a leader commits the company to a particular strategy, it is not obvious whether the strategy will succeed. There are many examples of failed strategies. There is always an element of luck in a successful strategy. The Toyota gamble on the hybrid technology could have failed, had oil prices stayed low for a longer period, or had technological progress accelerated the arrival of cheaper and more efficient electric motor technologies. Had this been the case, Toyota might have had to backtrack on its commitment. And had such hesitations been expected by Toyota engineers, researchers, mid-level managers, and workers, the coordination of all these agents' activities around the hybrid project might have been more difficult. Thus an important element of leadership is the credibility of the proposed strategy and the commitment of management to *stay the course*. It is not just that leaders have to define a direction for their company, but they have to make it credible for followers that they are willing to go along. This involves both good *communication* and *conviction*, so that followers can rest assured that the strategy will not be modified on the first signs that the strategy might be misguided. These elements are missing from the Rotemberg and Saloner analysis, but we will return to them in the next section.

3.2 Leading by example

The next important economic analysis of leadership is **?**, who considers *leading by example*. Hermalin's model also involves moral hazard by followers, but the leader's approach to motivating his team members is to lead by example. A key interest of his analysis is to show how leadership by example works in situations where agents are self-interested. The main building block Hermalin relies on is the leader's private information about the return to effort for the team as a whole. By exerting high effort himself, the team leader signals to his members that there is a high payoff for the individuals in the team to exerting effort. Interestingly, in his model the leader's signaling activity, which derives from his informational advantage, can result in more efficient outcomes than if all team members were equally informed. The reason is that the signaling encourages followers to also provide effort and thus overcomes their tendency to shirk.

Leading by example is a fundamental element of leadership, which is stressed in many different contexts. Thus, a political leader is more likely to get support and loyalty from followers if he is not seen to enrich himself in office. Similarly, a CEO who is helping himself to too many perks is not in a good position to get his subordinates to implement a painful cost-cutting program. Indeed, some CEOs have voluntarily given up their stock options and cut their salary when their firm hit a rough patch, as a way of convincing their subordinates to accept a pay cut in order to save the firm. Putting in long hours at the office, especially when the firm is facing an unexpected major problem or decision, is also a way for the leader to show that he cares about the firm and others involved in the firm.

Leading by example is not necessarily tied in a direct way to the notion that the leader has private information on the value of effort for the organization. It may simply be a signal that the leader cares about workers as well. One important observation of Hermalin's in this respect is that the leader is only willing to lead by example if his compensation is designed to do so. In small organizations, Hermalin shows that the leader's share of profits should be proportionately less than the leader's effort, while in larger organizations it should be proportionately larger. This finding may be relevant to the US corporate environment of the past two decades: when CEO pay reaches the extremely high levels seen in many US corporations today, this compensation could make it more difficult for the CEO to lead by example. The pay is simply so high that employees are likely to conclude that the CEO is just working hard for the money.

The analyses of Rotemberg and Saloner (1993, 2000)**??** and **?** focus mostly on the public good provision aspect of leadership and not so much on the leader's role in coordinating the various activities of the firm. It worth noting that this focus on public good provision points to leadership models that are quite close to Japanese corporate leadership ideas. Its emphasis is on a long-termist perspective for management, putting the organization's welfare ahead of shareholder value, the importance of communication and eliciting continuous improvements, and finally leadership by example and through pay moderation.

3.3 Leadership, coordination, conviction, and execution

More recently, several contributions, including our own **?**, have put the spotlight more on the coordination role of the leader. Along these lines, **?** have extended Hermalin's analysis by adding another element of successful leadership: the ability of a leader to *rally support* to be able to make the changes he desires. They consider a model where the leader's ability to bring about change depends first on how successfully he can communicate to followers that change is feasible and desirable, and second on the leader's level of support from *activists* who join his cause. That is, in their model followers make a first move by deciding whether or not they want to lend their support to the leader. Then, the leader commits to a direction, and finally the undecided potential followers choose whether they want to follow the leader. An important observation that emerges from their analysis is that the mere expectation that a leader will be successful can bring about success. That is, their model generates multiple equilibribria. If all the followers believe the leader will fail, then indeed he will fail, as he cannot get enough activists to join him in the first place. On the other hand, even if the leader is not particularly able or is not proposing a promising strategy for the organization, he can succeed if the followers expect him to succeed and join him *en masse* as activists. Majumdar and Mukand argue that in this context the best type of leader for the organization is one who is motivated to act in part but not wholly in self interest. His private interest (or *ambition*) will get him to take initiatives more readily, but it will also make it harder for him to rally activists who do not share the same interests.

? consider a leadership problem in a two-period model where information arrives sequentially in both periods. The leader's objective is first of all coordination – getting followers to take actions that are complementary to his – and second adaptation – implementing an overall strategy for the organization that is best suited to the firm's environment in the second period. The leadership facet they focus on is *communication*. But, in contrast to Rotemberg and Saloner, they emphasize *top-down* communication. They point to a basic trade-off for the leader in communicating his mission-statement for the firm: if he sets too precise milestones and defines the firm's strategy in too specific terms, he takes the risk that he will have to execute the strategy in the future, even when it no longer appears desirable to him in the face of new information. By stating somewhat vague goals for the firm he keeps more options open and can adapt the execution of the strategy to a changing environment. However, the vaguer the mission statement, the less the leader is able to convince the followers to take a complementary action.

In other words, the leader can only gain credibility by being sufficiently specific. Communicating convincingly and credibly incurs costs, which explains why many CEOs are reluctant to do this. The more stable the environment the firm is in, the easier it is for the CEO to be specific and the more effectively he can lead by communicating the firm's strategy precisely. But a more uncertain environment, according to their analysis, calls for a more cautious and hesitant approach. Thus, what might appear to be a failure of leadership – a reluctance to commit firmly to a given strategy–may actually be the best way of steering the firm through uncertain times. Their analysis provides one important illustration of the fact that there is no uniquely appropriate leadership style or method. The approach to leadership fundamentally depends on the circumstances the firm finds itself in. We return to this somewhat self-evident but nevertheless important observation in the section below.

Another direction economists have pursued recently is to identify individual characteristics, preferences, or personality traits that make some people particularly effective leaders. A widely accepted view, echoed to some extent in Parsons' analysis of effective leadership and in the economists' writing we have reviewed above, is that a good leader is foremost a *team player*. Interestingly, however, **?** find evidence that somewhat contradicts this view in a first study of CEO characteristics based on a detailed data set of candidates for CEO positions in private equity funded firms. Although the headhunting firm from which Kaplan, Klebanov and Sorensen received the data had designed its questionaires partly to be able to identify the team players as promising candidates for CEO positions, the authors find that the CEOs who tended to have better performance were the more self-assured CEOs with exceptional "*hard/execution related skills*". These findings are consistent with recent theoretical analyses that have highlighted the potential benefits of CEO overconfidence.

In an early paper exploring the implications of CEO overconfidence, **?** proposes a model in which managerial overconfidence helps attract and retain employees with similar beliefs. This is a model of the well known notion of leadership neatly put in the old proverb "*he who loves me, follows me.*" Applied to leadership in organizations, this facet of leadership is most relevant at the founding stage of the firm when investors and employees have to decide whether they want to commit themselves to this venture.

In a different context, **?** explore the benefits of overconfidence in a model similar to Hermalin's, which involves a moral hazard in teams problem. An overconfident leader tends to work even harder than Hermalin's rational leader and this may help overcome free-riding by other team members.

Finally, the study by **?** also emphasizes the potential benefits of leader overconfidence. They study a similar problem of leadership by *communication* as in **?**, with the difference that the cost to the leader of communicating too much information is that followers may respond to this information by choosing actions which force the leader to move away from his preferred strategy. They then show that in this context leader overconfidence (or, self-confidence in their terminology) may help the leader to stick to his guns and bring followers around his preferred strategy.

As this quick tour of the economic literature reveals, several important facets of leadership have been analyzed by economists, the most important ones being *communication* and to some extent *vision*. Conspicuously absent from this literature, however, is any discussion of the idea that a successful leader must know how to *empower others*. Also, the elements of *execution* and *integrity* while tangentially related to the discussions on CEO compensation on the one hand, and to overconfidence on the other, have not been explored in much depth. Moreover, all these early contributions only focus on one or two elements at a time. Finally, none of these contributions explore in any depth what we believe is a fundamental issue for leadership: the credibility of the leader's vision, in settings where the leader is expected to change course in the face of changes in the firm's environment. The next section outlines a general conceptual framework based on our paper **?** that has at its core this credibility problem, but that also includes four of our five elements. The one element still missing is *empowering others*.

4 Conceptual Framework

The model we outline in this section sheds light on what we believe to be a fundamental problem of leadership, namely how the leader can credibly convey that he will stay the course so long as a change in strategy is not clearly warranted by new events. The effectiveness of leadership depends on the leader's ability to convey that he will do as best he can to stick to the proposed path for the organization. It is only when followers have the confidence that the firm is committed to a strategy that they are willing to rally around the leader's mission-statement for the organization.

The framework we consider has one leader and many followers, which we take to be a continuum indexed by i for analytical simplicity. In contrast to the previous analyses discussed above, this framework applies most clearly to large organizations, where the typical agent's behavior has a negligible impact on the organization as a whole. The main advantage of focusing on large organizations is that we can abstract from the complexities of gaming inside organizations. The organization's environment is summarized in the parameter θ, which affects payoffs. The leader and followers start with different information or beliefs about the true value of θ. This reflects the idea that most agents in a large organization only have local information about their own department or their market segment, and while the leader has access to global information, he is not fully informed about all the individual activities the firm is engaged in.

The leader's primary role in a large organization is to delineate the overall strategy for the firm. This is captured formally by letting the leader move first and announcing what he believes the environment is, θ_L, to which the firm should try to adapt to. Thus, in this framework a strategy is summarized by the goal set for the organization to adapt as closely as possible to the perceived environment θ_L. This is admittedly a somewhat abstract representation of a leader's *mission statement* for the organization or of the leader's *vision*. Suffice it to say that the merit of this abstract formulation is generality. Many different strategies in different contexts can be represented in this way.

Of course the leader's *vision* θ_L is not a fully accurate representation of the environment and the organization is uncertain as to the true state of the environment. This idea is captured by letting θ_L be a random variable, which is only equal to the true environment on average. For analytical simplicity we take this random variable to be normally distributed: $\theta_L \sim \mathcal{N}(\theta, 1)$.

The followers' own information about the environment is given by $\theta_i \sim \mathcal{N}(\theta, \sigma_\theta^2)$. They use this information along with the leader's mission statement to determine what action a_i they should take. Finally, after the followers have moved the leader receives new information about the environment in the form of a signal $S_L \sim \mathcal{N}(\theta, \sigma_2^2)$ and then he chooses his own action a_L – which can be thought of the organization's overall course of action – based on his updated beliefs about θ.

Several immediate questions arise. First, why do followers take their own information into account at all? Why not just rely on the global information of the leader? The simple answer is that followers value not just the benefits of coordination but also the benefits of adaptation. But, more interestingly, even if followers only cared about coordination they still need to be able to forecast what the leader's ultimate choice a_L will be, and for that their own information may be helpful. Second, why does the leader pay any attention to the signal S_L? Again, the leader and the organization as a whole care about adaptation to the environment. To the extent that the original mission-statement θ_L turns out to be maladapted, the leader will want to change course even if this comes at the expense of some mis-coordination. Importantly, however, when the leader makes the final choice a_L he no longer has to worry about how his choice will affect followers' actions a_i, as these actions have already been taken. There is thus a fundamental time-consistency problem for the leader: if he could commit to a choice function $a_L(S_L)$ at the time when he communicates his mission statement he would want to do so, as his ex-ante choice will influence how followers act and will therefore be different from his ex-post choice.

Formally, the objective function for all the agents in the organization can be taken to be:

$$\Pi_i = -(a_i - a_L)^2 - \int_j (a_j - \bar{a})^2 dj - (a_L - \theta)^2 \text{ for } i \in [0,1] \cup \{L\} \tag{1}$$

This objective reflects three concerns for all agents: i) *coordination with the leader*, or taking an action that is close to the organization's strategy; ii) *coordination among followers*, and; iii) *adaptation* to the environment θ.[2]

With this objective function, followers need to forecast the ultimate strategy of the organization a_L to be able to determine their own best response a_i. If they think that the leader's ultimate choice a_L is very sensitive to S_L they will put very little weight on the leader's mission statement θ_L and more weight on their own information. As a result, the organization will not be well coordinated and there will be a large loss from mis-coordination; that is the term

$$\int_j (a_j - \bar{a})^2 dj$$

will be large. This observation captures in a simple way the concern CEOs and shareholders have with potential failures of leadership. If the firm is not seen to be committed to a clear strategy, there is a risk that there will be lots of coordination failures. Moreover, this risk is highest when senior management is seen to be hesitant and to be waiting for new information before deciding on the overall course for the company. A clear implication is that CEOs should not try to fine-tune the firm's strategy too much; in other words, that *the best is the enemy of the good*.

But how can CEOs credibly convey that they will stay the course? We explore two

[2] This basic conceptual framework is similar to the model of organizations by **?**, which also considers the organizational tradeoff between achieving greater coordination and greater adaptation. However, in their model agents communicate directly with each other and there is no leader.

mechanisms. The first is a form of overconfidence of the leader, which we refer to as *resoluteness* or *conviction*. This is modeled by assuming that the leader overestimates the precision of his prior information. That is, the leader believes that θ_L has variance $\sigma_p^2 \leq 1$. By attaching too high an informational value to θ_L the leader will put less weight on new information S_L so that his mission statement has more credibility. This is why *conviction brings credibility*.

This is an intuitive and widespread idea. Good leaders are often described to be strong and to have strong convictions along with great vision. In our framework this means that they trust their opinion or information more than those of others and therefore they will not easily be swayed to change course. This mechanism is related to the role of overconfidence discussed in the contributions in the previous section. But resoluteness plays a different role here and is also more specific than overconfidence.

It plays a different role, as it serves as a commitment device to achieve greater coordination. And it is more specific, as it is precisely overconfidence with respect to prior information that matters. In other words, what matters is the leader's initial conviction, or belief, that he is right. This is what Parsons refers to as the element of *integrity*. Note, however, that if the leader was overconfident with respect to the value of new information he would be even more fickle than a rational leader and he would then undermine the credibility of his mission statement.

To summarize, this framework captures two closely linked leadership problems: the first is that the leader may simply have the wrong vision and chooses a path for the company that may lead to failure; the second is that although the leader ultimately steers the organization in the right direction his mission statement is too vague, poorly communicated, or not fully credible, so that the organization's overall plan of action is implemented incoherently with substantial coordination failures. The best way to deal with these problems is to appoint a leader who is forceful, even stubborn, has strong convictions, but who is not obstinate to the point where he is willing to take the company in a disastrous direction in the face of overwhelming evidence that his chosen strategy will lead to disaster.

Interestingly, when the leader's or the followers' information is noisier then, if anything, the firm should appoint a more resolute leader. The reason is that when the leader knows less to begin with, he is more likely to change the firm's strategy in response to new information and therefore is less able to coordinate the followers. A more resolute leader is then desirable even if this means a greater risk of ultimately heading in the wrong direction.

This basic framework can be augmented or modified in several different directions without affecting the fundamental leadership tradeoff nor the desirability of resolute leadership. Possible modifications of the objective function (1) are the following:

1. Replace the term $-(a_i - a_L)^2$ in the leader's objective with

$$- \int_i (a_i - a_L)^2 di$$

   to reflect the idea that the leader does not ultimately care only about adaptation of the firm's strategy to the environment but also about coordination with all the followers' actions. With this objective function leader resoluteness is still desirable but less so.

2. Add the term $-(\theta - a_i)^2$ to the followers' objective function to reflect the idea that followers also care about adaptation to the environment. This worsens coordination among followers. When followers want to align their action with the leader's, they do so knowing that the leader's action is partly based on θ_L. Because θ_L is known to all followers, it enables coordination. When followers want to also align their action with the true state, however, they weight θ_L less and coordination deteriorates.

3. Allow for a more general weighting of the different terms in the objective function as follows:
$$-\omega_i(a_i - a_L)^2 - \omega_j \int_j (a_j - \bar{a})^2 dj - (a_L - \theta)^2.$$
As long as the weights on alignment and coordination in the firm's objective function are positive, leader resoluteness is always desirable. But as coordination becomes more important relative to the benefit of alignment, the marginal value of more resoluteness rises. For firms where alignment is crucial (ω_i and ω_j small), the optimal level of resoluteness will still be positive, but small.

4. Change followers' payoff to
$$-(a_i - a_L) - (\overline{a} - a_i)^2 - (a_L - \theta)^2$$
to reflect the fact that there are only private costs to mis-coordination and no public externality costs. In this case, resoluteness is always costly. If followers choose the degree of coordination that is best for the firm on their own, then there is no coordination problem for the leader to resolve. The only issue the leader is then concerned with is to choose the best-adapted mission. Rational leaders perform this task best. This would be a model with an uninteresting role for a leader, in our view, that does not incorporate relevant leadership challenges.

5. Introduce private and public costs to mis-coordination in the form:
$$-(a_i - a_L)^2 - \int_j (a_i - a_j)^2 dj - (a_L - \theta)^2.$$
With this payoff function the optimal amount of resoluteness is also lower, as private costs to mis-coordination now cause agents to coordinate better. But, again, some resoluteness is still valuable.

6. Add reputation as a commitment device. One way to incorporate reputation

costs is to add a fourth term to the leader's payoff function as follows:

$$\Pi_L = -(a_i - a_L)^2 - \int_j (a_j - \bar{a})^2 dj - (a_L - \theta)^2 - c(a_L - \theta_L)^2. \qquad (2)$$

The fourth term introduces a penalty for the leader that is increasing the more the leader ends up deviating from his stated mission θ_L. This term is one way of capturing Parsons' *execution* or accountability element. A leader can be more effective at coordinating followers' actions if he is willing to put his reputation on the line that he won't deviate from the announced mission statement. In our framework this is equivalent to choosing a higher c. Remarkably, as is shown in our companion article, resoluteness remains a valuable attribute of a leader even when the leader can commit to a strategy by staking his reputation. The reason is that a resolute leader is prepared to choose even higher values of c–in other words, is even more willing to put his reputation on the line–as he is more confident that he is right.

To summarize, the framework we have outlined so far can account for four of the five key elements of leadership (at least partially) that we have singled out in the introduction: first, the element of *vision* is captured in the relative precision of the leader's initial information; second, top-down *communication* is reflected in the leader's mission statement; third, *execution* is captured in the leader's willingness to stake his reputation on the successful implementation of the mission; and, fourth the element of *integrity* is captured in the leader's resoluteness or confidence in his initial information. It is worth noting that overconfidence is often viewed in the economics literature as a *bias* that may lead individuals to make foolish mistakes. In contrast, here, the particular form of overconfidence which results in resoluteness can be a desirable attribute, as has often been noted in the management literature on leadership.

This framework can also be augmented to account for the *bottom-up communication* element of leadership. To introduce a role for communication by followers it suffices to let the leader's second signal S_L be an aggregate index of followers' actions, which themselves reflect followers' own information:

$$S_L = \int_j a_j dj + \varepsilon,$$

where ε is a noise term: $\varepsilon \sim \mathcal{N}(0, \sigma_\varepsilon^2)$ which captures the quality of communication between followers and the leader.

By introducing a two-way communication channel into our framework in this way we obtain several major substantive changes to our analysis. First, a new tradeoff arises between greater coordination among followers–achieved by getting followers to found their actions less on their own private information–and less information communication by followers to the leader. In other words, coordinated actions now have both a positive payoff externality and a negative information externality. Second, followers decide to base their actions more or less on their information depending on whether they think that the leader is a *good listener* or not. If they think that the leader will put a lot of weight on S_L (by being a good listener) they expect that θ_L will be less predictive of the leader's final choice of strategy a_L and therefore they will be led to put more weight on their information θ_i. This, in turn, means that S_L is more informative, which confirms their initial belief that the leader will put more weight on S_L. In other words, this two-way communication translates into a fixed point problem and gives rise to three possible equilibria.

The first equilibrium, which we label *dictatorial equilibrium* is such that the leader pays no attention to S_L at all. As a result followers only put weight on θ_L and entirely ignore their own information when choosing their actions. This means that the leader is right to ignore S_L, as it conveys no information. As intuition suggests, this equilibrium always exists.

In the other two equilibria, which we label *lead-by-being-led equilibria* the leader does put a lot of weight on S_L with the consequence that followers' actions make S_L very informative, albeit at the cost of substantial mis-coordination. One of these equilibria is unstable and we dont focus on it for this reason. In the lead-by-being-led equilibrium the organization is, of course, better adapted to the environment, as it relies on more information to determine its strategy. This equilibrium does not exist for all parameter configurations. Basically, what is required is that the true precision of the leader's prior are low, while the precision of agents' private information is high. Also the leader should not be too resolute so that he does indeed put enough weight on S_L, and the environment should not be too uncertain so that mis-coordination costs remain within reasonable bounds.

Interestingly, in the dictatorial equilibrium there is so much coordination by the followers that the leader does not need to be resolute at all. However, resoluteness can be a way of selecting the dictatorial over the lead-by-being-led equilibrium. And, paradoxically, in the lead-by-being led equilibrium some leader resoluteness is desirable in some situations to achieve greater coordination. This is the case when the signal the leader sees from the followers' output is already very precise.

In sum, the framework with two-way communication allows for situations where it is preferable for a leader to be a *good listener* and to be capable of formulating well-adapted missions, as Parsons has been emphasizing. Resoluteness is most valuable when there is lots of uncertainty on the true environment but the leader's prior information is relatively accurate (in other words, when the leader has great *vision*). In these situations, the leader's stubbornness may suppress followers' information and may lead to the wrong strategy choice for the firm, but this risk is reduced by the leader's visionary qualities.

5 Missing Pieces

As we have already noted, one missing element from our list is *empowering others*. To introduce this element into our framework requires a broader perspective on organizations than our representation of a collection of followers who act in a non-cooperative way based on their own information. As Parsons suggests, one important reason why empowering others is so important is that there is a limit to how much a leader can do.

To model leader *limited attention* one would have to put constraints on the leader's ability to process information and to communicate with the whole organization. Our representation of top-down communication in our framework is rudimentary, to say the least. In reality, communication of an overall mission, strategy, or vision for the organization takes a lot of face-to-face meetings during which the strategy can be debated, explained in greater detail and better motivated. Communication in our framework only takes the form of a message that is broadcast to the whole organization. Many firms have such broad mission-statements posted on their websites and they inevitably read like a shallow and bland public relations exercise.

Top-down communication is more complex and takes time. To be effective, a leader has to be able to empower others around him in this communication effort. By enlisting the support of a strong team around him he will be able to not only communicate the mission better but also to signal the credibility of the mission by displaying the level of support in his management team, as **?** have argued. Similarly, when it comes to the execution of the strategy, the leader will need to empower others around him to implement all the multiple components of the strategy.

Another reason to empower one's followers is to develop their skills and knowledge base. Followers that rigidly follow a leader's exacting instructions do not develop their own judgement and end up contributing less to their firm than they might if they were allowed to experiment and learn. One way to capture this idea would be to write down a dynamic version of the model outlined above where followers could learn about the precision of their information over time from seeing their payoff realizations. If they simply followed the leader's instructions, their payoffs would only be related to the leader's information and would teach them nothing about their own information. But if they used their private signal to develop their own course of action, seeing the results of that action would teach them about how to use their information more efficiently in the future. In such an environment, a leader would have to balance the short-term gains from resolute leadership generating well-coordinated outcomes against the long-term costs of strong coordination that result in foregone learning opportunities for followers.

Although there are important benefits in empowering others, this is often one dimension along which many leaders fail. There are several reasons why leaders tend to be reluctant to delegate. A first basic reason is that they are so confident in their own vision and abilities that they do not trust their subordinates to be up to the task. Thus, another drawback of resoluteness (besides leading to greater mis-adaptation to the environment) may be insufficient empowerment of subordinates.

A second reason is that leaders want to retain their power and fear competition from promising younger, smarter, candidates for the job. Thus in an effort to *entrench* themselves they will tend to resist empowering others. This idea has been analyzed by economists in the context of a principal-agent model, most notably by **?**. It has also been explored in a political economy context by **?**, who argue that an autocratic leader's fear of treason by their *viziers* is the main reason behind their time-honored practice of appointing weak but loyal subordinates over more competent ones. Another interesting recent analysis on this aspect of political leadership by **?** points to the difficulty for the leader of *credibly* empowering others. The leader can take power or rewards away from his subordinates at any time and he will do so when he no longer needs them. If his subordinates anticipate this outcome they will have reduced incentives to work in support of the leader's mission. Myerson's analysis suggests that if the leader wants to credibly delegate power he needs to subject his authority to a third party, which in the political context of his analysis may be a court with authority to remove the leader. In the corporate context this role could be assigned to an independent board of directors. Note, however, that an independent empowered board could undermine the leader's own credibility, which was already discussed in the introduction.

Another important and related element of leadership that is missing from our framework is the process by which leaders are identified or selected. The board of directors is charged with appointing corporate leaders, but how does the board identify a good leader? Managers compete for leadership positions and their track-record helps establish their leadership credentials. An obvious question that arises in this context is whether this leadership contest results in the appointment of resolute leaders. In an interesting anlysis of this question, **?** argue that overconfident managers are more likely to be appointed CEOs. The reason is that overconfidence leads these managers to take greater risks. Even if this risk-taking leads overconfident managers to fail more often, the pool of successful managers–from which CEOs are picked–will be overrepresented by overconfident managers. To the extent that overconfidence takes the form of resoluteness this selection bias towards overconfident managers may be beneficial for the organization as we have argued above.

6 Conclusion

As our brief review highlights, the nascent economics literature on leadership has analyzed several important elements of leadership in organizations. Although the starting point of most economic analyses is the Principal-Agent paradigm of the firm, the ultimate direction of these leadership analyses is an entirely different vision of the managerial firm, where the main problem is not so much to elicit effort provision by management (or limiting their consumption of perks) but to make sure that management exercises leadership credibly and executes its vision of the firm's mission.

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