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2006, Vol. 31, No. 2, 386–408.

THE ESSENTIAL IMPACT OF CONTEXT ON ORGANIZATIONAL BEHAVIOR

GARY JOHNS
Concordia University

I argue that the impact of context on organizational behavior is not sufficiently recognized or appreciated by researchers. I define context as situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables, and I propose two levels of analysis for thinking about context—one grounded in journalistic practice and the other in classic social psychology. Several means of contextualizing research are considered.

Imagine conducting a research study in which you expect variable *x* to cause variable *y* but instead discover that *y* causes *x*. Imagine doing a study in which you anticipate a strong positive relationship between two variables but instead find a strong negative relationship. Imagine conducting an investigation in which the base rate of some crucial organizational behavior varies by a ratio of 35:1 between subsamples. Surprises of this nature should surely capture our attention, and they are frequently a product of our failure to consider contextual influence when doing research.

My purpose in this article is to provide an overview of how context affects organizational behavior and how research can be better "contextualized." According to Rousseau and Fried, "Contextualization entails linking observations to a set of relevant facts, events, or points of view that make possible research and theory that form part of a larger whole" (2001: 1). They assert that such contextualization can inform hypothesis development, site selection, measurement choice, data analysis and interpretation, and the reportage of research.

Previous treatments of the impact of context on organizational behavior, although helpful, have tended to be somewhat ad hoc or oriented toward a particular aspect of context. In the present overview I discuss the many faces of context, introduce some important dimensions of context at two levels of analysis, provide systematic examples of how context affects organizational behavior, and suggest some ways to better contextualize research.

WHAT IS CONTEXT?

Cappelli and Sherer portray context as "the surroundings associated with phenomena which help to illuminate that [sic] phenomena, typically factors associated with units of analysis above those expressly under investigation" (1991: 56). Thus, they describe organizational characteristics as providing context for individual members and the external environment as providing context for organizations. Mowday and Sutton characterize context as "stimuli and phenomena that surround and thus exist in the environment external to the individual, most often at a different level of analysis" (1993: 198). They go on to describe context as consisting of constraints versus opportunities for behavior, proximal versus distal stimuli, and similarity versus dissimilarity among organizational members. In this essay I define context as situational opportunities and constraints that affect the occurrence and meaning of organizational behavior as well as functional relationships between variables. Context can serve as a main effect or interact with personal variables such as disposition to affect organizational behavior.

The essential point made in this article is that context can have both subtle and powerful ef-

Portions of this article were developed while I was visiting professor at the Australian Graduate School of Management, University of New South Wales, and Hooker Distinguished Visiting Professor at the DeGroote School of Business, McMaster University. Preparation of the article was supported by grant 00-ER-0506 from Quebec's Fonds pour la Formation de Chercheurs et l'Aide à la Recherche and grants 410-2003-0630 and 410-2003-1014 from the Social Sciences and Humanities Research Council of Canada. The advice of anonymous reviewers is much appreciated.

fects on research results. Researchers often take for granted what causes what in their research (friendly staff causes sales), the signs expected between key organizational variables (extraversion is positively related to performance), and the linear nature of the world they study (richer jobs are better). As I will show, there are important contextual exceptions to such generally tenable inferences.

The Many Faces of Context

The foregoing definitions are admittedly broad and, thus, somewhat vague. Hence, it is useful to consider some of the various manifestations of context so as to gain a better appreciation of how it affects organizational behavior. I should emphasize that these manifestations or facets of context are related rather than independent.

Context as the salience of situational features. It is tempting to view context as the salience of situational or environmental features to those being studied. Thus, research conducted in a particular occupational group (e.g., Sutton's [1991] bill collectors) or in the aftermath of a riveting event (e.g., Lieb's [2003] post September 11 job seekers) heightens our sensitivity to potential contextual impact. Indeed, salient situational features are one common signal of impactful context effects and the first place one might look in trying to contextualize research. However, situational salience is neither sufficient nor necessary to ensure contextual impact on organizational behavior. Regarding sufficiency, many context effects are subtle in that their associated stimuli are not apparent to actors, as later examples concerning social density and social structure will suggest. Regarding necessity, as will be discussed next, salient situational features can countervail each other, thus limiting their actual impact on organizational behavior.

Context as situational strength. Mischel (1968) reminded behavioral scientists that situations vary in their capacity to abet or constrain human agency. So-called strong situations, with obvious norms and rigid roles, tend to constrain the expression of individual differences. Weak situations permit more latitude or opportunity for the expression of such differences. In a more complex manner, context can be conceived of as a set of situational opportunities for, and countervailing constraints against, organizational behavior (cf. Johns, 1991; Mowday & Sutton, 1993). As such, it can be represented as a tension system or force field comprising such opportunities and constraints (Lewin, 1951).

Ross and Nisbett (1991) submit that such a conception of context offers three important insights. First, the tension system concept underlines that constraints can be as important as opportunities in determining the occurrence of organizational behavior (Johns, 1991; Peters, O'Connor, & Eulberg, 1985). For instance, high-quality training may not transfer to the work setting if one's boss does not accept the changes induced by the training (Fleishman, Harris, & Burtt, 1955). Despite this, most theories in organizational behavior begin by proposing a list of antecedents of a construct (e.g., commitment, escalation) that tend to reflect opportunities rather than constraints. Second, in contradistinction to this, the tension system concept also allows for the fact that a situation may be precariously close to change, given prevailing opportunities and constraints.

In combination, these two insights give rise to a third (Ross & Nisbett, 1991): apparently salient contextual stimuli sometimes have trivial effects, and apparently trivial contextual stimuli sometimes have marked effects. Potentially strong contextual stimuli can have weak effects when the opportunities they presume are countervailed by opposing constraints. Thus, Goodman (1979, 1986) describes how a psychologically impactful conversion to self-managed mining teams had only a small impact on mining productivity in the face of technological and geological (i.e., contextual) constraints. Apparently trivial contextual stimuli can have substantial effects when small changes are made in a precariously balanced tension system, resulting in what Gladwell (2002) refers to in conjunction with social epidemics as a *tipping point*. Hence, in other work, Goodman (Goodman & Garber, 1988; Goodman & Leyden, 1991) showed that ostensibly innocuous changes in mining crew composition (thus affecting crew familiarity) had rather marked effects on safety and productivity, at least by the standards of social variables.

Context as a cross-level effect. The definitions supplied by Cappelli and Sherer (1991) and Mowday and Sutton (1993) suggest that context often operates as a cross-level effect in which

situational variables at one level of analysis affect variables at another level. Although upward effects are certainly possible (consider the context that rogue trader Nick Leeson supplied to the defunct Barings Bank), most cross-level conceptions of context are top-down, considering the impact of a higher level of analysis on a lower level. As such, context can have direct effects at the lower level, as well as moderate relationships between lower-level variables (Kozlowski & Klein, 2000). For instance, a particular technology shapes the design of various jobs nested under it. In turn, job design contextually moderates the connection between worker personality and performance.

Context as a configuration or bundle of stimuli. As will be illustrated, it is useful to consider discrete dimensions of context. Nevertheless, as Rousseau and Fried remind us, "A set of factors, when considered together, can sometimes yield a more interpretable and theoretically interesting pattern than any of the factors would show in isolation" (2001: 4). A good example is seen in "deadly combinations" of otherwise effective HR practices (Becker, Huselid, Pickus, & Spratt, 1997). For instance, Brown, Fakhfakh, and Sessions (1999) found that employee stock ownership was more effective in controlling absenteeism than stock ownership combined with profit sharing, even though both practices were independently associated with reduced absenteeism. Fortuitous bundles of HR practices can also emerge. MacDufffie (1995) showed that innovative HR policies particularly facilitated manufacturing productivity when they were "bundled together" and when they were also combined with appropriate work systems and production buffers, a synergy that exceeded the additive effects of the separate practices. Benson, Feingold, and Mohrman (2004) found that the successful completion of a tuition reimbursement program can either increase or decrease subsequent employee turnover. Completion by itself led to increased turnover. However, completion accompanied by a promotion resulted in reduced turnover. Such sign reversals often signal context effects.

Context as an event. Sometimes, a single event or happening can punctuate context. Such events or happenings most often have been studied using qualitative methods, such as Barker's (1993) study of the conversion of a circuit board manufacturer to self-managed teams or Elsbach and Kramer's (1996) study of the reactions of top U.S. business schools to lower-than-expected *Business Week* rankings. Quantitative research of this type is rare, but several recent investigations of the impact of the September 11 terrorist attacks on work preferences, attitudes, and behavior are illustrative (Byron & Peterson, 2002; Lieb, 2003; Ryan, West, & Carr, 2003).

Context as a shaper of meaning. The various faces of context discussed thus far imply that it often has the potential to shape the very meaning underlying organizational behavior and attitudes. For instance, consider frog pond effects (Firebaugh, 1980), in which one's *relative* rather than absolute standing in a setting imbues meaning to events and processes. Thus, achieving a promotion takes on considerably different meaning in a cohort in which the base rate of promotion is 90 percent as opposed to 10 percent. Similarly, being an individualist in an individualistic culture might engender different attitudes and behavior than being an individualist in a collectivistic culture. Later, we will see how revisions in employment context changed the meaning of absenteeism among British dockworkers and postal employees.

Context as a constant. Much organizational behavior research is cross-sectional and conducted at a single level of analysis. Consequently, many potential contextual influences are constants in a particular research study. This is a fact of life in much organizational research—part of the "omitted variables" problem. While we cannot study every aspect of context in a given project, producers and consumers of research can sensitize themselves to how context affects organizational behavior, whether or not it has been formally measured in a given study.

Why Study and Report Context?

Researchers in organizational behavior should study and report context for a number of reasons. Importantly, if we do not understand situations, we will not understand person-situation interactions. The study of such interactions is a distinctive competence of the discipline of the field (House, Rousseau, & Thomas-Hunt, 1995). Unfortunately, although well-developed taxonomies exist to describe human abilities and personality, the same cannot be

said for situational or contextual factors (Frederiksen, 1972; Hattrup & Jackson, 1996; Kelley et al., 2003). Discussing contemporary personality research, Funder asserts that

> for all the arguments that the situation is all-important . . . , little is empirically known or even theorized about how situations influence behavior, or what the basic kinds of situations are (or, alternatively, what variables are useful in comparing one situation with another) (2001: 211).

The field of organizational behavior, the very name of which signals the importance of organizational context, may do better, but it still has much to accomplish (Cappelli & Sherer, 1991; Johns, 2001a; Mowday & Sutton, 1993; Rousseau & Fried, 2001), since context effects can be both subtle and powerful. I will illustrate such effects later in the article.

Context is likely responsible for one of the most vexing problems in the field: study-to-study variation in research findings. This is based on distributional assumptions that context will often vary more than individual differences across research sites. Context is also implicated in the poorly understood "missing linkages" (Goodman, 2000) that can explain how individual or team activity gets translated into larger organizational outcomes. Context has already been implicated in the explanation of many anomalous research findings (Hackman, 2003; Johns, 2001a), and such understood "exceptions to the rule" have tremendous value added in understanding organizational behavior. A number of illustrations are provided in this paper.

Another reason for studying and reporting context is that it helps us to better convey the applications of our research. Managers and other potential consumers of this research care about context, and being sensitive to this permits more authentic and authoritative communication with this audience (Johns, 1993). Textbook authors often find themselves facing two solitudes, drawing theory from the scholarly literature and then having to resort to the business press for "applications." Much of the recurring angst concerning the relevance of management research (e.g., the December 2001 issue of the *British Journal of Management*) might be as much a matter of acontextual packaging as of lack of relevance. The point is not that managers will read better-contextualized research reports. Rather, it is that we as scholars will be better able in our teaching and popular writing to describe research settings with which our audiences can identify.

It appears that better-contextualized articles, despite their comparative rarity, have been disproportionately represented in *Academy of Management Journal* Best Article Awards and Academy of Management Organizational Behavior Division Outstanding Publication Awards (e.g., Barker, 1993; Dutton & Dukerich, 1991; Mitchell & Lee, 2001; Sutton & Rafaeli, 1988). If such awards are thought to presage impact on the field, they surely signal the value of attention to context.

Don't We Study Context Now?

It might be argued that organizational behavior researchers frequently study contextual features such as job design, role relationships, and reward systems. This is true, but the assertion deserves substantial qualification. The point being made here is not that context is never studied. Rather, it is that *its influence is often unrecognized or underappreciated*. Langfred (2000) studied workgroup effectiveness in a Danish military regiment and an Illinois social service agency. Although he helpfully alerted readers to this rather salient contrast in contexts, no specific mention was made of the fact that the correlation between two of the study's three key variables (social cohesiveness and group effectiveness) was .28 in the social service agency and −.65 among the Danish soldiers. Such dramatic sign reversals are often a symptom of context effects.

The fruits of extant research on work context are often ignored unless they are a declared, substantive aspect of a particular research study. In addition, such contextual features are often studied in a piecemeal fashion, in isolation from each other. When aspects of context, such as job design, are the focus of a study, other salient contextual features, such as the reward system, are often unmeasured and unmentioned. (If they *are* measured, researchers often use them as control variables, "controlling away" context rather than assessing its impact empirically.)

This disjointed consideration of the contextual force field is unhelpful, as the previous discussion of deadly and fortuitous combinations of HR practices illustrates. Although such reduc-

tionism is warranted when examining the fine points of context, it is also responsible for the weak and variable relationships observed in many studies, especially when countervailing constraints are not considered. Below, I show that some of the more dramatic examples of context effects pertain to occupational and temporal context, surrogates for larger configurations of more specific situational stimuli.

Earlier, I argued that events or happenings might represent important contextual influences. Despite this, research in organizational behavior is seldom timely enough to capture the impact of such events as the Enron meltdown or the September 11 tragedy. Complicating matters, the contextual description contained in the typical research report in organizational behavior is pallid (Johns, 1993). This is ironic, because astute researchers often can describe organizational context even in the absence of its precise measurement, something that cannot be said for individual differences, cognitions, and dispositions, all of which are hidden from direct scrutiny. Nevertheless, many field studies are described with the parsimony properly reserved for experimental simulations—enterprises removed from time or place. This deprives authors, enterprising readers, and future meta-analysts of opportunities to cogitate about potential contextual influences. For instance, research reports frequently omit details about HR policies concerning work schedules (e.g., flextime), work-family initiatives, attendance controls, and the like. Such policies provide constraints on and opportunities for observed research results.

Research on employee turnover, selection, and performance appraisal illustrates a frequent lack of concern with context. The occurrence of turnover is influenced by economic conditions, and the mere rate of this occurrence affects the size of its correlates (Cappelli & Sherer, 1991). Yet both Carsten and Spector (1987) and Williams and Livingstone (1994) had to contact authors to find out when and where their turnover studies were conducted in order to conduct meta-analyses of the impact of unemployment rates on turnover.

Although leaving an organization frequently is portrayed theoretically as a process, Steel (2002) points out that in most studies of turnover researchers employ a static cohort design that ignores contextual influence that varies with time. Consequently, people at different stages of the turnover process (e.g., the newly dissatisfied versus those holding a written offer from another firm) are lumped together, despite the fact that they should be differentially conversant with the external labor market and other contextual stimuli (Mitchell & Lee, 2001) that impinge upon the decision to quit.

Related to this, there are almost *no* studies of where people go when they quit, a sure violation of the principle that context represents constraints and *opportunities*. This unnatural, acontextual bounding of time and space foregoes the considerable advantage of studying whole events and processes (see below). Finally, although turnover constitutes removal from a *social* system, the role of social influence on the behavior has barely been studied, except indirectly in some diversity/demography research and a handful of social network studies (Johns, 2001b).

Despite a concern for application, tool-oriented research in industrial-organizational psychology and human resources has not given enough attention to context. In particular, in much research on selection and performance appraisal, researchers have ignored the social context in which various techniques and instruments are applied. Equally important, they have also assumed a very narrow, nonsystemic conception of what the functions or outcomes of these processes should be (good hires, accurate assessment). As detailed below, this very narrow conception of "the" appropriate dependent variable is a recipe for context blindness. To be sure, there is now research on applicant reactions to selection procedures, and it shows that applicants are quite sensitive to test type, explanations or lack thereof for decisions, and other contextual variables that are ignored in the typical validity study (Ryan & Ployhart, 2000). There is also a small amount of work on the impact of liking and politics on performance appraisals (e.g., Duarte, Goodson, & Klich, 1993). Still, in most appraisal research, scholars seem to assume that managers and other raters want to provide conventionally accurate appraisals, desire no other outcomes, and have no other goals in making ratings, all dubious assumptions when accountability and social context are considered (cf. Tetlock, 2000). For instance, Fried, Levi, Ben-David, and Tiegs (1999) found that supervisors reported they would deliberately in-

flate subordinate performance appraisals to the extent that documentation of performance was sparse and the ratings would receive more scrutiny.

IMPORTANT DIMENSIONS OF CONTEXT

Behavioral scientists have intermittently recognized the dearth of effort devoted to understanding the dimensionality of the situational factors that affect human behavior. Part of the problem may be the perceived enormity of the task. For example, Sells (1963) cites a "preliminary" list of 236 elements that might describe a "total stimulus situation." Although this number falls well short of Allport's (1937) list of 17,953 trait names to describe people, we should remember that those trait names have been distilled into about five basic dimensions of personality that exhibit relevance for understanding organizational behavior (e.g., Barrick & Mount, 1991). Such empirical distillation has yet to occur in the domain of organizational context. Thus, I offer here some examples of what appear to be important contextual variables for organizational behavior—talking points to begin a discussion of context. In combination, they constitute a force field or tension system (Lewin, 1951; Ross & Nisbett, 1991), the net effect of which shapes organizational behavior.

It is useful to consider two levels of analysis when thinking about context. One level might be termed *omnibus context* and the other *discrete context*. The term *omnibus* refers to an entity that comprises many features or particulars. Thus, it refers to context broadly considered. Discrete context, however, refers to the *particular* contextual variables or levers that shape behavior or attitudes. Discrete context can be viewed as nested within omnibus context such that the effects of omnibus context are mediated by discrete contextual variables or their interactions, thus reflecting Rousseau and Fried's (2001) configural portrayal of context. Discrete contextual variables might apply to any level of analysis, from individuals to industries. Nevertheless, a mesotype relationship (House et al., 1995) is implied in which discrete contextual variables provide the explanatory link between more descriptive and general omnibus context and specific organizational behavior and attitudes.

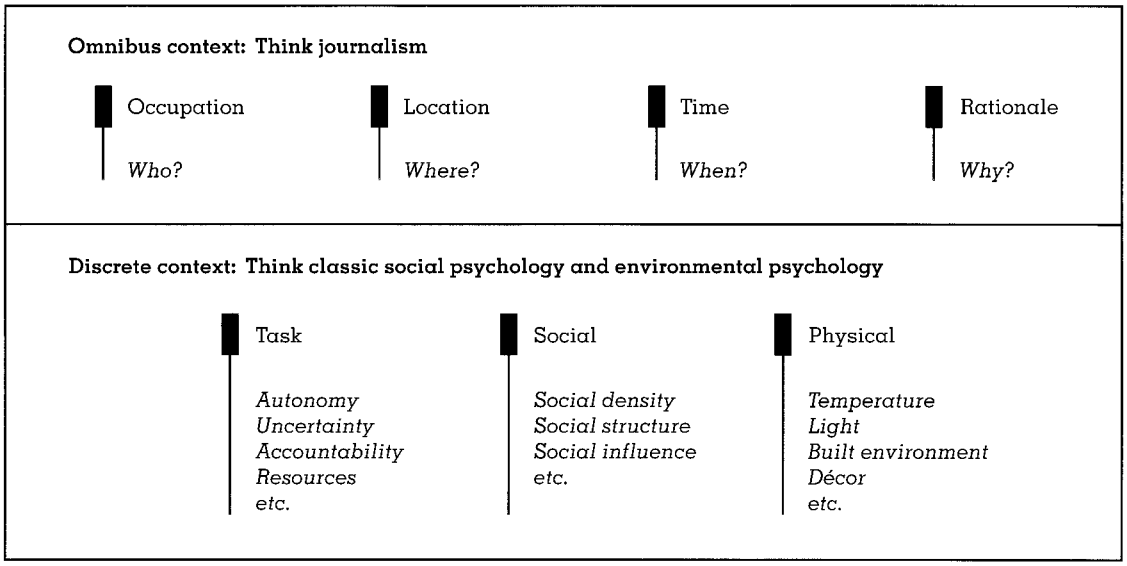
Omnibus Context

In thinking about the important dimensions of omnibus context, I was guided by the fact that several prominent scholars in the organizational sciences have asserted that good research "tells a story" (e.g., Daft, 1983, 1995; Huff, 1999). Although Daft favors simple research designs that have the quality of poems rather than novels, I think, when it comes to context, that there is considerable merit in also thinking of research as a parallel to journalism. It is an axiom of good journalistic practice that a story describes *who, what, when, where,* and *why* to the reader, thus putting recounted events in their proper context. Assuming that *what* constitutes the substantive content of the research, more attention to the remaining journalistic principles in both designing and reporting research will reap the benefits to be derived from the careful consideration of context. As illustrated in the upper portion of Figure 1, the who heuristic refers to occupational and demographic context, the where heuristic refers to the location of the research site (region, culture, industry), the when heuristic refers to the time (absolute and relative) at which the research was conducted or research events occur, and the why heuristic refers to the rationale for the conduct of the research or the collection of research data.

At first, it might seem strange to consider who is being studied as a contextual variable. However, use of the who heuristic alerts us to the occupational and demographic context in which all organizational members find themselves embedded. Thus, the who variable concerns both direct research participants and those who surround them. Gender provides a good example. The distribution of the sexes in the workplace can be a potent if subtle contextual variable. Furthermore, men and women often face very different work and nonwork contexts such that separate models may be required to adequately describe their attendance patterns and their career advancement (Johns, 2001a). One suspects that the frequent practice of controlling for the who variable in much organizational behavior research simply washes out salient contextual influence.

Researchers could do a better job of reporting when their data were collected and reflecting on the role of temporal factors in their research. Time represents context in at least two senses.

FIGURE 1
Some Important Dimensions of Context



First, it is a surrogate for environmental stimuli occurring when the research is conducted (Johns, 2001a). Second, time affects the web of social and economic relationships that surrounds any aspect of organizational behavior, a point well recognized by researchers who deal with product life cycles. Key contextual conditions underlying time effects include secular trends, changing institutional patterns, evolving technology, major organizational change, social maturity effects, and accrued feedback as a course of action unfolds.

Wagner and Gooding (1987) determined that societal trends over time (1950–1985) affected both the conduct and the results of employee participation research, including questions asked, methods employed, and effect sizes reported. Tansey and Hyman (1992) illustrate how a mildly deviant but mundane behavior—absence from work—was reframed as an industrial menace during World War II, with U.S. ad campaigns translating absenteeism into lives lost on the front. Simply thinking about such issues (in this case, how context changes the meaning of an innocuous work behavior) can sensitize researchers to the impact of temporal matters on their work.

Where a research study is conducted can have a marked impact on its results. Prominent mediators of the effects of location include economic conditions, racial and social class composition, and national culture. Respectively, these mediators will later be classed as resources, social structure, and social influence. For instance, Brief, Butz, and Deitch (2005) explain how the racial composition of communities affects the human resources practices of organizations located therein.

Why information is being collected by a researcher or an organization can have a potent contextual impact on organizational behavior and associated research. A common mediator is the extent to which the reason induces feelings of accountability on the part of respondents (Ferris, Mitchell, Canavan, Frink, & Hopper, 1995; Frink & Klimoski, 1998; Tetlock, 1985, 1992, 1999). This accountability may, in turn, be tied to resource implications. Both supply constraints on and opportunities for what is likely to be found. A clear example is provided by a meta-analysis by Jawahar and Williams (1997), showing that performance appraisals made for administrative purposes were one-third of a standard deviation more favorable than those made for developmental or research purposes. Evidently, raters faced with having to convey career-affecting news to subordinates or having their own leadership talent assessed by superiors adopt a mode of leniency.

Later, I illustrate the power of context with reference to several of these omnibus dimensions. In part, this power stems from their incor-

poration of several discrete contextual levers, the subject to which I now turn.

Discrete Context

Discrete context refers to specific situational variables that influence behavior directly or moderate relationships between variables. The lower portion of Figure 1 shows that salient dimensions of discrete context include task context, social context, and physical context (cf. Hattrup & Jackson, 1996; Mowday & Sutton, 1993). As shown, examples of task context include autonomy, uncertainty, accountability, and resources; examples of social context include social density, social structure, and direct social influence; and examples of physical context include temperature, light, the built environment, and décor.

As noted earlier, the elements of these three dimensions can be seen as mediating omnibus context in a mesolike manner. Thus, knowing someone's occupation often permits reasonable inferences about his or her task, social, and physical environment at work, which, in turn, can be used to predict behavior and attitudes. Tellingly, Hackman (2003) specifically cites government regulation, the culture of flying, and cockpit design as severely constraining the latitude of airlines to innovate in the design and management of aircrews. Respectively, these variables correspond to task, social, and physical context, all aligned so as to constrain rather facilitate innovation.

Also, as noted earlier, countervailing influences among contextual variables are common, and this is especially well illustrated by considering discrete context. For instance, direct social influence has often been shown to countervail another critical contextual variable: the availability of valued resources. Thus, informal productivity norms have been shown to constrain productivity in the face of the temptations of piece-rate pay (Homans, 1950), and groups have been shown to forego absolute profit maximization to maximize their gain (and thus assert social dominance) over an outgroup (Tajfel & Turner, 1986).

The elements of physical context derive from environmental psychology, and I will not consider them further other than to agree with Pfeffer (1997) that their impact on organizational behavior is understudied. The elements of task and social context are not meant to be in any way exhaustive, but those listed are argued to be *important* contextual variables. This importance is inferred from a combination of two factors: (1) operation at multiple levels of analysis and theoretical pervasiveness, and (2) appearance in classic social psychology research manipulations.

Operation at multiple levels of analysis and theoretical pervasiveness. Some measure of the importance of a discrete contextual variable can be inferred from its appearance at more than one level of analysis. Such an appearance can signal either isomorphism or functional equivalence across levels (cf. House et al., 1995). In turn, important similar or identical contextual variables also surface in a variety of organizational behavior theories. Multilevel tractability and theoretical pervasiveness are not violations of the spirit of the argument that context has been downplayed. Despite their importance, the variables to be discussed generally are not considered in research designs and reports unless they are a specific object of study. Also, in comparison to intrapsychic personal constructs, one less often finds reviews of the literature or meta-analyses based around contextual variables or theoretical syntheses that map their connections across levels or theories, in the spirit of the Latin root of the word context as knitting together (Rousseau & Fried, 2001).

Among the task variables, consider *uncertainty:* environmental uncertainty, a construct associated with macroorganizational theory (Duncan, 1972; Pfeffer & Salancik, 1978), and role ambiguity, a construct associated with micro organizational behavior (Katz & Kahn, 1978), share a set of features that render them isomorphic across levels—difficult diagnosis, risky prediction, and unclear cause-effect relationships. Thus, uncertainty is a contextual variable that affects everything from individual information processing and decision making (e.g., leadership theory; Vroom & Jago, 1988) to how organizations transact with their institutional environments (e.g., neoinstitutional theory; Oliver, 1991). Among the faces of context discussed earlier, uncertainty is particularly implicated as a shaper of meaning. When matters are more uncertain, a variety of meanings can be attached to situational stimuli. One consequence is that interpretations of the situation can be more discretionary. Hence, I previously reviewed research showing that uncertain contexts prompt

self-serving behavior among individuals, groups, and organizations (Johns, 1999).

The degree of *autonomy,* or freedom of action, that an individual, team, or organization has is one of the most omnipresent contextual factors. Thus, themes of autonomy and control resonate in many areas of organizational behavior. The reason for this theoretical pervasiveness can again be seen in one of the several faces of context—the provision of constraints on and opportunities for the occurrence of behavior. Limited autonomy constitutes a "strong situation" (Mischel, 1968) that constrains behavior, reducing the impact of individual differences. Conversely, ample autonomy is a key opportunity factor fostering human agency in theories of motivation (Deci & Ryan, 1985), innovation (Parker, Wall, & Jackson, 1997), stress management (Karasek, 1979), and empowerment (Spreitzer, 1995). This is because it permits knowledge or motives to find expression in behavior. For instance, Parker et al. (1997) demonstrate that job autonomy provides the opportunity necessary for knowledge of innovative work practices to be converted into actual changes in role orientation.

Accountability is the requirement to defend or justify an action or decision to some interested audience (Frink & Klimoski, 1998). The theme of accountability pervades many topic areas at several levels in the organizational sciences, including those concerned with roles, ethics, agency, corporate governance, performance appraisal, and compensation (Ferris et al., 1995; Frink & Klimoski, 1998). Considering the faces of context, changes in accountability are often important events that considerably alter the meaning that is attached to behavior. For instance, Hammer, Landau, and Stern (1981) studied the conversion of a manufacturing plant from corporate to employee ownership. Although the total volume of absenteeism exhibited was equivalent before and after the conversion, the reasons for absence provided to HR personnel changed drastically, with many more "legitimate" reasons being invoked under employee ownership. Accountability to one's self and one's coworkers was made salient by the conversion, and it changed the meaning of absenteeism from casual deviance to serious business that demanded legitimation.

Resources constitute a fourth important dimension of task context and variously include money, time, information, esteem, and so on. The availability of resources and the contingencies by which resources are linked to behavior have been shown to have a profound impact on individuals, groups, and organizations. Hence, resources figure prominently in microlevel (e.g., equity), mesolevel (e.g., agency), and macrolevel (e.g., resource dependence) organizational theories. Cappelli and Sherer (1991) assert that one resource that is often overlooked in organizational behavior research concerns the external labor market—particularly, the availability of jobs. For example, the occurrence of both turnover and absenteeism is inversely related to unemployment levels (Hulin, Roznowski, & Hachiya, 1985; Markham, 1985). In turn, this affects the base rates of these behaviors, a fact that in and of itself influences the size of their correlates. Furthermore, in labor markets that are more munificent with employment alternatives, employees are freer to act in line with their attitudes toward their current jobs. Thus, Carsten and Spector (1987) found that the relationship between job satisfaction and turnover was more strongly negative under conditions of lower unemployment, when other jobs were more readily available. Notice that job availability will vary with the omnibus contextual dimensions of time and location, and it illustrates both the cross-level and situational strength aspects of context.

Social context is a second key dimension of discrete contextual influence. It can range from the more passive examples of *social density* (the location of others in space) and *social structure* (the differentiation of those others by tenure, gender, ingroup/outgroup status, and so on; Pfeffer, 1991) to direct *social influence* (cf. Ferris & Mitchell, 1987), as effected by norms, communication, persuasion, and other such mechanisms. Hackman (1992) would describe social density and structure as involving ambient social stimuli and direct social influence as involving discretionary social stimuli. Kelley et al. (2003) submit that the more interpersonal aspects of social context are grounded in the degree of interdependence of outcomes, degree of information sharing, and the serial ordering of interaction episodes.

Many examples of social context effects are provided in the following section. Therefore, I forego examples here other than to illustrate the multilevel, multitheory appearance of the most basic aspect of social context: social density. For

instance, this variable appears in theories of helping (e.g., the number of people in a room), relational demography (e.g., the number of women in an organization), and population ecology (e.g., the number of hotels in a city).

Appearance in classic social psychology research manipulations. Another signal of the importance of various discrete task and social contextual variables is found in the powerful manipulations that have been perfected in classic experiments in social psychology. Although social psychological experiments are sometimes criticized for not paying *enough* attention to the complexity of context as represented in the natural world, they do serve as striking prototypes for examining the bald impact of isolated contextual levers. In fact, Ross and Nisbett claim that "the first and most basic contribution" of social psychology "concerns the power and subtlety of situational influences on behavior" (1991: xiv).

As an example, consider Asch's (1952) classic series of studies on social conformity, in which naive research participants judged the relative length of lines in the presence of deceptive experimental confederates. This and subsequent research show the power of context in shaping conformity. Thus, allowing participants to render their judgments secretly, consequently reducing accountability to the confederates, appreciably reduces conformity to a false norm. The same effect can be observed when the stimulus lines are made very different in length, thus reducing uncertainty. The presence of social models also has a strong impact on conformity to a false norm. Up to a point, the more confederates who support the false norm, the more likely the naive participant will be to comply, but a fellow dissenter will strongly reduce such conformity. Respectively, these effects reveal the impact of social density and social structure.

Social density and social structure effects are among the most subtle context effects, and they can be observed under strikingly minimal circumstances. For instance, as early as 1897, Triplett demonstrated how the mere presence of others increased the rate of simple motor responses, such as winding fishing line. Later, Zajonc (1965) showed how this social facilitation effect was itself contingent on another key contextual feature: the nature of the task, particularly uncertainty. While the mere presence of others stimulates the performance of simple or well-learned tasks, it inhibits the performance of difficult or unfamiliar tasks. As will be seen shortly, this opposition of signs is a frequent signature of context effects. The mere presence of others also underlies the social loafing effect—the tendency to withhold effort when performing simple tasks in groups of increasing size (Kidwell & Bennett, 1993; Shepperd, 1993).

As a final example, many classic social psychology experiments have manipulated context via the use of resources, such as money, time, status, esteem, and information. For instance, the whole area of insufficient justification was prompted by the counterintuitive finding that people who were paid less money to fabricate a testimony came to believe in it more than those who were paid more to do so (Festinger & Carlsmith, 1959). This effect is generally assumed to be mediated by autonomy such that greater attitude change occurs under conditions of free choice rather than extrinsic reward. In another social psychology classic, Darley and Batson (1973) showed how the contextual resource of time affects altruism, a behavior popularly attributed to disposition. Seminarians experimentally induced to be pressed for time were much less likely to help a distressed citizen than those who had ample time before an appointment. Thus, lack of time constrained an altruistic response, and ample time provided an opportunity for such a response.

WHAT CONTEXT DOES

Thus far, I have discussed various faces of context, argued that it deserves more research attention, and presented some important dimensions of context. In what follows I present a number of examples of context effects, showing what context *does* to organizational behavior and how it affects scientific inferences about this behavior. These effects are not independent, and the first, restriction of range, often sets the stage for other effects. Most examples concern omnibus context. Although I occasionally call attention to discrete contextual variables that presumably underlie these omnibus effects, the examples are not confined to the variables discussed earlier.

Context Restricts Range

One of the most basic things that context can do is affect the observed range of organizational variables under consideration. Restriction of range is a particular problem (Johns, 1991; Rousseau & Fried, 2001). Such restriction can prompt null findings, inconsistencies across studies, and findings that apply to only a portion of the ultimate range of an independent or dependent variable. In an earlier article (Johns, 1991), I illustrated that such restriction is often a joint product of methodology (e.g., sampling) and substance. I then provided copious examples, including how technology constrains work behavior, how social class limits occupational mobility, and how occupations limit need structures—restrictions that have had important (and often unrecognized) effects on research outcomes.

Industries comprise, among other stimuli, variations in resources, technology, and uncertainty, and they are subject to the cyclic effects of time. Finkelstein and Hambrick (1996) have shown that industries, thus, vary reliably in the extent to which they restrict the range of executive discretion, again illustrating the constraints and opportunities theme. In an area that has shown some appreciation for context, organizational culture researchers often extol the virtues of social influence in enhancing firm performance. Although culture-performance relationships have been observed (e.g., Sheridan, 1992), the existence of "macrocultures" grounded in industrial differences (Abrahamson & Fombrun, 1994) sets clear constraints on this connection. Chatman and Jehn (1994) found more variation in culture between industries than among firms within industries. They implicated industrial differences in resources and technology. Similarly, Martin, Feldman, Hatch, and Sitkin (1983) found that stories purportedly illustrating the uniqueness of organizational cultures were, in fact, strikingly similar across organizations. More recently, Nelson and Gopalan (2003) found some evidence that national culture constrains variation in organizational cultures. The contextual imperative suggested by these findings stands in sharp contrast to the common view that cultures are shaped essentially through internal processes.

Context Affects Base Rates

As a particular consequence of range restriction, context can have a profound effect on the base rates of key organizational variables across occupations or locations, or over time. In turn, such variations in base rates will have a marked impact on the imputed importance of these variables, their meaning to actors and observers, and the inferred significance of their correlates. For instance, both frog pond and attributional dynamics will suggest very different meanings for behavior that is enacted in a context in which that behavior is common versus rare. Similarly, for a given true-score relationship, behaviors will become less predictable as their occurrence departs from a 50-50 base rate (i.e., they are either common or rare).

In the domain of occupational context, consider "presenteeism," the tendency to show up for work even though one is feeling unwell. In a large stratified sample of Swedish employees, Aronsson, Gustafsson, and Dallner (2000) found the percentage of employees reporting presenteeism ranged from 21 percent (civil engineers) to 65 percent (nursing home aides). In general, the behavior was most prevalent among those in the caregiving and primary teaching sectors—relationship-intensive jobs (with accountability to fragile clients) that had suffered personnel cutbacks in the years preceding the study.

As another example, McEvoy and Cascio (1987), in a meta-analysis of the relationship between performance and turnover, reported annual turnover base rates ranging from 3 percent to 106 percent across samples. Such extreme variance, partially a function of occupational opportunities for and constraints on mobility, has prompted more interest in statistically controlling for turnover base rates than in understanding contextual effects on turnover (Johns, 2001b).

Location can also have a marked impact on the observed occurrence of important organizational behaviors. Kaiser (1998) assembled absenteeism rates from a number of nations. In 1992 these rates ranged from 1.6 percent in Japan to 7.7 percent in the Netherlands to 11.6 percent in Sweden, a per capita extreme of 7.25:1. Such cross-national differences are likely underpinned by national and cultural variations in social benefits, gender-role differentiation, la-

bor decommodification, work centrality, and the conception of time (Addae & Johns, 2002; Kaiser, 1998).

Context Changes Causal Direction

The power of context can be illustrated by describing three studies in which the causal arrow between key variables was reversed from well-established trends in the literature. Undiagnosed, such reversals are extremely problematic because they prompt theoretical confusion and lead to incorrect inferences for managing organizational behavior. In each of these studies, omnibus occupational context is implicated.

There is growing research evidence that positive employee attitudes and behaviors can have a positive effect on customer outcomes and organizational performance on such dimensions as profits (Harter, Schmidt, & Hayes, 2002). Despite this, Ryan, Schmidt, and Johnson (1996) found that both customer satisfaction and a performance indicator (loan delinquency) appeared to have a subsequent impact on employee morale, rather than the other way around. The occupational context was customer service in automotive credit offices. As the authors recognized, in this particular business, more occasions for "service" may signal more problematic customers, and happy customers are those with paid installments who make things easy for service representatives.

Somewhat similar findings were reported by Sutton and Rafaeli (1988), who tested the plausible hypothesis that friendliness on the part of convenience store sales staff would boost store sales. Finding in fact that higher-selling stores had *less* friendly personnel, the authors used additional qualitative and quantitative methods to zero in on the insight that store pace was the contextual variable underlying the negative association—customers demand speed from convenience stores, and busy locations put staff under considerable strain. Notice that the occupational nuances seen here are unlikely to apply to sales situations that are not predicated on speed and convenience. Also, notice how the additional contextual factor of store location is implicated in these results, since store pace varied with location. In both of these studies, it was the social context vis-à-vis customers (i.e., social influence) that evidently produced the anomalous results.

A final study from another domain illustrates yet again the reversal of causality from a well-established direction. Tharenou (1993) studied the job satisfaction and absenteeism of apprentice electricians. In contrast to the prevailing ethos in the literature (Hackett, 1989), her two-wave longitudinal study determined that absenteeism affected subsequent job satisfaction, rather than the reverse. The occupational context of new apprentices probably explains this result. Although it takes some time for work attitudes to galvanize, a few early absences can lead to trouble for highly accountable probationary apprentices, including supervisory wrath, missed exams, and the requirement for working time to be made up. Thus, absences affect subsequent satisfaction. This example also highlights how context unfolds over time.

Context Reverses Signs

In addition to reversing causal arrows, context has been shown to be diagnostic of opposing signs between key organizational behavior variables. Tett, Jackson, Rothstein, and Reddon (1999) reviewed evidence regarding the bidirectionality of relationships between personality dimensions and job performance. They concluded that such bidirectionality is not uncommon and attributed it, in part, to occupational context. Thus, although the general trend is for extraverts and those high in conscientiousness to be better performers, there are interpretable reversals of this trend grounded in occupational differences. For instance, they suggest that extraversion is counterindicated for accountants, for whom professional accountability and limited autonomy in work style are requisite. They assert that ignoring such contextual influence can cancel out underlying personality-performance relationships. Tett et al. surmise that one factor underlying the opposing signs phenomenon is that different occupations define good performance differently. Thus, implicitly, the criterion variable differs across studies. Below, I argue that using multiple or alternative dependent variables is a good way to explore and highlight the operation of context.

Historical trends often reveal the sign changes that signal decided temporal shifts in context. In this regard, two British studies show how contextual changes over time were accompanied by changes in the meaning of absentee-

ism. Turnbull and Sapsford (1992) studied industrial relations practices on the British docks over the years. Of particular concern was the incidence of strikes and absenteeism. As the industrial relations climate shifted and the essence of absenteeism shifted from idiosyncratic self-expression to an entrenched source of industrial conflict, the sign of the relationship between strikes and absenteeism changed from negative to positive. The authors implicate changes in technology and a shift from casual to permanent labor, which resulted in increased employee accountability.

Taylor and Burridge (1982) observed a similar sign reversal over the years, in the British Post Office, in the association between absenteeism rates and medical retirement rates. This change, from strong negative to strong positive, was thought to reflect unofficial modifications in the strictness of applying criteria for retirement, a shift in resource availability. Evidently, absenteeism was first viewed as counterproductive behavior mitigating against the privilege of retirement, and was then viewed as a medical symptom justifying retirement. Here, we see a shift in the meaning of behavior over time.

Context Prompts Curvilinear Effects

The presence of curvilinear relationships is frequently a sign of context effects, with the opposed signs phenomenon appearing in a single data set. Thus, a quadratic function can reflect both a positive and a negative relationship between *x* and *y,* depending on the range of *x* under consideration. If different levels of *x* constitute different work contexts, various restrictions of range on *x* may produce substantially different research results (cf. Johns, 1991; Rousseau & Fried, 2001), prompting confusion in the literature.

Xie and Johns (1995) sampled 143 different jobs (classified with the *Dictionary of Occupational Titles*), with a good representation of professional, managerial, clerical, and blue collar employees. Results revealed U-shaped relationships between emotional exhaustion, a measure of chronic stress, and several self-reported job characteristics. Independent measures of job complexity and occupational prestige revealed similar curvilinear relationships with stress. Therefore, the prescriptions for good job design differ according to occupational context. In blue collar and clerical settings, stress appears to be a function of understimulation and boredom. In professional and managerial settings, stress appears to be a function of overstimulation and elevated responsibility. Consequently, at least in terms of stress, the "blue collar blues" and the "white collar woes" reflect opposing processes dictated by organizational context and mediated by job complexity.

Another example in which occupational context is signaled by curvilinearity concerns the relationship between employee performance and turnover. Although the relationship between these two variables is predominantly negative, a curvilinear relationship has occasionally been observed, with higher turnover being exhibited among better and poorer performers (Williams & Livingstone, 1994). There are some indications that occupational dynamics underlie this curvilinearity, with the clarity and visibility of employment credentials being important moderators (Allen & Griffeth, 2000, 2001). That is, positive relationships between performance and turnover have been observed in samples that comprise scientists, engineers, academics, and the like (e.g., Schwab, 1991), professions in which it is relatively easy to document superior performance according to universally recognized criteria, such as patents and publications.

An important way that time constitutes context is via maturity effects in social systems (cf. Campbell & Stanley, 1966). That is, the context for group processes changes as time passes. Katz (1982) found that the length of time R&D teams worked together strongly influenced their internal and external communication levels and consequent project performance. Among "younger" R&D groups, increased time working as a team was associated with increased performance. Among more mature project teams, increased time together was associated with decreased performance. The proximal discrete contextual variable that provoked this curvilinearity was team communication patterns (e.g., intrateam and external professional communication), which closely mirrored the performance data.

Context Tips Precarious Relationships

As noted earlier, the mechanics of context can be quite subtle, and small changes in context

often matter greatly. In one version of this, *x* has no impact on *y* over a wide range of *x* and then shows a marked impact—a nonlinear effect easy to miss, given restriction of range and base rate factors. As Gladwell puts it in describing such tipping points, "We are more than just sensitive to changes in context. We're exquisitely sensitive to them" (2002: 140).

Research has particularly highlighted the subtle contextual role of the distribution of the sexes, a joint example of what I earlier termed *social density* and *social structure*. In general, men and women tend to receive equally favorable performance appraisals (Latham, Skarlicki, Irvine, & Siegel, 1993). However, this generality masks substantial differences in rated performance depending on the proportion of males and females in the organizational unit under study. When women represent a very small proportion of a workforce and, thus, assume token status, their performance appraisals suffer in comparison to men (Pazy & Oron, 2001; Sackett, DuBois, & Noe, 1991). However, as the proportion of women increases, women actually exhibit higher performance than men. The critical proportion for the emergence of the token effect is about 20 percent or fewer women (Pazy & Oron, 2001; Sackett et al., 1991), a clear illustration of Gladwell's (2002) tipping point. This example illustrates the interplay between contextual effects. Occupational context affects the base rate of women and men in various organizational units. In turn, this base rate conditions the sign between gender and performance.

Allmendinger and Hackman (1995) observed a conceptually similar tipping point in their study of professional symphony orchestras. As Hackman notes:

> Life in a homogeneously male orchestra surely is not much affected by the presence of one or two women, especially if they play a gendered instrument such as the harp. Larger numbers of women, however, can become a worrisome presence on high-status turf that previously had been an exclusively male province, engendering intergroup conflicts that stress all players and disrupt the social dynamics of the orchestra (2003: 908).

Context Threatens Validity

Cook, Campbell, and Stanley's much-taught compendium of threats to validity (Campbell & Stanley, 1966; Cook & Campbell, 1979) is actually, in part, a caution about how unappreciated context can taint research results or damage the generalizability of those results. Appreciating the essential contextual underpinning of many of these negative outcomes can sensitize researchers to how a design that "looks good on paper" can turn bad in execution.

The operation of time features prominently in the compendium. This is because Cook et al. recognized that the conduct of an experiment is a process and that processes covary with a series of contextual events that can impinge on one's research (cf. Rousseau & Fried, 2001). Thus, repeated testing and changes in instrumentation during the research cycle constitute potential contextual impact. For example, Lam and Schaubroeck (2000) studied the reactions of bank employees to being promoted or passed over for promotion. In this pre-post design, the performance of promoted employees was measured by different supervisors after the promotion, suggesting the potential for an instrumentation artifact. The authors recognized the issue and brought to bear some additional contextual information to address it.

The distribution of resources and reward contingencies also figures strongly among the Cook et al. threats to validity. That is, the basic idea behind several threats is that outside parties intervene to distribute resources in a way that runs counter to the research design, or that research participants themselves appropriate resources in a way that intrudes on the design. For instance, under the diffusion or imitation of treatment, the control condition somehow becomes exposed to resources reserved for the experimental group. Thus, Schweiger and DeNisi (1991) reported the need to terminate their field experiment on a realistic merger preview when elements of the preview were copied by the manager of the control plant. In some settings, research participants may take things into their own hands, exhibiting compensatory rivalry to secure resources such as attention or prestige. For instance, one hears anecdotes of workers "competing" with new technology (such as robotics) to reinforce their own worth and denigrate that of the technical innovation.

Matters of social density, structure, and influence figure implicitly in several of the Cook et al. threats to validity. For example, the standard prescription to prevent imitation of the experimental treatment, compensatory rivalry, or resentful demoralization on the part of a control

group is to isolate it physically and informationally from the experimental group, manipulating context to avoid confound.

Finally, Cook et al. treat threats to external validity as interactions between an experimental treatment and some other factor. Those dealing with context include setting × treatment interactions (e.g., involving location or occupation) and history × treatment interactions (those involving situational changes over time). To take the most straightforward external validity example, relationships theorized or found in Western cultures might not hold up in non-Western cultures such that the validity of Western theories is said to be culturally biased.

Based in an experimental paradigm, Cook et al. portray these matters as threats because they constitute experimental confounds or unrecognized interaction effects. However, in the naturally confounded world of correlational field research, they also represent opportunities for understanding which omnibus and discrete dimensions of context are likely to be important.

CONTEXTUALIZING OUR RESEARCH

Intersecting the important dimensions of context with its effects suggests a number of ways to explore and exploit contextual impact. I sample a few of these here (see also Cappelli & Sherer, 1991; Hackman, 2003; Johns, 2001a; Rousseau & Fried, 2001) in the domains of research design, measurement, analysis, and reportage. It goes without saying that good theory and familiarity with one's research site(s) (Daft, 1983) are prerequisites for the success of these contextualization tactics.

Research Design

Various research designs can be employed to better illuminate context.

Do cross-level/comparative research. Cross-level designs are those that explicitly demonstrate how higher-level situational factors affect lower-level (e.g., individual) behavior and attitudes. Such designs are "comparative" when they intentionally contrast situations that vary in strength, meaning, or important contextual dimensions such as autonomy or accountability.

Harrison and Price (2003) examined self-reported absenteeism across eleven mundane social settings in which there were varied expectations for attendance (e.g., work, appointments, classes, parties, religious services). The resulting context × context matrix revealed reasonable internal consistency, providing some support for the existence of absence proneness. In this study, contextual variation was exploited to reveal the limits of its own influence. Although these situations appear to vary considerably in terms of situational strength and accountability for attendance, individual differences still exerted some consistent influence across settings.

Kristensen (1991) examined the use of absenteeism as a means of coping with stress among slaughterhouse workers, with an emphasis on contrasts among fifteen occupational groups. Employees engaged in bucolic "work in stable" averaged only three days of absence a year, whereas those engaged in "slaughtering of pigs, work with knife" averaged nineteen days. Such differences were attributed to variations in job design and pay scheme, with high work pace, low autonomy, and piece-rate pay characterizing the most stressful jobs. Here, differences in occupational context were exploited to better understand the coping functions of absenteeism.

Telling examples of cross-level research illustrate how nonwork context affects workplace behavior. Virtanen, Nakari, Ahonen, Vahtera, and Pentii (2000) discovered that municipal employees in three Finnish towns exhibited decidedly different absence rates and patterns despite doing the same work for the same pay. They concluded that this was because the towns differed in social class composition (an example of social structure), ranging from lower to middle class domination. Thus, class-determined social influence led to differences in the perceived legitimacy of absenteeism that transcended the actual social class of the employees themselves.

Incidents of workplace aggression are often portrayed as stemming from dispositional bad apples. However, Dietz, Robinson, Folger, Baron, and Schulz (2003) illustrate that it matters greatly where such bad apples live. Specifically, they determined that community violent crime rates were predictive of plant-level workplace aggression incidents, citing social learning mechanisms as a possible cause. Interestingly, perceived plant procedural justice climate was not correlated with aggression. In a similar vein, Dietz and Nolan (2001) found that U.S. state-

level nonworkplace homicide rates were strongly correlated with corresponding workplace homicide rates and shared similar resource-related correlates (e.g., poverty level, divorce rates).

Cross-level research and comparative research are most likely to elucidate context when the discrete contextual levers that are thought to be responsible for context effects are explicitly theorized and measured. This has been a particular weakness in much cross-cultural research, in which the mesolevel variables thought to intervene between nationality and organizational behavior often go unmeasured (Brockner, 2003). Brief et al. (2005) surmise that community environments affect the racial composition of organizations by socially influencing the prejudices and stereotypes of organizational decision makers.

Researchers develop psychological and sociological constructs to help us understand organizational behavior, but these constructs sometimes become ends in and of themselves as objects of study (cf. Heath & Sitkin, 2001). This problem can be rectified not by abandoning constructs but by devoting more attention to organizational processes, events, and happenings, which can illuminate context (Rousseau & Fried, 2001).

Study processes. Research designs that examine how behavior unfolds over time or how organizations configure themselves to deal with recurrent problems especially reveal context. Hackett, Bycio, and Guion (1989) had nurses complete a daily attendance diary and rate potential causes of absence each day. Aggregated cross-sectionally, the results revealed familiar causes of absence: sickness and problems at home. Analyzed within-person over time, however, Gladwell's (2002) "exquisite sensitivity" to context was apparent. For instance, a single nurse exhibited a single absence due to the death of a friend. Other such unique patterns of contextual sensitivity were observed.

One of the most interesting questions in the organizational sciences is how organizations manage to adapt, innovate, and prosper despite the rather thick catalog of cognitive and social foibles documented by behavioral scientists. Gradually, research focused on organizational processes, in addition to cognitive and institutional constructs, is showing how context is often manipulated to countervail these foibles. Heath, Larrick, and Klayman (1998) have reviewed the cognitive shortcomings that individual decision makers often exhibit, including faulty information sampling, self-serving information processing, overconfidence, and giving undue weight to salient cues. They then provide many examples of "cognitive repairs"—processes that organizations put in place to deal with these shortcomings. Many of these repairs are manipulations of constraints designed to force organizational members to come closer to approximating idealized rational decision models, often by increasing the salience of accountability. Examples include strict patient examination protocols for trauma physicians, forced buffer time for project schedules, lab meetings to critique ongoing projects, and a variety of more exotic mechanisms. This research reveals how examining constructs in situ, as part of organizational processes, can clarify how organizations work.

Study events. As noted earlier, one face of context is the occurrence of particular events. As a mundane example, Smith (1977) shows that departmental job satisfaction levels were correlated with departmental absence rates when constraints against absence were removed (i.e., accountability was reduced) because of the occurrence of a severe snow storm in Chicago. Such a relationship was not observed in snow-free New York. More dramatically, Kushnir, Fried, and Malkinson (2001) studied absenteeism in the context of a traumatic national event—the assassination of Prime Minister Rabin of Israel. Using a telephone survey shortly after the event, they concluded that emotional reaction to the event was predictive of absenteeism, especially among women and those pessimistic about the future. Again, the study reveals how nonwork context can affect work behavior.

Three timely studies about the impact of the September 11 terrorist attacks on work-related matters illustrate the subtlety of such nonwork contextual influence. Contrary to speculation in the popular press and among some recruiters and mental health professionals, the events appeared to have had little impact on students' job attribute preferences (Lieb, 2003) or on various employee work attitudes (Ryan et al., 2003). However, Byron and Peterson (2002) observed a marked increase in absenteeism following the attacks. This suggests an acute, rather than chronic, reaction among those who were not

touched directly by the attacks. It also illustrates the crucial role of dependent variable choice when studying context effects, a topic discussed below.

Collect qualitative data. Well-conducted qualitative research has great potential to illuminate context effects, for at least two reasons having to do with circumventing the omitted variables problem. First, alert qualitative researchers can be sensitive to the full range of discrete contextual levers (and their interactions) that might affect behavior in a studied setting. Second, they can be sensitive to the full range of behaviors and attitudes that context might affect, often "working backwards" to make inferences about the situation. As I illustrate in the next section, an open view about what constitutes relevant dependent variables facilitates contextual sensitivity.

A particular word needs to be offered about the collection and reporting of qualitative data in otherwise quantitative studies. In short, we should welcome this. Among other reasons, the capacity of meta-analysis for theory building in the organizational sciences has been blunted by the lack of codable qualitative data concerning context. Instead, many meta-analysts must often concentrate on potential moderators inherent in the research design (e.g., whose measure of commitment was used?), since they are unable to form contextual links across studies that exhibit markedly different results.

Measurement and Analysis

One way to both detect and appreciate context effects is to measure multiple dependent variables or to measure dependent variables different from the norm in a particular research area. The exact logic for doing this would vary from study to study but should be grounded in good theory. In general, however, some variables are less susceptible to constraint than others (e.g., attitudes less than associated behavior) and, thus, can paint a picture of situational strength when used in conjunction with one another. Also, multiple dependent variables are often necessary to home in on the differential meaning that variations in context can occasion.

In the face of theory to the contrary, Johns and Xie (1998) predicted and found that both Canadians and Chinese were self-serving regarding their own absenteeism behavior. Thus, respondents from both countries underreported their own absence levels and saw their absence records as superior to those of their coworkers. How did the more modest and collective Chinese reconcile these self-serving perceptions? The inclusion of an additional dependent variable captured the contextual difference between the two locations. When asked to estimate the days missed by their *occupational* peers, as opposed to their coworkers, the Chinese offered extremely high values. Thus, seeing themselves as princes among princes enabled the Chinese to reconcile self-serving behavior with workgroup solidarity. The more individualistic Canadians exhibited little such group-serving behavior, simply seeing themselves as princes. Here, the inclusion of several dependent variables highlighted a demarcation between cognition and context. Up to a point, the Chinese and Canadians thought alike, suggesting that cultural context was unimportant. The inclusion of a more culturally sensitive dependent variable revealed contextual differences underpinned by social influence.

Similarly, Bagozzi, Verbeke, and Gavino (2003) found that Dutch and Filipino employees experienced shame in the face of customer difficulties in similar ways but attached different meaning to this shame and, consequently, behaved differently. The Dutch viewed shame as a threat to their self-esteem and lowered their performance, whereas the Filipinos viewed shame as a threat to their social esteem and increased their performance to repair their social status. Thus, the shame reaction was similar across cultures, but the inclusion of the performance variable revealed the sign reversal that can signify strong context effects.

A graphic example of how changing dependent variables clarifies context can be seen in Sutton and Hargadon's (1996) qualitative study of the use of group brainstorming at IDEO, one of the world's premier industrial design firms. Psychological research has clearly established that individual brainstorming is superior to group brainstorming in terms of the number of ideas generated in a given time period. Yet Sutton and Hargadon identified six other business-related criteria (e.g., impressing clients) by which group brainstorming was considered to be a success at IDEO. Hence, in context, the company's use of the practice makes good sense. Interestingly, it is difficult to conceive of many real-world tasks

in which the traditional brainstorming criterion variable (gross volume of ideas generated) is germane. This lack of ecological validity is a sign that context has been ignored in the domain of brainstorming research.

Being alert to context as situational strength suggests using analytic strategies that are sensitive to the distributional properties of data, rather than simply exploring means (Johns, 1991; Rousseau & Fried, 2001). Thus, variances, distribution shapes, and degree of within-unit agreement can all speak to the impact of context. Also, certain research problems suggest analyses that allow for curvilinearity or reversed causality (the extreme example of changing dependent variables!). Perhaps the most striking example of entertaining reversed causality can be seen in the studies described earlier that revealed causality that departed in direction from well-established research patterns. In this work, appropriate two-wave data collection revealed that what was thought to be independent was dependent, and vice versa. Thus, in some contexts, customer satisfaction can affect employee morale, absence can cause job dissatisfaction, and store sales can condition employee friendliness.

Finally, I alluded earlier to the cavalier use of contextual control variables in much organizational research. Such variables often account for more variance in the criterion than the dispositional or intrapsychic variables under study. More important, however, the casual use of a control variable assumes that the relationship between substantive variables *x* and *y* is equivalent for all levels of the control, an assumption that needs to be tested. Interactions involving situational variables signal archetypical context effects, and the many examples of sign reversals noted above suggest that ignoring these interactions will simply wash out predicted main effects.

Reportage

Authors need to become more adept at reporting contextual information that has theoretical bearing on their results or that might be useful to others (e.g., meta-analysts) in the future. A good place to begin is to ensure that the elements of omnibus context are addressed in adequate detail: who was studied, where were they studied, when were they studied, and why were they studied?

This all might sound obvious, but I have seen where the editor of an international journal has had to ask authors preparing a revised manuscript to specify in which country their research was conducted. I have also seen fifteen-year-old questionnaire data appear in a manuscript without mention of any potential effects of temporal context. I (Johns, 1993, 2001a) have advocated trying to name studied organizations, explaining how research access was achieved and including site details in the introduction of articles when those details had an impact on the development of hypotheses. If unmeasured, speculation concerning discrete contextual variables is warranted, as is the inclusion of details of extant policies or procedures that might have shaped one's results. Gratuitous context, of course, is to be avoided. However, intelligent speculation about contextual impact seems little different from the intelligent application of theory.

CONCLUSION

The many examples of context effects provided here raise the question of why context has been underappreciated. The repeatedly lamented absence of a good taxonomy of situations is in part to blame, since we lack a refined, systematic language for expressing context. In addition, some authors (Gladwell, 2002; Johns, 1991) implicate the fundamental attribution error—the tendency to overemphasize dispositional causes of behavior at the expense of situational causes (Ross, 1977).

However, more may be at work here. The tendency for organizational culture researchers to ignore industrial macrocultures suggests a *general* tendency to seek causal explanations at lower rather than higher levels of analysis, a tactic referred to unflatteringly by Hackman (2003) as *explanatory reductionism*. Indeed, Cappelli and Sherer (1991) indicted the cognitive revolution in the discipline of organizational behavior for preempting appreciation of context. Although insights have accrued from this revolution, a disquieting trend can be seen in literature reviews summarizing such work in the areas of the employment interview (Schmitt, 1976), performance appraisal (Ilgen, Barnes-Farrell, & McKellin, 1993), and employee turn-

over (Johns, 2001b). In each case, disappointment is apparent, as contextual omissions that damage progress are observed.

In the field of organizational behavior, a dichotomy has developed in which qualitative researchers immerse themselves in context and quantitative researchers purportedly study generic phenomena and constructs. It is not clear that this division of labor has had positive results. For their part, some qualitative researchers get so immersed in context that they fail to recognize universal phenomena, with the consequence that concepts such as social norms are rediscovered monthly in the pages of doctoral dissertations and journal articles. Conversely, some quantitative researchers seem almost desperate to ensure that reviewers and readers see their results as generalizable. To facilitate this, they describe research sites as blandly as possible—dislocated from time, place, and space—and omit details of how access was negotiated. Potential critics of a study's generalizability are frequently disarmed with boilerplate in the discussion section, which states that the research should be replicated in other contexts. A reviewer of this paper opined that part of this stems from institutional practices in psychology that are grounded in laboratory research and its related, dominant APA publication style. There may be merit to this view. Early research in organizational behavior was contextually rich but later became "scientized," I believe, to earn industrial-organizational psychologists perceived legitimacy among other domains in psychology. In support of this, Blair and Hunt (1986) contend that context-free research is viewed by some as being more scientific than that featuring context.

The past thirty years have proven to be a time of great advancement for the development and perfection of intrapsychic constructs and dispositional variables in the field of organizational behavior. Constructs such as organizational commitment, justice perceptions, self-efficacy, psychological empowerment, psychological contracts, and many others have improved our understanding of life at work. Likewise, the role of personality in the workplace, viewed for many years as a disreputable subject, has been profitably rehabilitated. What has been lacking, I submit, is comparable progress in understanding how context affects organizational behavior. Such attention to the shining figure at the expense of the murky ground is perhaps understandable, but it is also dysfunctional. It is probable that the proffered examples of opposing signs, reversed causality, curvilinear relationships, and extreme base rate differences are just the tip of a contextual iceberg that deserves more systematic examination and reportage.

There may be light on the horizon. The *Journal of Organizational Behavior* has made appreciation of context one of its mission features and has devoted space to Contextual Sidebars that allow authors to expand on situational factors surrounding their studies. Also, the *Academy of Management Journal* has endeavored to attract more contextualized qualitative research. To my eye, the *Journal of Applied Psychology,* once a bastion of scientization, has been publishing more articles that feature good contextualization. We can hope that this trend signals a more sophisticated treatment of context in organizational research.

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Gary Johns (gjohns@jmsb.concordia.ca) holds the Concordia University Research Chair in Management at the John Molson School of Business, Concordia University, Montreal. He received his Ph.D. in industrial-organizational psychology from Wayne State University. His research interests include absenteeism, job design, self-serving behavior, research methodology, and the impact of context on organizational behavior.

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