IMPLICIT VOICE THEORIES:
TAKEN-FOR-GRANTED RULES OF SELF-CENSORSHIP AT WORK

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In four studies, we examine *implicit voice theories*—taken-for-granted beliefs about when and why speaking up at work is risky or inappropriate. In Study 1, interview data from a large corporation suggest that fine-grained implicit theories underlie reluctance to voice even pro-organizational suggestions. Study 2 survey data address the generalizability of the implicit theories identified in Study 1. Studies 3 and 4 develop survey measures for five such theories, establishing the measures' discriminant validity and incremental predictive validity for workplace silence. Collectively, our results indicate that implicit voice theories are widely held and significantly augment explanation of workplace silence.

Upward communication is vital to the success of contemporary organizations. By speaking up to those who occupy positions that are hierarchically higher than their own, employees can help stem illegal and immoral behavior, address mistreatment or injustice, and bring problems and opportunities for improvement to the attention of those who can authorize action. Employees of all types and levels confront problems and formulate ideas when carrying out day-to-day activities in organizations; this is the nature of work in a dynamic environment. Yet, even when they believe they have something useful to say, people often choose silence over voice (speaking up [e.g., Milliken, Morrison, & Hewlin, 2003; Ryan & Oestrich, 1998]). Reluctance to voice substantive and relevant ideas and questions at work is widespread and frequently attributed to employee concerns about personal consequences (e.g., Ashford, Rothbard, Piderit, & Dutton, 1998; Edmondson, 2003; Milliken et al., 2003; Pinder & Harlos, 2001; Withey & Cooper, 1989). Whether seen as primarily rational and calculative or as fear-driven and spontaneous, the belief that voice is risky has been described as a general ex-

pectation that speaking up will have undesired outcomes, such as harm to one's reputation or image, reduced self-esteem or emotional well-being, or negative work evaluations and reduced opportunities for promotion (e.g., Ashford et al., 1998; Milliken et al., 2003).

Two major approaches to the study of speaking up in organizations exist. The first, which has dominated the literature, is to predict the occurrence of this prosocial, potentially risky behavior. This research has amassed considerable evidence about the individual difference, leader behavior, and organizational context antecedents of voice (e.g., Ashford et al., 1998; Detert & Burris, 2007; LePine & Van Dyne, 2001; Van Dyne & LePine, 1998). Implicitly or explicitly, many of these studies present psychological safety as a mediator between antecedent variables and voice behavior (e.g., Ashford et al., 1998; Miceli & Near, 1992). Detert and Burris (2007), for example, showed that employee perceptions of psychological safety mediated relationships between positive managerial behaviors and employee voice. A second approach, thus far pursued primarily through qualitative accounts (e.g., Harlos, 2001; Milliken et al., 2003; Ryan & Oestrich, 1998), is to focus directly on the phenomenon of reluctance to speak up. As elaborated below, we believe both approaches are valuable and necessary because they reflect phenomenological, not just semantic, differences. We propose that further systematic focus on why employees *don't* speak up opens the possibility for new theoretical explanations of speaking up in the workplace, for two basic reasons.

First, overly broad conceptions of both voice and silence, together with the assumption that what is understood about one term fully applies to the other, can restrict advances in theory and practice (Tangirala & Ramanujam, 2008; Van Dyne, Ang, & Botero, 2003). To illustrate, an employee's not providing input because of not having ideas is a different phenomenon from withholding ideas from bosses because of fear of the consequences of expressing these ideas. And an individual might speak frequently yet withhold information or opinions about important problems from bosses because he/she believes these ideas would not be well received. Thus, withholding relevant ideas for self-protective reasons (self-censorship) can occur even while voice (of another kind) is being offered. These distinctions are important because it is the lack of timely input—from those who have information they believe is worth contributing, to those with the power to act—that especially hampers organizational learning (Edmondson, 2002, 2003). Our research thus investigates silence, defined as "the withholding of ideas, suggestions, or concerns about people, products, or processes that might have been communicated verbally to someone inside the organization with the perceived authority to act" (Kish-Gephart, Detert, Trevino, & Edmondson, 2009: 166–167).

Second, and the central focus of this article, is the possibility that people remain silent at work because of socially acquired beliefs, or implicit theories, about what makes voice risky in social hierarchies. If so, understanding of employee silence might be improved by focusing explicitly on these taken-for-granted beliefs, rather than assuming they merely reflect personality characteristics, current boss behaviors, or features of an organizational context. This perspective—that implicit theories independently drive a variety of social behaviors—has been demonstrated extensively in the social psychology literature (e.g., Chiu, Hong, & Dweck, 1997), but only alluded to in previous explanations of voice in the workplace (Milliken et al., 2003). The present research thus examines *implicit voice theories* as a subtle and insidious cause of employee silence. In particular, we focus on self-protective implicit voice theories: knowledge structures that individuals use to avoid trouble that could arise from speaking up to authorities.

After a brief introduction to the idea of implicit voice theories, we present four studies representing a progression from inductive to deductive analysis that together address three general research questions: (1) Are there common implicit theories about why upward voice is risky or inappropriate? (2) Can these implicit voice theories be efficiently and validly measured? And (3) Are implicit voice theories related to workplace silence after other theoretically relevant individual differences and organizational influences are controlled for?

We address the first question with an exploratory interview study (Study 1) in which we examine the reasons for self-protective silence from the point of view of would-be speakers in one large multinational corporation. Rather than deriving categories of beliefs from a priori theoretical expectations, we deepened and expanded our understanding of why people remain silent by searching for implicit theories that might be revealed in what we term *latent voice episodes*: specific instances in which a would-be speaker believes the possibility exists to speak up to someone with positional power in a face-to-face context about something of importance.

In Study 2, we examine the generalizability of the implicit theories identified in Study 1. Our goal in this study was not to develop an exhaustive taxonomy of all self-protective implicit voice theories (hereafter, simply "implicit voice theories") but rather to confirm that those identified in Study 1 are not idiosyncratic to a single organization and are common enough to merit subsequent investigation.

In Studies 3 and 4, we address the second and third research questions by developing and refining survey measures of five implicit voice theories and linking them to correlates and consequences. In Study 3, we operationalize and examine the psychometric properties of five implicit voice theory measures, including their relationships with an array of relevant individual and organizational constructs. In Study 4, we use a three-wave survey design to test the incremental validity of these theories by examining whether they predict silence in analyses controlling for a wide range of individual differences and contextual factors. Through a series of robustness checks, we show that implicit voice theories can be understood as antecedents of silence in their own right, rather than as mediators of typically studied contextual factors or as antecedents attenuated or amplified by their interaction with contextual factors. Collectively, the results from this hybrid research project studying samples of hundreds of adults with diverse work experiences indicate both the prevalence of implicit voice theories and their unique contribution to explanations of workplace silence.

IMPLICIT VOICE THEORIES

The Nature of Implicit Theories

We propose that largely taken-for-granted beliefs about the risk or inappropriateness of speaking up

in hierarchical organizations exist and constitute a type of implicit theory used for everyday "sense making" (Levy, Chiu, & Hong, 2006). Implicit theories are schema-like knowledge structures that individuals use to effortlessly process current stimulus cues and choose responses (Ross, 1989: 342); they have alternatively been called "naïve," "lay," and "commonsense" theories (Heider, 1958; Kelly, 1955) and are similar to "cognitive scripts" (Abelson, 1976), "primary frameworks" (Goffman, 1974), and "logics of action" (Bacharach, Bamberger, & McKinney, 2000). The term "implicit theory" is particularly apt, however, because it clarifies that this type of belief structure contains not just an organized representation of stimuli, but also assumptions about cause and effect (Anderson & Lindsay, 1998). That is, implicit theories, like scientific ones, allow an individual to make a priori predictions (Levy et al., 2006). For example, an implicit theory that it is unsafe to speak up in public settings at work contains an "if-then" assumption that speaking up will lead to negative consequences in a specific type of situation. The assumptions embedded in implicit theories need not be accurate—especially as applied to each specific instance in which they guide behavior—to serve useful functions for individuals, such as providing a sense of psychological control, helping maintain relationships, and protecting oneself or one's group (Levy et al., 2006).

Implicit theories allow individuals to quickly and relatively effortlessly orient themselves and decide on action by comparing new stimuli with previously encountered stimuli stored in mental structures (Chiu et al., 1997). Such theories are implicit in that they often operate below consciousness, generating in a top-down, automatic fashion many behavioral responses typically (but incorrectly) described as resulting from an intentional, deliberative process (Bargh & Ferguson, 2000; Gollwitzer & Brandstatter, 1997; Hertel & Kerr, 2001). Given their automaticity, implicit theories are usually poorly articulated (Chiu et al., 1997; Levy et al., 2006), and people seldom discuss them without prompting or provocation (Ross, 1989). As such, people tend not to be aware of the tremendous impact implicit theories have on their behavior, even though they know whether they agree or disagree with the theories when they are stated and can articulate simple versions of the theories they hold when prompted for explanations of their behavior (Bacharach et al., 2000; Levy, Stroesser, & Dweck, 1998).

Implicit theories develop during an individual's life, through both direct experience and vicarious learning (Abelson, 1976; Anderson & Lindsay, 1998) in repeated situations that are "sufficiently involving to stimulate the construction of a generalized event representation of the sequence of events that take place" (Wyer, 2004: 288). For instance, individuals develop implicit theories of leadership effectiveness via an array of experiences in which perceived leader actions co-occur with outcomes apparently attributable to these acts (Epitropaki & Martin, 2004; Lord & Maher, 1991). Once formed, implicit theories tend to endure because people seek out anecdotal verification rather than falsification of beliefs that serve self-protective or self-enhancing aims (Furnham, 1988; Levy et al., 2006; Wyer, 2004). Further, implicit theories tend to survive empirical disconfirmation because of certain cognitive and motivational processes (Anderson & Lindsay, 1998). For example, the tendency to more readily recall confirming instances bolsters existing implicit theories, particularly those that predict negative outcomes for the self (e.g., social, emotional, or bodily harm). This is partly explained by the bias whereby "bad" is stronger than "good" in memory (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001) and the survival-based human fear response that tends toward "false positives" (Ohman, 2000).

Self-Protective Implicit Voice Theories

As Anderson and Lindsay noted, countless small decisions are made every day in organizations, many without conscious awareness on the part of decision makers "that they are making judgments or using a naïve theory to guide their judgments and behaviors" (1998: 23–24). Among the routine organizational decisions implicit theories are likely to drive is whether to speak up in specific instances, which is why scholars have called focusing on implicit theories a crucial next step for understanding decisions to remain silent (Milliken et al., 2003). Although implicit voice theories can serve many different motives, such as protecting others' feelings or avoiding wasting time or effort (Van Dyne et al., 2003), we focus here on *self-protective* implicit voice theories, those that link upward voice about certain issues or in certain types of situations to risk. This focus allows us to address several of the dominant themes and remaining theoretical and empirical questions about workplace silence.

Studying implicit theories that connect cues embedded in particular situations to silence answers recent calls for the development of finer-grained theories of communication behavior that include factors such as targets, topics, and venues (Grant & Ashford, 2008). An implicit theory perspective sug-

gests that silence can stem from automatically evoked beliefs rather than from a conscious, calculative conclusion that "speaking up is risky," a view that is consistent with the spontaneous nature of most routine decisions about speaking up.[1] To illustrate, individuals might withhold voice drawing on a specific implicit theory that speaking up in the presence of one's boss's boss puts the boss in a bad position and so should be avoided (Milliken et al., 2003), irrespective of who the boss is or what her/his previous behavior has been. This withholding differs from only withholding voice about problems from *specific* leaders whose prior behavior has created an impression that offering improvement-oriented voice is risky. In short, an implicit theories perspective recognizes behavior is driven by automatic, specific judgments (whether conscious or not) that link particular situational cues to extant knowledge structures. Summary judgments made consciously (e.g., "It's not safe") may provide parsimonious explanations for a pattern of behavior, but they do not capture the nature of motivated human cognitions that give rise to such summaries.

Uncovering implicit voice theories leads to an expanded view of the basic causes of workplace silence and to a greater appreciation of why it is so difficult to eliminate subordinate reticence to challenge authority. Prior qualitative studies examining silence have shown employees attributing a lack of safety for voice to proximate, external, and presumably verifiable causes. For example, employees often explain their fear of speaking up by pointing to harsh or unwelcoming leader behavior (Milliken et al., 2003), unfavorable company or industry conditions (Dutton et al., 1997), or prior experiences at work suggesting that speaking up leads to negative social or career consequences (Dutton et al., 1997; Milliken et al., 2003). Consider, however, that speaking up at work is a specific case of speaking up to authority figures, a domain with which individuals have past experience in multiple institutional settings starting early in life (Kish-Gephart et

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[1] Research in psychology has shown that conscious processing and reasoning about the costs and benefits of speaking up in a specific instance likely only characterize situations in which an employee has a long time to reflect on a choice and is highly motivated to do such processing (Kish-Gephart et al., 2009). Such conscious processing and reasoning may, for instance, occur when employees "sell" strategic issues (Dutton, Ashford, O'Neill, Hayes, & Wierba, 1997) and "blow the whistle" on illegality or immorality (Miceli & Near, 1992), but they are less likely to occur when employees make on-the-spot work decisions to speak up or remain silent about problems or improvement opportunities.

al., 2009). As Milgram (1974) noted, children develop beliefs about upward communication from routine interactions with parents in which parents convey not only specific content (e.g., "Go to bed now"), but also more general expectations about how to respond to authority (e.g., "You must do as I say" or "Do not question me"). It therefore stands to reason that people hold implicit theories that govern behavior around authorities and that these theories are stronger predictors of self-protective silence than other attitudes or beliefs.

In fact, implicit voice theories may be particularly potent predictors of silence toward authorities because they are among the numerous specific schemata individuals develop to guide behavior in "authority ranking" situations (social relations marked by clear power differences among members [Fiske, 1991]). In nearly all cultures, by the age of three children spontaneously demonstrate understanding of authority ranking structures, suggesting that humans are endowed with content-specialized psychological structures for generating this understanding (Cosmides & Tooby, 1992; Fiske, 1991). Stated another way, recognition of social hierarchies and fear of offending those with higher standing than oneself is part of humans' evolutionary heritage (Milgram, 1974; Plutchik, 2003). Although offending higher-ranking others today rarely presents *physical* danger, humans may nonetheless have developed a specific "motivational system designed to regulate willingness to take competitive risks in dominance-relevant contexts" (Ermer, Cosmides, & Tooby, 2008: 107). Safety now refers primarily to social and material rather than physical matters (Ermer et al., 2008; Pinker, 1997). Nonetheless, the development and internalization of beliefs about how to safely interact with others who have greater power ("higher-power others") may explain why quantitative studies have revealed modest relationships between measures of current leader behavior (e.g., managerial openness) (Ashford et al., 1998; Detert & Burris, 2007; Dutton, Ashford, Lawrence, & Miner-Rubino, 2002) and employee beliefs that it is safe to speak up.

In suggesting that implicit voice theories may be related to human evolution, we do not presuppose that all individuals in all cultures equally endorse or are equally driven by such theories (Buss, 2009; Tooby & Cosmides, 1990). Beliefs about challenging higher-ranking others likely require specific experiences to activate, shape, and reinforce them (LeDoux, 1996; Tooby & Cosmides, 1990). Because each individual experiences authority through a unique combination of parents, teachers, coaches, and religious or other institutional leaders, one should not expect individuals to have developed

identical beliefs and behavioral strategies for navigating hierarchical relationships (Buss, 2009). These arguments parallel findings for other domain-specific mental structures. For example, humans appear to be endowed with specialized mental apparatus for detecting cheaters (Cosmides & Tooby, 1992), but individuals vary widely in their actual ability to correctly detect cheating (Ekman, O'Sullivan, & Frank, 1999). Overall, therefore, humans have evolved to have elaborate mental structures around authority, but the content and strength of beliefs are likely to vary dramatically on the basis of individual experience.

Implicit Voice Theories and Employee Silence

An implicit theories perspective on voice suggests that ordinary life experiences in hierarchical social institutions shape beliefs about where, when, and about what speaking up is risky. That one often cannot remember where or when these "fundamental social frameworks" (Goffman, 1974) were learned does not mean they are not imported into one's current work environment, wherein they serve as a basis for automatic evaluation of stimuli, rather than being formed anew in each setting (Bacharach et al., 2000). Stated another way, when employees encounter a new boss, their minds are not a tabula rasa in regard to beliefs about speaking up, just as adults' minds are not a tabula rasa in regard to beliefs about leadership (Lord & Maher, 1991), politeness (Brown & Levinson, 1987), and other standards for general social behavior, when they enter new contexts. We thus propose that implicit voice theories can help explain workplace silence as a direct causal factor. We do not expect these theories to mediate relationships between typically studied antecedents and silence because these antecedents (such as current leader behavior and other aspects of current work context) are likely only modest contributors to belief systems about behavior around higher-power others that form and solidify over a long time period.

In sum, our argument is that individuals are likely to arrive at work with a set of implicit voice theories, constructed through past direct and vicarious learning, or socialization, in hierarchical institutions. Micro aspects of specific contexts in which an individual might speak up—such as the content of desired communication, the venue, and the number and positions of others present—work as stimulus cues that are matched to the individual's "toolbox" of discrete, specific implicit theories (Hong, Morris, Chiu, & Benet-Martinez, 2000). Once invoked, implicit voice theories dictate an appropriate response; they represent prior formation of beliefs "about what leads to what" (Bandura, 1986: 183). Implicit voice theories thus can dictate remaining defensively silent so as to avoid personal harm (Van Dyne et al., 2003). To the individual, silence appears to work (that is, it keeps him/her safe), further reinforcing the implicit theories. Thus, without somehow engaging in behavior that directly and specifically challenges and contradicts them, it is unlikely that individuals will revise, set aside, or develop new implicit theories related to speaking up (Bacharach et al., 2000). We thus argue that it is not easy to counteract or attenuate the impact of implicit voice theories.

STUDY 1: GROUNDED DISCOVERY OF IMPLICIT VOICE THEORIES

We undertook a field study in a large, complex corporation to investigate employees' beliefs about the potential risks of speaking up about issues they believed were important to their organization's effectiveness. Our inductive approach was designed to capture snapshots of reality as it exists for actors in a social system, allowing them to help define the conceptual territory rather than limiting our inquiry to existing categories and frameworks.

Methods

Context overview. We conducted extensive interviews at a leading high-technology corporation, referred to here by the pseudonym HiCo. Employees engaged in strategy, research and development, manufacturing, marketing, and selling of products and services in a highly technical and fast-changing industry context. HiCo presented many advantages for this research, starting with the central importance of the effective use of knowledge for success in its industry. Recognizing this, senior executives had been dismayed when a company-wide survey revealed that approximately 50 percent of all HiCo respondents did not feel comfortable speaking up at work. These results triggered the creation of an internal task force and an invitation to the first author to join this group as an academic researcher who would design and conduct interviews investigating the individual and contextual factors behind voice and silence at HiCo.

Interview sample. To maximize, as much as possible within a single company, the likelihood of identifying diverse causal factors and employees' beliefs about speaking up, we selected interviewees from ten units, two in each of five divisions: R&D, manufacturing, U.S. sales, international marketing and sales, and corporate finance. We chose leaders

at the top of each focal unit and used a random selection of direct reports from the top to the bottom of a reporting structure within a given unit, stratifying by gender and tenure only to ensure a diverse mix of interviewees. Our interviews spanned the hierarchy at all ten sites, ranging from senior managers one or two levels below the division president level to the lowest-ranking employees, and included executives, managers, engineers, researchers, sales and marketing professionals, financial analysts, and frontline operators. The average age of interviewees was 41 years (s.d. = 8.6); their average organizational tenure was 11 years (s.d. = 7.3); and 56 percent were male. We conducted 190 interviews, 5 in the smallest unit of just 16 members and more than 20 each in units with several hundred employees.

Data collection. The first author spent between one and three days interviewing at each of the ten sites, conducting a total of 75 of the 190 interviews. Two additional skilled interviewers pilot-tested the protocol with the first author at HiCo and then conducted the remaining 115 interviews. The interviews, which lasted between 30 and 90 minutes each, elicited detailed behavioral examples of situations in which the interviewees either felt particularly able/unable or willing/unwilling to speak up. To minimize the imposition of potential interviewer biases on informants, each interview began by showing the interviewee his/her unit's and division's average scores on the "safe to speak up" and "challenge traditional ways" items from the company's employee survey and asking, "What do you make of these results for your unit?" The interviewers then asked more structured interview questions designed to generate descriptions of specific voice episodes. The intent of the interviews was to generate concrete examples of situations in which individuals wanted to speak up and either did or did not, and to elicit descriptions of their thoughts and feelings about the situations. By pushing for specific examples and clarifying that respondents' personal experiences or beliefs could be highly divergent from those of the majority in their unit, we generated a diverse mix of positively and negatively valenced descriptions from respondents in each unit.

Tape-recording and transcribing the interviews generated over 3,000 pages of text describing a wide variety of general beliefs and specific latent voice episodes. Approximately 72 percent of the specific episodes pertained to issues directly related to organizational performance or improvement. In these episodes, people had offered or withheld suggestions for improving the quality, efficiency, or customer experience of a particular product or service, or for improving a marketing or research strategy. The remaining 28 percent of the episodes pertained to situations perceived by the informant as unjust or otherwise affecting personal or coworker well-being. No episodes involved legal boundaries crossed or matters perceived as requiring reporting outside the organization.

Data analysis. We engaged in a multistep inductive process (Miles & Huberman, 1994) to identify and hone our understanding of the affect-laden beliefs that lead to silence. Using qualitative data management software, we identified and placed in one electronic folder over 500 text passages, ranging from a few lines to several paragraphs, in which informants used cognitive and emotional terms (e.g., "afraid," "scared," "anxious," "tentative," "paranoid") to describe their beliefs about the safety of speaking up. These analytic units were systematically analyzed for evidence of common explanations, not just of why it felt unsafe to speak up in the specific episode described, but also of why the episode represented, for the informant, a more general type of situation in which it is unsafe or a bad idea to speak up. Our focus on episodes allowed us to detect situational cues that give rise to silence, along with the stable factors examined in prior research (e.g., individual differences and manager behaviors). In short, we analyzed the data to include attention to episode-specific features that might reveal implicit theories about speaking up. In keeping with prior implicit theory research, we anticipated that features of a situation may trigger certain stored beliefs about where, when, and to whom speaking up is unsafe.

Through repeated review and discussion of the data and the emerging themes, we identified and named five implicit voice theories that occurred multiple times in the data. These theories differ as to the specifics of when, where, and why, yet all are self-protective in their core assumption that speaking up to authority figures at work is risky, and the theories are all therefore likely to lead to defensive withholding of upward input (Van Dyne et al., 2003). As a check on our developing understanding, we confirmed that an independent coder could identify examples of each implicit voice theory in the data. We also checked with our contacts inside the company as to the face validity of our developing understanding (Lincoln & Guba, 1985). This iterative journey between data and theoretical categorization involved extensive debate among the authors.

Findings

Implicit voice theories. We labeled the first implicit theory that emerged "presumed target identification." It is a taken-for-granted belief in managers' identification with the status quo, which leads to the causal assumption that those higher in an organizational hierarchy hear suggestions as personal criticism. Specifically, we found that many would-be speakers viewed speaking up as unsafe because they took for granted that the target of voice was likely to be personally identified with, or to feel ownership of, the aspect of the organization in question. For example, a HiCo research scientist considered recommending a new procedure to save resources risky because he worried that the target (his boss) would view the suggestion as an accusation that the current method (the one the boss was presumed to embrace) was wasteful. As a project manager put it, "People get so attached to their projects; their projects become part of their self-image and self-worth so it's not acceptable to question them." In this way, numerous informants assumed that, rather than being seen as helpful, their comments about products, processes, or strategy would threaten, offend, or invoke defensiveness in authority figures. This was the case even when the intended comments were not inherently negative— that is, not related to problems or mistakes but rather to ideas for improvement.

The second recurring implicit theory is a perceived need to have solid data, polished ideas, or complete solutions before it is safe to speak. Similarly to NASA members observed by Vaughan (1996), informants reported a fear of speaking up without proof that something was wrong or suboptimal; others reported a need to inoculate themselves against negative reactions from authorities through extensive preparation and data gathering prior to speaking up. The following statement by a HiCo manager illustrates the second implicit theory: "There's that feeling, that belief, that you should go in [to forums where voice is possible] extremely prepared. That you should cover every area, not go out on a limb, don't reach or overextend any conclusions without substantiation." Others spoke of the perceived need to look good by being able to "answer questions perfectly," avoiding "ad lib comments," and "not crying about something unless you can offer a constructive solution." This implicit voice theory is reminiscent of the issue-selling hypothesis that employees are reticent to speak up without having clear solutions (Dutton & Ashford, 1993).

The third and fourth implicit theories we identified involve beliefs about speaking up to bosses in the presence of others. As Dutton and Ashford (1993) noted, public voice, and the resulting visibility of an issue so raised, may increase the likelihood that a target takes action, but it also appears to be associated with a belief that the speaker suffers consequences. This implicit theory, "Don't bypass the boss upward," refers to the belief that speaking up in ways that (even inadvertently) challenge, question, contradict, or expose one's boss in front of his/her superiors will be seen as disloyal and unacceptable (Milliken et al., 2003). As informants noted, speaking up to those above one's immediate boss feels risky: "[He] would maybe hold that grudge against me, because I disagreed with him" (manufacturing operator) or because "going over my manager's head" would "completely alter our relationship," which could "limit my career" (sales representative). As a manufacturing manager noted, this implicit voice theory hampers learning because higher-level leaders do not hear the unvarnished truth from distal subordinates, especially when the intermediate managers are in the room:

> The reason people won't speak up to me is not fear of me, I think, but the fact that their boss was in the room . . . . If I get them one-on-one I get some great learnings. But where you get concern is fear of reprisal, that somebody will come back and say, "How dare you go and talk to [the plant manager] without me getting a chance to have my side of the story. Don't you ever talk to him again without me knowing." And bang, that shuts down all the communication right there.

The fourth implicit theory identified, "Don't embarrass the boss in public," represents the belief that bosses dislike hearing bad news, or being challenged, in front of others in a group without advance, private notice. Driven by this implicit theory, informants often reported "just dropping it" altogether, or choosing to wait for a private opportunity. Both choices can be detrimental to organizational learning, because some improvement-oriented voice content occurs to people in public contexts and loses its usefulness if held for later. For instance, if a decision is being made in a meeting, waiting for privacy or anonymity to provide an alternative or express a concern may mean that voice is offered too late to be implemented. Further, private discussions preclude the opportunity to utilize group brainstorming to generate solutions.

As has prior work (e.g., Milliken et al., 2003), we identified "negative career consequences for speaking up" as a fifth implicit voice theory. This theory connects challenging the status quo to general, neg-

ative career repercussions caused by managerial retaliation. As one manufacturing line operator explained, "What good is it going to do me to stand up and have a legitimate question or maybe challenge them about something? Nothing but put me lower in the basement." Others reported more specific retribution fears, such as poor formal evaluations. For example, one manager said, "If I disagree, they would maybe hold that grudge against me—like our end-of-year review, they might be nit-picky." Others viewed speaking up to bosses as risky for their career trajectories. A salesperson said, "My manager determines my destiny at this company, therefore I dare not challenge him and what he's telling me to do. So, in a sense, it's not safe to speak up." Although the specific work consequences informants feared varied widely, the general form of this implicit voice theory was consistent: "If I challenge authority, retaliation in the form of career consequences may arise."

Theory or fact? The basis of implicit voice theories. Next, we explored the data for evidence of the sources of informants' implicit theories about speaking up. These analyses suggested that informants could only sometimes identify specific experiences underpinning an implicit theory. For example, some informants pointed to bosses reacting to prior upward voice with emotional outbursts of anger, demeaning or derogatory comments, or other unpredictable or frightening behaviors as the basis of their general beliefs about when, where, or to whom to speak up. Not surprisingly, fear-laden experiences such as these lead to a focus on self-preservation (Rachman, 1990), which people pursue in part by developing cognitive theories about specific stimuli linked probabilistically to risk and harm. Although it is not surprising that direct experiences with stimuli like a "bulldozing" or "revenge-seeking" boss would give rise to a belief about the dangers of speaking up, in our data, such reports were relatively rare. Instead, as the following examples illustrate, interviewees frequently lacked evidence to support their fears of speaking up, even when asked directly for such evidence:

> Interviewer: What would lead to your fear that perhaps you'd lose your job or that whatever you say is going to be used against you? Are there any examples of this? and Has anything every happened for asking hard questions?

> Financial analyst: I've never seen it happen.

> International marketing manager: Everyone knows that we never fire anybody.

> Sales representative: Not that I know, but we're always afraid that that can happen. Why? I don't know. And I feel the same way. And I cannot explain why.

> Manufacturing operator: I've never seen anything happen as a result. . . . It's not like a week later all of a sudden you were gone.

Moreover, some respondents' reports revealed implicit theories that inhibit voice despite experiences directly contradicting those theories. For example, an international sales manager noted that his beliefs persisted despite "management, in a way, always stimulating that you should speak up, that they should hear your voice." A research associate who, driven by the "don't embarrass the boss in public" implicit theory, reported staying silent about a mistake her boss made during a meeting also noted that when she later told the boss in private he responded, "Oh, you should have said so at the meeting."

In this way, the data suggest that implicit voice theories do not merely reflect what people have learned in their current role and environment but that these theories endure despite contradictory evidence in the present, as do other implicit theories (Anderson & Lindsay, 1998). For example, the data reveal that implicit theories about voice can stem from general beliefs rather than from actual experiences at work. Said one sales representative, explaining his reluctance to speak up, "It's just corporate America in general." Remarks from two salespeople illustrate that informants sometimes recognized, when probed, that their beliefs about the risks of speaking up were not based on actual HiCo experience: "I think it's more societal than [HiCo]" and "I don't think it has to do with [HiCo] specifically, but with people's perception that speaking up is viewed in a lot of instances as rocking the boat." Similarly, we found that the implicit voice theories identified in these data were often not grounded in employee recall of specific instances that led to the general beliefs. For instance, when asked if specific experiences had led to his belief that he'd be "cutting his boss's throat" if he challenged his manager in front of more senior managers, an employee responded, "No, I just think it's kind of a business thing that you don't disagree with your manager to his boss." Although Study 1 respondents may have referenced "corporate America" or "business" as the basis and boundary for their beliefs, their statements reflect the tendency of people throughout the world, across all institutional domains, to recognize the need for special care in dealing with higher-ups (Fiske, 1991).

STUDY 2: ASSESSING THE BROADER EXISTENCE OF IMPLICIT VOICE THEORIES

To ensure that our findings were not idiosyncratic to a single organization or an artifact of our interview approach and specific questions, we conducted a second study using a different method to uncover implicit voice theories with a sample of informants from a broad range of organizational backgrounds. We captured answers to an open-ended survey question about the conditions under which speaking up at work might be risky and coded written responses for evidence of the theories identified in Study 1 as well as for evidence of additional common implicit voice theories.

Methods

The sample. A simple survey was given to 185 students enrolled in executive education courses offered by a large university in the northeastern United States. These respondents had a mean age of 37.9 years; 79 percent were male, and 44 percent had been raised outside North America. Their work experiences and organizational levels spanned multiple functions and hierarchical levels in a wide array of public and private organizations.

Data collection and analyses. We developed a survey requesting written responses to a general, open-ended question with the following instructions: "Thinking about the what, to whom, where, and when of speaking up (or anything else that comes to mind about speaking up) to managers in work organizations, please state below–in your own words–any beliefs you have about what, in general, makes speaking up to those with more power feel somewhat or very risky, dangerous, or inappropriate." The prompt "Speaking up feels risky or inappropriate when:" was then presented, followed by several bullet points indicating respondents could write as many distinct reasons as they wanted.

Two research associates were instructed in the general idea of an implicit voice theory and, using working definitions and examples of each implicit theory from Study 1, taught to identify evidence of the five theories in the new data. The research associates were also trained to search for and record evidence of any additional general beliefs that might comprise implicit voice theories, as well as evidence of contextual factors linked to assessments of risk in respondent statements.

Findings

Implicit voice theories identified. The two independent coders identified the five implicit voice theories discovered in Study 1 frequently (average = 29.2 per theory) and with reasonably high consistency (Cohen's kappa = .81) in the Study 2 data. We readily adjudicated the few disagreements between the coders, noticing that most disagreements stemmed from one coder's overly liberal application of the codes. The most frequent implicit theory in these data was the "need for solid data or solutions" ($n = 48$), suggesting that this belief is not merely a reflection of the high-tech, science-driven context of Study 1. For example, some Study 2 respondents saw speaking up as risky or inappropriate when "we don't have enough points to prove and sustain the idea," an "idea is not fully baked," or when "there is not a solution in hand." Table 1 illustrates the five common implicit voice theories identified in the two studies.

Open coding identified two other findings worth mentioning. First, approximately 40 percent of the comments referenced current context factors, rather than general implicit theories, as the basis for assessing voice as risky. For example, respondents pointed to specific boss behaviors, aspects of their organization's culture, "hot situations" (e.g., someone's bad mood), and a feeling of being on "shaky ground" (e.g., firm is performing poorly, their boss is new) as reasons for a calculated assessment of risk. Second, these data suggest several additional implicit voice theories, but none of these other potential theories were identified as frequently as the five self-protective ones also found in Study 1. The bottom part of Table 1 lists these additional beliefs and shows that each was identified fewer than ten times in the Study 2 data (that is, less than one-third as frequently on average as the five theories from Study 1). These additional beliefs reflect several primary motives: a desire to protect oneself, a desire to protect others or one's organization, and a desire to protect oneself from social embarrassment or ostracism (Milliken et al., 2003; Van Dyne et al., 2003). Finally, both coders also noted about 60 instances that suggest people may hold an array of additional implicit theories about message content. For example, respondents noted that it feels risky or inappropriate to speak up about race/diversity issues, performance or compensation decisions, overall strategy as set by senior managers, their boss's own behavior or management style, and issues already discussed.

Summary. The Study 2 data suggest that the five implicit voice theories uncovered in Study 1 capture common beliefs about speaking up in hierarchical organizations, not just beliefs held at HiCo (the Study 1 context). The data also suggest that other implicit voice theories exist (relating to self-protection and other motives, such as protecting

TABLE 1
Implicit Voice Theories Identified in Studies 1 and 2

Implicit Voice Theories	Exemplary Quotations from Informants	Number of Times Identified, Study 2 Only
Found in Studies 1 & 2		
Presumed target identification	"Bosses may feel personal ownership in the tasks I am suggesting are problematic." "The boss may have created the processes and may be offended or attached to them." "If speaking up involves critiquing a process, routine, or belief which is important to the boss, they may hold a grudge."	16
Need solid data or solutions (to speak up)	"I think that presenting an under-developed, under-researched idea is never a good idea." "You are questioning their ideas and had better have proof to back up your statements." "You lack the necessary data to justify your position."	48
Don't bypass the boss upward	"If there is a higher-level individual present it is more risky because you would be afraid that your direct boss would feel as if you were going over their head. [My boss] may perceive that I am pointing out issues that she should have identified." "My boss would see [speaking up to his boss] as undermining and insubordinate." "When you go around your boss and move up the chain there is the possibility that it will have dramatic negative effects. By breaking the chain of command it appears that you do not respect who you report to, even if you only feel that it was an important issue that was being ignored."	28
Don't embarrass the boss in public	"Managers hate to be put on the spot in front of others. It is best to brief them first one-on-one so the boss doesn't look bad in front of the group." "You should pass it by the boss in private first, so you don't cut his legs out from under him." "[Speaking up] is done in front of a group, it is the first time they are hearing the suggestion, and it is possibly counter or critical to [the manager's] objectives, beliefs, team."	25
Negative career consequences of voice	"To stop a project or say it is worthless would be a career ender." "Speaking up may leave a bad impression and impact future promotions." "Speaking up may reduce the number of opportunities to be involved in interesting projects."	28
Other potential theories identified in Study 2 only		
Don't speak up if you're not an expert		7
Don't speak up when caught off guard		6
Don't speak up when doing so will harm others		6
Don't speak up if it makes you look like a show-off, not a team player		6
Don't speak up in front of clients/customers		3
Don't speak up when you are too new		3
Don't speak up when you are the youngest		3

others), although these were not as frequently mentioned as were the theories also identified in Study 1. Thus, we took assessing whether common implicit voice theories can be measured and linked to workplace silence as our next goal (versus developing an exhaustive taxonomy of these theories). We proceeded to Study 3, in which we developed survey measures to operationalize the five implicit theories identified most frequently in Studies 1 and 2.

STUDY 3: DEVELOPMENT OF IMPLICIT VOICE THEORY MEASURES

Our goal in Study 3, to evaluate the psychometric properties of proposed scales for five implicit voice theories, included assessing statistical support for our argument that implicit voice theories are distinct (i.e., show discriminant validity) from the individual difference and contextual factors commonly discussed in extant literature.

Methods

Data collection and sample. To reduce respondent fatigue and concerns about common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003), we collected survey responses to new implicit theory items and items tapping several potential correlates on a first survey and then obtained responses to items assessing other theoretically relevant constructs on a second survey given approximately one week later. We collected survey data from two sources, both of which (as in Study 2) provided access to adults with a broad range of work experiences in hierarchical settings. We used a community-based online subject pool associated with one university in the northeastern United States. Of the 231 adults invited to participate (on the basis of eligibility criteria including at least two years of full-time work experience), 157 provided usable data for survey 1, and 117 provided usable data for both surveys, giving us an overall net response rate of 52 percent of those initially invited to participate. We also administered surveys 1 and 2 to 110 MBA students at a second northeastern university. Of the 108 respondents who provided usable data for survey 1, 66 respondents also provided usable data for survey 2, giving us a net response rate of 60 percent.

Of the 265 respondents providing data for the implicit voice theory measures and other constructs on survey 1, 59 percent were female, and 66 percent were between the ages of 22 and 35. Approximately 85 percent of the sample had spent the majority of their childhood in North America; 10 percent were raised in Asia. In this sample, 48 percent of the members were currently employed, and 51 percent had been managers of at least one employee in their most recent job. Compared to the MBA respondents, respondents from the community pool were, on average, older, and they were more likely to be currently employed, U.S.-raised, and female (all $p < .01$). These differences merely represent increased variance on those dimensions and were therefore not considered a reason to separate the samples for assessments of the implicit voice theory scales or their correlations with individual differences. However, because the relationship between the theories and factors in an individual's current environment (e.g., boss behaviors) might be expected to differ for those currently employed and those currently unemployed, we report correlations and discriminant validity evidence for the implicit voice theories and contextual factors using only the 94 currently employed respondents from the community sample.

Measures of implicit voice theories. Use of self-report survey measures is the most common technique for assessing implicit theories, and prior research indicates that when presented with straightforward statements of an implicit theory, people are able to "reflect and endorse their views accordingly" (Levy et al., 2006: 5), even if the beliefs are not normally made explicit. For example, implicit person theories are routinely assessed on surveys with basic statements reflecting beliefs about the malleability of personality (e.g., Chiu et al., 1997; Levy et al., 1998; Plaks, Grant, & Dweck, 2005), intelligence, creativity, wisdom (Sternberg, 1985), and morality (Chiu, Dweck, Tong, & Fu, 1997). Our goal was to develop implicit voice theory measures that were understandable and appropriate for adults in a wide variety of industry and organizational settings and that had adequate content validity without taxing respondents' energy or goodwill (Brown, Trevino, & Harrison, 2005).

We therefore used working definitions and examples from Studies 1 and 2 to iteratively develop, discuss, and refine survey items until we had settled on 28 survey items (5 or 6 per theory) deemed to represent the conceptual domain of our five implicit theories. Throughout the process, we attempted to ensure that our measures had reasonable initial "substantive validity" (Anderson & Gerbing, 1991) by constructing items that drew directly from the language used by working informants, revising proposed items on the basis of feedback from a consultant working in this domain, and making further revisions based on feedback from executive MBA students. Because implicit voice theories are *general* beliefs imported into *specific* situations (e.g., interactions with specific bosses), the questions treat "speaking upward" and "to the boss" in hypothetical rather than concrete terms. Respondents were given a general instruction to answer "some specific questions about upward communication in work organizations" rather than told to think about speaking up to a particular target (e.g., their current boss). Questions were answered on a five-point agreement scale.

Measures of potential correlates. The ultimate value of implicit voice theory measures rests not on their own reliability and internal validity, but on whether they are distinct from and have incremental validity over other predictors. In Study 3, we therefore began establishing discriminant validity by collecting data on a number of individual and organizational attributes. We included several variables commonly used in prior voice research (e.g., LePine & Van Dyne, 1998). We coded re-

spondents' *gender* (1 = "female"), *current employment status* (1 = "currently employed"), and *managerial status/experience* (1 = "manager") using dummy variables. Respondents' *age* was assessed using seven categories, ranging from "21 or less" to "56 or older." Respondents also indicated the *type of industry/company* in which they had the most years of work experience using one of seven categories provided (e.g., "manufacturing," "consulting").

We also sought to establish that the implicit voice theory measures were distinct from dispositional characteristics of respondents linked to voice in prior research. For example, LePine and Van Dyne (2001) found assertiveness and vulnerability, subcomponents for extraversion and neuroticism, respectively, to be the "Big 5" personality markers most highly correlated with voice. Similarly, proactive personality has been identified as a positive correlate of voice behavior in prior research (Detert & Burris, 2007). Endorsement of implicit voice theories may simply be a reflection of respondents' overall vulnerability or, conversely, may be completely unnecessary responses to certain stimuli for those very high in assertiveness and proactive personality. *Assertiveness* and *vulnerability* were therefore each measured on survey 1 using 10 items from the International Personality Item Pool (2009). Sample items for assertiveness were "I take charge" and "I seek to influence others"; sample items for vulnerability were "I get overwhelmed by emotions" and "I can't make up my mind". We measured *proactive personality* on survey 2 using 4 items from Bateman and Crant's (1993) 17-item scale. The 4 items, including, "If I see something I don't like, I fix it" and "I am always looking for better ways to do things," have been used as a reliable short version of the scale in voice research (Detert & Burris, 2007).

Because implicit voice theories involve leaders as targets and because leaders have power to impose material consequences on employees (Magee & Galinsky, 2008), it was important to determine whether the theories stemmed from the current behaviors of respondents' bosses. For example, if these theories have deeper roots than learning from a current boss's behavior, then respondents' level of agreement with them should be distinct from their ratings of their current bosses' behaviors, even behaviors that are highly "considerate" (Stogdill, 1963) and "intellectually stimulating" (Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Similarly, if implicit voice theories represent more than learning from one's current context, then endorsements of them should also be distinguishable from ratings

of a negative current leader behavior such as abusive supervision (Burris, Detert, & Chiaburu, 2008). We also reasoned that other leader behaviors less directly linked to voice in prior research, such as "initiating structure" (leader behaviors involving clear delineation of standards and expected procedures [Stogdill, 1963]), should be distinct from the implicit voice theories. Even if these theories are largely a reflection of current leader behaviors, initiating structure could minimize the development of theories if it leads subordinates to see a leader as even-handed; or, conversely, it could lead to higher levels of implicit voice theories if subordinates perceive initiation of structure as leader disinterest in being challenged.

We evaluated the above discriminant validity questions using four extant measures of perceived leader behavior. First, in survey 1 we used items from the Leader Behavior Description Questionnaire (LBDQ-12; Stogdill, 1963) to assess consideration and initiating structure. The 6 items used to measure *consideration* include "S/he is friendly and approachable" and "puts suggestions made by the group into action"; the five items used to measure *initiating structure* include "asks that group members follow standard rules and regulations" and "lets group members know what is expected of them." Second, we used Podsakoff and colleagues' (1990) 4-item measure to assess *intellectual stimulation* (sample items: "S/he challenges me to think about old problems in new ways" and "asks questions that prompt me to think") in survey 2. Third, we measured *abusive supervision* in survey 2, asking respondents 6 questions from Tepper's (2000) 15-item scale. Four of the 6 items chosen have been shown to form a reliable scale that is negatively correlated with subordinates' psychological safety and use of voice to their current leader (Burris et al., 2008). Sample items include "S/he puts me down in front of others" and "S/he tells me my thoughts or feelings are stupid." These four leader-behavior constructs were all rated on a five-point frequency scale ranging from "never" to "always."

Finally, if individuals develop implicit theories prior to joining a specific work organization, then the theories measured here should not be strongly related to signals about the risks of voice in a current work environment. For example, measures of the theories should be distinct from measures of organizational centralization, even though hierarchical, centralized decision making has been identified as a feature of organizations in which silence is pervasive (Milliken et al., 2003). To investigate this relationship, we included the hierarchy of authority component of Hage and Aiken's (1969)

measure of *organizational centralization* in survey 2. This five-item measure was assessed on a four-point scale ranging from "definitely false" to "definitely true" with items such as "There can be little action here until a supervisor approves a decision" and "Even small matters have to be referred to someone higher up for an answer."

Data Analysis

The first question addressed by Study 3 was whether our measures of the five implicit voice theories have adequate statistical properties. We computed and evaluated item and scale descriptive statistics and reliabilities, as well as results from multiple factor analysis models. To do this, we randomly split the 265 survey 1 responses, analyzed the first half extensively, and then ran a single confirmatory model on the hold-out sample.

With the first half of the sample, we fit the 28 items to a five-factor model in LISREL, using maximum-likelihood estimation and allowing for factor correlation (with direct oblimin rotation). After examination of item means, reliability information, and factor loadings (e.g., item loadings >.50 on the hypothesized factor), we eliminated 8 items (1 or 2 from each implicit theory measure) and estimated a second five-factor model using the remaining 20 items (see Appendix A for the items). We then estimated several four-, three-, and one-factor models to compare against the fit of the hypothesized five-factor model. For example, we compared the fit of the hypothesized model to that of a four-factor model in which the items for the "don't bypass the boss upward" and "don't embarrass the boss in public" implicit theories were loaded onto a single factor. When convinced that the five-factor model was the most appropriate one for the first half of the data, we then estimated its fit using the hold-out sample ($n = 132$).

To examine whether our implicit voice theory measures had discriminant validity in relation to other theoretically relevant variables, we computed scales for all constructs (the five implicit voice theories and all other constructs in the nomological network) by averaging all items tapping a construct and estimating reliabilities for each scale. We then computed bivariate correlations among all the variables and performed additional confirmatory factor analyses (CFAs). For the demographic characteristics assessed as categorical variables, we assessed relationships with the implicit voice theories via analyses of variance (ANOVAs) with post hoc contrasts.

Findings

Table 2 presents the means, standard deviations, and intercorrelations of the five implicit voice theories and all other variables.

Implicit voice theory scales. As expected, the implicit voice theory measures are positively and moderately intercorrelated. The means are near the scale midpoint of 3.0, and standard deviations (0.73 to 0.90) indicate a significant range of agreement with each implicit theory. The estimated reliabilities for the implicit voice theory scales (see the diagonal of Table 2) are acceptable (Nunnally & Bernstein, 1994).

The hypothesized five-factor structure for the 20 retained implicit voice theory items fit the randomly selected first half of the data well (RMSEA = .05, CFI = .97, NNFI = .96). Further, the five-factor model fit the data better (in terms of fit indexes and significant differences in chi-square statistics per degrees of freedom) than all more parsimonious models estimated. For example, the hypothesized five-factor model corresponding to our implicit voice theories fit the data better than a four-factor model combining the items for the "don't bypass the boss upward" and "don't embarrass the boss in public" implicit theories ($\Delta\chi^2 = 49.1$, $\Delta df = 4$, $p < .01$) and a model with a single factor ($\Delta\chi^2 = 289.6$, $\Delta df = 10$, $p < .01$). The hypothesized five-factor model also fit the data better than a four-factor model in which the correlation between the two most highly correlated implicit theory latent factors ("don't bypass upward" and "don't embarrass the boss in public") was fixed at 1.0 ($\Delta\chi^2 = 56.8$, $\Delta df = 1$, $p < .01$) (Bagozzi & Phillips, 1982). We confirmed the fit of the hypothesized five-factor model using the unexplored half of the data. All fit indexes were again above acceptable thresholds (e.g., RMSEA = .08, CFI = .94, NNFI = .93).

Implicit voice theories and relevant correlates. We next considered the discriminant validity of the implicit voice theories from the set of individual differences and contextual factors described above. As shown in Table 2, respondents' demographic characteristics were largely unrelated to the implicit voice theories. Respondents who were currently employed reported higher agreement with the implicit theory that one needs solid data or solutions when speaking up and with the implicit theory that speaking up has negative career consequences. The managerial status of respondents was not related to any theory, suggesting that becoming a manager does not make one less likely, on average, to hold the kinds of implicit theories that thwart speaking up. Gender was also uncorrelated with any of the implicit voice theories. Further,

TABLE 2
Descriptive Statistics and Correlations for Study 3 Variables[a]

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Individual implicit voice theories																		
1. Presumed target identification	2.90	0.76	(.78)															
2. Need solid data or solutions	2.80	0.90	.43**	(.78)														
3. Don't bypass boss upward	2.89	0.76	.36**	.33**	(.76)													
4. Don't embarrass boss in public	3.22	0.77	.35**	.40**	.51**	(.77)												
5. Negative career consequences	2.67	0.73	.49**	.42**	.36**	.35**	(.76)											
Individual difference variables																		
6. Gender	0.60	0.49	.03	.08	−.03	.07	.02											
7. Current employment status	0.51	0.50	.12	.24**	.07	.07	.24**	.18*										
8. Managerial status/experience	0.51	0.50	−.11	.03	−.10	.02	−.11	.04	.07									
9. Assertiveness	3.76	0.62	−.32**	−.19*	−.23**	−.26**	−.28**	−.02	−.02	.27**	(.91)							
10. Vulnerability	2.08	0.56	.26**	.04	.06	.04	.11	.11	−.13	−.23**	−.42**	(.89)						
11. Proactive personality	4.20	0.53	−.11	.03	−.04	.07	−.15*	.09	.00	.15*	.45**	−.23**	(.77)					
Contextual variables																		
12. Consideration (leader)[b]	3.62	0.78	−.26*	−.06	−.06	−.02	−.12	.13		.07	.13	−.21*	.18	(.89)				
13. Initiating structure (leader)	3.94	0.66	−.03	−.05	−.02	.00	−.03	.23*		.24*	.06	−.21*	.06	.37**	(.76)			
14. Intellectual stimulation (leader)	3.16	0.85	−.24*	−.05	−.30**	.04	−.22*	.15		.34**	.29**	−.25*	.33**	.42**	.27**	(.89)		
15. Abusive supervision (leader)	1.50	0.74	.17	.07	.11	.10	.26*	.00		−.03	.02	.05	−.04	−.62**	−.29**	−.43**	(.91)	
16. Organizational centralization	2.20	0.61	.38**	.06	.18	.19	.27**	.12		−.19	−.25*	.37**	−.22*	−.27**	−.06	−.42**	.38**	(.87)

[a] Variables 1–10 and 12–13 were measured at time 1; variables 11 and 14–16 were measured approximately one week later. Where appropriate, alpha reliabilities are shown on the diagonal in parentheses. Empty cells indicate use of a restricted sample for correlations involving contextual variables.

[b] $n = 183$ for correlations involving variables 1–11, but $n = 94$ for correlations involving contextual variables 12–16.

* $p < .05$
** $p < .01$

ANOVA results (not shown in Table 2) for both the age and the industry categories indicated no overall differences for any of the implicit theories; post hoc univariate comparisons also did not reveal clear differences in the implicit theories for any age or industry grouping.

The bivariate correlations between the implicit voice theories and the individual dispositions examined are generally modest, and only about half are significant. The most consistent pattern emerges for assertiveness, which is significantly, negatively related with all five implicit voice theories (though at a modest level, an average r of $-.26$). Using the complete data from both samples ($n = 183$), we ran a CFA in which the hypothesized best-fitting model had eight factors: five implicit voice theories, assertiveness, vulnerability, and proactive personality. CFA results suggested an acceptable fit for the model discriminating the theories from the personality traits (RMSEA = .06, CFI = .92, NNFI = .92) and a poorer model fit for all alternative models combining any implicit voice theory with any personality dimension. For example, a seven-factor model combining items for the personality dimension (assertiveness) and the theory (career consequences) whose independent factors were most highly correlated ($\phi = -.42$) in the eight-factor model fit the data significantly less well ($\Delta \chi^2 = 173.8$, $\Delta df = 7$, $p < .01$).

Turning to the contextual factors, we found that the four measures of perceived leader behavior generally had correlations with the implicit voice theories in the expected directions (e.g., negative for consideration, positive for abusive supervision), but overall these relationships were quite weak and inconsistent. For example, none of the four extant perceived leader behavior measures was significantly correlated with all five of the implicit theories, and only one correlation between a leader behavior and a voice theory reached .30. Intellectual stimulation showed the most consistent pattern, being significantly, negatively related to three of the five theories, but at an average value of only $-.15$. Abusive supervision and consideration were each correlated (positively and negatively, respectively) with only one of the five implicit voice theories. Finally, centralization was significantly, positively correlated with two of the five implicit voice theories (average $r = .22$). To avoid potential recall/hindsight bias, we ran CFA models on the implicit voice theory and work context factors using only the currently employed Study 3 respondents. Because a model with all ten factors (five theories, four leader behaviors, and centralization) required estimation of too many parameters rela-

tive to the sample size to produce reliable estimates, we fitted several smaller models to confirm the five theories were distinct from any of the context factors. No model that combines any contextual factor with any of the implicit voice theories resulted in a better fit to the data. For example, a six-factor model with five implicit theory factors and one factor for organizational centralization fit the data well (RMSEA = .04, CFI = .95, NNFI = .95), significantly better than a five-factor model that combined centralization with its highest correlated implicit voice theory, presumed target identification ($\Delta \chi^2 = 108.9$, $\Delta df = 5$, $p < .01$).

Summary

The results of Study 3 indicate that five inductively derived implicit voice theories can be measured with survey scales that show evidence of reliability and validity. Results also show that the implicit theories are distinct from theoretically relevant individual differences and contextual factors. The next question, which we addressed in Study 4, was whether these implicit voice theories also have incremental validity—that is, whether they predict workplace silence in analyses controlling for other individual and contextual explanations.

STUDY 4: EXAMINING THE INCREMENTAL VALIDITY OF IMPLICIT VOICE THEORIES

We used a three-wave survey process with a new sample of working adults to examine the incremental validity of the implicit voice theories as predictors of silence. We measured an array of theoretically relevant individual difference and contextual correlates of silence at time 1, the implicit voice theories at time 2, and silence about problems and ideas at time 3.

As already noted, prior theory and research on voice and the smaller body of research on silence have described individual demographic, dispositional, and attitudinal factors, leadership behaviors, and other contextual factors as primary influences on voice or silence. The arguments and initial evidence offered thus far in this article, however, suggest that implicit voice theories that are only partially, if at all, rooted in current experience drive silence in a current organization, directed toward current authority figures. For example, employees may remain silent in meetings with "skip-level" leaders (those in positions one or more hierarchical steps higher than the employees' immediate bosses) because they developed a belief long ago that their boss would see speaking up as disloyal. Or employees may have internalized gen-

eral social norms about "embarrassing others in public" and therefore refrain from speaking up in such settings, irrespective of their natural tendencies toward speaking up or current contextual cues from a leader about its acceptability. We therefore tested the following hypothesis about the independent influence of the theories of interest here:

Hypothesis 1. Implicit voice theories predict workplace silence in analyses controlling for other individual and contextual influences on silence.

As described in our introduction, and illustrated throughout, the nature of implicit theories suggests that the direct, independent effect hypothesized above is its own main story, not a simplification of a moderation or mediation story involving general workplace influences. Thus, we conducted a series of robustness checks to rule out alternative explanations, including the idea that we missed more complicated relationships between the theories and other variables. We also examined whether our hypothesis receives support using an alternative dependent variable (voice) that is less directly the behavioral manifestation of the implicit voice theories.

Methods

Data collection and sample. To reduce concerns about respondent fatigue, common method bias, and uncertain direction of causality, we collected the Study 4 data via three surveys completed approximately one to three weeks apart (Ostroff, Kinicki, & Clark, 2002). The measures of all individual difference and contextual variables were placed on survey 1, the implicit voice theory measures on survey 2, and the dependent variable—a measure of silence—on survey 3. In addition to staggering surveys to reduce "memory traces" (Harrison & McLaughlin, 1993), we used spacing within the surveys and different scale types (e.g., agreement versus frequency anchors [Podsakoff et al., 2003]) to facilitate construct differentiation.

Data were collected from students enrolled in an executive MBA program based in the northeastern United States. Of 123 possible respondents, 116 completed all three surveys. However, because an accurate assessment of the hypothesis depended on respondents' being currently employed and having a current boss, we excluded responses from 22 people who were unemployed or self-employed (e.g., company founders). The average age reported by the 94 in the final sample was 34.5 (s.d. = 5.0); 17 percent were female, 68 percent reported being a manager of one or more employees, 43 percent reported significant work experience outside the U.S. or Canada, and 50 percent reported being born and raised outside of North America (with 33 percent, Asia was the dominant other origin).

Measures

Implicit voice theories. We assessed the five implicit voice theories using the same 20 items used in Study 3 (see Appendix A), again rated using a five-point agreement scale. Because our goal in Study 4 was to examine the predictive utility of implicit voice theories as an explanatory category distinct from personality or contextual factors, not to assess which particular theories are most related to silence in this particular sample, we combined the 20 items into a single higher-order latent construct (*self-protective implicit voice theories*) using confirmatory factor analysis in LISREL. In short, use of a higher-order construct is both parsimonious and consistent with the recommendation that independent and dependent variables (in this case, a general measure of silence) should be assessed at the same level of aggregation (Ajzen, 1991). We thus computed the value for each respondent on this higher-order implicit voice theory construct by weighting each of the 20 theory item responses by its loading on the first-order factor and then further weighting the five first-order theory factors by their loadings on the second-order theory factor. Estimated reliability for this measure is .93.

Individual difference control variables. We used evidence from Study 3 as well as from prior theory and research to select individual difference and contextual control variables. *Gender* (1 = "female") and *age* (in years) were assessed as basic demographic controls that could potentially affect silence (LePine & Van Dyne, 1998). Because the assertiveness dimension of extraversion and the vulnerability dimension of neuroticism were the highest Big 5 correlates of voice in prior research (LePine & VanDyne, 2001) and could likewise be reasons for silence, we again measured respondents' *assertiveness* and *vulnerability* as described in Study 3. We also measured *proactive personality*, another dispositional predictor of speaking up (Detert & Burris, 2007), as in Study 3. Additionally, because dispositional affect may be theoretically related to staying silent at work (Tangirala & Ramanujam, 2008) and is a recommended means of controlling for potential same-source biases (Cropanzano, James, & Konovsky, 1993), we included measures of re-

spondents' *positive affect* and *negative affect* using Watson, Clark, and Tellegen's (1988) 20-item PANAS scale, with instructions to report the extent each adjective was felt "on average," using anchors ranging from "very slightly or not at all" (1) to "extremely" (5).

We also controlled for respondents' *managerial status* (coded 1 for a manager of one or more subordinates, 0 otherwise), reasoning that formal position might alter both beliefs and behaviors regarding speaking up. Finally, because level of satisfaction with one's job has been examined as a reason to speak up more or less (e.g., Withey & Cooper, 1989), we assessed overall *job satisfaction* on a five-point scale using three items adapted from Hackman and Oldham's Job Diagnostic Survey (1975) (sample item: "Generally speaking, I am very satisfied with my current job"; "strongly disagree" [1] to "strongly agree" [5]).

Current context control variables. We controlled for four aspects of respondents' current context that might independently influence workplace silence. First, drawing from the literature (e.g., Milliken et al., 2003), we assessed respondents' view of their organization's *centralization* (using the same measure as in Study 3). Second, we measured respondents' ratings of the psychological safety in their work units, because of its clear connection to willingness to take interpersonal risks, including speaking up (Detert & Burris, 2007; Edmondson, 2003). We used Edmondson's (1999) scale, with items rated from "highly inaccurate" (1) to "highly accurate" (7) (sample items: "Members of my unit are able to bring up problems and tough issues"; "It is safe to take a risk in my unit"). Third, we assessed *leader openness* on a scale ranging from "never," 1, to "always," 5, using a four-item scale used by Detert and Burris (2007) (sample items: My manager is . . . "willing to make changes," "interested in my ideas"). Though leader intellectual stimulation (as used in Study 3) and leader openness are conceptually similar, we chose to use the latter here, given its more direct theoretical and empirical link to speaking up beliefs and behavior in prior work (e.g., Ashford et al., 1998; Detert & Burris, 2007). Finally, we again measured perceived abusive behaviors of a current boss, using the same *leader abusiveness* measure as in Study 3, because this variable has been linked to reduced voice (Burris et al., 2008).

Silence. In response to prior arguments that silence should be theorized and measured as distinct from voice (Van Dyne et al., 2003) and to serve our specific focus on beliefs leading to self-censoring—or *not* speaking up—we did not wish to use extant voice measures as a dependent variable. Similarly, newly developed measures of silence were not appropriate for this research, because motives for silence are embedded in them. For example, Parker, Bindl, Van Dyne, and Wong's (2009) measure of "defensive silence" includes attributions about withholding ideas, opinions, or information because the respondent does not want to "damage [his/her] reputation" and "be seen as difficult or rude." Use of such measures here would thus have involved using an explanation for silence (implicit voice theories) to predict an outcome measure with its own already embedded explanation.

We therefore developed our own five-item measure of *silence*. The scale is target-specific, in that respondents were asked to answer questions about "withholding ideas, opinions, and/or information from your *current boss*." We relied on self-reports because, unlike observable behaviors (including voice), instances of intentional withholding of input are most clearly knowable by the self (Tangirala & Ramanujam, 2008). The items for this measure, which were rated on a frequency scale (1 = "never" to 5 = "always"), were "I withhold ideas from my boss for changing inefficient work policies," "I keep ideas for developing new products or services to myself," "I do not speak up about difficulties caused by the way managers and subordinates interact, "I keep quiet in group meetings about problems with daily routines that hamper performance," and "I withhold thoughts about improving customers'/stakeholders' experiences with us." Estimated reliability for this measure was .74. To confirm that this scale was negatively related to, but not the mere opposite of, voice, we also collected a self-report measure of voice using Van Dyne and LePine's (1998) six-item voice scale. In keeping with expectation, the correlation between the silence and voice measures was −.55, indicating only about 30 percent overlap in self-reported voice and our new measure of silence that reflected *withholding* input.

Findings

Preliminary analyses. Table 3 presents the means, standard deviations, correlations, and estimated reliabilities (on the diagonal) of the Study 4 variables. In general, variable correlations are as expected (e.g., leader openness and leader abuse are negatively correlated; the implicit voice theory latent variable and silence are positively correlated), and none are so high as to warrant concerns about multicollinearity.

TABLE 3
Descriptive Statistics and Correlations for Study 4 Variables[a,b]

Variable	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Gender	0.17	0.38																	
2. Age	34.50	5.03	-.11																
3. Assertiveness	3.94	0.48	-.05	.08	(.80)[c]														
4. Vulnerability	1.87	0.47	.11	-.19	-.23*	(.79)													
5. Proactive personality	4.22	0.54	.06	-.12	.19	-.29**	(.76)												
6. Positive affect	3.84	0.48	.13	.05	.34**	-.33**	.32**	(.81)											
7. Negative affect	1.69	0.50	.10	-.34**	-.05	.53**	.03	-.10	(.84)										
8. Managerial status	0.68	0.47	.13	.08	.13	.06	.17	-.11	.12										
9. Job satisfaction	3.19	0.89	.00	.03	-.03	-.11	.06	.31**	-.26**	-.04	(.83)								
10. Organization centralization	2.28	0.69	.17	-.17	-.22*	.06	.14	.00	.18	-.05	-.38**	(.85)							
11. Work unit psychological safety	5.08	0.98	-.11	.27**	.22*	-.14	.01	.06	-.36**	.08	.24*	-.48**	(.66)						
12. Leader openness	3.64	0.76	-.05	.10	.24*	-.27**	.05	.16	-.22*	.17	.27**	-.52**	.46**	(.88)					
13. Leader abusiveness	1.63	0.71	-.01	-.04	.08	.15	.09	-.01	.36**	.08	-.28**	.44**	-.35**	-.61**	(.84)				
14. IVT-specific leader behaviors	2.02	0.75	.13	-.01	-.03	.11	-.07	.05	.21*	-.08	-.22*	.52**	-.37**	-.60**	.75**	(.88)			
15. Self-protective IVTs	24.46	4.94	.06	.09	-.14	-.05	-.02	.14	-.12	-.11	.01	.29**	-.19	-.01	.05	.22*	(.93)		
16. Voice	3.93	0.54	-.06	.10	.22*	-.01	.05	-.01	-.09	.10	.06	-.16	.29**	.17	-.01	-.14	-.30**	(.81)	
17. Silence	1.95	0.58	-.06	-.02	-.27**	.04	.03	-.01	.11	-.12	-.01	.25*	-.27**	-.22*	.15	.24*	.44**	-.55**	(.74)

[a] "IVT" is "implicit voice theory." $n = 94$. Variables 1–14 were measured at time 1, variable 15 at time 2, and variables 16–17 at time 3.
[b] Variables 3–7 and 9–17 were measured on five-point scales, with these exceptions: 10, four-point scale, and 11, seven-point scale.
[c] Values on the diagonal in parentheses are scale reliabilities; reliability for the second-order self-protective implicit voice theory construct was calculated as $1/(1+1/x)$, where x is the sum of five χ^2/psi terms, estimated using CFA in LISREL. For an illustration of this technique, see www.ssicentral.com/lisrel/techdocs/validity.pdf.

* $p < .05$
** $p < .01$

Given the moderate correlations among the five specific implicit voice theories (in Study 3 and in this study), we expected and found the fit indexes for a CFA model loading the 20 voice theory items onto five first-order factors and then onto a higher-order self-protective voice theory latent factor to be acceptable but not high (e.g., RMSEA = .08). Also as expected, fit indexes for this higher-order latent construct model were lower than those for a model with only five first-order implicit voice theory constructs (e.g., RMSEA = .06), but much better than those for a model that simply bypassed the five first-order constructs and loaded all 20 items directly onto a single latent factor (e.g., RMSEA = .14, $\Delta\chi^2$ = 130.9, Δdf = 5, $p < .01$). Additional models also confirmed the independence of the implicit voice theory, voice, and silence constructs (i.e., any model that combined items for these three factors into two or fewer factors produced significantly poorer model fit indexes and chi-square statistics). For example, a three-factor model distinguishing the implicit voice theories, voice, and silence fit significantly better than a two-factor model combining silence and voice ($\Delta\chi^2$ = 17.6, Δdf = 2, $p < .01$).

Hypothesis test. We examined our hypothesis using hierarchical ordinary least squares regression analysis. We first entered all control variables, which collectively explained 19 percent of the variance in silence; Table 4 (model 1) presents results. In a second model, we added the implicit voice theory second-order latent factor. This factor is significantly related to silence ($\beta = 0.39$, $p < .01$) and explains an additional 12 percent of the variance in

TABLE 4
Study 4: Implicit Voice Theories as Predictors of Silence[a]

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Individual differences							
Gender	−0.13[a]	−0.12	−0.11	−0.13	−0.10	0.01	0.00
Age	0.06	0.01	−0.01	0.01	−0.02	0.06	0.09
Assertiveness	−0.23	−0.18	−0.20	−0.18	−0.18	0.19	0.15
Vulnerability	−0.09	−0.10	−0.13	−0.09	−0.10	0.13	0.14
Proactive personality	0.06	0.08	0.07	0.10	0.06	0.05	0.05
Positive affect	0.02	−0.02	0.00	−0.03	−0.00	−0.11	−0.08
Negative affect	0.12	0.17	0.16	0.16	0.18	−0.10	−0.13
Managerial status	−0.08	−0.05	−0.03	−0.04	−0.05	0.00	−0.02
Job satisfaction	0.16	0.12	0.09	0.11	0.14	0.03	0.06
Contextual variables							
Organizational centralization	0.19	0.04	0.48	0.02	0.94	0.06	0.15
Work unit psychological safety	−0.14	−0.08	−0.47	−0.08	−0.61	0.19	0.15
Leader openness	0.04	−0.10	0.30	−0.09	0.27	0.09	0.18
Leader abusiveness	0.11	0.03	−0.03	−0.04	0.79	0.25	0.26
IVT-specific leader behaviors				0.09	−1.40	−0.22	−0.15
Implicit voice theories							
Self-protective IVT latent factor		0.39	0.62	0.38**	0.31		−0.27*
Context by IVT interactions							
Organizational centralization × IVT			−0.61		−1.20		
Climate for psychological safety × IVT			0.52		0.77		
Leader openness × IVT			−0.54		−0.51		
Leader abusiveness × IVT			0.08		−0.94		
IVT-specific leader behaviors × IVT					1.81		
R^2	0.19	0.30	0.31	0.31	0.34	0.14	0.20
ΔR^2 [b]		0.12	0.01		0.03		0.06
ΔF		12.87**	0.25		0.71		5.2*

[a] Standardized regression coefficients are reported. "IVT" is "implicit voice theory." $n = 94$.

[b] For the model 2 change in R^2 (ΔR^2), the baseline model is model 1; for model 3, the baseline is model 2; for model 5, the baseline is model 4; and for model 7, baseline is model 6.

* $p < .05$
** $p < .01$

silence beyond that explained by the controls ($\Delta F = 12.87$, $p < .01$).[2] This result offers clear support for our hypothesis.

Robustness Checks

Context moderation. To examine whether the main effect of implicit voice theories on silence masked a more complex pattern of amplified or attenuated impact driven by contextual features, we examined the results of a model with four interaction terms, each testing a context variable commonly studied in the voice literature. As shown in model 3 of Table 4, these results provide no evidence of an interaction between aspects of respondents' current organizational, team, or leadership context and implicit voice theories. Although our sample size limited power to detect such effects, none of the interaction terms approached significance, and adding the four interaction terms together did not appreciably improve the explanatory power of the model ($\Delta F = 0.25$, n.s.).

Mediation. To examine whether implicit voice theories mediate between the contextual factors studied and silence, we used two statistical approaches. First, we tested whether the theories mediate relationships between team psychological safety, organizational centralization, leader openness, and leader abuse and silence using the Baron and Kenny (1986) four-step method. In all cases, the first two conditions were not both met; thus, this approach did not reveal evidence of mediation. Second, where appropriate, we conducted Sobel (1982) tests to examine distal mediation (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002) and again found no statistical evidence to suggest that the implicit voice theories studied here were mediating an indirect relationship between the contextual influences and silence.

We also conducted mediation tests to consider the possibility that mediation ran in the opposite direction, as suggested by implicit leadership theory (Lord & Maher, 1991) and demonstrated in recent psychological research (Critcher & Dunning, 2009). Here, too, we found no evidence that implicit voice theories influenced how current contextual factors were perceived, precluding as plau-

sible a model in which perceptions of context mediate between implicit voice theories and silence.

Implicit voice theory–specific leader behaviors. As an additional check on the robustness of our results, we ran a set of regressions adding another leader behavior variable to models 2 and 3. Because we reasoned that leader openness and leader abusiveness, as general constructs, might not be specific enough to affect silence through implicit voice theories or to moderate the impact they have on speaking up to a leader, we developed and included in the regressions a measure of leader behaviors that directly related to the theories. To illustrate, an employee might hold implicit theories about not embarrassing his/her boss in public because of witnessing the boss reacting angrily when others brought new issues up in front of coworkers. In this case, the manager's specific behavior, not an implicit theory, could be said to have led to employee silence. Lacking extant measures of these implicit voice theory–specific leader behaviors, we developed ten items (two per implicit theory) to assess whether our respondents' current bosses had engaged in specific behaviors related to the theories. Respondents were asked to rate each of the ten statements on a seven-point scale ranging from "highly inaccurate" to "highly accurate" as a description of their current direct boss. Instructions for these questions stated this: "We are interested here in understanding whether you have *actually experienced* the following behaviors and outcomes, not your beliefs or general impressions about them." To illustrate, items included in the *implicit voice theory–specific leader behavior* scale capturing experiences related to *presumed target identification, need for data or solutions,* and *don't bypass the boss upward,* respectively, were: "My boss gets upset when people point out problems with work routines that s/he has spent time developing or supporting," "People in my unit are told not to bring up problems unless they can present clear solutions," and "My boss uses words and actions indicating that pointing out things needing improvement to those higher in the organization is a sign of disloyalty to her/him." Estimated reliability for this ten-item scale was .88.

We first retested our hypothesis by adding the implicit voice theory–specific leader behaviors variable to the model (model 2) that included all the other control variables and the implicit voice theories. As shown in model 4 in Table 4, the implicit voice theory latent factor remained a significant predictor ($\beta = 0.38$, $p < .01$) of silence, and the new leader behavior control variable was not a significant predictor of silence. Further, the trivial

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[2] Whereas the implicit voice theory latent factor results in a significant ΔF and increase in adjusted R^2 when added to a model with all controls, the reverse is not true: when the latent variable is entered alone in step 1, there is no significant increase in variance explained by adding the 13 control variables ($\Delta F = 0.97$, n.s.; Δ-adjusted-R^2 = −.003).

change in R^2 (~1%) between models 2 and 4 suggests that although the general implicit theories explain significant variance in silence (about 12 percent in both models), implicit voice theory–related behaviors by current bosses do not. Our results are thus robust to the inclusion of a variable assessing current bosses' implicit voice theory–specific behaviors.

We also reexamined the case for moderation and mediation involving the theories. As shown in model 5, the five terms interacting implicit voice theories and the respective context variables do not, collectively, produce any increase in the explanatory power of the model predicting silence ($\Delta F = 0.71$, n.s.). There is also no evidence for mediation using this new leader behavior variable.

Predicting voice. As a final robustness check, we addressed the concern that the relationship between implicit voice theories and silence may reflect the self-censoring nature of both the beliefs and the associated behavior by considering the incremental validity of the theories latent factor on *voice*. Recall, as argued earlier and supported by the correlation of $-.55$ between our measure of silence and Van Dyne and LePine's measure of voice, that silence and voice are not direct opposites; nonetheless, confidence in our findings and our hypothesis can be strengthened by showing that the incremental predictive validity of the theories on silence is replicated for the voice measure. We thus added the implicit voice theory latent factor (see model 7) to a controls-only model (model 6) and found a 6 percent increase in the amount of voice explained ($\Delta F = 5.2$, $p < .05$).

DISCUSSION

This article advances research on employee silence by investigating implicit theories of voice operating in organizational hierarchies. In four studies employing multiple methods to counterbalance and supplement each other's contributions, using data from several hundred adults with varied work experiences, we identified, measured, and examined relationships with theoretically relevant correlates for five implicit theories about speaking up. Our results provide initial evidence that implicit voice theories help explain employee silence, adding substantially to prior explanations that have focused on dispositional or demographic characteristics of employees and on organizational context. Together, the studies provide a platform for future research on implicit theories as an influence on workplace voice and silence.

Theoretical Contributions

Our focus on self-protective implicit voice theories advances understanding of reluctance to speak up at work. The traditional view is that contextual factors, such as the behavior of an angry boss or the memory of prior experiences (e.g., what happened last time one spoke up to person X about topic Y), give rise to a general conclusion that voice is unsafe (e.g., Milliken et al., 2003). Our research extends this view by explaining that people hold implicit theories relating certain situational cues to negative consequences that are such that specific features of the content, context, and target in a latent voice episode can trigger an implicit theory, thereby leading to silence. This explanation complements theory maintaining that general features of an employee's work environment make voice more or less risky. The implicit voice theories we identified are not random but, rather, consistent with what is known about reluctance to challenge authority (Milgram, 1974), fear of being ostracized (Williams, 2001), and the tendency to prevent embarrassment by avoiding face-threatening remarks (Brown & Levinson, 1987; Morand, 1996). Moreover, our findings show that sometimes unwillingness to speak up is not experienced as intense, discrete fear but rather as a sense of inappropriateness; voice seems risky because it seems wrong or out of place.

We also argued that because knowledge structures about undesired consequences of speaking up are formed throughout a life rather than merely through recent experience (Kish-Gephart et al., 2009), we expected implicit theories to be triggered by relevant stimulus cues and applied in a cognitively automatic, top-down fashion. The evidence presented in Study 4—that implicit voice theories show an independent main effect on silence, rather than mediation of (or moderation by) local conditions—provides initial support for this view. These findings imply that models that explain silence with leader behavior and other contextual factors are incomplete in important ways. In these leader-centric views, which have dominated the voice literature, employees choose silence because leader behavior has caused them to conclude that it is unsafe or futile to speak up (e.g., Burris et al., 2008; Nembhard & Edmondson, 2006). In this study, however, the perceived behaviors of actual leaders were only modestly correlated with implicit theories about speaking up to leaders. This finding is consistent with issue selling research, in which quantitative assessments of current management behavior (e.g., top management openness) have been largely unrelated to the perceived "image risks" of speaking up, even though qualitative stud-

ies have shown that informants attribute the risks to leader behavior (Ashford et al., 1998). We thus offer a complementary "follower-centric" perspective (Shamir, 2007).

In follower-centric models, it is what employees *believe about leaders in general* (based on a lifetime of prototype building) that drives behavior toward leaders (often in an automatic fashion), not objective characteristics or behaviors of *actual* leaders (Epitropaki & Martin, 2004; Lord & Maher, 1991). In essence, this perspective suggests that follower beliefs are vital to explanation of outcomes usually considered leadership effects. For research on voice and silence, a follower-centric perspective suggests that individuals bring implicit voice theories to work and automatically use them as filters for attending to and interpreting current stimuli. When features of a latent voice episode trigger a specific belief that it is unwise to speak up about *this issue*, or in *that venue*, then presumptions about leader reactions can be more influential on behavior than a leader's actual behavior or desires. In short, employees' silence can be thought of as influenced as much by their own cognitive frameworks as caused by current bosses' behaviors or other organizational factors.

We do not intend to suggest that actual boss behavior and direct experiences at work do not influence employee silence. Clearly, a domineering or abusive boss, or a recent experience of being reprimanded for speaking up, will influence the behavior of employees (Burris et al., 2008). (Indeed, although not significant in the regression models containing many variables, several leader behavior and other contextual factors showed significant bivariate correlations with employee silence.) According to a follower-centric perspective, employee silence does not require bosses acting in intimidating ways; *implicit theories about bosses* are sufficient, just as face saving and many other social behaviors are largely driven by internalized knowledge structures (Bacharach et al., 2000; Goffman, 1974). Although bosses figure prominently in most of the implicit voice theories we uncovered, "the boss" can be a hypothetical or archetypical authority, constructed over many years and experiences, rather than an accurate reflection of an employee's current manager or managers. This observation helps to explain why many managers are surprised to learn that people are afraid to speak up to them. If managers assume that others' fear has to be a reaction to *them*, or to something they have done, they will be puzzled when others are reluctant to speak up despite what they accurately see as a lack of intimidating behavior. Ironically, the beliefs of a boss may be the opposite of the beliefs contained in

an implicit voice theory. For example, contradicting the "presumed target identification" implicit theory, a manager may genuinely wish for honest input about projects and be unaware that others withhold that input because they tacitly assume that to offer it could be taken as criticism of the manager.

Limitations and Future Research Directions

Despite our use of multiple methods, study designs, and analyses to support our core theoretical arguments, this research has limitations, and much work remains to be done to understand the nature, antecedents, and consequences of implicit voice theories. Our studies rely on self-reports of the specifics in actual latent voice episodes, for reactions to an open-ended question, and for the measures of implicit voice theories. And Studies 3 and 4 used explicit measures (the most common method for assessing implicit theories) of the theories of interest. Although we took steps to alleviate common method concerns (including measurement over time periods, use of positive and negative affect as controls, and factor analysis to establish discrimination among constructs) (Podsakoff et al., 2003), it is possible that respondents were reporting "more than they can know" about their beliefs via this approach (Nisbett & Wilson, 1977). The consistent emergence of similar implicit theories in analyses using multiple methods and samples, together with the results in Studies 3 and 4 showing discriminant validity from potential correlates and criterion validity with voice and silence measured at a later time, strengthen our confidence in the validity of our approach and results; however, further research is required to test and extend the implicit theories we identified. This should include research establishing the predictive validity of implicit voice theories with additional controls not examined here (e.g., conscientiousness, agreeableness, self-esteem [LePine & Van Dyne, 2001]) and research comparing how survey measures relate to probes assessing implicit voice theories with more implicit methods (e.g., association tests or primes).

Because our primary theoretical and empirical goal was to establish the importance of the concept of implicit voice theories in explaining silence, we developed measures and examined relationships for the five theories most commonly identified in Studies 1 and 2. Despite the size and breadth of these samples, other implicit voice theories undoubtedly can be identified and perhaps even fit into a parsimonious taxonomy based on function or motive. We focused on five self-protective theories but, as noted in Study 2, we recognize that others

exist in this category and that implicit voice theories serving other purposes also exist; such purposes include protecting oneself or others from social ostracism or feelings of impotence. Systematic study across national cultures—especially cultures differing in "power distance" (House, Hanges, Javidian, Dorfman, & Gupta, 2004)—may prove particularly fruitful for comprehensive identification of implicit theories governing silence. Future work could also be done to refine and further test the survey measures developed for the five focal implicit voice theories of this study. Although several statistics (e.g., item variances, item-to-total scale correlations) suggested that our items were not overly complex, future research might use even simpler, more direct language to appropriately assess these and other implicit voice theories.

Our goals in Study 4 were conducive to using a single higher-order latent variable to represent the five theories. Additional analyses showing that the five theories entered alone (after all control variables) each significantly predicted silence strengthened our conclusions, as did the finding that the five implicit voice theories, entered as a set of first-order variables, predict an increment in silence ($\Delta R^2 = 15.5\%$) similar to the single higher-order latent variable. However, future research should investigate specific implicit voice theories for predicting specific voice-related criterion variables.

Attention to how implicit voice theories develop and shape behavior over time will also advance understanding of this important phenomenon. The mixed and modest correlations between the theories studied here and an array of individual differences and contextual factors, together with the preliminary lack of evidence that the former mediate the latter's influence on silence, suggest a need for future research on the causes of implicit voice theories. This might include identification of salient experiences in individual work histories, not just examining current leadership chains (Detert & Trevino, 2010). In some cases, a single distant incident or life event may stamp into memory long-enduring beliefs about speaking up (Tooby & Cosmides, 1990). For example, one interviewee vividly recalled an incident 12 years and three managers ago as the basis for his belief that speaking up is risky (cited in Kish-Gephart et al. [2009]). Research might also consider how nonwork experiences that shape orientation to authority in hierarchical settings (such as childhood and adolescent experiences in families, schools, and other institutions) endure in the form of implicit voice theories. Parental style (authoritative, authoritarian, or permissive [Baumrind, 1967]) and perceptions of parents' work experiences (Barling, Dupre, & Hepburn,

1998), for example, may affect the strength with which implicit voice theories are held in adulthood. In short, if people are born with a basic grammar for orienting themselves toward authorities, research must seek to identify the types of experiences that produce varied life stories from similar starting points (Fiske, 1991).

To uncover the sources of implicit voice theories, and to distinguish which are shared features of human socialization and which, if any, are specific to individual, organizational, and national experiences, research should be conducted on large samples of individuals from selected cohorts, organizations, and countries. Such research, especially if longitudinal, will help uncover the social dynamics through which implicit theories are formed and reinforced, leading, for example, to particularly strong "climates of silence" in some organizations (Morrison & Milliken, 2000). In sum, scholars need to better understand the factors that shape the development, use, reinforcement, and overcoming of implicit voice theories (Milliken et al., 2003). This understanding may require researchers to expand their theoretical (e.g., draw from evolutionary psychology, anthropology, child and adult development) and empirical (e.g., use life history narratives, subliminal priming approaches, or PET or fMRI scans to measure brain activity) scope.

This research did not find evidence for moderation of the impact of implicit voice theories on silence, despite its use of constructs often used in voice research: psychological safety, centralized decision making, and leader openness and abusiveness. During the review process for this article, we collected additional data (from 90 percent of our Study 4 sample) to explore (post hoc) the potential moderating role of perceived alternative employment possibilities. We tested whether access to alternative employment lowered the implicit theory effects on silence, but the results suggested instead that better alternative employment is related to lower silence only for those holding the implicit voice theories at *low* levels. Specifically, we found a significant interaction effect (on silence) for the interaction of alternative employment times self-protective implicit voice theories, and a plot of the interaction revealed that among respondents with high perceived access to alternative employment, silence was lower only for those reporting low agreement with the implicit voice theories ($\beta = 0.08$, s.e. = .02, $p < .01$). (For respondents with low perceived access to alternative employment, silence did not change with their level of agreement with the implicit voice theories [$\beta = 0.02$, s.e. = .02, $p = .34$, n.s.]). In short, we did not find evidence that strongly held implicit voice theories are

attenuated by contextual factors, such as access to alternative employment, that might indicate less need for their use.

These results, though initially counterintuitive, are consistent with the view of implicit voice theories proposed in this article. Specifically, we argue that implicit voice theories develop from the hard-wired motive of self-protection and are thus taken-for-granted, biased toward false positives, and rarely tested against evidence; therefore, aspects of a person's current context (such as an open boss or a decentralized organizational structure) rarely grab sufficient cognitive attention to override self-protective implicit theories. In this way, the implicit theories people hold drive behavior when basic stimulus cues trigger those theories (Bargh, 1997; Ehrlinger & Dunning, 2003). For example, if a person believes that speaking up in public is risky, silence will occur during public latent voice episodes even if the current context includes a good boss, a supportive culture, or little other basis for concern about job security or employability.

We do not intend to suggest that implicit voice theories cannot be moderated or overcome. In the chaos of competing stimulus cues, "it is the action schema with the strongest activation level that triumphs in this battle for cognitive supremacy and guide's one's behavior" (Macrae & Johnston, 1998: 404). Thus, for example, schema-driven helping will lead to picking up another's dropped pen, unless the brain's "supervisory attention system" (Norman & Shallice, 1986) shifts focus to another stimulus in the situation—such as messy leaking ink (Macrae & Johnson, 1998)—and overrides the initial automatic tendency. Similarly, implicit voice theories, despite an evolutionary basis, may be overridden in voice episodes in which sufficiently strong competing environmental stimuli lead the "prioritizing algorithms" in an individual's brain to activate alternative emotions, schemata, and action tendencies (Cosmides & Tooby, 2000). For example, situations involving behavior that is strongly offensive, illegal, or physically dangerous may evoke sufficient anger to override the withdrawal tendencies associated with implicit voice theories. As Kish-Gephart and her colleagues noted, "Higher intensity empathetic anger experienced when a close colleague is belittled, blatantly discriminated against, or unfairly blamed for a costly mistake may trigger an automatic response that over-rides fear's silencing effects" (2002: 182). Such appears to be the case for individuals who blow the whistle despite the fear of retaliation (Henik, 2008). Future research may include experiments to identify real-time cues that may lead to voice despite high levels of one or more implicit

voice theories. Such research would allow controlled study of the necessary conditions for establishing episodic attenuation or amplification of implicit theories.

Alternatively, field research could investigate organizational contexts (naturally occurring or manipulated in quasi-experiments) where norms or practices counteract the tendency toward silence associated with specific implicit voice theories. For example, researchers might study the impact of managerial statements targeted to contradict common theories, such as, "I want to hear about concerns *even if you don't yet have solutions*, because we can work on solutions together" or "I want you to speak up honestly at all times when you have a problem or idea, *no matter who is in the room, including my boss.*"

Conclusion

Implicit voice theories present subtle barriers to organizational learning. Even when managers do not behave in ways that actively stifle voice, implicit voice theories can block valuable knowledge from being shared. Enabling individuals to speak up to those in power is inherently challenging, given the presumed risk-reward asymmetry that favors silence. In short, voice's benefits are primarily collective (organizational), but individuals bear voice's costs. The implicit voice theories discovered in this research add to this simple observation, exacerbating the asymmetry and increasing the pull of silence. Viewed this way, our findings can be seen as reason for further pessimism about the ideal of an organization that elicits and puts to use the ideas and intelligence of all its members. Managers appear saddled not only by their own actual behaviors inhibiting voice but also by subordinate beliefs about managers. However, although managers may have little choice about whether employees bring implicit voice theories to work, they do have discretion about whether to proactively manage them or to let them be silent killers of voice. Proactive management would involve acknowledging that people hold beliefs that foster silence, explicitly stating theories that contradict those beliefs, and continuously working to dispel them by modeling, inviting, and rewarding speaking up.

REFERENCES

Abelson, R. P. 1976. Script processing in attitude formation and decision making. In J. S. Carroll & J. W. Payne (Eds.), *Cognition and social behavior:* 33–46. Hillsdale, NJ: Erlbaum.

Ajzen, I. 1991. The theory of planned behavior. *Organi-*

zational Behavior and Human Decision Processes, 50: 179–211.

Anderson, J. C., & Gerbing, D. W. 1991. Predicting the performance of measures in a confirmatory factor analysis with a pretest assessment of their substantive validities. *Journal of Applied Psychology,* 76: 732–740.

Anderson, C. A., & Lindsay, J. L. 1998. The development, perseverance, and change of naïve theories. *Social Cognition,* 16: 8–30.

Ashford, S. J., Rothbard, N. P., Piderit, S. K., & Dutton, J. E. 1998. Out on a limb: The role of context and impression management in selling gender-equity issues. *Administrative Science Quarterly,* 43: 23–57.

Bacharach, S. B., Bamberger, P., & McKinney, V. 2000. Boundary management tactics and logics of action: The case of peer-support providers. *Administrative Science Quarterly,* 45: 704–736.

Bagozzi, R. P., & Phillips, L. W. 1982. Representing and testing organizational theories: A holistic construal. *Administrative Science Quarterly,* 27: 459–489.

Bandura, A. 1986. *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice Hall.

Bargh, J. A. 1997. The automaticity of everyday life. In R. S. Wyer (Ed.), *Advances in social cognition,* vol. 10: 1–61. Mahwah, NJ: Erlbaum.

Bargh, J. A., & Ferguson, M. J. 2000. Beyond behaviorism: On the automaticity of higher mental processes. *Psychological Bulletin,* 126: 925–945.

Barling, J., Dupre, K. E., & Hepburn, C. G. 1998. Effect of parents' job insecurity on children's work beliefs and attitudes. *Journal of Applied Psychology,* 83: 112–118.

Baron, R. M., & Kenny, D. A. 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology,* 51: 1173–1182.

Bateman, T. S., & Crant, J. M. 1993. The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior,* 14: 103–118.

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. 2001. Bad is stronger than good. *Review of General Psychology,* 5: 323–337.

Baumrind, D. 1967. Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs,* 75: 43–88.

Brown, M. E., Trevino, L. K., & Harrison, D. A. 2005. Ethical leadership: A social learning theory perspective for construct development*. Organizational Behavior and Human Decision Processes,* 97: 117–134.

Brown, P., & Levinson, S. C. 1987. *Politeness: Some universals in language usage.* Cambridge, U.K.: Cambridge University Press.

Burris, E. R., Detert, J. R., & Chiaburu, D. S. 2008. Quitting before leaving: The mediating effects of psychological attachment and detachment on voice. *Journal of Applied Psychology,* 93: 912–922.

Buss, D. M. 2009. How can evolutionary psychology successfully explain personality and individual differences? *Perspectives on Psychological Science,* 4: 359–366.

Chiu, C., Dweck, C. S., Tong, J. Y., & Fu, J. H. 1997 Implicit theories and conceptions of morality. *Journal of Personality and Social Psychology,* 73: 923–94.

Chiu, C., Hong, Y., & Dweck, C. S. 1997. Lay dispositionism and implicit theories of personality. *Journal of Personality and Social Psychology,* 73: 19–3.

Cosmides, L., & Tooby, J. 1992. Cognitive adaptations for social exchange. In J. H. Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind:* 163–228. Oxford, U.K.: Oxford University Press.

Cosmides, L., & Tooby, J. 2000. Evolutionary psychology and the emotions. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed.): 91–115. New York: Guilford.

Critcher, C. R., & Dunning, D. 2009. How chronic self-views influence (and mislead) self-assessments of task performance: Self-views shape bottom-up experiences with the task. *Journal of Personality and Social Psychology,* 97: 931–945.

Cropanzano, R., James, K., & Konovsky, M. A. 1993. Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organizational Behavior,* 14: 595–606.

Detert, J. R., & Burris, E. R. 2007. Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal,* 50: 869–884.

Detert, J. R., & Trevino, L. K. 2010. Speaking up to higher ups: How supervisors and skip-level leaders influence employee voice. *Organization Science*, 21: 249–270.

Dutton, J. E., & Ashford, S. J. 1993. Selling issues to top management. *Academy of Management Review,* 18: 397–428.

Dutton, J. E., Ashford, S. J., Lawrence, K. A., & Miner-Rubino, K. 2002. Red light, green light: Making sense of the organizational context for issue selling. *Organization Science,* 13: 355–369.

Dutton, J. E., Ashford, S. J., O'Neill, R. M., Hayes, E., & Wierba, E. E. 1997. Reading the wind: How middle managers assess the context for selling issues to top managers. *Strategic Management Journal,* 18: 407–425.

Edmondson, A. C. 1999. Psychological safety and learning behavior in work teams. *Administrative Science Quarterly,* 44: 350–383.

Edmondson, A. C. 2002. The local and variegated nature of learning in organizations: A group-level perspective. *Organization Science,* 13: 128–146.

Edmondson, A. C. 2003. Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. *Journal of Management Studies,* 40: 1419–1452.

Ehrlinger, J., & Dunning, D. 2003. How chronic self-views influence (and potentially mislead) estimates of performance. *Journal of Personality and Social Psychology,* 84: 5–17.

Ekman, P., O'Sullivan, M., & Frank, M. G. 1999. A few can catch a liar. *Psychological Science,* 10: 363–366.

Epitropaki, O., & Martin, R. 2004. Implicit leadership theories in applied settings: Factor structure, generalizability, and stability over time. *Journal of Applied Psychology,* 89: 293–31.

Ermer, E., Cosmides, L., & Tooby, J. 2008. Relative status regulates risky decision making about resources in men: Evidence for the co-evolution of motivation and cognition. *Evolution and Human Behavior,* 29: 106–118.

Fiske, A. P. 1991. *Structures of social life.* New York: Free Press.

Furnham, A. 1988. *Lay theories: Everyday understanding of problems in the social sciences.* Oxford, U.K.: Pergamon Press.

Goffman, E. 1974. *Frame analysis.* Boston: Northeastern University Press.

Gollwitzer, P. M., & Brandstatter, V. 1997. Implementation intentions and effective goal pursuit. *Journal of Personality and Social Psychology,* 73: 186–199.

Grant, A. M., & Ashford, S. J. 2008. The dynamics of proactivity at work. In B. M. Staw & A. Brief (Eds.), *Research in organizational behavior,* vol. 28: 3–34. Greenwich, CT: JAI.

Hackman, J. R., & Oldham, G. R. 1975. Development of the Job Diagnostic Survey. *Journal of Applied Psychology,* 60: 159–170.

Hage, J., & Aiken, M. 1969. Routine technology, social structure, and organizational goals. *Administrative Science Quarterly,* 14: 366–376.

Harlos, K. P. 2001. When organizational voice systems fail. *Journal of Applied Behavioral Science,* 37: 324–342.

Harrison, D. A., & McLaughlin, M. E. 1993. Cognitive processes in self-report responses: Tests of item context effects in work attitude measures. *Journal of Applied Psychology,* 78: 129–140.

Heider, F. 1958. *The psychology of interpersonal relations.* New York: Wiley.

Henik, E. 2008. Mad as hell or scared stiff? The effects of value conflict and emotions on potential whistleblowers. *Journal of Business Ethics,* 80: 111–119.

Hertel, G., & Kerr, N. L. 2001. Priming in-group favoritism: The impact of normative scripts in the minimal group paradigm. *Journal of Experimental Social Psychology,* 37: 316–324.

Hong, Y., Morris, M. W., Chiu, C., & Benet-Martinez, V. 200. Multicultural minds: A dynamic constructivist approach to culture and cognition. *American Psychologist,* 55: 709–772.

House, R. J., Hanges, P. J., Javidian, M., Dorfman, P. W., & Gupta, V. 2004. *Culture, leadership, and organizations: The GLOBE study of 62 societies.* Thousand Oaks, CA: Sage.

International Personality Item Pool. 2009. *A scientific collaboratory for the development of advanced measures of personality traits and other individual differences.* http://ipip.ori.org/. Accessed April 7, 2009.

Kelly, G. A. 1955. *The psychology of personal constructs.* New York: Norton.

Kish-Gephart, J., Detert, J. R., Trevino, L. K., & Edmondson, A. C. 2009. Silenced by fear: Psychological, social, and evolutionary drivers of voice behavior at work. In B. M. Staw & A. P. Brief (Eds.), *Research in organizational behavior,* vol. 29: 163–193. Greenwich, CT: JAI.

LeDoux, J. E. 1996. *The emotional brain.* New York: Simon & Schuster.

LePine, J. A., & Van Dyne, L. 1998. Predicting voice behavior in work groups. *Journal of Applied Psychology,* 83: 853–868.

LePine, J. A., & Van Dyne, L. 2001. Voice and cooperative behavior as contrasting forms of contextual performance: Evidence of differential relationships with Big Five personality characteristics and cognitive ability. *Journal of Applied Psychology,* 86: 326–336.

Levy, S. R., Chiu, C., & Hong, Y. 2006. Lay theories and intergroup relations. *Group Processes and Intergroup Relations,* 9: 5–24.

Levy, S. R., Stroesser, S. J., & Dweck, C. S. 1998. Stereotype formation and endorsement: The role of implicit theories. *Journal of Personality and Social Psychology,* 74: 1421–1436.

Lincoln, Y. S., & Guba, E. G. 1985. *Naturalistic inquiry.* Newbury Park, CA: Sage.

Lord, R. G., & Maher, K. J. 1991. *Leadership and information processing.* Boston: Unwin/Hyman.

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. 2002. A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods,* 7: 83–104.

Macrae, C. N., & Johnston, L. 1998. Help, I need somebody: Automatic action and inaction. *Social Cognition,* 16: 400–417.

Magee, J. C., & Galinsky, A. D. 2008. Social hierarchy:

The self-reinforcing nature of power and status. In J. P. Walsh & A. P. Brief (Eds.), *Academy of Management annals,* vol. 2: 351–398. Essex, U.K.: Routledge.

Miceli, M. P., & Near, J. P. 1992. *Blowing the whistle: The organizational and legal implications for companies and employees.* New York: Lexington.

Miles, M. B., & Huberman, A. M. 1994. *Qualitative data analysis* (2nd ed.). Beverly Hills, CA: Sage.

Milgram, S. 1974. *Obedience to authority.* New York: Harper & Row.

Milliken, F. J., Morrison, E. W., & Hewlin, P. F. 2003. An exploratory study of employee silence: Issues that employees don't communicate upward and why. *Journal of Management Studies,* 40: 1453–1476.

Morand, D. A. 1996. Dominance, deference and egalitarianism in organizational interaction. *Organization Science,* 7: 544–556.

Morrison, E. W., & Milliken, F. J. 2000. Organizational silence: A barrier to change and development in a pluralistic world. *Academy of Management Review,* 25: 706–725.

Nembhard, I. M., & Edmondson, A. C. 2006. Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. *Journal of Organizational Behavior,* 27: 941–966.

Nisbett, R. E., & Wilson, T. D. 1977. Telling more than we can know: Verbal reports on mental processes. *Psychological Review,* 84: 231–259.

Norman, D. A., & Shallice, T. 1986. Attention to action: Willed and automatic control of behavior. In R. J. Davidson, G. E. Schwartz, & D. Shapiro (Eds.), *Consciousness and self-regulation,* vol. 4: 1–18. New York: Plenum.

Nunnally, J. C., & Bernstein, I. H. 1994. *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

Ohman, A. 2000. Fear and anxiety: Evolutionary, cognitive, and clinical perspectives. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed.): 573–593. New York: Guilford.

Ostroff, C., Kinicki, A. J., & Clark, M. A. 2002. Substantive and operational issues of response bias across levels of analysis: An example of climate-satisfaction relationships. *Journal of Applied Psychology,* 87: 355–368.

Parker, S., Bindl, U., Van Dyne, L., & Wong, S. 2009. *Measuring motives for silence.* Paper presented at the annual meeting of the Academy of Management. Chicago.

Pinder, C. C., & Harlos, K. P. 2001. Employee silence: Quiescence and acquiescence as responses to perceived injustice. In K. M. Rowland & G. R. Ferris (Eds.), *Research in personnel and human resources management,* vol. 20: 331–369. New York: JAI.

Pinker, S. 1997. *How the mind works.* New York: Norton.

Plaks, J. E., Grant, H., & Dweck, C. S. 2005. Violations of implicit theories and the sense of prediction and control: Implications for motivated person perception. *Journal of Personality and Social Psychology,* 88: 245–262.

Plutchik, R. 2003. *Emotions and life: Perspectives from psychology, biology, and evolution.* Washington, DC: American Psychological Association.

Podsakoff, P., MacKenzie, S., Lee, J., & Podsakoff, N. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology,* 88: 879–903.

Podsakoff, P., MacKenzie, S., Moorman, R., & Fetter, R. 1990. Transformational leader behaviors and their effects on followers' trust in leader, satisfaction, and organizational citizenship behaviors. *Leadership Quarterly,* 1: 107–142.

Rachman, S. 1990. *Fear and courage.* Gordonsville, VA: Freeman.

Ross, M. 1989. Relation of implicit theories to the construction of personal histories. *Psychological Review,* 96: 341–357.

Ryan, K. D., & Oestreich, D. K. 1998. *Driving fear out of the workplace* (2nd ed.). San Francisco: Jossey-Bass.

Shamir, B. 2007. From passive recipients to active co-producers: Followers' roles in the leadership process. In B. Shamir et al. (Eds.), *Follower-centered perspectives on leadership:* ix-xxxix. Greenwich, CT: Information Age.

Sobel, M. E. 1982. Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology 1982:* 290–312. Washington, DC: American Sociological Association.

Sternberg, R. J. 1985. Implicit theories of intelligence, creativity, and wisdom. *Journal of Personality and Social Psychology,* 49: 607–627.

Stogdill, R. M. 1963. *Manual for the Leader Behavior Description Questionnaire—Form XII.* Columbus: Bureau of Business Research, Ohio State University.

Tangirala, S., & Ramanujam, R. 2008. Employee silence on critical work issues: The cross level effects of procedural justice climate. *Personnel Psychology,* 61: 37–68.

Tepper, B. J. 2000. Consequences of abusive supervision. *Academy of Management Journal,* 43: 178–190.

Tooby, J., & Cosmides, L. 1990. On the universality of human nature and the uniqueness of the individual: The role of genetics and adaptation. *Journal of Personality,* 58: 17–67.

Van Dyne, L., Ang, S., & Botero, I. 2003. Conceptualizing

employee silence and voice as multidimensional constructs. *Journal of Management Studies,* 40: 1359–1392.

Van Dyne, L., & LePine, J. A. 1998. Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management Journal,* 41: 108–119.

Vaughan, D. 1996. *The Challenger launch decision: Risky technology, culture, and deviance at NASA.* Chicago: University of Chicago Press.

Watson, D., Clark, L. A., & Tellegen, A. 1988. Development and validation of brief measures of positive and negative affect: The PANAS scale. *Journal of Personality and Social Psychology,* 54: 1063–1070.

Williams, K. D. 2001. *Ostracism: The power of silence*. New York: Guilford.

Withey, M. J., & Cooper, W. H. 1989. Predicting exit, voice, loyalty, and neglect. *Administrative Science Quarterly,* 34: 521–539.

Wyer, R. S. 2004. *Social comprehension and judgment: The role of situation models, narratives, and implicit theories.* Mahwah, NJ: Erlbaum.

APPENDIX A

Studies 3 and 4: Implicit Voice Theory Construct Items

Presumed Target Identification

Someone who helps create a process or routine is likely to be offended when others suggest changes.

It's risky to challenge existing processes because it may be seen as questioning the wisdom of the individuals who established or support them.

Speaking up to suggest a better way of doing something is likely to offend the person(s) currently in charge of the process or product you're speaking about.

It is not good to question the way things are done because those who have developed the routines are likely to take it personally.

Need Solid Data or Solutions (to Speak Up)

Presenting underdeveloped, under-researched ideas to your group is never a good idea.

To look good when speaking up with an idea or suggestion you have to be able to answer every question you get asked.

Saying "I don't know" or "I'm not sure" when being questioned about some aspect of a new idea you're presenting puts you in a bad position.

Unless you have clear solutions, you shouldn't speak up about problems.

Don't Bypass the Boss Upward

When you speak up about problems or areas for improvement to your boss in front of people who are even higher in the organization, you make your boss look bad.

Loyalty to your boss means you don't speak up about problems in front of his or her boss.

Pointing out possibilities for improvement in front of other managers calls attention to the fact that my boss didn't identify these possibilities him/herself.

Questions that you're not sure if your boss can answer should not be asked in front of your boss's boss.

Don't Embarrass the Boss in Public

Pointing out problems or inefficiencies in front of others is likely to embarrass the boss.

It is not a good idea to make your manager look bad in front of the group by speaking up without telling him/her in advance.

You should always pass your ideas by the boss in private first, before you speak up publicly at work.

It is important to give your boss time to prepare to discuss a problem or suggestion you have prior to bringing it up in front of a group.

Negative Career Consequences of Voice

If you want advancement opportunities in today's world, you have to be careful about pointing out needs for improvement to those in charge.

You are more likely to be rewarded in organizational life by "going along quietly" than by speaking up about ways the organization can improve.

Pointing out problems, errors, or inefficiencies might very well result in lowered job evaluations.

Speaking up at work about possible improvements sets you up for retribution by those above you who felt threatened by your comments.

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