



Organization Science

Publication details, including instructions for authors and subscription information:
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To cite this article:

James G. March, Robert I. Sutton, (1997) Crossroads—Organizational Performance as a Dependent Variable. Organization Science 8(6):698-706. <https://doi.org/10.1287/orsc.8.6.698>

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Organizational Performance as a Dependent Variable

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Abstract

Most studies of organizational performance define performance as a dependent variable and seek to identify variables that produce variations in performance. Researchers who study organizational performance in this way typically devote little attention to the complications of using such a formulation to characterize the causal structure of performance phenomena. These complications include the ways in which performance advantage is competitively unstable, the causal complexity surrounding performance, and the limitations of using data based on retrospective recall of informants. Since these complications are well-known and routinely taught, a pattern of acknowledging the difficulties but continuing the practice cannot be attributed exclusively to poor training, lack of intelligence, or low standards. Most researchers understand the difficulties of inferring causal order from the correlations generated by organizational histories, particularly when those correlations may be implicit in the measurement procedures used. We suggest that the persistence of this pattern is due, in part, to the context of organizational research. Organizational researchers live in two worlds. The first demands and rewards speculations about how to improve performance. The second demands and rewards adherence to rigorous standards of scholarship. In its efforts to satisfy these often conflicting demands, the organizational research community sometimes responds by saying that inferences about the causes of performance cannot be made from the data available, and simultaneously goes ahead to make such inferences. We conclude by considering a few virtues and hazards of such a solution to dilemmas involving compelling contradictory imperatives and the generality of the issues involved. (*Organizational Performance; Effectiveness; Interpreting History; Scholarship*)

organizations. It is not clear that organizational purpose can be portrayed as unitary or that the multiple purposes of an organization are reliably consistent. It is not clear that a single conception of purposes is shared among participants in an organization. It is not clear that purpose antedates activities. Nevertheless, talking about the purposes of organizations and evaluating comparative organizational success and failure in fulfilling those purposes are conspicuous parts of conventional discourse. Business firms are compared in terms of profits, sales, market share, productivity, debt ratios, and stock prices. Hospitals use cost recovery, mortality and morbidity rates, board certification of physicians, and occupancy rates. Universities use research productivity and prestige of faculties, test scores of students, rankings by popular magazines, and win/loss records of football teams. Such comparisons become a basis for evaluating executives, for making decisions about allocation of human and other resources, for writing history, and for stimulating arrogance and shame.

Explaining variation in performance or effectiveness is also one of the more enduring themes in the study of organizations.¹ It is manifested most distinctively in studies with a focus on "management" but extends to a wide range of research that seeks to understand competitive survival and to construct interpretations of organizational histories that emphasize the adaptation of organizations to feedback from their environments. Organizational performance can, of course, be considered at a disaggregated level, as for example in studies of the direct costs of producing a particular product using a specific technology or of efficiency in performing a particular task. Our interest here, however, is in more aggregate assessments of organizational performance, as for example in accounting, sales, or financial reports, in stories of organizational history, or in other socially constructed evaluations of overall organizational effectiveness.

Organizations are commonly defined as instruments of purpose. They are seen as coordinated by intentions and goals. Such a formulation has often troubled students of

Problems in Studies of Performance

In studies of organizations, performance sometimes appears as an independent variable, but it is more likely to appear on the left-hand side of the equation as a dependent variable.² This emphasis is most explicit in the field of organizational strategy, which is often defined as having organizational performance as its primary focus, but the idea that performance is to be predicted, understood, and shaped is commonplace throughout the field. Such a posture is also embraced as a code of proper behavior. The second sentence in the Academy of Management Code of Ethical Conduct is: "Our professional goals are to enhance the learning of students, colleagues, and others and to improve the effectiveness of organizations through our teaching, research, and practice of management" (Academy of Management 1995, p. 573).

Efforts to fulfill the implicit promise of the code, the hopes of managers, the logic of performance improvement, and the ambitions of students of organizational adaptation encounter a fundamental complication, however: identifying the true causal structure of organizational performance phenomena on the basis of the incomplete information generated by historical experience is problematic. Students of organizational performance rarely exercise experimental control over predictor variables. They rely instead on analyses of observations made of naturally occurring events. As a result, they confront problems of finding adequate archival data and of soliciting and interpreting the accounts of informants. These records of naturally occurring histories of organizational performance are notoriously difficult to interpret. Any observation-based organizational history is rife with resolute ambiguities that can frustrate the efforts of statistical and interpretive imagination to identify causal links among historical events.

Without attempting to be comprehensive, we mention three of the more conspicuous problems involved in understanding variations in organizational performance. First, information about apparent determinants of differences in performance diffuses through a population of competitors and thereby tends to eliminate variation in both the determinants and their effects. Second, the theoretical ideas and analytical models that are normally used ignore a variety of feedback loops that are likely to be important. Third, the data that are used to record organizational histories often rely on retrospective recall of informants, recall that is likely to reconstruct the past to make it consistent with subsequent performance results, conventional story lines, and current beliefs. These problems are neither new nor difficult to recognize but they are not well accommodated in studies seeking to explain organizational performance.

Instabilities of Performance Advantage

Organizations compete with one another, consciously seeking advantage. A major feature of that competition is competitive imitation. Poor performance rankings are interpreted by potential competitors as indications that a practice does not work or a market does not exist, thus inhibiting imitation and competition, thereby reducing the competitive pressure and improving relative performance. Good performance rankings, on the other hand, not only stimulate admiration; they also encourage imitation and competition that tend to erode a favorable position. Organizations seek to emulate the performance successes of others by emulating their organizational forms and practices. This practice is institutionalized through concepts of "best practice" and in the activities of managerial media and consultants.

The result is the progressive elimination from net effect of organizational factors that are clearly relevant to performance advantage or disadvantage. This complication has often been used, by itself, to explain the relatively poor record of organizational research in explaining variations in performance. The basic idea is that any feature of organizational practice that might provide major competitive advantage is ordinarily adopted by all competitors. This competitive shaping of practice and various forms of institutionalized diffusion (DiMaggio and Powell 1983) reduce the variation in powerfully effective practices and obscure their effects, leaving any analysis the unenviable task of detecting weak signals in a performance world of substantial noise.

In this way, successes at understanding performance differences are self-destructive. As knowledge spreads, factors that previously distinguished high performers from low performers tend to disappear; and the more powerful the explanatory mechanism is believed to be, the faster the diffusion of knowledge about it. This imitative mechanism does not require that the performance advantage or disadvantage attributed to a particular factor necessarily be "real", only that it be generally accepted and acted upon, so as to reduce variation in the independent variables. The mechanism is obviously more enduring, however, if a true performance advantage or disadvantage has been identified, thus reducing variation in the dependent variable as well.

In order for knowledge to be imitatively self-destructive in this way, the relevant factors must be controllable so that an organization can be imagined to be able to adopt attributes and practices that are thought to give advantage and to reject those that are thought to give disadvantage. Although this requirement seems relatively unrestrictive with respect to many of the organizational forms, practices, and programs that are given credit for

performance advantage, sources of advantage vary in their susceptibility to transfer (Barney 1991). Characteristically, they are imperfectly or imaginatively implemented. Profound differences between organizational policies as formally adopted (e.g., total quality management, zero-based budgeting) and actual organizational practices have been observed, thus in principle assuring continued variation in organizations even in the face of widespread beliefs about effective practices. Unfortunately, normal procedures for recording organizational practices for research purposes tend either to accept the formal policies without assessing their implementation or to introduce considerable noise in measurement.

Simple Models of Complex Worlds

Performance instabilities are a special case of a more general complication. Most interpretations of organizational performance are built on elementary causal conceptions, sometimes encased in multiple regression or analysis of variance models, at other times embedded in less formal historical speculations. Theories are characteristically specified in terms of a causally "dependent" variable to be predicted and several explanatory variables imagined to be causally antecedent. Particularly where the various variables are observed at the same time, it is often unclear what variable should be treated as causally dependent. The choice is made by the researcher. Neither the data nor the analytical frames are of much help in making such a decision. It is normally based on a prior judgment about the causal structure. This judgment may be valid, but it cannot be confirmed by the analysis, which can only assess the likely strength of the relationships on the assumption that the causal structure is correctly specified. In their specifications of causal relations, students of organizational performance tend to construct theories and models that ignore important mutual effects that are frequently noted in the literature on organizations. These effects cannot be described as established beyond doubt, in part because of the observational complications already noted, but they are sufficiently plausible to make simple causal models injudicious.

First, there are mechanisms by which performance in one time period is affected positively by performance in previous periods. Many of the cognitive and affective factors that seem likely to influence performance (for example, investor, customer, and worker confidence in the organization) are themselves likely to be influenced by prior performance. Good performance rankings lead both to self-assurance and to being treated favorably by others; poor performance rankings lead both to loss of self-assurance and to being treated unfavorably by others. People who experience positive emotions as a result of

being assessed as successful have been found to be more creative, more persistent, more likely to help others, and more likely to make decisions quickly (See Isen and Baron 1991 for a review). As a result, it seems quite likely that positive experiences in organizations will contribute to future positive experiences. Poor performance assessments are likely to be similarly self-reinforcing (Sutton and Callahan 1987). According to one interpretation at least, negative assessments create an emotional climate of failure, where interlocked cycles of declining performance and internal reactions lead to organizational demise (Greenhalgh 1983, Masuch 1985).

Moreover, there may well be a difference between the positive and negative assessment cases. Studies of the way individuals—including the leaders of organizations—make attributions with respect to their own performance, indicate that they typically take credit when their own performance is good and blame external causes when their own performance is poor (Jones and Wortman 1973, Staw et al. 1983, Adams et al. 1985). The resulting self-confidence among successful individuals is likely to contribute positively to organizational performance, whereas the disassociation from failure restrains the loss of self-confidence among individuals who are not successful. As a result, the motivations generated by performance and its attributions are likely to accelerate success more than failure among current leaders.

Second, at the same time, there are also negative feedback effects by which success or failure in organizational performance creates countervailing tendencies. According to one common speculation, organizational performance below target or aspiration levels (failure) triggers increases in search, decreases in organizational slack, and decreases in aspirations (Cyert and March 1963, March 1988). Each of these effects of failure increases the likelihood of subsequent success. The idea of stimulating improvement by defining past performance as a failure is a familiar theme in the goal setting literature (Pritchard et al. 1988, Locke and Latham 1990).

According to the same theories, performance that is above aspiration levels (success) triggers adjustments in the opposite direction, so that success stimulates subsequent failure either through an increase in aspirations or through a decrease in search and an increase in slack. Whether the cyclic process produced by these two negative feedbacks leads to an observed positive or negative serial correlation for performance depends on the speeds of the three adjustments to failure or success and the frequency of observation.

Third (as is suggested by the preceding example), the short run effects of some mechanisms are likely to be different from their long run effects. One of the more

obvious is the contrast between the short-run (efficiency) and long-run (adaptiveness) effects of attention. According to standard theories of problemistic search, decreases in slack and increases in search in response to failure ordinarily improve organizational performance in the short run, but the improvements pose complications for longer run performance (March, 1994). For example, the threat posed by poor performance causes decision makers to restrict experimentation, tighten controls, and place greater reliance on formal procedures which require less complex information processing (Staw et al. 1981, D'Aunno and Sutton 1992). The long run consequences are likely to be damaging to performance. Conversely, increases in slack and decreases in search in response to success tend to reduce organizational performance in the short run but facilitate experimentation and risk taking that can yield long run returns (March 1991).

The learning dynamics of success are similar. Success at using one technology, strategy, or behavior leads to increased use. Increased use leads to greater competency, thus to greater success, thus to greater use. The resulting local positive feedback produces a competency trap which is detrimental in the long run (Levitt and March 1988, Arthur 1989). Thus, the use of organizational power to impose an environment (for example by dominant firms or nations) erodes the capability to adjust to an environment externally imposed (Levinthal and March 1993, Miller 1993). The notion that short-term success leads to longer term failure is also reflected in the idea that avoidance of potential disaster leads to an underestimation of danger and a degradation of safety (March and Shapira 1987, Starbuck and Milliken 1988).

This brief foray into the feedback dynamics of performance is not intended to be exhaustive or to present a parsimonious integration of the relevant complications. Rather the aim is merely to suggest why a simple unidirectional causal interpretation of organizational performance is likely to fail. Performance feeds back upon itself through numerous mechanisms. Despite this substantial, and distinctly not secret, literature, the effects of performance on organizational predictor variables (and thus ultimately on performance) are frequently forgotten in research that purports to identify factors in organizational performance. Many standard specifications do not deal effectively with causal relations involving mutual effects among the variables, particularly between the "dependent" variable and one or more "independent" variables. As a result, simple unidirectional interpretations of performance are common in a world in which effects are interrelated in a rich system of probable feedback loops. Although using prior performance as a control variable

(which is common) meliorates these problems to some extent, it tends to obscure the mechanisms involved.

Retrospective Recall

Research on organizational performance is further complicated by the difficulty of choosing measures for the explanatory variables of interest, particularly the difficulty of avoiding measures that are themselves causally connected independent of any links among the variables they measure. The problem is particularly characteristic of the extensive use of retrospective accounts as sources of data. Many of the key independent variables in organizational performance studies are not observed directly. Where they are observed directly, they normally are not observed over time. This is true not only of studies using field research methods and narrative analysis but also of those using more classical statistical techniques. Commonly, informants are asked to assess things like group cohesiveness, management style, goals, intentions, and power, as well as changes that might have taken place in such things. Variables used to explain performance are sometimes assessed considerably after the performance is well-known to the informants (Tosi and Gomez-Mejia 1994).

The result is the probable introduction of significant retrospective bias (Fischhoff 1975, Fischhoff and Beyth 1975). Performance information itself colors subjective memories, perceptions, and weightings of possible causes of performance. Informants exist in a world in which organizational performance is important. That world is filled with widely believed conventional stories about the causes of good and poor performance, and those stories are evoked by knowledge of performance results. As a result, retrospective reports of independent variables may be less influenced by memory than by a reconstruction that connects standard story lines with contemporaneous awareness of performance results.

For example, students who were led to believe (falsely) that their groups had performed well in a financial puzzle game reported higher group cohesiveness, greater personal influence over the task solution, higher quality communications, more confrontation of ideas with teammates, and more openness of teammates than were students who were led to believe their group did poorly. Relative to students who were given negative feedback, they believed that they and their teammates had higher motivation and ability, that the task was more enjoyable, and that the instructions were clearer (Staw 1975).

Given that many informants in studies of effectiveness and performance are themselves members or leaders of the groups about which they are making attributions, their reports are particularly prone to bias. As observers and

the observed collaborate in developing an understanding of history, the past is likely to become a product fashioned from consciousness of the present and framed by currently conventional story lines. The resulting construction of history is likely to attribute organizational successes or failures to properties of organization and the wills of managers, but such interpretations probably provide more credible evidence for their legitimacy than their validity.

Story lines and personal interests are intertwined to produce a fable that fits expectations and, as much as possible, confirms a storyteller's conceptions of self-worth and the worth of others. Because the stories of informants can be fitted into standard story lines, they are likely to be accepted by researchers and their audiences (Staw 1975). For example, observed correlations between a firm's "quality" as reported in an annual survey of corporate reputations and that firm's financial performance are likely to be due more to the effect of performance on perceptions of quality than to the effect of quality on performance (McGuire et al. 1990).

Despite the hazards of using cross-sectional and retrospective data and informants' interpretations to identify the possible causes of organizational performance, much research that attempts to explain observed performance differences continues to rely on such evidence. Brown and Eisenhardt's (1995) recent review and integration of the product development literature indicates that the bulk of research on the performance of product development efforts involves cross-sectional and retrospective studies. For example, the most common method for studying how rational planning affects product development success entails asking informants to recall why products have succeeded or failed, often asking them to compare a successful product with an unsuccessful one (e.g., Zirger and Maidique 1990). As Brown and Eisenhardt point out, this means that the findings are likely to have been shaped by a host of cognitive biases. These studies may actually tell us less about the determinants of performance than about the ways performance information affects memory, cognitive processing, and story telling.

The Emperor's Clothes

Most studies of organizational performance are incapable of identifying the true causal relations among performance variables and other variables correlated with them through the data and methods they normally use. Although there are studies that mitigate these shortcomings, the emperor of organizational performance studies is for the most part rather naked. New enthusiasms succeed old ones, but the process often appears to be less one of gradual accumulation of knowledge than of intellectual drift stimulated by competition for scholarly reputation.

The questionable status of studies in which organizational performance appears as a causally dependent variable is not a secret. The difficulties in identifying causes of performance differences are common knowledge, part of the most basic training in the field (Staw 1975, Lenz 1981). As a result, the more intriguing part of this history is not the fact that the performance emperor has no clothes, for that is hardly "news". Rather it is the impressive persistence in making inferences about organizational performance histories that are so conspicuously and so generally known to be suspect.

A standard response to these persistencies has been to assume a failure of intelligence, standards, or training. Remedies of better research recruitment and training, better reviewing of journals, better consciousness of the problems have been pursued. These efforts have had very little impact. A steady flow of studies making questionable interpretations of performance evidence continues. Even though almost everyone knows that the emperor has no clothes, few people talk about that fact, and many of the same people who note the emperor's nakedness nevertheless discuss the tailoring of his suits. Since the journals involved are serious, peer-reviewed journals and the researchers are serious, well-trained researchers, the pattern reflects the field and cannot be attributed exclusively to particularistic inadequacies of specific journals or individuals.

This suggests that properties of the research context, rather than individual ignorance or journal incompetence, may be primary contributors to this curiosity. For example, the research context, particularly in the United States, provides numerous barriers to the kind of richly detailed, multiple-site, long historical studies using in-depth scholarly analyses and complex models that might yield data more appropriate to the task. Such studies are inconsistent in important ways with short-term research funding practices, rules for reputation accumulation among researchers, and the normal expectations of professional journals and publishers. The kind of persistence, attention to complexity, and delayed gratification required for a thoroughly informed and theoretically sophisticated study of the historical development of an organization has to be seen as an unusual achievement (Padgett and Ansell 1993).

Such contextual restrictions on the kind of research that is likely may provide partial explanations for the failure to improve organizational scholarship in directions that are well-known to be needed. Those elements of context do not, however, explain the gap between accepted standards of inference and assertions about causes of variations in performance. To understand the latter inconsistency it is necessary to examine some features of the

organizational and social context of organizations research.

Many organizational researchers, and particularly those prone to making assessments of the factors affecting performance, are employed by professional schools. Aspiring managers, engineers, and other professionals who attend these schools presume that they are being groomed to create conditions for organizations, and people and groups within them, to perform better than others and better than in the past. Researchers secure compensation and attention as consultants to organizations, as lecturers to organizational audiences, or as authors of books providing suggestions for improving organizational performance. These occasions and constituencies provide funding and legitimacy to organizational researchers. They encourage researchers to create and espouse speculations about predicting and controlling performance outcomes. And their enthusiasm for speculation about performance differences seems largely unaffected by a long history involving the continuous overturning of old enthusiasms with new ones. In such a climate, it is not overly surprising that organizational researchers become courtiers of a naked emperor.

At the same time, many organizational researchers are linked to academic institutions and professions, systems that are less immediately concerned with improving performance and more concerned with attention to standards of research and inference that mark research institutions of distinction. They produce and review papers for professional journals, talk to colleagues in the language of inferential method, and serve as judges of the adequacy of research. These occasions and constituencies also provide funding and legitimacy to organizational researchers, but their expectations are different. They encourage researchers to question simple causal stories of performance and retrospective accounts of history. Academic researchers become not only the courtiers of a naked emperor but also keepers of a sacred faith in the methods of scholarship, systematic inference, and defensible interpretations of history.

In the tradition of such dilemmas, conflicts between these two perspectives are often "solved" by separating the two contexts. In academic institutions, one can find a culture of advice givers who tell stories about the things that affect organizational performance to people involved in trying to produce improved performance. These advice givers are ordinarily quite disconnected from serious research on organizations and quite unconcerned about research standards, as are their patrons. One can also find a culture of research workers who tell stories to each other about why one cannot make inferences about causality

from correlational and retrospective studies. These research workers are ordinarily quite disconnected from the immediate problems of management and quite unconcerned about organizational performance improvement, as are their patrons. In most American universities, the two cultures are protected from each other by the semi-permeable barrier that divides professional schools from schools of arts and sciences. The buffer allows the two cultures to avoid confronting the implications of their incompatibility.

In and around professional schools, however, and particularly in the United States, this simple separation is made more difficult. The soldiers of organizational performance and the priests of research purity often occupy not only the same halls but also the same bodies. These students of organizations inhabit both cultures and cannot easily achieve the delicate pleasures of consistency that are granted to their more fortunate colleagues who reside exclusively in a world of performance concerns or exclusively in the core realms of academe. The two-culture solution is supplemented by a more localized two-sidedness in which individuals and individual institutions announce that it is not possible to make valid inferences, yet simultaneously proclaim them; or adopt the paraphernalia of scholarship without much attention to their assumptions. In a schizophrenic tour de force, the demands of the roles of consultant and teacher are disassociated from the demands of the role of researcher.

What's a Scholar To Do?

It is easy to bemoan a state of affairs in which students of organizations are driven both to proclaim scholarly standards of inferential discourse and to collaborate in subverting them in practice. The result is, in many ways, unfortunate from the point of view of scholarly traditions. It certainly calls for renewed efforts to change the context of scholarship to make it either less demanding of performance implications or more consistent with scholarly research on performance. Journals can do a better job of enforcing standards; senior scholars can do a better job of escaping the short-run research horizons learned in the course of securing tenure; funding agencies can provide more sustained support for long historical studies.

Such a call to virtue is doubtless salutary, but it ignores the extent to which there is deep social truth in simultaneously identifying factors affecting organizational performance and admitting that the identification is quite probably false. It is a cliché of speculative discourse that ideas are not to be judged solely by their empirical truth as assessed by scholarly precepts. The classical admonition to embrace beauty and justice, as well as truth, has

led to a long tradition of struggle among aspirations for scholarly truth, intellectual elegance and ethical or ideological propriety. The struggle is captured poignantly in contemporary efforts to write about things such as human motivations and social power, where claims of veracity are juxtaposed with claims of human traditions and the demands of ideological correctness.

Since the earliest days of scholarship, the role of the scholar as researcher has been to pursue a vision of reality as lying outside social beliefs about that reality. The role of the scholar as part of the social establishment has been to support a social system that allows scholarship to flourish. The role of the scholar as educator has been to transform social beliefs about reality, encouraging beliefs that conform more to the understandings of scholars. The dilemma of scholarship is twofold. First, it involves finding a route between a course that is precipitous in destroying vital elements of community built on social myths and intuitive knowledge and a course that is precipitous in corrupting the integrity of scholarship. Second, it involves finding a conception of knowledge that does not discourage its pursuit, that holds out the possibility of augmenting knowledge through systematic scholarship in the face of a long history of scholarly recantations and a chronic vulnerability to nihilism.

The dilemma leads naturally to a course of collective and individual hypocrisy. Organizational researchers have often observed that organizations do not reliably connect their "talk" and their "action" (Edelman 1964, Weick 1979, Brunsson 1989). It should not be surprising that a similar pattern is found among organized research workers. Nor should the pattern be routinely condemned. When we observe that an organization justifies a decision with information that has been gathered after the decision was made, we sometimes note that the information is probably more connected to the task of confirming important social norms than to the task of making a particular decision (Feldman and March 1984). Similarly, in the present case, the tradition of honoring normatively-approved principles of scholarly inference while violating them is a way of sustaining important values. At the least, it is probably more sensible than changing the principles to match the practices, which may be the primary behavioral alternative for achieving consistency.

The simultaneous embrace of the possibility of knowledge and the difficulty of achieving it can be a form of wisdom that sustains inquiry and skepticism in healthy confrontation (Meacham 1990, Sutton and Hargadon 1996). In particular, one of the complications of personal and organizational knowledge is that there are many ways of knowing, some of them individually compelling but impossible to confirm through acceptable procedures of

inference from empirical observation.³ Confronting the conflict between what is believed and what is demonstrable threatens either the belief or the standards of demonstration in a situation in which both may be worth preserving. Maintaining a formal pretense that the belief is consistent with the evidence sustains both the belief and the sanctity of scholarly standards.

Moreover, such a resolution occurs at the collective level without necessary consciousness. Principled observers who denounce the weak inferential base of studies attempting to explain variations in organizational performance and other features of ambiguous organizational histories provide inadvertent confirmation of the questionable practices. By affirming a collective commitment to high standards of scholarly interpretation, their audit legitimizes the system they expose. At the same time, those who weave a story of the organizational determinants of relative performance secure legitimacy and resources that protect their more fastidious brethren from the practical consequences of their scruples. As has been true since the beginning, the purities of the virtuous are subsidized by the accommodations of the sinful.

Whether we accept such an apologia for the emperor's tailors and the sycophants who proclaim the fineness of imperial garments depends on how we deal with the associated pathologies. The essential point is that scholarship is probably better served by maintaining a tension between saying more than we know and understanding how little we can know, rather than by a definitive resolution of the conflict; but maintaining the tension is vulnerable to the unquestioned temptations of imagining a resolution.

One danger is that the concrete rewards from pleasing the emperor may lead us to exaggerate both the advantages of seeing his clothing and the risks involved in confirming his nakedness. If reputations and institutions are to be maintained by proclaiming insights into history and the discovery of routes to sustained performance advantage, then it may become inordinately natural to characterize the niceties of inferential clarity as dispensable scholastic pretense. The tendency of many articles with a wide range of ideological, methodological, and disciplinary prejudices to subordinate issues of inference ambiguity to issues of practical recommendations and sweeping generalizations may be a symptom of that danger. A second danger is that the terrors of claiming unjustifiable knowledge will drive us from empirical discourse into the relatively safe activities of proving theorems, contemplating conundrums, and writing poetry. The tendency of many of our best minds to eschew empirical inference for the innocently elegant worlds of mathematics, formal

logic, and literary theory may be a symptom of that danger.

Partial protection from the two dangers may be provided by consciousness of the ambivalences. If we remind ourselves, from time to time, that standards of inference, like standards of imperial fashion, are more temporary approximations than eternal verities, we do not demean our allegiance to them but we reduce the risk that we will overlook the occasional beauty of cloth woven from invisible threads. And if we remind ourselves, from time to time, that what we are doing is the work of sustaining a belief in the emperor's clothes as a social mythology and a confession of weakness, we do not demean that work but we reduce the risk that we will come to believe in the emperor's clothes as a literal reality.

Ultimately, however, the pain of discomfort at failing to choose between the simultaneous imperatives of speech and silence is better endured than is the denial of either. There is no neat solution, for neatness itself would be a claim that an essential dilemma has been overcome, that virtue can be discovered and proclaimed, or that the trade-offs can be calculated and accepted. Scholarly virtue is more a struggle than an achievement, and seeking knowledge about historically ambiguous phenomena such as organizational performance is more a necessary form of disciplined self-flagellation than a pursuit of happiness.

Acknowledgments

We are grateful for financial and fellowship assistance provided by Hewlett-Packard, National Science Foundation (SBR-9022192), the Spencer Foundation, the Center for Advanced Study in the Behavioral Sciences, and the Stanford Graduate School of Business; and for various intellectual and professional contributions by Jerker Denrell, Thomas D'Aunno, Robert Gibbons, J. Richard Hackman, Hans Krogh Hvide, Robert Kahn, David Owens, and Barry Staw.

Endnotes

¹We use the terms "performance" and "effectiveness" interchangeably. The problems with defining, measuring, and explaining the two terms are virtually identical.

²Three of the more highly regarded journals involved in publishing empirical research on organizations—the *Strategic Management Journal*, the *Academy of Management Journal*, and the *Administrative Science Quarterly*—are particularly likely to focus on performance and performance as a dependent variable. For the issues published in 1993, 1994, and 1995, we counted all articles and research notes in these journals except for editorials, editors' remarks, introductions to special issues, and essays. Whether organizational performance (or effectiveness) was examined in a paper and the role it played in the author's analysis was gleaned from the abstract. If the abstract indicated that performance (or effectiveness) was considered but it was not clear whether it was portrayed as an independent variable, dependent variable, both, or in some other way (e.g., as only a control or intervening variable), we examined the text and tables to classify it. In these three

years, these three journals published 439 articles and research notes. Performance appeared as a variable in 124 (28%) of the abstracts of those articles, 88 times as a dependent variable only, 15 times as an independent variable only, 13 times as both, and 8 times in some other capacity. At the other extreme, we counted only 7 (7%) of 98 articles published in *Organization Studies* in the same three-year period as having performance as a variable cited in their abstracts (five of those with performance as a dependent variable only). *Organizational Behavior and Human Decision Processes* and *Organization Science* locate themselves between the two extremes. Performance appeared as a variable in the abstracts of 57 (16%) of the 355 articles published in those journals over the same three years, 42 times as a dependent variable only, 5 times as an independent variable only, 8 times as both, and 2 times in some other capacity.

³The idea of multiple ways of knowing goes back at least to Plato and keeps resurfacing, particularly in the hands of those who would challenge established epistemologies, thus is a useful, generic claim of exemption from recognized rules of intelligent inference. In the present case, the distinction is not between different kinds of scholarly traditions, each of which claims specialized capabilities for making knowledge assertions, but between the procedures of scholarship and the procedures of ordinary comprehension. The argument in favor of ordinary comprehension is, however, similar to the argument in favor of deviant scholarship in that it depends on the assumption that it provides variety. Since any established mode of thought tends to become less exploratory as it becomes more effective, variety is useful even though any particular idea generated from ordinary comprehension, like any particular idea generated by deviant scholarship, is likely to be inferior.

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Accepted by Arie Y. Lewin; received September 11, 1996. This paper has been with the authors for one revision.