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Investigating the role of discrete emotions in silence versus speaking up

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Investigating the role of discrete emotions in silence versus speaking up

Abstract

Silence in the workplace is a highly prevalent behaviour, but more is needed to understand the causes and consequences of such behaviour. In this article, we draw on theory and research to examine the role of discrete emotions in decisions to remain silent or to speak up. Three studies with full-time employees were carried out utilising both qualitative and experimental methodologies. Study 1 (n = 110) demonstrated that there are many reasons for being silent and established fear as the main emotion associated with silence behaviour. Building on the results of Study 1 and using a quasi-experimental vignette design, Study 2 (n = 142) confirmed that different silence motives provoke different emotional experiences. Exploring the behavioural effects of emotions using a further experimental design, Study 3 (n = 80) showed that anger is an antecedent to speaking up about an observed transgression, whereas less intense anger was associated with staying silent. This pattern was not evident for fear. Taken together, these three studies provide empirical data regarding the relationship between silence, emotions and actions. We contribute to theory and research at the intersection of silence, emotions and behaviour and offer valuable insights into the dynamics of these concepts in the workplace.

Practitioner points

- Our study demonstrates that employees are silent for many reasons and that managers need to be sensitive to the multiple motives driving silence behaviour
- Managers need to be aware that silence provokes specific emotions, with fear and anger being particularly common emotional consequences of silence.
- Employees are more likely to take action when emotions are intense and so managers need to incorporate a sensitivity to employee emotions in understanding worker silence and voice

Keywords: silence, voice, speaking up, emotions, fear, anger, affect-as-information
Investigating the role of discrete emotions in silence versus speaking up

The prevalence of silence behaviour at work is well documented. Milliken, Morrison, and Hewlin (2003) reported that 85% of professional and managerial employees declared such behaviour while Ryan and Oestreich (1991) stated that 70% of employees are fearful of speaking up at work. Such findings bring to the fore a debate on the causes and consequences of speaking up versus remaining silent within the workplace. Responding to the call of Morrison (2014) for further field studies of silence and entreaties for greater examination of discrete emotions (e.g. Gooty, Gavin, & Ashkanasy, 2009; Hu & Kaplan, 2015), we examine the role of specific emotions in decisions to remain silent or to speak up. Drawing on past theory and research on silence and emotion (Carver & Harmon-Jones, 2009; Frijda, Kuipers, & Ter Schure, 1989; Van Dyne, Ang, & Botero, 2003), we sought to identify the role of key emotions associated with different forms of silence (defensive, acquiescent and prosocial). Following this, we examined which emotions were associated with action tendencies to speak up or remain silent about workplace transgressions.

Silence refers to the intentional withholding of information (Van Dyne et al., 2003) and although some studies have identified positive consequences of silence such as fostering employee self-reliance, enhanced creativity and independence (Bruneau, 1973) and the facilitation of learning (Bies, 2009), research largely suggests negative outcomes of such behaviour. For the individual, feeling unable to speak up about concerns may lead to a sense of helplessness, reduced job satisfaction, isolation, absenteeism and turnover (Morrison & Milliken, 2000). It can provoke a sense of cynicism in those who are silent (Morrison & Milliken, 2000; Perlow & Repenning, 2009) and lead to symptoms of stress (Brewin, Dalgleish, & Joseph, 1996; Gross & Levenson, 1997; Perlow & Williams, 2003; Richards & Gross, 1999). The interpersonal consequences of silence are identified as loss of trust, social rejection, weakened interpersonal ties, diminished power (Ashford, Rothbard, Piderit, & Dutton, 1998; Morrison & Milliken, 2000) and feelings of isolation, anger and resentment (Cortina & Magley, 2003; Perlow & Williams, 2003). At the organizational level, silence can impede learning and development (Argyris & Schon, 1978) and may result in organizational decline going undetected (Hirschman, 1970). It can create obstacles to creative communication, limit inputs from
diverse perspectives, reduce information flow to management (Creed, 2003; Near, Rehg, Van Scotter, & Miceli, 2004; Nemeth, Connell, Rogers, & Brown, 2001) and undermine productivity (Perlow & Williams, 2003). Morrison, Wheeler-Smith, and Kamdar (2011) suggest that a climate of organizational silence, once established, can be very difficult to alter as a cultural phenomenon.

While research has identified a number of motives for silence including protection of the self (i.e., defensive silence) and protection of others (prosocial silence; Brinsfield, 2013), what remains unexplored is the role that emotions play as motives for silence. Emotions act as the motivational conduit between thoughts and actions (Weiner, 1985, 1995), and different emotions lead to different types of action tendencies (Lazarus, 1991). Although some research has found that positive emotions, such as happiness, tend to provoke approach behaviours, while negative emotions, such as fear, more often result in avoidance behaviours (Coan & Allen, 2004), recent studies suggest that the relationship between emotions and action is quite complex (Lindebaum & Gabriel, 2016). Moreover, what continues to be elusive in the field of silence research is the relationship between distinct emotions and decisions to remain silent or to speak up in situations such as following an observed transgression. Although such behaviour may be provoked by ethical concerns (Tangirala & Ramanujam, 2008), there is a wide array of motives for silence or voice beyond this, and thus, in this research, we were interested in less ethically-charged situations.

To achieve our objectives, we carried out three independent studies utilizing a variety of methods and a diverse range of employee samples. The first study took an inductive approach and qualitatively analysed the relationship between the reason or motive for being silent and ensuing emotions experienced using a cognitive mapping technique (Eden, 1992). Employing a quasi-experimental design (Grant & Wall, 2009), Study 2 built on the outcomes of Study 1 and targeted the examination of discrete emotions triggered by three different forms of silence. Following from the outcomes of Study 2, our third study examined whether different negative emotions experienced following an observed transgression lead to differences in the tendency to remain silent or speak up. Cumulatively, our studies contribute to our understanding of the role of emotions in employee silence and related behaviour. First, our findings establish that the reasons for being silent are proactively selected and result in appropriate behavioural patterns. Second, we demonstrate that different forms of
silence provoke different emotional reactions, but responses to silence with a negative emotional tone are evident to a greater degree. Finally, we provide clarification regarding the effect of particular negative emotions on silence or voice behaviour by identifying the roles of anger and fear as antecedents to silence and voice behaviour.

**Employee silence and associated motives**

Adopting an individual level perspective on employee silence (Morrison & Milliken, 2003), we frame silence as the conscious decision to withhold information, as distinct from an accidental breakdown in communication or just having no contribution to make to a discussion or issue (Tangirala & Ramanujam, 2008). Noelle-Neumann’s (1974) work contends that an individual is more likely to remain silent when they find that their view does not have broad public support. This conceptualisation was adopted by Bowen and Blackmon (2003) in their extension of Noelle-Neumann’s (1974) work to organizational settings, and particularly to the pressure to suppress key information in order to conform to organizational norms. Van Dyne et al. (2003) described employee silence as occurring when an employee intentionally withholds work-related ideas, information and opinions and further proposed distinct the dimensions of defensive, acquiescent and prosocial silence. Inherent within this model is the juxtaposing of silence as both a positive functional strategy in some contexts while constituting a destructive dynamic in another. Milliken, Morrison and Hewlin (2003) supported the contention that different forms of silence exist, which was further verified by Brown and Coupland (2005) with a sample of graduate entrant interviewees. We adopt this perspective of silence having distinct forms in the present suite of studies.

Bies (2009) argues that the prevailing conceptualisation of silence is incomplete, as the role of motivation in silence behaviour is not fully understood. A challenge is emerging whereby some claim that further work is required to gain a broader understanding of silence in the workplace, while others bemoan the lack of depth in empirical research that inhibits the isolation of particular components (e.g. Bies, 2009; Tangirala & Ramanujam, 2008). We maintain that the issue of silence in organizational settings requires field research where employees deliver their thoughts and experiences on silence in the workplace for inductive review. Thus in our first study, we elicited experiences, feelings and reasons for being silent at work from a diverse group of employees.
Within the organizational context, Van Dyne et al. (2003) identified three forms of silence based on underlying motives: acquiescent silence, defensive silence and pro-social silence. Acquiescent silence refers to silence as a result of disengagement or resignation. This may occur because employees do not feel that their opinion is valued by their supervisors or managers (Morrison & Milliken, 2000), because they do not feel they have the energy it takes to get involved (Ashford et al., 1998; Dutton, Ashford, O’Neill, & Lawrence, 2001) or because they feel it is futile to do so (Milliken et al., 2003; Morrison & Milliken, 2003). Defensive silence is caused by the fear of negative consequences of speaking up. It occurs when employees are aware that there may be a better course of action to the one proposed, but say nothing about it. In contrast to acquiescent silence, defensive silence is more proactive as it involves a conscious weighing up of options and an ensuing decision to withhold voice (Van Dyne et al., 2003). This type of silence is also described within the psychological safety literature (Detert & Burris, 2007; Detert & Treviño, 2010; Edmondson, 1999; Liang, Farh, & Farh, 2012). Silence can also occur when employees believe they are doing other people a favour by withholding information, and this is referred to as prosocial silence (Van Dyne et al., 2003). It is characterised by a concern for others, rather than disengagement or a concern for personal consequences. As such, it is regarded as being similar to tolerating inconveniences and putting up with irritations (Organ, 1988).

The role of affect in employee silence

Emotions can be defined as a “subjective feeling state” (Ashforth & Humphrey, 1995; p. 99) which varies in terms of its intensity, duration, consistency and valance. Emotions have been proposed as important factors in many organizational attitudes and behaviours (Ashkanasy, 2003; Ashkanasy & Humphrey, 2011; Brief & Weiss, 2002), shaping our behaviour, and influencing how we interact with others (O'Shea, 2016). The affect-as-information model (Clore, Gaspar, & Garvin, 2001; Schwarz, 2001) suggests that people may directly use their affect as a cue to facilitate decision-making regarding an appropriate response in certain social situations. This theory suggests that “we know how we judge something by how we feel towards it” (Suri & Gross, 2012; p. 13). Thus emotions play a role in readying our behavioural responses, fine-tuning our decision-making, and facilitating our interpersonal interactions (Gross & Thompson, 2007). The organizational environment
may confer some avenues of emotional expression but deny others, rendering some behaviours, in this context speaking up or remaining silent, more or less likely to occur.

Thus, emotions and emotional reactions can lead to tangible and intangible actions (e.g. Frijda et al., 1989; Larsen, McGraw, & Cacioppo, 2001; Siemer, Mauss, & Gross, 2007). Belshak, Jacobs and Den Hartog (2008) demonstrated that anger and frustration mediated the effect of feedback on counterproductive work behaviours, while other studies have found that negative emotions such as fear and sadness typically lead to greater activation compared with positive emotions such as happiness and surprise (Cacioppo, Berntson, Larsen, Poehlmann, & Ito, 2000). When people experience negative emotions such as sadness they are motivated to act in a way that addresses the situation (Grandey, Tam, & Brauburger, 2002), while the experience of a positive emotion is more likely lead to behaviour that sustains that positive emotion (Spector & Fox, 2002). However, contextual factors regularly intervene in decisions regarding action (Barrett, 2006) such that when the event is significant to the individual (Verduyn, Delvaux, Van Coillie, Tuerlinckx, & Van Mechelen, 2009) and has negative overtones, more charged emotional reactions ensue (Totterdell, Hershcovis, Niven, Reich, & Stride, 2012).

Rather than aggregate emotions into merely positive and negative dimensions (cf. Barsade & Gibson, 2007; Briner & Kiefer, 2005), researchers have called for an increased focus on discrete emotions (Brief & Weiss, 2002; Gooty et al., 2009; Lindebaum & Jordan, 2012). Indeed studies have found clear associations between discrete emotions and distinct consequences (Barclay, Skarlicki, & Pugh, 2005; Hu & Kaplan, 2015). For example, pride ensues from the receipt of recognition (Tracy & Robins, 2004), embarrassment results from making mistakes (Basch & Fisher, 2000), guilt and shame are associated with norm violation (Ersoy, Born, Derous, & van der Molen, 2011) and both anger and happiness differentially influence negotiation outcomes (van Kleef, De Dreu, & Manstead, 2004).

Research on emotions experienced when engaged in silence behaviour is quite limited (Blenkinsopp & Edwards, 2008). Past research has demonstrated that the more negatively an individual reacts to an event, the less likely (s)he is to be silent (Bowes-Sperry & O'Leary-Kelly, 2005). Fear has been strongly linked to silence (Kish-Gephart, Detert, Treviño, & Edmondson, 2009), specifically defensive silence (Van Dyne et al., 2003), while acquiescent silence is characterised by
indifference, hopelessness (Pinder & Harlos, 2001) and feelings of resignation (Henik, 2008; Pinder & Harlos, 2001). However, as Morrison (2014) concludes, few of these studies are direct empirical investigations of the emotional dynamics of silence. Morrison (2014) encourages researchers to undertake field investigations and we position our second study as a direct response to this call. In Study 2, we investigated how different forms of silence trigger specific emotional reactions. We focused on how defensive, prosocial and acquiescent silence result in the experience of different emotions within a specific work domain.

Conversely, emotions about a workplace situation may trigger different behavioural responses to either remain silent or speak up, particularly when an individual witnesses some kind of workplace transgression. Edwards, Ashkanasy and Gardner (2009) proposed a model specifying how discrete emotions influence employees’ decisions to remain silent or speak-up. They suggest that anger and guilt predict speaking up following an observed transgression, while anticipatory fear and shame predict decisions to remain silent. Furthermore, emotions are connected to the attribution an individual makes of an event or behaviour (Dasborough & Ashkanasy, 2002). Historically, Heider (1958) suggested that individuals explain the result of an event or behaviour through an internal or external locus of causality. Attribution of intent features in emotional reactions to wrongdoing, such that people can be more emotionally sensitive to acts of wrongdoing when they attribute such acts to intentional as opposed to unintentional causes (Dasborough & Ashkanasy, 2002; Douglas & Martinko, 2001; Greenberg, 1984, 1990; Kidd & Utne, 1978). Thus, in our final study we investigated the role of two specific negative emotions (anger and fear) in combination with an observer’s attribution regarding an observed transgression in the decision to speak up or remain silent.

Study 1

With a few notable exceptions (Van Dyne et al., 2003), there has been a paucity of overt research on the causes and outcomes of different forms of silence. Research associating employees’ reasons for purposeful silence with their emotional responses has been especially rare. Our first study sought to identify why employees are silent in their workplace and to capture the emotions they experience as a result of being silent. This study responded to continued calls for more meticulous
approaches to examining both the causes and effects of employee silence behaviour in the contemporary workplace (e.g. Bies, 2009; Tangirala & Ramanujam, 2008). Adopting the Edmondson and McManus (2007) recommendation that research in growing fields of inquiry should first consider adopting an inductive approach, this study used a visual data-mapping technique to map the meaning and personal experience of silence in the workplace amongst employees’. We posed the following research questions:

*RQ1: What are employees’ reasons for being silent in the workplace?*

*RQ2: How does this silence behaviour make employees feel?*

**Sample**

Respondents were 110 full-time employees participating in a variety of executive management development courses at a major university in Ireland. 108 of 110 respondents returned usable data comprising 75% females with an average age of 33.3 years (SD = 8.38 years) and work experience ranging from 22-55 years. Participants worked in a broad range of industries and sectors including telecommunications, construction, healthcare, and financial services. The majority of respondents held managerial roles; 12% senior management, 26.9% middle, 27.8% junior management and 34.3% non-managerial.

**Materials and Procedure**

Prior to commencing the study, ethical approval was obtained from the university’s ethics committee. Confidentiality was assured and no overtly identifying information was requested of participants. The decision to remain silent at work might generally be perceived as a negative, passive behaviour which respondents may not be comfortable disclosing or discussing publicly. To circumvent this possibility, we designed a mapping technique which would deliver “a diagrammatic representation of an individual’s cognitions” and attributions (Langfield-Smith, 1992; p. 350). Eden (1992) suggests that cognitive maps are useful tools to assist respondents represent subjective knowledge in a more meaningful manner than many other investigative methods. The visual nature of
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a cognitive map can have a significant impact on respondents’ reflection on the target concept as the physical procedure of completing a map stimulates deeper and more complex thought regarding the interconnection between aspects of the core concept.

The guided map tool comprised a single sheet of paper on which a series of associated boxes were provided to which participants responded. A prompt at the top of the map asked each participant to consider a recent occasion when they had chosen to be silent in their workplace. They were then asked to write their reasons for this silence in the first box and to capture how that silence made them feel in the linked box (see Figure 1). Research has consistently supported the primacy of emotional memory over that of event or episodic memory alone, indicating that life event memories that have associated emotional experiences are remembered more accurately than those devoid of emotion (Dere, Pause, & Pietrowsky, 2010; Holland & Kensinger, 2010).

Data analysis and results

The respondents’ “Reason for Being Silent” comments were transcribed into an Excel Database (371 distinct statements). Where comments were several words in length, the essential meanings were distilled into one or two words. An example is “not asking a question as it might undermine a colleague in front of others” was coded as “avoid embarrassing other” while “trying to concentrate on a challenging task” was coded as “aid concentration”.

The next step involved the allocation of each of ‘reason for being silent’ comments to the silence type as identified in the Van Dyne et al. (2003) silence motive-behaviour model. 328 comments presented straightforward allocation to one of the three silence types (defensive, acquiescent or prosocial). 43 comments were excluded from the central analysis as they sometimes evidenced two distinct motive patterns in one cell without an indication of primacy (e.g. ‘I don’t count here and staying quiet helps others’) or some motives fell well outside the model identifying reasons we categorised as ‘non-aligned’ and included reasons such as ‘I had home issues on my mind’ or ‘I was feeling unwell.’ This non-correspondence of 11% of data to the silence motive-behaviour model is discussed after the core findings are presented. The results of the allocation process (see Table 1)
revealed that 42% of remaining comments identified incidents of acquiescent silence, 32.4%
identified a prosocial reason and 25.6% identified a defensive reason for silence.

A similar process was adopted for the “Made me Feel…” responses on the guided map. For
instance, “Better able to concentrate on the task at hand” was distilled to “concentrated” while
“significantly demotivated because my question was ignored” was coded as “demotivated”. The
‘Made me Feel’ section recorded 285 distinct statements, which were clustered into 109 feelings
categories and then connected with Van Dyne et al.’s (2003) three silence types (see Table 2 for
summary of distribution). Defensive silence recorded 40 feelings of which 39 were distinctly negative
in nature, with frustrated (30%), isolated (18%) and anxious/stressed (15%), the principal feelings
recorded. The one positive defensive silence feeling recorded was safe. Acquiescent silence recorded
39 feelings, all negative, with isolated/powerless (28%), frustrated (26%) and disengaged (13%)
being the most frequent. Prosocial silence reasons attributed 29 distinct feelings (28 positive and one
negative – impatient), with engaged (59%), calm/content (17%) and focused (10%) being dominant.
Subsequent analysis of the small number of non-aligned motives excluded from the main analysis
revealed two subgroups; one related to feelings of tiredness and fatigue (3%) which contributed to
their silence and they reported feeling lethargic, and another subgroup indicated they were naturally
shy or introverted and thus are reticent to speak.

**Brief Discussion: Study 1**

Study 1 sought to isolate reasons for different forms of silence and the resulting affective
experience. Results indicated that acquiescent silence resulted from experienced exclusion, not being
listened to or not being respected. These respondents reported strong feelings of isolation and
frustration. In contrast, the enduring nature of respondents reporting defensive silence was that of
fearful employees, hesitant to risk voice and engagement primarily because of potential identity loss if
wrong (personal efficacy perception), or possible conflict with colleagues/managers. These
participants also felt isolated and additionally experienced feelings of stress. More positively, nearly a
third of employees identified a prosocial reason for being silent such as ‘allowing colleagues have time to think’ and the resultant emotions included engagement and contentment.

**Study 2**

In Study 2, we built on the findings of Study 1 by conducting a quasi-experimental vignette study focusing on the motives for defensive, prosocial and acquiescent silence (Van Dyne et al., 2003) and resulting emotions associated with these forms of silence. Acknowledging that the appraisal of events is associated with the experience of different emotions (Scherer, Schorr, & Johnstone, 2001), we drew on the affect-as-information model (Clore et al., 2001; Schwarz, 2001) as our theoretical foundation. Firstly, we sought to confirm the indication from Study 1 that having to be silent due to a perceived lack of efficacy of voicing, or perceived lack of safety to voice, would result in negative emotional experience (Milliken et al., 2003; Morrison et al., 2011; Van Dyne et al., 2003). In a quasi-experimental investigation, we examined the impact of these different forms of silence on the emotional reactions of respondents and hypothesised the following:

**Hypothesis 1:** Defensive silence will provoke stronger feelings of fear and anger than acquiescent or prosocial silence.

Helping others (i.e., prosocial behaviour) has been shown to be related to the experience of positive emotions (Meier & Stutzer, 2008; Oarga, Stavrova, & Fetchenhauer, 2015), a contention broadly supported by the data from Study 1. But the specific positive emotions exactly are unclear. Thus, secondly, we explored whether prosocial silence would lead to the experience of the discrete positive emotion associated with love, which in this context is translated as care, affection and fondness.

**Hypothesis 2:** Prosocial silence will provoke stronger emotions associated with caring, affection and fondness than defensive or acquiescent silence.

Finally, it was more difficult to hypothesise the exact emotions that might be experienced for acquiescent silence, given the paucity of past research in this area. However, in advancing the insights from Study 1 regarding a sense of isolation and frustration, we expected that acquiescent silence
would be associated with an emotional profile that was more negative in valence. Given the resignation associated with this form of silence, we hypothesised that there may be an element of fear in this type of silence. However, given the low activation of acquiescent silence, we expected this would not be as strong as that experienced for defensive silence, but would be more prevalent than that of prosocial silence. Thus we hypothesised:

_Hypothesis 3. Acquiescent silence will provoke stronger feelings of fear than prosocial silence._

Vignette-based methodologies offer insights into how individuals’ feelings and behaviours are influenced by factors that may not be easily accessible in real-life situations (Evans et al., 2015). Such designs are considered a hybrid of traditional survey and experimental methods and are well positioned to deliver on both internal and external validity criteria in a manner that clearly illuminates many of the complexities of human behaviour. Well-designed, researchers conducting vignette-based studies can avoid many limitations of conducting field-based research, yet confidently extrapolate findings from their research to ‘real life’ situations (Evans et al., 2015).

**Method**

**Sample.** Participants (n = 142) were professional practitioners drawn from organizations involved in the treatment of addiction in one of three countries (Ireland, Italy, Peru). Access was granted due to the perceived relevance of this study for participants. Age of participants ranged from 21 to 75 with an average age of 40.21 years (SD = 10.29); 62% of the sample were female. Organisational tenure ranged from 1 year to 35 years (mean = 9.11 years; SD = 7.50).

**Procedure.** We adopted a quasi-experimental design using vignettes to manipulate the three forms of silence (Aguinis & Bradley, 2014; Grant & Wall, 2009). A vignette is a brief, carefully written description of a situation designed to simulate key features of a real world scenario (Evans et al., 2015). We constructed three short vignettes, depicting scenarios of defensive silence, prosocial silence and acquiescent silence respectively, occurring during a one-to-one meeting between a boss and a subordinate (the respondent). The defensive silence vignette positioned the respondent adopting
self-protective silence in a meeting with a supervisor where the supervisor requested feedback on a new work method (s)he had championed but the respondent knew was faulty. The acquiescent silence vignette positioned the respondent as an employee who felt neither listened to nor regarded, and from whom the supervisor sought a critical review of the work unit performance. Their decision was to adopt a resigned silence. The prosocial silence vignette positioned the respondent as adopting a protective silence regarding a teammate experiencing some personal problems, when asked by their supervisor for a team review. Respondents were asked to imagine they had remained silent in these situations and to rate their emotional reaction on a scale provided.

Prior to distribution, the vignettes were reviewed by four subject matter experts verifying the assignment of each vignette to the correct silence category. The vignette surveys for the Italian and Peruvian sample were translated from English to their mother tongue by a team of language experts. Once the questionnaire was translated, it was then translated back to English by native Italian/Spanish speakers who were fluent in English. The English translation and the original version of the questionnaire were compared and consistency was established.

Measures. Emotional reactions. Diener, Smith and Fujita’s (1995) scale was used to assess 24 emotions across six categories; love (category comprised of items measuring caring, affection, fondness), joy, fear, anger, shame and sadness. This scale enjoys broad support in the prevailing literature (Schimmack, Oishi, & Diener, 2002; Tronvoll, 2011; Trougakos, Beal, Green, & Weiss, 2008). Cronbach alphas ranged from .69 to .87.

Results

Preliminary analyses. Mauchly’s test of sphericity (test of ANOVA assumptions) was not satisfied, but this test is unlikely to be satisfied in data arising in social, behavioural and health research (Lix & Keselman, 2010). Thus, we report the multivariate test, Wilk’s Lambda, as it is not dependent on the assumption of sphericity (Field, 2006). In exploring the data, we found a number of between-subjects differences for country across the emotions for each scenario, so we controlled for country (dummy coded) in subsequent analyses. For example, within the acquiescent silence
condition, Peru demonstrated the highest levels of fear (Mean = 3.49) and anger (Mean = 2.27), compared to Italy (fear mean = 2.76, anger mean = 2.21), and Ireland (fear mean = 2.49, anger mean = 1.85). In the defensive silence condition, Ireland demonstrated the low levels of joy (mean = 1.32), compared to Italy (mean = 1.78) and Peru (mean = 2.48). We conducted the analyses with and without country as a covariate. For all analyses, the pattern of findings remains the same.

**Hypothesis testing.** All hypotheses were tested using IBM SPSS Statistics version 22. To test our hypotheses, we conducted a series of within-subjects ANOVAs to compare differences in each emotion (e.g. love, joy, fear, anger, shame and sadness) across the three scenarios. Although we hypothesised specific relationships only for fear, anger and love (i.e., caring, affection, fondness), we examined all six emotions, given the paucity of past research in this area.

As expected, no significant differences were found across the three conditions for joy, shame or sadness. However, significant differences were found across the three conditions for love (Wilk’s Lambda = .603; F = 41.88 (2, 127); p < .001; partial eta squared = .397), fear (Wilk’s Lambda = .953; F = 3.131 (2, 127); p < .05; partial eta squared = .047), and anger (Wilk’s Lambda = .908; F = 6.518 (2, 128); p < .01; partial eta squared = .092). Using a Bonferroni adjustment to assess the differences across the three conditions for the emotion love, we found that all conditions were significantly different from each other, with the prosocial silence condition demonstrating the highest levels (M = 3.11), followed by defensive silence (M = 1.91) and acquiescent silence (M = 1.62). In contrast, the defensive silence condition demonstrated the highest reports of both anger (M=2.81) and fear (M=3.45) when compared with acquiescent silence (anger M=2.27; fear M=2.93) and prosocial silence (anger M= 1.92; fear M=2.93). Means for all conditions can be found in Table 3. Thus, hypotheses 1 and 2 were supported.

**Brief discussion: Study 2**

The results demonstrated that different silence motives provoke different emotional experiences. Anger was related to acquiescent silence, while anger and fear were the predominant emotions associated with defensive silence. On the other hand, love (i.e., caring, affection, fondness)
was the predominant emotion associated with prosocial silence. These results provide preliminary indications that prosocial silence is predominantly associated with emotions related to caring, while defensive and acquiescent silence are associated with differential combinations of anger and fear. These forms of silence produce a dominant mix of negative approach (e.g. anger) and avoidance (e.g. fear) emotions. Thus, in our final study we focused on anger and fear in order to understand more fully their effects on silence or speaking up.

**Study 3**

The aim of the third study was to examine the role of specific emotions as motivators of employee decisions to either remain silent or to speak up following an observed transgression. Given the prominence of fear and anger as motives for defensive silence in our first two studies and drawing on the work of Edwards et al. (2009), we specifically focused on these two emotions in the third study to examine how each leads to the different action tendencies to remain silent or to speak up. Second, we aimed to build on the findings of Study 2, by considering the role of causal attributions in relation to fear and anger (Dasborough & Ashkanasy, 2002). Following Frijda et al. (1989), we expected that specific negative emotions (i.e., fear and anger) would result in different action tendencies to remain silent or blow the whistle. Edwards, et al. (2009) suggest that, following the witnessing of a transgression, an observer must decide how to respond. Behavioural options that face employees in such situations include remaining silent, discussing the matter with colleagues, confronting the perpetrator or engaging in some form of whistle-blowing (Edwards et al., 2009). Furthermore, these authors suggest that observing and appraising a wrongdoing is likely to result in anger. We draw on these behavioural options in this study, and propose the following:

*H4a: Anger will be negatively associated with (i) behavioural intentions to remain silent, and positively associated with (ii) intentions to discuss the wrongdoing with the transgressor or (iii) another colleague, and (iv) intentions to bring the issue to a manager’s attention.*

In contrast, Edwards et al. (2009), suggest that fear is more likely to lead to silence than speaking up following an observed transgression. Thus, we hypothesise the following:
**H4b:** Fear will be positively associated with (i) behavioural intentions to remain silent, and negatively associated with (ii) intentions to discuss the wrongdoing with the transgressor or (iii) another colleague, and (iv) intentions to bring the issue to a manager’s attention.

Past research indicates that inferences of responsibility for misbehaviour provoke anger and resentment (Near et al., 2004; Robinson, Robertson, & Curtis, 2012; Tripp & Bies, 2010). Attribution of intent is an inherent component of emotional reactions, such that employees are more emotionally sensitive to transgressions when they attribute them to intentional rather than unintentional causes (Belschak, Den Hartog, & Fay, 2010; Decker & Calo, 2007; Gundlach, Douglas, & Martinko, 2003; Robinson et al., 2012). Furthermore, attributing misbehaviour to a stable cause (e.g. a stable trait of an individual) rather than an unstable cause (e.g. a once-off mistake by the individual) may influence both the emotions experienced and the intention to act. Moreover, past research has demonstrated that anger is often experienced when intent and responsibility for a transgression is attributed to a specific person (Clore & Centerbar, 2004). Indeed, cognitive appraisal theories (Lerner & Tiedens, 2006; Smith & Ellsworth, 1985) draw our attention to the role of cognition in emotional experience and emotional effects. Thus, causal attributions appear to be a relevant factor to consider when investigating the role of emotions in the intention to speak up or remain silent. Thus, we investigated the following hypothesis:

**H5:** Internal attributions of a transgression will be more likely to elicit intentions to act (i.e., speak up) than a transgression attributed to an external cause.

**Method**

Similar to Study 2, in this study we employed an experimental vignette methodology (EVM; Aguinis & Bradley, 2014; Atzmüller & Steiner, 2010) to investigate the action tendencies associated with the emotions of fear and anger across four reactions to transgressions comprising remaining silent, speaking to a colleague, speaking to the transgressor, or speaking to a manager about it. In addition, we assessed whether causal attributions had an impact on these relationships. Participants were presented with vignettes in written form and asked to make explicit judgments and express
consequential behavioural preferences (Aguinis & Bradley, 2014; p. 354). As speaking up about a potential transgression may be a sensitive issue, this method was appropriate (e.g. King, Hebl, Botsford Morgan, & Ahmad, 2013; Patel, 2003; Shepherd, Patzelt, & Baron, 2013).

Sample. Eighty financial sector employees from two companies in Ireland took part in the study, comprising 49 females (61.2%) and 31 males (38.8%), with an average age of 32.1 (SD = 7.5 years; age range of 20-54yrs). This represented a response rate of 61.5%.

Procedure. We used 2 (fear vs. anger) 2x2 factorial (high/low emotion x internal/external attribution) designs, providing participants with vignettes of witnessed transgressions as prompts. Participants were assigned to one of two experiments: the first was designed to elicit varying levels of fear and the second was constructed to provoke varying levels of anger (n = 40 per condition). Each organisation was assigned to one experimental condition to avoid contagion and confounding of the results. Thus, all analyses presented represent within-person differences.

We analysed the participants from each condition separately. Analogous versions of the fear and anger vignettes were created to manipulate the attribution (internal vs. external). The first described four vignettes of an employee witnessing a transgression and experiencing varying levels of fear, with either internal or external causal attributions provided for the witnessed transgression (high fear/internal, low fear/internal, high fear/external and low fear/external). In the second experiment, the four vignettes manipulated levels of anger giving high anger/internal, low anger/internal, high anger/external and low anger/external attributions. Within each experiment, the presentation of the four vignettes was randomized to avoid order effects.

In addition to assessing each participant’s intention to stay silent or speak up for each scenario, we also assessed their emotional reaction to the observed transgression (fear or anger), emotional intensity (high or low), and their attribution of the transgression to ensure that the vignette elicited the appropriate internal or external attribution. These were used as manipulation checks. Each participant also completed a survey capturing a number of individual difference measures, including moral reasoning (Welton, Davis, & LaGrone, 1994), implicit theories of morality (Chiu, Dweck,
Tong, & Fu, 1997) and locus of control (Spector, 1988), to test for potential between person covariates.

**Measures**

*Action tendencies to stay silent or speak up* were measured using four items as follows: “Below are a series of possible actions that [OBSERVER IN SCENARIO] might take; please rate the actions below that you think [OBSERVER] should take: 1. [OBSERVER] should do nothing/stay quiet, 2. [OBSERVER] should talk to a colleague, 3. [OBSERVER] should address the issue with the individual, 4. [OBSERVER] should bring the issue to a manager’s attention.” Each item was assessed on a four point Likert scale (1 = “definitely should not take this action”, to 4= “should definitely take this action”). This measure was developed for this study to assess varying levels and degrees of silence versus voicing behaviour, using behavioural options that have been outlined in the literature (Edwards et al., 2009). Short measures such as this one are advised when respondents are asked to respond repeatedly to the same questions in order to sustain participant willingness to partake (Ohly, Sonnentag, Niessen, & Zapf, 2010).

To assess the manipulation within each scenario we measured perceived emotions and attributions after each scenario. *Emotions* were assessed after each scenario by asking the participants “How do you think [OBSERVER] would feel after observing this behaviour?” Participants rated 11 positive and negative emotions (e.g. fear, anger, excited, relief) from ‘not at all’ (1) to ‘very much’ (5) (Carver & Harmon-Jones, 2009; Carver & Scheier, 1982, 1990, 2009).

*Causal attributions* were assessed with 6 items using a 9-point Likert scale from the Causal Dimension Scale (Russell, 1982). Locus of causality and controllability were assessed using 3 items each (e.g. “Is the cause(s) of the transgression something that reflects an aspect of [TRANSGRESSOR NAME] [9] or reflects an aspect of the situation [1]”).

**Results**
Preliminary analyses. Mauchly’s test of sphericity was not satisfied, so we report the Wilk’s Lambda, as it is does not depend on the assumption of sphericity (Field, 2006). Manipulation checks were conducted using three mixed ANOVAs, with fear/anger and the causal attribution as the dependent variables, and the four scenarios (repeated measures; high/low level emotion x internal/external attribution) and condition (between measure; fear vs. anger) as independent variables. The results confirmed the elicitation of the relevant emotions in each vignette, but the attribution manipulation was somewhat less effective. Looking first at fear, contrasts indicated that the scenarios were all significantly different from each other, demonstrating that lower fear was experienced in the low emotions scenarios (Scenario F1 M = 2.50; Scenario F2 M = 1.85) than the high emotion scenarios (Scenario F3 M = 8.20; Scenario F4 M = 8.45). Similarly, when anger was entered as the dependent variable, contrasts showed a significant difference in the scenarios, with higher anger reported in high emotion scenarios (Scenario A3 M = 7.95; Scenario A4 M = 7.60), than in low emotion scenarios (Scenario A1 M = 4.08; Scenario A2 M = 2.81). Means for all scenario are summarised in Table 4.

To examine the manipulation of causal attributions, the same procedure was followed. There was a significant scenario by condition interaction (Wilk’s Lambda = .322; F (3; 76) = 53.41; p < .001; partial eta squared = .678), but investigation of the individual scenario means demonstrated that there were variations in the effectiveness of the manipulations. Across conditions, the internal attributions were confirmed for each scenario designed to elicit these (Scenario F1 M = 20.68; Scenario F3 M = 22.70; Scenario A1 M = 20.25 and Scenario A3 M = 23.00). However, the external attribution was less consistent (Scenario F2 M = 18.25; Scenario F4 M = 22.23; Scenario A2 M = 17.13, and Scenario A4 M = 7.13). Thus, we cautiously interpret scenario F4 (high fear, external attribution condition). All means are displayed in Table 4.

Hypothesis testing. To examine the hypotheses regarding the effects of fear and anger on action tendencies, we conducted separate within-subjects ANOVAs, firstly with the anger conditions (N = 40) and then repeated these with the fear conditions (N = 40) with each of the four silence or voice options as dependent variables. For each DV, we conducted the analyses with and without
potential covariates including moral reasoning (Welton et al., 1994), implicit theories of morality (Chiu et al., 1997) and locus of control (Spector, 1988). However, as none of these potential covariates demonstrated significant effects on the variables of interest, the results are reported without these covariates. The pattern of significant findings remains the same.

Firstly, to test hypothesis 4(a), we focused on the 4 anger vignettes. We found a main effect of the vignette for all four outcomes: stay silent (Wilk’s Lambda = .197; F (3; 37) = 22.23; p < .001; partial eta squared = .803), discuss with a colleague (Wilk’s Lambda = .429; F (3; 37) = 16.44; p < .001; partial eta squared = .571), address the issue with the transgressor (Wilk’s Lambda = .269; F (3; 37) = 33.50; p < .001; partial eta squared = .731), and bring the issue to a manager’s attention (Wilk’s Lambda = .058; F (3; 37) = 199.59; p < .001; partial eta squared = .942).

To further investigate these interactions, contrasts were performed comparing each vignette across each of the conditions. For stay silent, contrasts demonstrated that all vignettes except A3 (high anger, internal attribution) and A4 (high anger, external attribution) were significantly different. Examination of the stay silent means for anger (see Table 4) indicated that participants were most likely to remain silent when anger was low and the cause was externally attributed, but also with low anger and internal attribution. Contrasts for asking a colleague for advice indicated that there were significant differences between all vignettes, except for vignette A1 (low anger internal) and A2 (low anger external). Examination of the mean scores (see Table 4) indicated that participants were more likely to ask a colleague for advice when anger was high, and when the attribution was also external. Contrasts for addressing the issue with the transgressor indicated significant differences between all scenarios except scenario A1 (low anger, internal attribution) and scenario A3 (high anger, internal attribution), indicating that participants were most likely to address the issue with the transgressor when anger was high and when the attribution was external (see Table 4). Finally, contrasts for bringing the issue to a manager’s attention demonstrated significant differences across all vignettes except A3 (high anger internal attribution) and A4 (high anger external attribution; see Table 4) suggesting that individuals were most likely to speak out to a manager when anger was high regardless of the attribution.
To test hypothesis 4(b), we selected only those individuals in the fear condition. We found a main effect of the vignette for staying silent (Wilk’s Lambda = .771; F (3; 37) = 3.654; p < .05; partial eta squared = .229), but there were no significant differences between each of the vignettes in the pairwise comparisons. The options to discuss with a colleague, address the issue with the transgressor and bring the issue to a manager’s attention did not show any significant differences between the scenarios.

Thus, we found support for hypothesis 4a, but not for hypothesis 4b. We found mixed support for hypothesis 5, as attributions did seem to have an impact on the decision regarding what action to take, although this only appeared in the anger scenarios, and seemed to disappear at the highest levels of anger.

**Study 3 Discussion**

This study demonstrated that low anger was associated with a decision to remain silent, while high anger was associated with an increasing likelihood to speak-up in various ways, although we note the use of our one-item measure as a limitation. The role of causal attributions was less clear. It appears that attributions may be more important in influencing decisions to speak up or remain silent regarding an observed transgression when strong emotions are absent. Thus, there is merit in further investigating the role of causal attributions in the relationship between emotions and speaking up. Specifically, further investigation of the interaction between causal attributions and levels of anger is warranted.

**General Discussion**

Our studies provide valuable insights into the concept of silence in the workplace and its relationship to both emotion and behaviour. Responding to the call of Morrison (2014) and Gooty et al. (2009), we provide empirical evidence regarding the relationship between the experience of silence and associated discrete emotions and actions. In so doing, we contribute significantly to the prevailing literature regarding the relationship between emotions and silence.
In the first instance, and confirming previous theoretical positioning (e.g. Ashford et al., 1998; Morrison & Milliken, 2000; Van Dyne et al., 2003), we empirically demonstrate that there are many reasons for being silent at work, with defensive silence being associated with personal protection while acquiescent silence is typically born of exclusion. We also confirm the contrast between proactive and passive motives for being silent and identify the discrete emotional consequences associated with these reasons for being silence.

Second, our studies demonstrate that although different forms of silence provoke different emotional reactions, negative responses to silence are evident to a greater degree. While previous research proposed that silence is associated with emotions such as fear (Van Dyne et al., 2003) and anger (Edwards et al., 2009; Harvey, Martinko, & Douglas, 2009; Henik, 2008), we confirmed this empirically in the field and established such emotions as a consequence of silence. Significantly, and in line with Lindebaum and Gabriel (2016), we demonstrated that anger is not always a destructive emotion, but can be constructive in the form of speaking up. This latter finding is of particular interest as it may suggest the presence of a threshold or tipping point for anger where the appraisal or fear of consequences is revised. Higher levels of anger appear to trigger more unrestrained reactions. This result is reflective of Grant’s (2013) identification of the centrality of emotion regulation processes in understanding decisions to voice.

We demonstrate that employee prosocial silence evokes responses such as engagement and contentment, with emotions such as caring, fondness and affection characterizing this proactive form of silence. Studies 1 and 2 reinforced the existence of this active form of silence across different contexts, indicating that remaining silent can be a deliberate formative strategy exercised by employees to enhance workplace relations and performance. Although not the main focus of our study here, Table 3 also demonstrated that there were relatively high levels of fear and shame associated with prosocial silence in Study 2. This is an as yet, unexplored area ripe for future research. In the main, prosocial behaviours have been considered a positive form of proactive behaviour in organisations (Grant, 2007; Layous, Nelson, Oberle, Schonert-Reichl, & Lyubomirsky, 2012), and whistle-blowing has been considered a type of prosocial behaviour (Dozier & Miceli, 1985). However, it should be noted that prosocial silence may not always serve a positive function in
organisations. For example, if an employee chooses to remain silent about the wrongdoing of a colleague in order to protect them, it may serve to protect wrongdoers.

Finally, we provide clarification regarding the effect of particular emotions on silence versus voice behaviour. While it is has been clearly established that emotions lead to action tendencies (Frijda et al., 1989; Larsen et al., 2001; Mackie, Devos, & Smith, 2000), our results specifically elucidate the primary role of anger as an antecedent of silence and voice behaviour, thus adding to previous research findings (Cacioppo et al., 2000; Grandey et al., 2002). Indeed further examination of the concurrent experience of fear and anger by employees may unlock the intricate cognitive and emotional regulation strategies at play with silence versus voice decisions.

Taken together, our results relate acquiescent, defensive and pro-social silence in terms of mapping their distinct motivational origins and demonstrate how the varying forms of silence result in distinct emotional experiences. Anger (defensive) and fear (acquiescent) permeate the emotional landscape of silence and these two emotions contribute significantly to our understanding of the dynamics of silence (versus voice) in the workplace. Furthermore, our results suggest that the positive and negative aspects of pro-social silence require further investigation.

**Limitations and future research**

Across each of our studies, sample size was modest and not always gender-balanced; thus our results cannot claim to be broadly representative of the general workforce. While the methodologies chosen delivered compelling insights regarding the trajectory of silence from its antecedents to its consequences, the use of vignettes over ‘live’ organizational examples may have resulted in a degree of simulation at the expense of authenticity.

As noted earlier, 11% of respondent attributions for being silent in Study1 did not correspond with the Van Dyne et al. (2003) motive-behaviour model, lending support to the contention that the model may not be all inclusive and warrants further analysis to accommodate multiple motive patterns and real silence motives not provided for currently (e.g. ‘family matters on my mind’ or ‘little or no interest in the issue’). A worthwhile consideration for future researchers might include an appraisal of
respondent personal resources, as non-work factors such as fatigue or family concerns may deplete resources to engage fully in voice or indeed an employee might just feel too shy or introverted to speak-up. Despite these limitations, taken as a whole, our three studies present compelling evidence for the role of emotions in motivating silence and voice and particularly demonstrate the distinct action tendencies resulting from experienced fear and anger.

Future studies should address these issues by continuing to gather field data in settings that are sizeable in nature across a broad range of contexts to allow for greater generalization of findings. A deeper focus on the experience of simultaneous emotions within silence types and the incorporation of emotional and cognitive regulation processes may uncover the active dynamic aspects being silent. Moreover, researchers should consider means of gathering data as it occurs in a live context to deliver a more embedded and complete narrative. Our studies revealed the importance of identifying the context in which silence behaviour is being recorded. Future research should maintain this attention and consider isolating contexts within which employee risk, control and efficacy differ, in an effort to further refine the relationship between motives, emotional experiences, context and behaviours.

This research surfaced some interesting variations in experienced emotions associated with silence behaviour from respondents in different countries (study 2), suggesting that future research may also benefit from considering country differences in the relationship between silence and specific emotional experiences. In particular, we suggest that experienced differences in the intensity of fear and anger in acquiescent silence conditions and joy in defensive silence conditions in cross-national samples might be a fruitful area for further research.

**Conclusion**

This research has confirmed that silence within the workplace is a complex phenomenon, with both positive and negative consequences for the silent employee and the organization. For managers and leaders, the challenge is not just to understand the multiple reasons why employees might remain silent but also to appreciate the range and implications of employee emotions. While manifest anger may result in voice, lower levels of anger typify acquiescent and defensive silence,
which would benefit from further consideration. Seeking to understand whether the source of silence emanates from employee efficacy attributions or safety concerns is important, as are steps to remedy the situation if these are confirmed. The recognition of the existence of factors that sponsor silence and the fostering of approaches to eliminate employee isolation and fear are key to improving constructive voice and engagement. However, not all silence has negative connotations, and managers and leaders should observe and acclaim the quiet support of pro-actively silent employees, reflecting the old adage attributed to Cicero that ‘silence is one of the true arts of conversation’.

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### Table 1. Study 1. Summary of the “Reasons for remaining silent” responses.

<table>
<thead>
<tr>
<th>Silence Type</th>
<th>Sample N</th>
<th>Comments N</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Acquiescent Silence</td>
<td>41</td>
<td>138</td>
<td>“No point speaking as not listened to”, “I’m treated as different”, “No culture of involvement”, “No authority.”</td>
</tr>
<tr>
<td>2. Defensive Silence</td>
<td>39</td>
<td>84</td>
<td>“I fear being wrong”, “I lack confidence to speak up”, “I fear conflict”</td>
</tr>
<tr>
<td>3. Prosocial Silence</td>
<td>28</td>
<td>106</td>
<td>“Taking time to think”, “To listen to others”, “To allow others space-time to speak”</td>
</tr>
<tr>
<td>Total</td>
<td>108</td>
<td>328</td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Study 1. Summary of the “silence made me feel” responses.

<table>
<thead>
<tr>
<th>Silence Type</th>
<th>Sample N</th>
<th>Feeling/State Category N</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Defensive Silence</td>
<td>39</td>
<td>40</td>
<td>“Frustrated”, “Stressed”, “Uninvolved and disengaged” (disengaged)</td>
</tr>
<tr>
<td>Total</td>
<td>108</td>
<td>109</td>
<td></td>
</tr>
</tbody>
</table>
Table 3. Study 2 (N = 142): Means across each scenario

<table>
<thead>
<tr>
<th>Condition</th>
<th>Defensive silence</th>
<th>Acquiescent silence</th>
<th>Prosocial silence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Love</td>
<td>1.91</td>
<td>1.20</td>
<td>1.62</td>
</tr>
<tr>
<td>Joy</td>
<td>1.75</td>
<td>0.997</td>
<td>1.67</td>
</tr>
<tr>
<td>Fear</td>
<td>3.45</td>
<td>1.50</td>
<td>2.93</td>
</tr>
<tr>
<td>Anger</td>
<td>2.81</td>
<td>1.58</td>
<td>2.27</td>
</tr>
<tr>
<td>Shame</td>
<td>2.42</td>
<td>1.37</td>
<td>2.44</td>
</tr>
<tr>
<td>Sadness</td>
<td>1.72</td>
<td>0.995</td>
<td>1.63</td>
</tr>
</tbody>
</table>
Table 4. Study 3: Means across each scenario and condition

<table>
<thead>
<tr>
<th>Cond.</th>
<th>Scen.</th>
<th>Fear</th>
<th>Anger</th>
<th>Attribution</th>
<th>Fear M (SD)</th>
<th>Anger M (SD)</th>
<th>Attribution M (SD)</th>
<th>Stay silent M (SD)</th>
<th>Ask colleague for advice M (SD)</th>
<th>Discuss with transgressor M (SD)</th>
<th>Bring to manager M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F1*</td>
<td>Low</td>
<td>NA</td>
<td>Internal</td>
<td>2.50 (1.57)</td>
<td>4.15 (2.03)</td>
<td>20.68 (0.849)</td>
<td>1.88 (1.09)</td>
<td>2.60 (0.841)</td>
<td>2.75 (1.06)</td>
<td>2.55 (1.04)</td>
</tr>
<tr>
<td>1</td>
<td>F2</td>
<td>Low</td>
<td>NA</td>
<td>External</td>
<td>1.85 (1.33)</td>
<td>2.95 (1.58)</td>
<td>18.25 (0.724)</td>
<td>2.15 (1.23)</td>
<td>2.65 (0.864)</td>
<td>2.65 (1.00)</td>
<td>2.28 (1.26)</td>
</tr>
<tr>
<td>1</td>
<td>F3</td>
<td>High</td>
<td>NA</td>
<td>Internal</td>
<td>8.20 (2.43)</td>
<td>5.50 (4.17)</td>
<td>22.70 (0.699)</td>
<td>2.18 (1.17)</td>
<td>2.68 (1.02)</td>
<td>2.13 (1.04)</td>
<td>2.60 (1.17)</td>
</tr>
<tr>
<td>1</td>
<td>F4</td>
<td>High</td>
<td>NA</td>
<td>External</td>
<td>8.45 (2.69)</td>
<td>5.25 (4.03)</td>
<td>22.23 (0.676)</td>
<td>1.88 (1.20)</td>
<td>2.73 (0.960)</td>
<td>2.45 (1.04)</td>
<td>2.78 (1.12)</td>
</tr>
<tr>
<td>2</td>
<td>A1</td>
<td>NA</td>
<td>Low</td>
<td>Internal</td>
<td>1.63 (0.897)</td>
<td>4.00 (1.96)</td>
<td>20.25 (0.849)</td>
<td>2.70 (0.939)</td>
<td>2.15 (0.802)</td>
<td>2.55 (0.959)</td>
<td>2.08 (0.997)</td>
</tr>
<tr>
<td>2</td>
<td>A2</td>
<td>NA</td>
<td>Low</td>
<td>External</td>
<td>1.28 (0.933)</td>
<td>2.68 (1.56)</td>
<td>17.13 (0.724)</td>
<td>3.30 (0.883)</td>
<td>2.08 (0.859)</td>
<td>2.15 (0.949)</td>
<td>1.28 (0.506)</td>
</tr>
<tr>
<td>2</td>
<td>A3</td>
<td>NA</td>
<td>High</td>
<td>Internal</td>
<td>4.63 (2.17)</td>
<td>10.40 (1.67)</td>
<td>23.00 (0.699)</td>
<td>1.15 (0.534)</td>
<td>3.13 (0.757)</td>
<td>3.03 (1.05)</td>
<td>3.60 (0.709)</td>
</tr>
<tr>
<td>2</td>
<td>A4</td>
<td>NA</td>
<td>High</td>
<td>External</td>
<td>4.50 (2.29)</td>
<td>9.95 (1.32)</td>
<td>7.13 (0.676)</td>
<td>1.33 (0.657)</td>
<td>3.30 (0.758)</td>
<td>3.73 (0.506)</td>
<td>3.85 (0.427)</td>
</tr>
</tbody>
</table>

* F refers to fear, and A refers to Anger. N= 40 for the fear experiment, and N = 40 for the anger experiment.
Figure 1. Study 1: Reasons for being silent and how that made participants feel.