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Emotions at Work:  
Norms of Emotional Expression and Gender Dynamics  
in Workplace Communication

By  
Sanaz Mobasseri

A dissertation submitted in partial satisfaction of the requirements for the degree of  
Doctor of Philosophy in Business Administration  
in the Graduate Division  
of the  
University of California, Berkeley.

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## ABSTRACT

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Gender Dynamics in Workplace Communication

By

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Doctor of Philosophy in Business Administration

University of California, Berkeley

Professor Sameer Srivastava, Chair

This dissertation examines how people express and exchange emotions in the workplace and how these expressions relate to their social positions in organizational networks. Prior literature has tended to focus on employees' expressed emotions towards external actors, such as customers, which are often required by their job roles; this dissertation instead focuses on emotional exchanges between colleagues in routine communications at work. I investigate four key questions: (1) How do people express emotions in the workplace? (2) How do people respond to the emotions of others in the workplace? (3) What kinds of emotional expressions are associated with valuable positions in organizational networks, and for whom? (4) Are there social network rewards (or penalties) associated with engaging in the emotion work of aligning towards colleagues' emotions? Core to this inquiry is gender, as a primary cultural frame for organizing social relations. I bridge insights from the sociology of gender with the social psychology of emotion to unpack how these factors shapes people's tendencies to express their emotions, respond to the emotions of their colleagues, and construct and navigate networks inside of organizations.

Findings from these studies contribute to research across five domains by: (1) enhancing our understanding of the cultural and emotional experience of employees in the workplace; (2) unearthing a less visible form of emotion work; (3) highlighting gender differences in emotional expressions, emotion work, and social network positions; (4) expanding interactional accounts of how individuals navigate social networks; and (5) identifying gendered and emotional correlates of social network positions.

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**CHAPTER 1:**  
**INTRODUCTION TO EMOTIONS AT WORK**

This dissertation contributes to our understanding of how emotions are expressed, exchanged, and related to social network positions inside of organizations. Extant literature on socio-emotional relationships within organizations has tended to focus on how emotional expressions towards external organizational actors are required by certain jobs; this dissertation instead focuses on how emotions are expressed and attended to between colleagues in routine communication. Despite the importance of emotions in interpersonal exchanges across domains of social life, surprisingly little is known about how people exchange emotions at work and how these expressive tendencies relate to their social positions within organizational social networks.

In this dissertation, I address four key questions about emotional expressions at work: (1) How does gender shape the tendency to express emotions at work? (2) How does gender shape people's tendency to respond to others' emotions by aligning to them? (3) How does gender shape the relationship between emotional expressions and social network positions? (4) Is the emotion work of aligning towards one's colleagues associated with valuable social positions in organizational networks? Past research has tended to focus on the relationship between instrumental interactions and social network positions, limiting our understanding of how emotions enable or constrain people's mobility inside of organizational social networks. Given that workplace interactions involve both emotional and task-based exchanges, omitting the role of emotions results in theories that potentially overstate instrumental behaviors at work. I draw on recent theoretical and methodological advances in computational linguistics to investigate emotional expressions in frequent and routine text-based communications within an organizational social network (Srivastava et al. 2018; Goldberg et al. 2016).

## **Dissertation Outline**

This dissertation is comprised of four chapters. I begin with this brief introduction to the topic of study. Chapter 2 investigates the role of gender in shaping emotional expressions and alignment—the tendency for people to match the emotional expressions of their conversation partners in language-based communication—at work. I develop a theoretical account that helps to reconcile two competing expectations about gender and emotional expressions. On one hand, men are socialized to contain their emotions, whereas women are socialized to express emotions. On the other hand, women in the workplace often suffer greater penalties and backlash than men when they express emotions. I propose that the tendency for men and women to express emotions depends on the valence of the emotion being expressed: men have greater license to express negative emotions, while women are licensed to express positive emotions. I further argue that women face more diffuse emotional obligations than men, making women more likely than men to adapt their tendencies to align to their colleagues' emotions. I test these ideas using the content of 425,649 one-to-one email message threads exchanged over six years among 710 full-time employees at a mid-sized technology firm. To account for selection of individuals into conversations on the basis of similarity in emotional expression tendencies, I employ a word-based hierarchical alignment model that distinguishes base rates of word usage from alignment in response to others' language use. Overall, people express six times more positive than negative

emotion in the workplace. Men are 16.0% more likely to express negative emotions, whereas women are 11.4% more likely to express positive emotions. Women align more to negative emotions than men. However, both men and women align to a similar extent towards their colleague's positive emotional expressions. I discuss the implications of these findings for research on emotions, gender, and workplace inequality.

My third chapter draws on 23,272 monthly snapshots of 1,704 employees' social networks to examine the relationship between people's emotionally expressive tendencies and their social positions within an organizational network. Prior theories of valuable social position in organizational networks overly rely on accounts of instrumental and task-related interactions, omitting the socio-emotional dimension of relationships, which is known to impact the relationships people form and corresponding social positions they hold. This paper bridges theoretical insights from social networks, the social psychology of emotions, and the sociology of gender to unpack how gendered expectations facilitate and hinder routine communication between employees where status judgments are made and relationships are formed. I develop theory that unearths differences in the interactional strategies that women and men employ at work by extending arguments about the social function of emotional exchanges in interpersonal relationships to valuable social positions obtained in the broader organizational network. I do so by integrating methodological tools from sociolinguistics, sociology, and social psychology. I use variation in individual's emotional expressions in electronic mail messages and their social position over time to unearth these gendered patterns in communication. Women with greater tendencies to express both positive and negative emotions are likely to hold more central, less constrained, positions in the social network. In contrast, men with greater tendencies to express negative, but not positive emotions, are likely to hold valuable positions in the network. Engaging in the emotional labor of aligning towards the emotions of one's colleagues is not associated with valuable social positions but results in lower status social positions for both men and women who align towards gender incongruent emotions. Women who align towards their colleagues' negative emotions as well as men who align towards their colleagues' positive emotions are associated with less valuable positions in the social network.

The fourth and final chapter lays out future directions for the broader research program. I do so by detailing specific steps to extend the arguments and findings detailed in Chapters 2 and 3.

**CHAPTER 2:**  
**GENDER AND THE GIVE AND TAKE OF EMOTIONS**  
**IN THE WORKPLACE**

## INTRODUCTION

From birth, people learn to express their emotions, which enable them to initiate relationships, obtain resources, and navigate competition; they help people solve two fundamental needs of social life, to cooperate and compete with others (Collins 2004; Thoits 1989; Kemper 1978).<sup>1</sup> These social needs are also core to the workplace, where colleagues routinely express and exchange emotions as they coordinate tasks, establish working groups, exert interpersonal influence, and manage conflict (Bechky 2011; Frijda 2007; Barley and Kunda 2001). Expressing emotions influences a wide range of organizational processes, such as helping, searching for solutions to problems, thinking creatively, evaluating people and processes, and making judgments about risk (Brief and Weiss 2002; Isen 1999; Staw, Sutton, and Pelled 1994; Staw and Barsade 1993; Isen and Baron 1991).

Research on expressions of emotion in the workplace has tended to focus on customer-service jobs, highlighting the role of individual emotional labor—the effort employees expend to understand and grapple with their own feelings as they enact role-specific public displays while serving consumers (Kunda and Van Maanen 1999; Rafaeli and Sutton 1989; Hochschild 1983). This paper brings the study of emotional work *inside* the organization—to the context of routine communication between colleagues during their normal course of work. Whereas prior work on emotional labor has focused on how employees respond to the emotions of external actors by regulating their own feelings and behaviors, I instead examine how employees respond to each other’s emotions by adapting their own emotional expressions (Sutton 1991).<sup>2</sup> Drawing on insights from sociolinguistics, I develop a novel theoretical conceptualization of emotional work as linguistic alignment, the choice to adapt one’s expressive tendency to match the language used by an interaction partner in a given conversational exchange (Giles et al. 1991). I conceptualize emotional alignment as a specific manifestation of linguistic alignment: the tendency to match the emotions expressed by one’s interaction partner in language.

Matching between how people talk, move their bodies, and nonverbally communicate is a robust phenomenon of social life (Tomasello 2008; Clark 1996; Giles et al. 1991). Matching can establish a sense of similarity by reducing interpersonal distance and organizing shared perceptions and expectations, which, in turn, powerfully engenders connections and enhances communication (Rivera 2012). These social benefits can be thwarted, however, when people fail to match by either not responding or responding in an asynchronous manner.<sup>3</sup>

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<sup>1</sup> The first expression a human makes when she/he is born is to cry, which was a step that advanced mammalian evolution (Lambert 2003; MacLean 1985).

<sup>2</sup> I refrain from using the term “emotional labor” because my arguments do not involve the appropriation of value or exploitation of emotional labor as originally conceived by Hochschild (1983). Instead, I draw on the concept of emotional work to describe engagement with one’s own emotions and the emotions of others. Emotional work is independent of whether or not an organization exploits this work for profit or broader organizational goals.

<sup>3</sup> Non-responses or asynchronous behaviors accentuate differences and have been described as “divergent” or “disaccommodating”; They can be used to maintain distance, dissociate, or uphold identity differences (LaFrance 1985; Scotton 1985; Bourhis and Giles 1977).

People can come into sync with one another in two distinct ways (Doyle et al. 2017; Doyle and Frank 2016). First, two individuals may already be similar in their behavioral tendencies and, therefore, sort into interactions on that basis (McPherson et al. 2001). When people have pre-existing baseline tendencies to behave in similar ways, they are more likely to match each other's behavior. A second way that people achieve synchrony is if either person actively adapts their behavior to match the other. In fact, people in organizations may be more willing to match their interaction partners the more they internalize, identify, and wish to comply with perceived organizational norms (Doyle et al. 2017).

I argue that achieving emotional alignment by adapting one's emotional expression to match one's interaction partner is a distinct form of emotion work. Furthermore, these tendencies to express emotions emerge, not only from norms that organizations maintain, but also from a longer-standing process of socialization that people undergo throughout the course of their lives. One of the most important determinants of how people are socialized is their gender; gender socialization can powerfully shape the emotional work that men and women take on, even in routine communications at work (Ridgeway 2011; Reskin and Roos 1990; Kanter 1977).

Considerable prior research has investigated the extent to which gender shapes the expression of emotions (Ridgeway 2011; Schilt 2010; West and Zimmerman 1987). On the one hand, there is a deeply rooted and widely held cultural belief that men are better suited to work because they are able to control and contain their emotions (Acker 1990; Kanter 1977). Thus, men are asked to do emotion work less often than women (Wharton 2009; Grandey 2000; Hochschild 1983). Women, in contrast, are widely considered to be emotionally expressive across domains of social life and are expected to engage with others' emotions (Chodorow 1978). Yet burgeoning research also reveals that women at work are not licensed to express emotion—they experience backlash when they do (Brescoll and Uhlmann 2008). As a consequence, when and how men and women engage in the give and take of emotion work in the workplace remains unclear.

I propose that the tendency for people to express emotions depends on the valence of the emotion being expressed and their gender socialization. More specifically, when men do engage with emotions, they are more likely to draw on negative emotions, such as anger and disappointment, because masculine socialization emphasizes the use of negative emotions as tools to signify their manhood (Schrock and Schwalbe 2009). By contrast, as members of the lower status gender category, women are not permitted to engage with negative emotions that are incongruent with traditional conceptions of femininity. Women are socialized throughout their lives to offer their interaction partners care, support, and affirmation, under the umbrella of positive emotions—and these idealized feminine behaviors bleed into the workplace (Kanter 1977). Thus, despite outdated notions of work as a rational and controlled context, I argue that men and women express both positive and negative emotions, but at different base rates. These same gender roles that people are socialized into also shape how men and women will engage with the emotions of others. Expectations of women's emotional obligations are diffuse and unbounded, whereas men's roles are more specific and rooted in nonfamilial roles. Thus, I argue

that women are more likely than men to adapt their communication tendencies when responding to the emotions of others.

I use a novel research design that draws on 425,649 routine email communications exchanged between 710 employees over six years within a company to examine men's and women's tendencies to align to the emotions of their colleagues, the emotional work they do for their colleagues. I employ a word-based hierarchical alignment model to distinguish between a person's baseline likelihood of expressing positive and negative emotions (pre-existing tendency to express emotions) from the likelihood that they will express an emotion to match to their colleagues' (engaging with emotions of others).

Results indicate that, overall, people express six times more positive than negative emotion in the workplace. Men are 16.0% more likely to express negative emotions, whereas women are 11.4% more likely to express positive emotions. Women align more than men to their colleagues' negative emotions, whereas both men and woman align similarly towards positive emotional expressions. I discuss the implications of these findings for our understanding of how routine interactions structure life inside of organizations, for the establishment and maintenance of gender roles at work, and for how emotions are woven through the content and nature of work.

## **THEORY**

Expressing emotions helps people relate to others and to their work (Dutton and Dukerich 2006; Wrzesniewski, Dutton, and Debebe 2003; Smith-Lovin and Heise 1988). Indeed, expressing some emotions and not others helps people coordinate tasks, exchange resources, and resolve conflicts (Thoits 1989; Clark 1987). As the nature of work becomes increasingly social, service-focused, and interdependent, interactions between colleagues give rise to more things (for example, events) that can generate emotional expressions, thus influencing how people navigate work and organizational life (Kelly and Barsade 2001). Engaging with emotions is, therefore, more relevant for the modern workplace than before.

Although debate persists about the definition of emotions, most agree that they are not simply innate phenomena; rather they are culturally constructed (Lawler and Thye 1999; Thoits 1989). I focus my attention on the cultural components of expressions, not necessarily felt experience of emotions, which are rooted in widely shared beliefs about appropriate social behaviors for a given context (Collins 2004; Thoits 1989; Hochschild 1983).<sup>4</sup> To aid in conceptualizing the work that emotional expressions do in social interactions, I bring together three dimensions of emotional expressions that each facilitate how people make meaning through interaction and communication. First, unlike more general and diffuse moods or feelings, emotions express value about something—that is, they refer to specific things, such as a person

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<sup>4</sup> It is, however, important to note that felt and expressed emotions can be related, where expression influence feelings and vice versa (Salancik 1977).



or an event, and assign a value to it (Brief and Weiss 2002; Weiss and Cropanzano 1996).<sup>5</sup> For example, when a colleague complains about the educational background of job candidates under review at a hiring committee meeting, he communicates to the group that he perceives the set of applicants to be *less* valuable.

Second, by expressing value about something, emotions enable people to take a position in relation to other objects, events, or people within an invoked cultural context, which helps interaction partners interpret and understand the expression (Du Bois 2007; Dutton and Dukerich 2006; Thoits 1989). To extend the example above, his negative emotional expression also reveals information about what his expected level of value in job candidates is, thereby providing information that can help shape the group's predictions about how he might evaluate other job candidates. Taking note of this, another colleague can respond by expressing the same negative sentiment about the candidates' educational backgrounds, thereby aligning with his colleague's position and signaling shared underlying values about hiring.

The third dimension is the interpersonal nature of emotional expressions (Collins 2004; Hochschild 1983). We seldom *express* emotions in solitude. The man reviewing job applications is unlikely to display his disappointment about the candidates alone in his office, because expressing emotions to others has distinct meaning from expressing emotions alone. Thus, people can powerfully use expressions of emotion to negotiate their position within organizations' social and cultural structures throughout their everyday interactions at work (Collins 2004; Eliasoph and Lichterman 2003).

In the course of daily life, people commonly characterize their own emotions along a spectrum ranging from positive to negative emotional valence (Russell 1983).<sup>6</sup> To put simply, one fast and easy way that people can categorize and interpret emotional expressions is along a dimension of positive to negative. For example, *he really liked the new budget proposal* or *she was disappointed with the draft you submitted*. Broadly, positive emotional expressions reward and affirm certain behaviors. By positive, I refer to emotional expressions such as happiness and gratitude. Expressions of these positive emotions facilitate the formation of important bonds by motivating people to approach, cooperate, and identify similarities with others (Waugh and Fredrickson 2006; Johnson and Fredrickson 2005). In contrast, expressions of negative emotion—such as anger, anxiety, and sadness—call for behavioral changes and sharpen group boundaries that delineate in-group membership from out-group membership (Keltner and Haidt 1999). Negative emotional expressions serve as behavioral warnings, punishments for particular actions, or uphold the boundaries of a group (Spoor and Kelly 2004; Keltner and Haidt 1999;

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<sup>5</sup> In contrast, people can have “feelings” or “moods” that are not tied to specific situations. Feelings refer to physical drive states such as hunger and fatigue, in addition to emotional states, that generate behaviors resulting in specific benefits for the body. In contrast, moods refer to weaker, more diffuse emotional experiences that are less tied to particular stimuli (Barsade 2002). For a more detailed discussion, see Thoits [1989].

<sup>6</sup> Debates about the definition of “emotion” and best approach to the study of emotion persist across disciplines including social psychology, sociology, and linguistics, to name a few. I draw on a dimensional approach to emotions, rather than a discrete approach, because my focus is on examining whether broad categories of emotions influence interactional patterns of alignment, rather than the individual effects of discrete emotions on interactional patterns.

Zajonc 1998). Such expressions can arise from inequitable situations, subtle and overt struggles over power and status, norm violations, and the loss of trust.

When employees interact, they express emotions to facilitate coordination, communication, and collaboration. In fact, many organizations have invested significant resources into defining and promoting cultural norms that guide the emotional tone of interactions through “collaboration” and “prosociality” to specify the kinds of behaviors that will help (or prevent) employees achieve organizational goals (Srivastava and Banaji 2011). This is one component of organizational cultures—they strive to encourage a particular kind of socioemotional behavior that is more conducive to work (Schein 1985). Given that conducting work involves a series of repeated interactions with approximately the same set of colleagues, emotional expressions of positive, as compared to negative, emotions are more useful for the formation and maintenance of relationships over time. Thus, my theoretical development begins with the hypothesis that routine expressions of positive emotions outweigh expressions of negative emotions (Baumeister et al. 2001; Rozin and Royzman 2001; Cacioppo, Gardner, and Bernston 1999).<sup>7</sup> An important implicit assumption in this baseline is that workplace task-related interactions are increasingly social, relying more on facilitators of social connection from positive emotions than signals of threat or loss stemming from negative emotion (Turco 2016; Zelizer 2009). Organizations with explicit hierarchies and clearly-defined independent roles are less likely to be places where emotional exchanges take place. Furthermore, a boundary condition of this premise is that the extent to which positivity is greater than negativity depends on the type of work, organizational culture and norms, and broader industry context (Chatman and O’Reilly 2016; Brief and Weiss 2002; Barsade et al. 2000).

### **Hypothesis 1: People express positive emotion more than negative emotion in routine workplace interactions.**

People are socialized to express some emotions and not others throughout the course of their lives. This socialization occurs both prior to entering an organization as well as during their time inside of an organization. Gender is one of the primary lenses through which people are socialized before they begin working, which is a core component of how people coordinate their social relationships (Ridgeway 2011). Thus, gender and emotions are both important forces that shape how people interact with others (Wharton 2009; Hochschild 1983). Yet, from expansive bodies of work on both gender and emotions, extant theories offer distinct and, at times, conflicting predictions about men and women’s tendencies to express emotions in the workplace.<sup>8</sup>

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<sup>7</sup> Evolutionary accounts of emotions assert that people are more responsive to negative, rather than positive emotions, because negative emotions signal dangers and threats to life. Since people only die once, people are more responsive to negative rather than positive emotions.

<sup>8</sup> A third perspective suggests that there may also be no gender differences between the emotional lives of men and women (Gross and John 2003). Since my focus is on emotional expressions and the cultural context of interactions, I omit a review of these arguments.

Most men experience gendered advantages in the workplace, but less is known about how men's emotionally expressive interactions are structured such that men's advantages are created and reinforced within organizations (Acker 1990; Kanter 1977). The ability to control, refrain from, and set aside emotions is highly valued at work and most assume that it belongs to men. Kanter described these masculine traits as "a tough-minded approach to problems; analytic abilities to abstract and plan; a capacity to set aside personal, emotional considerations in the interests of task accomplishment; a cognitive superiority in problem-solving and decision making" (1977:43). Indeed, organizations' taste for appearing controlled and reducing uncertainties lead many to privilege rational thinking over emotionality. Ideal worker conceptions privileged by organizations place little value on emotional expressions, with the exception of expressions of devotion to work (Acker 1990). This perspective suggests that men do not need to express emotions to conduct their work and achieve organizational goals.

At the same time, another theoretical perspective emphasizes that men hold higher status in the gender hierarchy, which licenses them to engage in emotional expressions that may be undesirable—for example, people perceive anger expressions at work as an internal loss of control for women, but a sign of competence and high status for men (Brescoll and Uhlmann 2008). Theoretically, then, men's higher status inside of organizations buffers them from penalties for deviating from discouraged behaviors, such as expressing emotions.<sup>9</sup> This view implies that men, more than women, have license to express emotions ranging from outbursts of excitement about sports teams to frustration over a colleague's work to disappointment about a promotion they did not receive. However, these arguments are inconsistent with the ideal worker perspective that conducting and coordinating work in organizations requires very little, if any, emotional expression and exchange. These extant theoretical perspectives about the emotional lives of men lead to different predictions for their tendency to express emotion: men either express no emotion or they are licensed in the workplace to express more than women. Both perspectives omit a deeper investigation into the differences in what various emotions mean when they are expressed and responded to.

Widely shared cultural beliefs about masculinity make men, more than women, well suited to express negative emotions. As the higher status gender category, men are both permitted to engage with negative emotions, that I argue are more restricted in workplaces than positive emotions, and have more experience with negative emotional expressions from their more masculine upbringing. Indeed, men learn to construct masculinity throughout their lives by mastering a set of conventional practices that signify their manliness (Schwalbe 2005). Men, therefore, internalize these gendered patterns that they have been socialized to perform over the course of their lives, and bring this into their workplace interactions. At work, men are more likely to appear strong, instrumental, rational, and tough through expressions of anger and

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<sup>9</sup> There is social psychological evidence that men experience backlash for expressing communal or feminine emotions such as warmth or sadness (Rudman and Phelan 2008). However, this is rooted in laboratory studies, which omit deeper theoretical conceptualizations about the contextual characteristics that endorse such penalties. In social organizations tasked with increasingly interdependent work, such expressions are more likely to be valued than penalized. In sum, organizational context is likely to matter for how masculinity is policed (Connell 1993).

disappointment, and provocations of fear because they have been socialized to engage in these ways (Higate 2007; Sinclair 1995; Collinson 1992). Thus, I argue that men's tendencies, resulting from their gendered socializations that they have internalized, to express negative emotions at work are greater than women's baseline tendencies (Wood and Karten 1986; Bales and Slater 1955).

**Hypothesis 2A: Men have a higher baseline tendency to express *negative* emotion than women.**

Expectations about how women will express emotions are deeply rooted in how girls are socialized to be pleasant, cheerful, and nurturing from childhood (West and Zimmerman 1987; Chodorow 1978). Tendencies to express emotion that are learned at home bleed into the workplace, which is increasingly becoming a site for intimate relationships (Zelizer 2009). On the one hand, women are expected to have more feelings, express more emotions, and be emotionally "fluent" in general (Shields 2002). Thus, this perspective suggests that women are much more likely than men to express emotions.

On the other hand, organizational cultures and workplace codes of conduct heavily restrict emotional expressions because they perceive them to be irrational and reflective of low self-control (Chatman and O'Reilly 2016; Elias [1939] 2000; Cancian 1987; Peplau and Gordon 1985). Notions of professionalism encourage people to restrict their independent expressions of self in service of conforming to general ideal worker stereotypes, which are often rooted in more typically masculine ideals (Reid 2015). Evidence abounds that these restrictions are disproportionately borne by women (Brescoll 2016; Rudman and Phelan 2008). For women striving to succeed in the workplace, professionalism strongly discourages emotional expressions, which are the very same behaviors that women are largely responsible for expressing and managing. How can these two perspectives be reconciled?

I argue that women are simultaneously more expressive than men and restricted within the workplace because women are confined to expressions that are closely coupled with traditional conceptions of femininity. The perception that women have more emotions to express stems, in part, from patriarchal relationships where women have been encapsulated into a set of roles, such as mothers, sisters, wives, or lovers, and these pre-existing understandings constrain the ways that people expect to interact with women at work (Turco 2010; Kanter 1977). Critically, the common thread that weaves women's social roles together is an emphasis on expressing support and affirmation to their interaction partners, which closely link to *positive* emotional expression. For example, women are more likely to be cheerful, nice, and affirming. Because women have been socialized to express positivity throughout their lives, their tendencies to express positive emotion have been, to some extent, internalized. Therefore, when

women choose to express an emotion at work, without being prompted by the emotion of another, they are more likely to express positive emotions than their male counterparts.

**Hypothesis 2B: Women have a higher baseline tendency to express *positive* emotion than men.**

Hochschild canonically coined the term “emotional labor” to describe the work people do to manage their own feelings and emotional expressions as a part of their job, which has consequences for career success and performance—for example, flight attendants, customer service representatives, and waiters, whom profit-seeking organizations exploit (1983). Employees constantly express their emotions in the normal course of doing their jobs, for example, in response to their colleagues, clients, events, and tasks (Brief and Weiss 2002; Sutton 1991; Rafaeli and Sutton 1987). While abundant research has focused on the emotional labor that companies extract from employees in jobs oriented towards customers or other external actors, less attention has been devoted to the oft unnoticed and less visible emotion work that underlies routine interactions between employees in the workplace (Wharton 2009).

By emotion work, I mean how people choose to respond to another person’s expression of emotion. When one’s colleague expresses an emotion to them, they face several choices when crafting their response (Fine 2012; Eliasoph and Lichtenstein 2003). There are three broad strategies for responding to another’s emotional expression. First, people can respond to another’s emotional expression by expressing no emotion at all, conveying disinterest or disagreement with the other person’s statement—for example, to signal disagreement with a colleague’s assessment of a job candidate (Rivera 2015). Not responding with any emotion can also signal disengagement and disinterest. Second, people can reply to a colleague’s emotional expression with the expression of another emotion, thereby conveying a *different* position than their interaction partner previously stated. The third type of response is to match their emotional reply to their partner’s preceding emotional expression. Emotional alignment—that is, the adaptation of one’s expressive tendencies to match that of their conversation partner—is a robust phenomenon of social life and a core tenet of social interaction (Eliasoph and Lichtenstein 2003; Fine 2000).

Choosing to emotionally align to another—that is, to match the emotions expressed by one’s interaction partner—is a specific type of emotion work.<sup>10</sup> Alignment, in general, reduces interpersonal distance, reflects engagement and interest, shared understanding and experience of the situation, and signals congruence between less visible underlying perceptions, judgments,

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<sup>10</sup> The exchange of emotions between individuals has also been characterized as “psychological bowing” or the “socioemotional economy” (Clark 1987; Hochschild 1983:801-81). Hochschild further develops the paradigm of psychological bowing by describing responses to emotional expressions that contain no emotion as “nonpayment” and responding with a different emotion, instead of matching to the same emotion, as “antipayment” (p. 80-81; 1983). Responding with no emotion at all conveys disagreement or disinterest with the other person’s statement—for example, to signal disagreement with a colleague’s assessment of a job candidate (Rivera 2015). Replying to a colleague’s emotional expression with the expression of another emotion conveys a different value and taking a different position than their partner previously asserted.

obligations, and expectations (Rivera 2015; Collins 2004; Hochschild 1983).<sup>11</sup> Aligning is conceptually similar to notions of cultural matching—for example, when employees match with job candidates or other colleagues on leisure pursuits—which gives rise to liking (Rivera 2012; Turco 2010). Alignment along other dimensions of communication has been shown to increase the extent to which people perceive those who align as attractive, supportive, and cooperative (Berger and Bradac 1982; LaFrance 1979; Feldstein and Welkowitz 1978). People consciously and unconsciously adapt their expressive style to become more similar to another. I argue that alignment on emotional expressions is a source of integration and belonging.

This tendency to align to interaction partners occurs in-person, online, and mediated through technology (Danescu-Niculescu-Mizil et al. 2012; Niederhoffer and Pennebaker 2002; Giles et al. 1979).<sup>12</sup> Alignment is not only found in the language people use, but also in how people move their bodies, the pace at which they talk, and the kinds of decisions that they make (Vacharkulksemsuk and Fredrickson 2012; Saavedra, Hagerty, and Uzzi 2011; Street 1983). In sociolinguistics, this accommodation strategy whereby individuals adapt to each other's communicative behaviors has been identified across a wide range of communication features including speech rate, pausing, utterance length, smiling, and gazing, to name a few (Feldstein 1972; Webb 1972; Argyle 1969). While linguistic alignment emphasizes the specific feature that is being aligned on and the consequences for the actor who is aligning, there are reasons to suggest that emotional alignment is an even stronger type of alignment, because alignment on the *cultural* content of expressed emotion carries additional meaning.

As I argued above, organizations have many reasons to promote positive socioemotional behaviors in the workplace and, in various ways, they socialize workers to do this. However, this same emphasis on positivity also dilutes the signal that it sends. Workers are more likely to have habituated to positive emotional expressions because they already expect their colleagues to express such emotions. In other words, organizational cultural norms have desensitized workers to positive emotional expressions, making them less likely to adapting their choice of words to align to an expression of positive emotion.

Organizations' emphasis on and preference for positive emotional content serves to preserve people's sensitivity to negative emotional expressions. In fact, one potential consequence of restricting expressions of negative emotion is that people have become even more sensitive to such expressions than they otherwise would have been. Thus, when it comes to adaptive responses to negative expressed emotions, people are more likely to align towards negative emotion than positive emotion.

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<sup>11</sup> A related concept is emotional contagion, which emphasizes the transfer of mood or emotions between people (Barsade 2002). Emotional alignment can result in a transfer of emotions (i.e. contagion), but it may also reflect a conscious or unconscious effort to align, establish similarity, and connect. Because alignment focuses on emotional expression, but not necessarily experiences or duration of emotion, it is possible that two people can emotionally align without actually experiencing any transfer of mood or emotions. Said differently, emotional alignment precedes emotional contagion, but contagion does not necessarily emerge from emotional alignment.

<sup>12</sup> Given the obstacles that prevent people from completely communicating what they intend to their audience, a distinction Goffman refers to as the difference between what people “give” and “give off”, the ability to emotionally align is a particularly remarkable (Goffman 1959; Ickes 1958).

### **Hypothesis 3: People align to negative emotion more than positive emotion in routine workplace interactions.**

As I have argued above that gender differences resulting from socialization shape people's tendency to express emotions, they also shape how men and women respond to the emotions of others. Men are socialized into roles that are less likely to involve emotional considerations in general. Idealized masculine roles are rooted in specific roles related to the organization of production (outside of the family), which stigmatizes emotion work and relegates such work to group members with lower status (Hochschild 1983). The roles that men are socialized to aspire to are much more likely to be specific, delimited, and independent from others. In contrast, women are socialized into roles that center on emotion work for others—in ways that are embedded in social interactions and relationships with diffuse and unbounded emotional obligations (Chodorow 1978). Women are raised to have great concern with affective goals and relationships, but this socialization is imprecise with respect to the limits of these concerns. The nonspecific nature of women's roles with respect to the emotions of others makes women more likely than men to adapt their communication tendencies in response to the emotions of their colleagues. I argue that the adaptation necessary to emotionally align for both positive and negative emotion is likely to be done by women.

### **Hypothesis 4: Women have a greater tendency to align to *both negative and positive* emotion than men.**

## **METHOD**

A great deal of research on emotions has focused on the public and more visible aspects of emotional life, yet investigation into the emotion work that employees do within their organizations for their own colleagues is often harder to observe and, therefore, less integrated into the broader sociologies of work and organizations (Wharton 2009; Grandey 2000; Hochschild 1983).

I propose that language offers insights to the study of emotional expressions at work. Organizations endorse, encourage, and motivate their members to communicate using language by investing resources into email and communication platforms, by providing employees with mobile devices to have consistent access to communication tools, and by allowing people to work from different locations, thereby increasing their reliance on linguistic communication to conduct their work. Language is a crucial tool for workplace communication. The words that employees choose and do not choose to express themselves are not only fundamental to communicating, coordinating, and building relationships, but also carry meaning and influence how others will reply (Du Bois 2007; Goffman 1981; Whorf 1956 [1940]; Sapir 1921). In fact, laboratory experiments reveal that 88 to 96% of emotions that participants recalled were shared

verbally with others, repeatedly: this process, termed “social sharing,” is found across emotions and is considered an integral part of emotional experiences (Rimé et al. 1991).

This linguistic approach offers distinct advantages for theoretical and methodological development for the study of work inside of organizations. First, the way that people express and align to emotions in their language reveals information about how individuals subjectively emotionally experience their workplace and their efforts to actively shape and extract emotional meanings from their routine experiences (Patterson 2014; Menchik and Tian 2008; DiMaggio 1997). Second, linguistic data in practice allows researchers to observe actual emotional expressions rather than the self-reported data about emotions. For emotion work that is harder to detect, self-reported data is at risk of measuring the norms, values, and beliefs that employees hold about emotional expressions that they should have, instead of the actual emotional exchanges that take place. Critically, linguistic data is also less susceptible to concerns around social desirability bias, impression management, or the limitations of individual introspection and consciousness that plague self-reports (Mobasseri, Goldberg, and Srivastava 2017). Third, sociolinguistic analysis of emotions relies on well established and validated psycholinguistic dictionaries that are widely used (Pennebaker et al. 2007). Lastly, the study of emotion in language offers theoretical insights to dynamics of interactions that are not face-to-face. In organizations, language-based communication represents a different mode of social interaction than face-to-face or self-reported interactions (Quintane and Kleinbaum 2011; Wu et al. 2008; Grippa et al. 2006). It is easy to imagine times when people may avoid expressing emotion in person and prefer to use language-based communication instead, or vice versa.

### **Empirical Setting and Data**

Data for the study of emotional alignment came from electronic messages (emails) exchanged between 710 employees of a mid-sized technology firm over six years, from 2009 to 2014. I sorted email exchanges into pairs of messages and replies—email threads—where each message and reply pair represents one unit of analysis. To ensure that email communications related to each other, I restricted the analysis to emails that include only one sender and one recipient. Thus, all emails to a group of recipients who are cc'd or bcc'd were excluded. 98% of all emails contained less than 500 words. To remove outliers from the analysis, emails with more than 500 words as well as emails with no text in the body of the message were also excluded from the analysis. Email replies that were sent seven days after the original message were excluded because it was unclear if that reply was related to the preceding message. This resulted in a data set containing 425,649 message reply pairs with 710 distinct employees exchanging messages. Because I am interested in how people reply to messages, a particular email can appear in the dataset as both a reply and a message that, in turn, conditions another reply, if there is a series of email exchanges. I then determined the gender and managerial status of the message sender and recipient from the company's HR records. To isolate the role of gender from effects of managerial status, at times, I restrict my analysis to interactions between non-managerial



employees, which draws from a dataset of 253,413 message reply pairs with 684 distinct non-managerial employees exchanging messages.

## Dependent Variables

There are two primary dependent variables in this study, both of which are dichotomous. The first dependent variable that I estimate is the probability of expressing positive (or negative) emotion when the preceding message from one's interaction partner does not contain any emotion words—that is unconditional on the prior message containing the same emotion. I refer to this dependent variable as the baseline or unconditional probability of expressing positive (or negative) emotion in email communication. In contrast, the second dependent variable that I estimate is the probability of expressing positive (or negative) emotion, conditional on whether the preceding message from one's interaction partner contained words from that same emotion category. I refer to this second dependent variable as emotional alignment.

To calculate emotional alignment, or the tendency to match the emotions expressed by one's conversation partner, I draw on a conditional model (as compared to a distributional approach) of emotional expressions in workplace email communications. This approach allows me to distinguish between two types of matching, which is critical for empirically estimating adaptive tendencies when engaging with the emotions of others. Since emotional alignment can be observed by noting when two people align in their emotional expressions, separating when that alignment results from pre-existing shared tendencies versus adaptive work above and beyond one's baseline is important for gaining theoretical and empirical precision about the extent to which people engage with emotions at work. For example, there are two paths through which colleagues can align to each other's positive or negative emotion. In one case, both employees have similar tendencies to express positivity that resulted from their respective socializations prior to beginning their jobs. Perhaps both employees were socialized in the same region with similar social norms about how to respond to other people's emotions. The fact that these two colleagues are able to match each others' emotions is not a case of emotional alignment. In contrast, when one employee adapts their response to match their colleague's emotional expression, they thereby engage in emotion work.

I borrow these crucial methodological advances from sociolinguistics, where prior work investigating linguistic alignment employs distributional methods to calculate the similarity between two people by measuring the frequency of their use of a particular word or category of words within a conversation (Jones et al. 2014; Niederhoffer and Pennebaker 2002). This approach may uncover a high level of similarity between two people that is not necessarily reflective of true *alignment*. Rather two colleagues may have already been similar in their behavioral tendencies to begin with, reflecting distributional similarity instead of alignment. Critically, conditional models allow for stronger inference about how a message conditions its reply than distributional methods. Thus, this approach enables me to separate emotional

alignment from pre-existing similarities in people's tendencies to express emotions, which can also be conceptualized as akin to homophily or cultural similarity.

To observe emotional expressions, I draw on the Linguistic Inquiry and Word Count (LIWC) dictionaries to categorize words used in messages as positive or negative emotional expressions. LIWC is a widely used linguistic framework containing dictionaries of psychology-relevant words that map onto cognitive and emotional dimensions of speech (Tauszik and Pennebaker 2010). Each LIWC category is comprised of a list of dictionary words and word stems that define that particular category. For example, LIWC categories include swear words, achievement, and pronouns.

I use two LIWC dictionaries that characterize positive and negative emotions. For these LIWC categories, words were initially selected from dictionaries, thesauruses, questionnaires, psychological scales, and lists made by research assistants. Groups of three judges independently rated whether each word was appropriate for each category. Adding or deleting words from a category required two out of three votes from judges. Furthermore, these particular LIWC categories of positive and negative emotion words are valid constructs for verbally measuring different expression of emotion, meaning that they accurately capture people's emotional experiences when they choose to describe them with language (Kahn, Tobin, Massey and Anderson 2007). Along the same lines, research has validated these same LIWC categories as measures of emotion in linguistic content written to other people (as opposed to written for one's self) as well as measures of emotion validated by human ratings of emotion in written form (Alpers et al. 2005).

I coded messages that contain at least one word from a positive or negative emotional category as an emotional expression. The positive and negative emotion LIWC categories contain 411 and 502 stem words, respectively. Table 1 display some examples of positive and negative emotion words and illustrates that the words contained in these LIWC categories are not merely representative of general affect; rather, these LIWC categories are specific and strong signals of positive and negative emotions.

**TABLE 1. EXAMPLES OF POSITIVE AND NEGATIVE EMOTION WORDS**

<b>Positive Emotion Words</b>		<b>Negative Emotion Words</b>	
<b>Stem Word</b>	<b>Examples of Word Variants</b>	<b>Stem Word</b>	<b>Examples of Word Variants</b>
amaz*	amazing, amaze, amazement	annoy*	annoyed, annoying
delight*	delight, delightfully,	furios*	furios, furiosness, furiosly
heartfelt		embarrass*	embarrassment, embarrassing
thoughtful*	thoughtfully	careless*	carelessly, carelessness
support*	supported, supportive	difficult*	difficult, difficulty
enjoy*	enjoy, enjoyed, enjoyment	upset*	upset, upsetting,
reliev*	relieved, relieving	exhaust*	exhausting, exhaustive
compassion*	compassionate	afraid	
agree*	agreeable, agreement	argu*	argue, argument, argued
hope*	hopeful, hopefully	awkward*	awkwardly

## Estimation

To calculate emotional alignment, or the behavioral tendency to express emotions in similar ways, I draw upon a method developed by Doyle and Frank, a Word-Based Hierarchical Alignment Model (WHAM) (Doyle et al. 2017; Doyle and Frank 2016). WHAM is a conditional model that critically assumes that one’s tendency to emotionally align to another is shaped by whether other’s preceding message contains an emotional expression. This method disentangles alignment from one’s baseline probability of expressing positive or negative emotions. WHAM is hierarchical in the sense that it treats probability of baseline expression and alignment differently depending on the three levels: gender group of the employee (*g*), word category (*c*), and specific interactional dyad within which two people are communicating (*d*). The first hierarchical level is the gender of the employee. This hierarchical level is important for accounting for distributional differences in the extent to which gender differences are likely to emerge in a particular workplace. For example, the extent to which men and women behave differently at work is likely to depend on the number of men and women employed in that particular workplace. For estimates about employee behavior overall, regardless of gender, I do not include this level of the hierarchy (e.g. Baseline Hypotheses). The second hierarchical level for the word category, *c*, accounts for the expectation that there are differences in the extent to

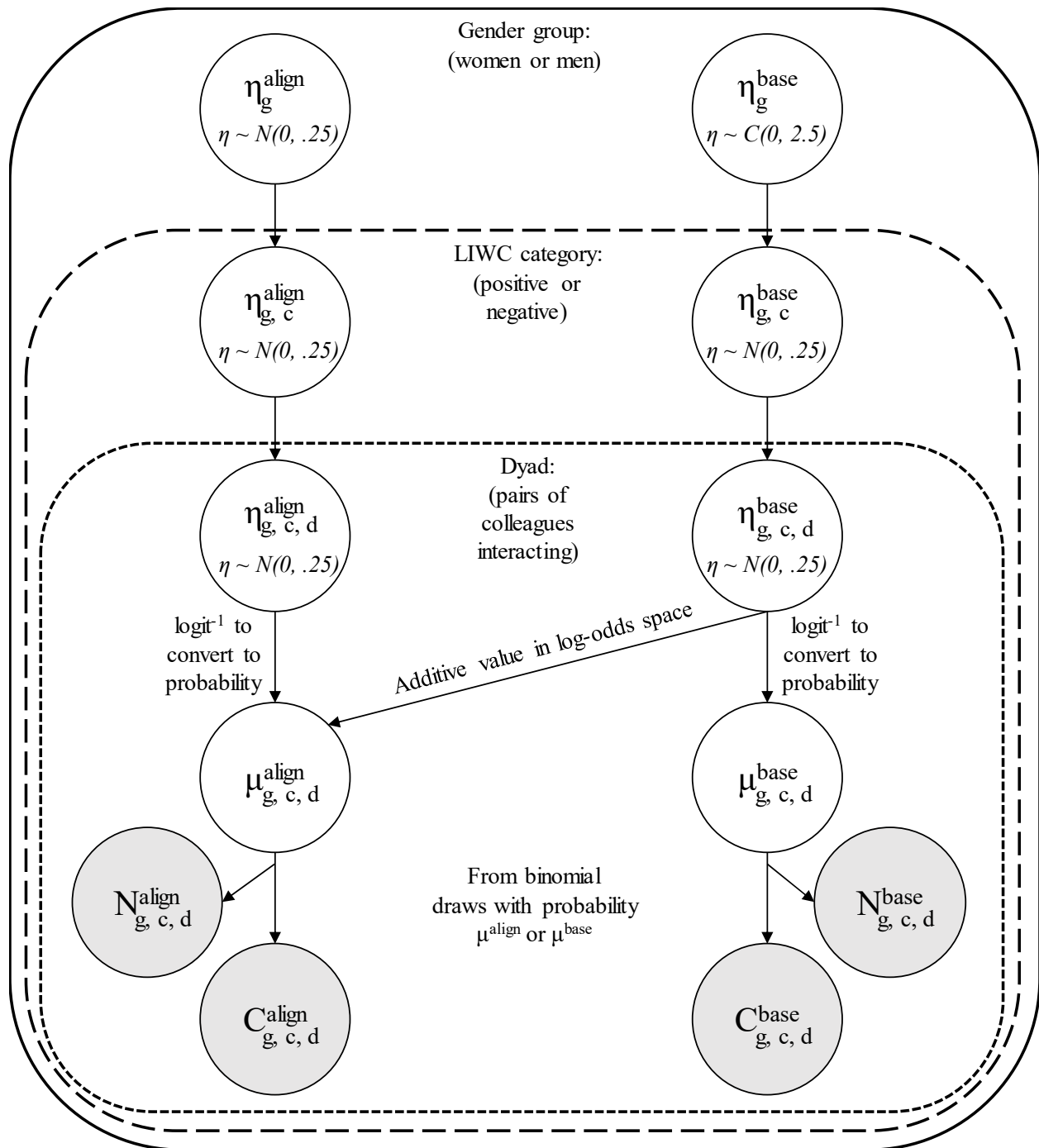
which words from different LIWC categories are expressed; therefore, I expect estimates of baseline and alignment probabilities to vary depending on the LIWC category. The third hierarchical level is the particular interactional dyad within which communication occurs,  $d$ . The frequency of communication between two employees is also likely to influence baseline and alignment probabilities of emotions.

All levels of the hierarchy—gender group, category, and dyad level—are assumed to have normal distributions with identical standard deviations of  $\sigma^2 = 0.25$ . I follow past sociolinguistic research by selecting a Cauchy (0, 2.5) distribution for the baseline frequency of emotional expressions, which indicates a relatively uninformative prior (Doyle et al. 2017; Doyle and Frank 2016; Gelman et al. 2008). Alignment is estimated from a hierarchy headed by a normal distribution with a mean of 0, which equally biases the model towards positive and negative alignment. The inferred alignment value depends on the prior and the number of messages observed.

WHAM treats each reply to a message containing a positive or negative emotional expression as a series of word-by-word independent draws from a binomial distribution. This means that the binomial probabilities are the same in the series of draws. The binomial probability  $\mu$  is dependent on whether the preceding message did or did not contain a word from that emotional category. The inferred alignment value is the difference between these probabilities in log-odds space. For each pair of message and reply between two individuals, I separated the replies into two groups based on whether the preceding message contained a word from that emotional category (the alignment group) or not (the baseline group). Then, all replies from an employee are aggregated in a single bag of words representation, that is, an unordered set of words, that focuses on word counts; thus, this approach is agnostic about word order, syntax, or grammar. Word counts of positive and negative emotion words in both types of messages—those that are and are not conditional on the preceding message containing a word from that category—are assumed to come from binomial draws with probability of  $\mu^{\text{align}}$  and  $\mu^{\text{base}}$ . The  $\mu$  values are generated from  $N$  values in log-odds space, by an inverse-logit transformation. The resulting probability estimate is akin to a linear predictor in a logistic regression.

The baseline likelihood of expressing an emotion is the frequency of a word from that emotional category in log-odds space. I use an inverse-logit transformation to convert this into a probability. Emotional alignment is, therefore, an additive value in log-odds space, which is equivalent to a coefficient in logistic regression. Then, emotional alignment is the change in log-odds of a person replying to another's emotional expression with a word from that same emotion category above their baseline usage of that emotion category. Parameter estimates were in RStan fits with 500 iterations over two chains (Carpenter et al. 2016). Figure 1 is a graphical depiction of my analysis. The graphic can be “read” from top to bottom, depicting the levels of hierarchy and transformations required to produce the estimates I report.

**FIGURE 1. GRAPHICAL DEPICTION OF WORD-BASED HIERARCHICAL ALIGNMENT MODEL**



Notes:

1. *N* indicates normal distribution; *C* indicates Cauchy distribution.
2. Lines around different components of the analysis represent hierarchical levels.

To put simply, my empirical objective is to distinguish between two types of emotions in email interactions: (a) emotions in email responses that reflect the *baseline* tendency that a person will express positive or negative emotion in an email response to their colleagues, and (b) emotions in email responses that reflect an *alignment* tendency that a person will adapt their expression of positive or negative emotion when responding to a colleague's email that contains positive or negative emotion.

## RESULTS

Table 2 reports descriptive statistics for the full data set of email message and reply threads. The tenure of employees sending and receiving messages to other employees in the data ranged from zero to 85 months. 32% of the employees were women. On average, employees replied to messages they received after only 0.26 days. 95% of replies were sent less than 2.84 days after a message was received. 38% of messages were both sent and replied to by women. The mean number of positive emotion words contained in email replies was 1.6, as compared to 0.2 negative emotion words.

**TABLE 2. DESCRIPTIVE STATISTICS FOR EMPLOYEES AND MESSAGE-REPLY THREADS**

Variable	Observations	Mean	SD	Min	Max
Tenure (Months)	710	8.4	11.0	0	85
Female	710	0.3	0.5	0	1
Messages Sent per Person	710	618.7	859.1	1	6,319
Messages Received per Person	710	602.0	936.8	1	10,611
Days between Send and Receive	710	0.3	1.3	0	7
Positive Emotional Words in Message	710	1.6	2.0	0	43
Positive Emotional Words in Replies	710	1.3	1.5	0	35
Negative Emotional Words in Message	710	0.3	0.7	0	39
Negative Emotional Words in Replies	710	0.2	0.6	0	19

Note: N = 425,649 email threads of message and reply pairs

Before reporting results of emotional expression and emotional alignment, I begin by providing some context for the linguistic tendency to align in emails. To do so, I first examine baseline and alignment estimates of functional words in this data set. Functional words, which constitute the substance of many interactions at work, are particularly relevant to psychological processes, so they serve as a useful comparison point for emotions (Pennebaker et al. 2007). For example, functional words include pronouns, prepositions, articles, and conjunctions, among other categories. Words such as “it,” “was,” “a,” and “and” comprise the function word category, which includes 464 words in total. In this particular organization, employees have a 40.2% baseline probability of using functional language in their messages, regardless of whether functional words were included in the preceding message. Furthermore, when it comes to alignment, the log-odds estimate for alignment towards expressions of functional words in a message is 0.11. Employees have a 42.7% probability of matching the functional language of their colleagues. Thus, for a linguistic category that is central to conducting work, these important sociolinguistic differences between baseline and alignment manifest in subtle ways.

Another reference point to help contextualize my results is alignment towards filler words. Filler words include expressions such as “um,” “like,” “you know,” or “I mean.” In conversations, alignment towards this linguistic category is considered to be a generalizable pattern across contexts (Giles et al. 1991). In these data, estimates of alignment towards filler words range from 0.29 to 0.47, which provide a helpful reference when interpreting other log-odds estimates of alignment reported below.



**TABLE 3. POSITIVE AND NEGATIVE BASELINE EXPRESSION**

<b>Baseline</b> N = 684 employee communications across 253,413 email threads of messages and replies		
	<b>Mean (%)</b>	<b>Credibility Interval</b>
<b>Hypothesis 1: All Employees</b>		
Probability of <b>Positive</b> Emotional Expression by <b>Any Employee</b>	4.65	4.61 – 4.68
Probability of <b>Negative</b> Emotional Expression by <b>Any Employee</b>	0.77	0.76 – 0.77
<b>Hypothesis 2A: Negative Emotion</b>		
Probability of <b>Negative</b> Emotional Expression by <b>Men</b>	0.81	0.80 – 0.82
Probability of <b>Negative</b> Emotional Expression by <b>Women</b>	0.70	0.69 – 0.71
<b>Hypothesis 2B: Positive Emotion</b>		
Probability of <b>Positive</b> Emotional Expression by <b>Women</b>	4.97	4.91 – 5.03
Probability of <b>Positive</b> Emotional Expression by <b>Men</b>	4.46	4.42 – 4.51

Table 3 reports average estimates for the baseline probabilities that any employee, regardless of gender, will express positive and negative emotions. I report estimates from the dataset of non-managerial interactions ( $n = 253,413$  email threads of messages and replies between 684 unique employees who are not managers); however, results are substantively similar for the entire dataset that includes interactions with managers ( $n = 425,649$ ). When responding to an email message that does not contain any positive emotion, the baseline probability of positive emotional expression, that a reply will contain positive emotions, is 4.65%, on average. In contrast, when responding to a message that does not contain negative emotion, on average, employees have a 0.77% probability of expressing negative emotions to other people within the firm, which is six times less likely than the probability of expressing

positive emotion. Thus, expressions of negative emotion are significantly less likely than expressions of positive emotion, providing support for Hypothesis 1.

Table 3 also contains estimates of baseline tendencies to express positive and negative emotional expressions by gender, which sheds light on Hypotheses 2A and 2B. For negative emotions, men have a 0.81% baseline probability of expressing negative emotions, when their interaction partners do not express negative emotions in the preceding message. In contrast, women have a much lower baseline probability of expressing negative emotion of 0.70%. The difference in baseline probabilities of negative emotional expression between men and women are statistically significant ( $p < 0.05$ ), providing confirming evidence for Hypothesis 2A. Men, in fact, are 16.0% more likely, than women, to express negative emotions to their interaction partners, when the preceding message from their interaction partner has not included any negative emotion.

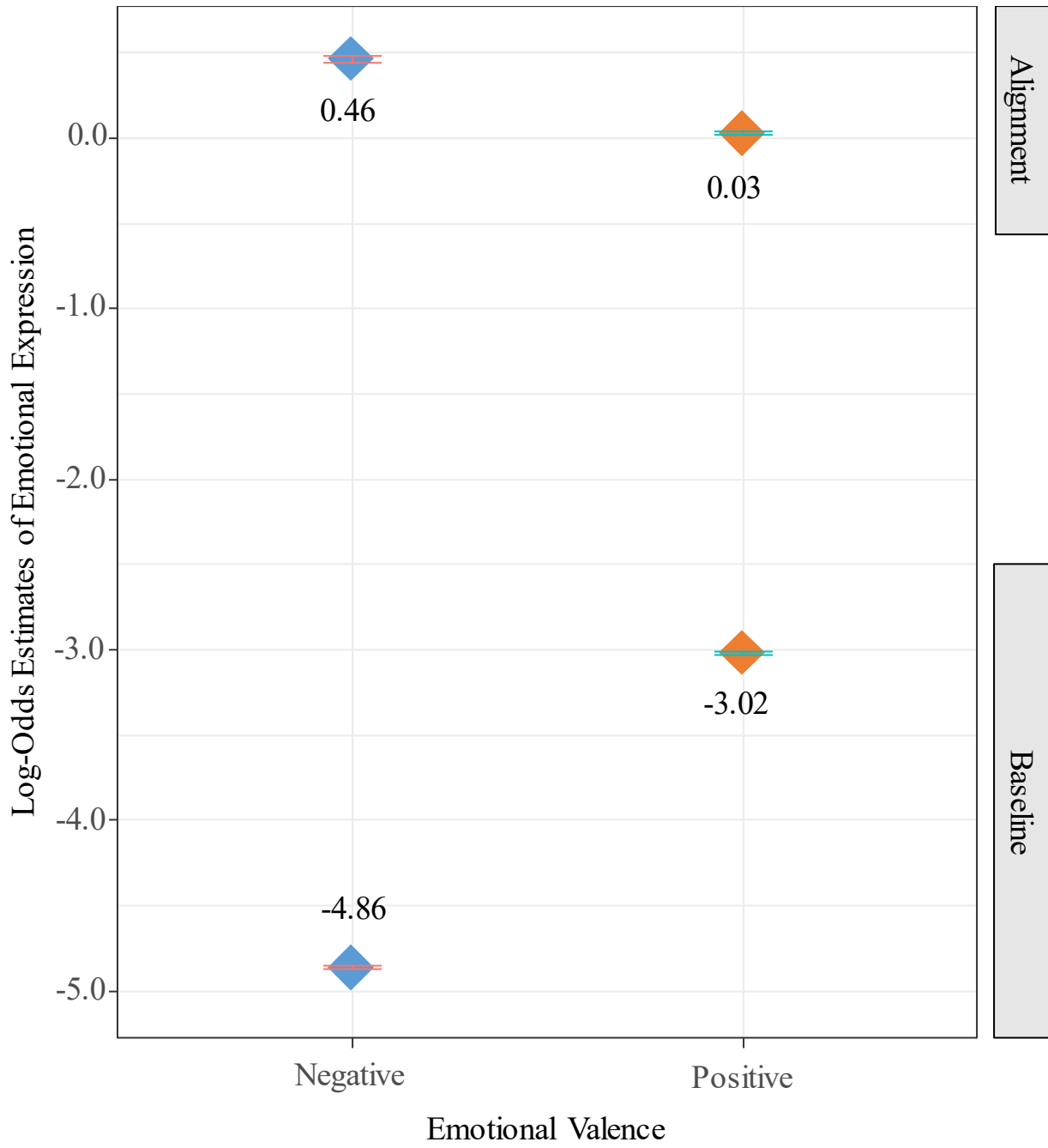
For positive emotion (Hypothesis 2B), the baseline likelihood that a woman will express positive emotions when there are no positive emotions contained in the preceding message is 4.97%, as compared to men's baseline probability of 4.46%. Thus, women have an 11.4% higher probability of expressing positive emotion than men. This means that, for the average number of internal emails sent in these data (618.7 as noted in Table 2), 30.7 emails from women will contain positive emotions as compared to 27.6 emails from men. This difference is statistically significantly different ( $p < 0.05$ ) providing support for Hypothesis 2A.

Emotional alignment, then, occurs when employees receive a message that contains a particular emotion and employees adapt their response from their baseline tendency to align towards the emotion expressed in the preceding message. Supporting evidence for my hypotheses stems from size of log-odds estimates, not the overall probability of alignment. The overall probability of alignment varies with the baseline probability of expression so my focus is on the size of alignment estimates. Table 4 contains the log-odds parameter estimates for Hypothesis 3, that people adapt the emotion included in their replies more for negative emotion than they do for positive emotions. This is also graphically depicted in Figure 2.

**TABLE 4. ALIGNMENT TO POSITIVE AND NEGATIVE EMOTIONAL EXPRESSIONS**

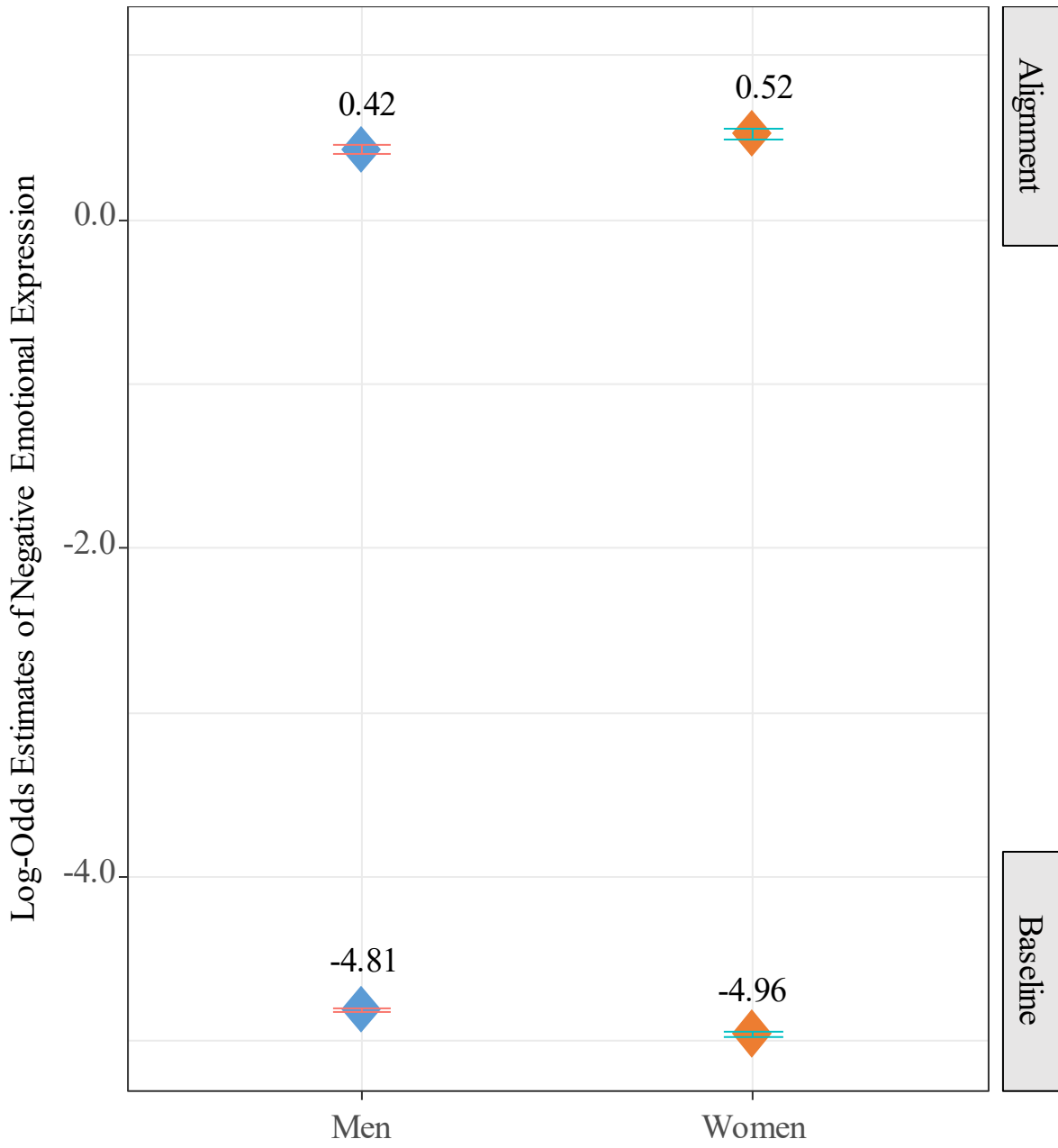
<i>Alignment</i> N = 684 employee communications across 253,413 email threads of messages and replies		
	<b>Log-Odds Estimates</b>	<b>Credibility Interval</b>
<b>Hypothesis 3: All Employees</b>		
Change in Log-Odds Estimate of Alignment to <b>Negative</b> Emotional Expression by <b>All Employees</b>	0.46	0.45 – 0.48
Change in Log-Odds Estimate of Alignment to <b>Positive</b> Emotional Expression by <b>All Employees</b>	0.03	0.02 – 0.03
<b>Hypothesis 4: Alignment to Negative Emotional Expression</b>		
Change in Log-Odds Estimate of Alignment to <b>Negative</b> Emotional Expression by <b>Men</b>	0.42	0.40 – 0.45
Change in Log-Odds Estimate of Alignment to <b>Negative</b> Emotional Expression by <b>Women</b>	0.52	0.49 – 0.55
<b>Hypothesis 4: Alignment to Positive Emotional Expression</b>		
Change in Log-Odds Estimate of Alignment to <b>Positive</b> Emotional Expression by <b>Men</b>	0.02	0.01 – 0.03
Change in Log-Odds Estimate of Alignment to <b>Positive</b> Emotional Expression by <b>Women</b>	0.03	0.02 – 0.04

**FIGURE 2. POSITIVE AND NEGATIVE EMOTIONAL ALIGNMENT FOR ALL EMPLOYEES**



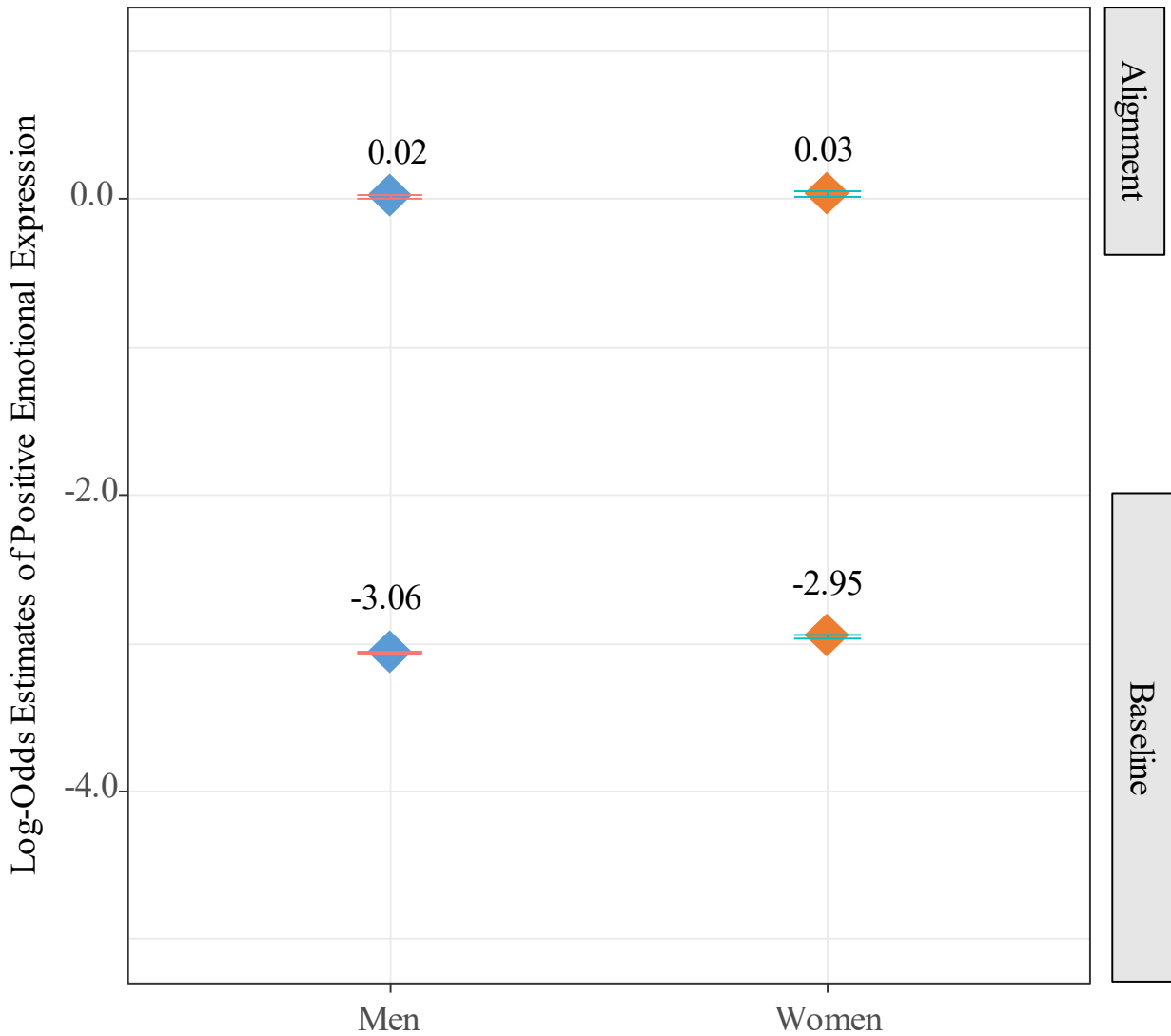
In response to positive emotions, the probability that employees will express positive emotions jumps up to 4.77% from 4.65%, on average. The log-odds estimate of alignment towards positive emotional expressions is 0.03 as compared to 0.46 for negative emotional expressions. For positive emotions, then, alignment represents a mere 2.6% overall increase above baseline. Said differently, employees are merely 1.03 times likely to align to positive emotions, suggesting that employees are not especially sensitive to the positive emotions of their colleagues as exchanged in routine email communications. Although the base rates of expressing negative emotions are lower than positive, my results provide evidence that people adapt their baseline tendencies more when aligning towards negative emotional expressions as compared to when they align towards positive emotional expressions. This provides evidence in support of my third hypothesis that people are much more sensitive to the negative emotions of others than to their positive emotions, which people are more likely to express in emails to their colleagues. Stated in terms of probabilities, when people receive a message containing negative emotions, their probability of expressing negative emotion increases to 1.21%, from their baseline of 0.77%.

**FIGURE 3. NEGATIVE EMOTIONAL EXPRESSION: BASELINE AND ALIGNMENT BY GENDER**



Hypothesis 4 examines how men and women respond to their interaction partners when either positive or negative emotion is expressed to them first. Table 4 reports log-odds estimates of alignment and Figures 3 and 4 are graphical representations of these results. When interaction partners express negative emotions first, alignment estimates for men are 0.42 as compared to 0.52 for women and this difference in the size of alignment is statistically significant ( $p < 0.05$ ). This means that the tendency to align towards negative emotions expressed by a conversation partner requires greater adaptation for women than for men, providing support for half of Hypothesis 4. Said differently, to emotionally align, women have to adapt their baseline tendency to express negative emotion *more* than men. Although baseline probabilities of negative emotional expression are statistically significantly lower than men, when their interaction partners express negative emotion, women increase more in their tendency to align relative to their baseline than men. Thus, although men are still more likely than women to align to their colleagues' negative emotions (in terms of probabilities and driven by higher base rates), the act of a colleague expressing negativity appears to have a different licensing effect for women than for men. During times when negative emotions are more likely to arise, such as during restructuring events or layoffs, this difference may be even more impactful for interactions and work within organizations. It is also important to note that the LIWC dictionaries for positive and negative emotions contain unambiguously emotional words, which may exceed the intensity of emotions in some organizational settings. If the dictionary for LIWC's positive and negative emotions categories were expanded to include less intense emotional terms as well, it is likely that the differences identified here would increase even further.

**FIGURE 4. POSITIVE EMOTIONAL EXPRESSION: BASELINE AND ALIGNMENT BY GENDER**



Hypothesis 4 also asserted that the same gendered pattern would hold for alignment towards positive emotion. Log-odds estimates reported in Table 4 and graphically displayed in Figure 4 illustrate that both men and women are not particularly sensitive to the positive emotional expressions of their colleagues and that there appear to be no statistically significant differences in the adaptive size of alignment. Thus, there appears to be no evidence to support the second part of Hypothesis 4. Although women have a higher probability of expressing positive emotions in the workplace, both men and women seem to be aligning to a similar extent towards positive emotions, relative to their baseline. This means that, unlike negative emotions, a colleague’s expression of positive emotions seems to have a similar licensing effect for both women and men.



### ***Robustness Checks***

First, the results reported above are based on analyses of employees who were not managers at the time of interaction. However, I conducted the same analyses across all employees, including all 26 managers, and the results are substantively similar. These results are included in Appendix A.

Second, I conducted a placebo test to explore whether the same gendered patterns of expression occur for other types of language. I do so by estimating baseline and alignment tendencies for the use of present tense in message and reply pairs. Alignment towards the present tense in language is one way that employees could align over the timing of their conversation topic. Tense alignment signals that both interaction partners are referencing the same moment in time. Men and women have 9.2% and 9.4% probabilities of using the present tense in their messages, regardless of the tense that their conversation partners used in the preceding message. For alignment, I estimate that men and women have log-odds of 0.03 and 0.02 aligning to the use of present tense in messages they receive from others. Neither of these differences in baseline or alignment probabilities are statistically significant for men and women ( $p < 0.05$ ). This placebo test provides some evidence that gender influences the dynamics of language-based expression and alignment of some linguistic categories, such as positive and negative emotions, but not others.

### **DISCUSSION**

This study finds people are six times more likely to express positive, rather than negative, emotions at work. In particular, men are 16% more likely than women to express negative emotions, whereas women are 11% more likely than men to express positive emotions in routine email communications. When it comes to linguistic accommodation of emotions—emotional alignment—the extent to which women adapt their expressions of negative emotion to align with their interaction partners is greater than men. No such gendered pattern emerges for emotional alignment towards positive emotional expressions. This article focuses attention on the emotional content of communications between colleagues to address a gap in our understanding of how gender shapes the expression of emotions in routine interactions and, consequently, the gender distribution of emotional work within the workplace. I do so by focusing on the valence of emotions—both positive and negative—and one aspect of the work do to accommodate and align to their colleagues, the tendency to match the emotions expressed by one’s interaction partners. At times when organizational tasks call for negative emotions, men are more likely to fulfill roles associated with negative emotions. In contrast, women will be more likely to enact roles that deploy positive emotion, but will be more sensitive than men to the negative emotions expressed by their colleagues.

Empirical evidence for this study draws from a dataset of 425,649 pairs of messages and replies exchanged among 710 employees over six years. I draw on the sociolinguistic

conceptualization of alignment to unpack gender differences in the tendency to engage with the emotions of others by aligning. I use variation in how people reply to the content of their colleague's emails to analyze gender differences in the tendency to emotionally align to others. Results indicate that people express six times more positive than negative emotion in the workplace. Men are more likely than women to express negative emotions, as compared to women who are more likely than men to express positive emotions. Men and women align similarly to their colleagues' positive emotions, but women demonstrate greater adaptation in their tendency to align towards their colleagues' negative emotions. I argue that these gender differences contribute to the perpetuation of gendered roles in the workplace whereby men and women are able to express different types of emotions, and, consequently, differentially engage in emotion work for their colleagues.

This article is not without limitations. First, this study examines the interactions of all employees within only one company, posing limits to the generalizability of these findings to other types of organizations in the U.S. and other countries. While there are strong theoretical reasons that gender differences in emotional expression and alignment should generalize to other organizational contexts, empirically testing the generalizability of these findings across other contexts, with varying contextual factors is an important step for future research. Second, this study focuses on one dimension of emotions, the valence of positive and negative emotions, expressed in one form, text communications, limiting our visibility into other dimensions of emotions, such as intensity, or other approaches to emotions, such as discrete approaches. Future research can adapt this research design to investigate the extent to which gender differences in patterns of emotions exchanged generalizes across other emotional dimensions, forms of expression (e.g. nonverbal expressions), and other types of emotions. Finally, this research design assumes that people notice and attend to expressed emotions in text. Future research can more directly observe this by investigating other cultural dimensions of communication, for example, norms of politeness, which may potentially result in patterns of expression and response that vary by gender.

## **Contributions**

Notwithstanding these limitations, this paper extends our understanding of how people express emotions and align to the emotions of their colleagues in routine workplace interactions. This article renews attention to the role of emotions at work as they are routinely expressed and responded to in emails between colleagues. Insofar as these results generalize to other settings, the relatively low probabilities of expressing any kind of emotion in communications with colleagues provide suggestive evidence that organizations inhibit emotional expressions in general. There is little evidence that people do not experience emotions when interacting with others or when doing work, yet there seems to be few places within organizational life that host employees' emotions. People are even further constrained in their ability to express negative emotion, relative to positive emotion. Results provide strong evidence that positive emotional expressions far outweigh negative emotional expressions. Extant research on subjective well-

being and employee satisfaction articulates the importance of expressing a full range of emotions, yet it seems that people are still severely emotionally constrained at work. Future research can build on these results by investigating the consequences of constraining one's emotions at work and, furthermore, the consequences of constraining one's negative emotions.

This paper also contributes to theoretical conceptualizations of emotion work in three distinct ways. First, I focus on emotional work inside of organizations with colleagues, as compared to prior work that has emphasized emotional labor for external facing actors, such as customers or clients. Second, this paper unearths the less visible form of emotion work that takes place in routine and ordinary communications, as compared to visible performances of emotion work such as those done by customer service agents or flight attendants. For example, more visible types of emotion work have even been documented in job training materials for nurses or flight attendants. In doing so, I advance emotion work theory by precisely articulating a specific type of emotional work, emotional alignment, which comprises my third contribution to the literature. I borrow sociolinguistic tools and theory to unpack how the act of matching another's emotional expressions, beyond one's own natural tendency, is a form of emotion work. Future research can build on this work by investigating and theoretically developing other forms of emotion work. For example, some types of emotional expressions are guided by norms of reciprocity instead of matching, which can be linguistically identified. Along these lines, responding to an expression of despair with an expression of hope can be conceptualized as another type of emotion work, shaped by different dynamics within organizations. Emotional work can also be empirically and theoretically unpacked in non-linguistic settings—for example, by examining nonverbal or paraverbal matching in face-to-face interactions.

Lastly, this paper argues and brings forward evidence that gender differences in socialization outside of work shapes how men and women express and attend to emotions within the workplace. Prior work has focused on how employees' internalization of organizational cultural norms drive the extent to which they linguistically express and endorse organizational norms (Doyle et al. 2017, Doyle and Frank 2016). I extend this work on how people fit into organizations by considering how gender socialization shapes the ways that people fit their emotions into organizations. Although both women and men are broadly subject to constraint in the emotions they express and align to, the difference in their emotional expression and alignment—or the emotion work they do—may intensify gender differences. Future work can interrogate how gendered actors can use other cultural tools, such as politeness or swearing, to sculpt their roles in the workplace. The persistence of gender differences in the workplace has puzzled researchers for decades. Thus, a more nuanced understanding of the ways in which interactional dimensions of the workplace, such as the positive and negative emotions exchanged, give rise to gender differences in communication patterns is of growing importance for the intractable issue of gender inequality (Ridgeway 2011). People's choice (or lack of choice) to interact with some colleagues and not others can either reinforce emotional patterns that govern society or decondition them by helping people learn new modes of interaction. Thus, applying an interactional lens to workplace dynamics can help shed light on the dynamic levers

that structure and reinforce gender differences in the workplace. Future research can also explicate the specific pathways that link emotion work to other kinds of workplace behaviors and roles—for example, how one’s tendency to emotionally align to their colleagues shapes the kinds of social networks they can form with their colleagues.

## **Conclusion**

In conclusion, this study underscores the value of borrowing social insights from research on linguistic patterns and the social psychology of expressed emotions to understand how routine interactions between men and women perpetuate gender differences in workplace communication. This work opens the door to future inquiries about types of differences embedded in routine workplace interactions and understanding how these differences shape other individual, job, and organizational outcomes.

**CHAPTER 3:**  
**SEEKING SOCIAL POSITIONS: EMOTIONAL EXCHANGES**  
**BETWEEN WOMEN AND MEN AT WORK**

## INTRODUCTION

Evidence abounds that the social structure inside of organizations paves pathways to valued resources—such as informal power, access to new and innovative ideas, and prestige (Uzzi, Yang, and Gaughan 2016; Burt 2005; Ibarra 1993). Extant research on intraorganizational social networks has tended to focus on how task-related, instrumental interactions with colleagues facilitate individuals' attainment ranging from promotion to compensation to career mobility (Burt 2005; Podolny and Baron 1997). Consequently, less is known about how the content of emotional exchanges shapes individual's social network positions, despite robust evidence that social ties inside of organizations are shaped by both emotional and task-related interactions (McGuire 2007; Haythornthwaite and Wellman 1998; Ibarra 1992; Brass 1984). Thus, theoretical accounts of how people build relationships and navigate towards desirable social positions remain incomplete because they rely upon accounts of social life that disproportionately emphasize task-related exchanges.

A rapidly proliferating literature on the social functions of expressing and exchanging emotions provides robust evidence that emotions shape people's ability to form, maintain, and navigate relationships (Frijda 2007; Collins 2004; Keltner and Morris 2000). Expressions of emotions can communicate social roles and encourage interaction partners to respond in ways that reinforce those social positions (Tiedens 2000). Those who successfully navigate intraorganizational networks towards valuable social positions are likely to express emotions in a way that corresponds to those social positions.

However, emotional expressions are heavily shaped by gender, which is known to differentially constrain and enable the type of emotions that women and men can express (Hochschild 1983). Given that socio-emotional behaviors are fundamental to relationships, it remains unclear how gendered expectations of emotional expressions shape men's and women's social positions within organizations. This paper begins to address this gap by investigating the relationship between gender, emotional exchanges, and social network positions.

## THEORY

### **Seeking Valued Social Positions in Organizational Networks**

Centrality is one of the most frequently used descriptive measures of one's social position in social structure (Wasserman and Faust 1994; Marsden 1990). Broadly, centrality measures a person's status, prominence, or prestige and is often linked to informal and formal power, control, social status, and leadership positions within organizations (Ibarra 1993). More central and higher status individuals potentially have greater access to and possible control over valued resources (Freeman 1978). Centrality in social networks has been linked to a myriad of positive outcomes, including career mobility, disproportionately large influence in their communities, better job outcomes, and greater independence (Uzzi, Yang, and Gaughan 2016; Podolny and Baron 1997; Podolny and Stuart 1995; Shaw 1964). Due in part to a focus on documenting the benefits of holding a valuable positions within a network, extant research sharply distinguishes

between task-based versus socioemotional relationships—or said differently, instrumental versus expressive relationships. Furthermore, data limitations often limit network researchers to study snapshots social networks instead of dynamic social networks changing over time. Consequently, our understanding of how micro-level social interactions give rise to relationships that accord valuable social positions and enable the flow of resources remains incomplete—disproportionately focusing on instrumental interactions and undertheorizing the role of emotions. This paper remedies this rift by theorizing the relationship between individuals’ social network positions and their tendencies to express and exchange emotion at work.

### **Individual Factors Shaping One’s Social Network Position**

Past research has linked social network characteristics to two individual factors that shape how people form social connections. First, one’s social category membership—such as one’s gender or age—has been linked to their social network characteristics. For example, women are more likely to have larger social networks with a greater diversity of kinship ties than men (Burt 1998). In contrast, men are more likely to be associated with positions of social network brokerage than women. Marital status has also been tied to network composition such that married individuals have more ties to family and neighbors than do unmarried individuals (Fischer 1982).

A second set of factors shaping social network characteristics is a person’s stable psychological characteristics, such as their personality traits, which have been linked to their motivations for navigating social networks and forming social ties (Casciaro 1998; Burt, Kilduff, and Tasselli 2013). For example, individuals with a high need for achievement and affiliation have been tied to more accurate perceptions of their social networks (Casciaro 1998).

A third potential factor, which has yet to be explicitly linked to one’s social network position, is a person’s expressions of their own emotions and responses to the emotions of others. Indeed, emotions researchers have amassed critical evidence of the extent to which emotions motivate people to take specific social actions, providing solid theoretical reasons to explore the relationship between individual’s emotional expressions and their social network position.

### **Emotions: The Building Blocks of Social Structure**

Social structures are influenced, to some extent, by the behaviors of people within them (Emirbayer and Goodwin 1994; Kemper 1993; Collins 1990). In particular (and consistent with the second chapter of this dissertation), I focus my arguments on the cultural components of emotional expression—often termed “display rules”—which are rooted in widely shared beliefs about appropriate behaviors for a given context (Collins 2004; Thoits 1989; Hochschild 1983).

At the same time, emotional expressions provide a social function within relationships by communicating social roles and encouraging interaction partners to respond in such a way that re-creates those social positions (Tiedens 2000; Keltner and Morris 2000). Thus, people who

obtain valuable social positions by navigating social interactions and constructing relationships are likely to express emotions that reinforce those social positions.

Evidence from social psychology research demonstrates that people draw inferences about others' positions in social hierarchies based on the emotion that they express. For example, MBA students asked to make status judgments about a stranger after watching a video of them expressing emotion during a job interview. Higher status was given to the male job applicants expressing anger as compared to those expressing sadness, providing evidence that people use emotional expressions when making inferences about status (Tiedens 2000). A second study conducted in an organization revealed that employees who were perceived to express more anger were more likely to be promoted (Tiedens 2000). Expressions of the more negative emotion, anger, informed people's judgments about a person's competence, which people also used to make judgments about status.

Thus, emotions ranging from positive to negative may also help people draw inferences about an expresser's social position in a given setting.<sup>13</sup> Expressions of positive emotions reward others' behaviors, convey praise, and signal acceptance, thereby motivating people to cooperate (Waugh and Fredrickson 2006; Johnson and Fredrickson 2005). By bestowing praise and reward unto others, expressers may also be perceived as having the local social status required to do so. In contrast, negative emotional expressions, such as those of anger or disappointment in the workplace, convey that the expresser is right about something that others are wrong about, thus reinforcing perceptions of the expresser's competence.

### **Gender Culturally Constrains Emotional Expressions**

While there is mounting evidence that displayed emotions are associated with a person's social position, it is also widely known that gender shapes emotional display rules such that men and women are expected to express different types of emotions (Hochschild 1983). Broadly, women are socialized to express more positive, affirming, and cheerful emotions than men. In contrast, men are socialized to express more negative emotions such as sadness and disappointment.

Given gendered cultural expectations for what emotions should be expressed, I consider how emotional expressions associated with valuable social network positions vary by gender. Congruence with gendered expectations is an important way that people signal shared understandings of social roles within a relationship. Emotional expressions that align with gendered social expectations play a critical role in contexts where people interact repeatedly, such as bounded intraorganizational networks, because they facilitate communication between coworkers. Expressing emotions that are dischordant with gendered expectation makes it

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<sup>13</sup> Consistent with the approach detailed in Chapter 2, I limit my theoretical focus to positive and negative emotional expressions. People commonly categorize and interpret emotional expressions along a spectrum of positive to negative (Russell 1983). Positive emotional expressions, such as happiness and gratitude, broadly reward and affirm behaviors (Waugh and Fredrickson 2006). Negative emotional expressions, such as anger and disappointment, sanction behaviors and draw boundaries (Keltner and Haidt 1999).



difficult for people to interpret, understand, and categorize their interaction partners. This, in turn, heightens ambiguity and calls into question other attributions that one has already made about their interaction partners, potentially leading to the loss of status. In sum, I hypothesize:

**H1: Women who express more (A) positive emotions (B, negative emotions) are (A) more (B, less) likely to hold valuable positions in the workplace social network.**

**H2: Men who express more (A) negative emotions (B, positive emotions) are (A) more (B, less) likely to hold valuable positions in the workplace social network.**

### **Emotional Alignment and Social Network Positions**

Building on these arguments about gender socialization and emotional expressions, I investigate how emotional alignment towards others' emotions—what I conceptualize as a specific form of emotional labor—relates to people's positions in a social network. In order to emotionally align towards a colleague's emotion, one must first be able to detect their colleague's emotional expression within a particular social interactional context. Appraisal theories of emotion—referring to people's interpretation of a situation—demonstrate that people may vary in their emotional response to the same stimulus because they interpret the situation differently (Smith and Ellsworth 1985; Weiner 1985).

Situational factors—such as agency, certainty, and effort—shape people's appraisal of emotions and, consequently, their felt and expressed emotions (Tiedens et al. 2000). For example, negative events perceived as caused by oneself or another person can evoke guilt or anger, respectively. Similarly, knowing if a person attributes agency to themselves or another person leads to experiences and expressions of pride or gratitude, respectively.

There are also reasons to believe that people's socialization outside of a given context, in addition to situational factors, influence their responses to others' emotions. In addition to influencing which emotions one is likely to express and when, gender socialization can also make it easier to detect and engage with certain emotions that one is more familiar with. Thus, if women are socialized to express more positive emotions, then this same socialization process makes it easier for them to interpret, appraise, and respond to others' positive emotional shapes. Similarly, if men are socialized to express more negative emotions, then this same socialization process makes it easier for them to interpret, appraise, and respond to others' negative emotional shapes. In addition, how people express their own emotions and, it can also make it easier for people to detect and appraise people's emotions, thereby influencing their response to others' emotional expressions.

In contrast, emotional incongruence with one's gender category leads to ambiguity that calls other judgments into question, such as one's competence (Brescoll, Dawson, and Uhlmann 2010). Aligning towards the gender incongruent emotions of one's colleagues' may lead to status penalties by heightening ambiguity around the focal actor.

**H3: Women with a greater tendency to emotionally align to their colleague's (A) positive (B, negative) emotions are (A) more (B, less) likely to hold valuable positions in the workplace social network.**

**H4: Men with a greater tendency to emotionally align to their colleague's (A) negative (B, positive) emotions are (A) more (B, less) likely to hold valuable positions in the workplace social network.**

## **METHOD**

Building on the earlier chapter of this dissertation, I continue to draw upon linguistic features of communication to study emotional expressions in organizations. I extend arguments made earlier by employing social network methodologies to measure individuals' social network positions in the organization on a monthly basis.

### **Empirical Setting and Data**

Data for the study of emotional expression, alignment, and social network characteristics came from electronic messages (emails) exchanged between 1924 employees of a mid-sized technology firm over seven years, from June 2010 to June 2016. Analyses were limited to employees with complete data records, which were 1,704 employees (32% female).

First, I used the same procedure detailed in Chapter 2 to assemble a data set to calculate individual monthly measures of emotional expression and alignment. I sorted email exchanges into pairs of messages and replies—email threads—where each message and reply pair represents one unit of analysis. As stated previously, I restricted the analysis to emails that include only one sender and one recipient to ensure that email communications related to each other. Thus, all emails to a group of recipients who are cc'd or bcc'd were excluded. Emails with more than 500 words as well as emails with no text in the body of the message were also excluded from the analysis to remove outliers. Email replies that were sent seven days after the original message were excluded because it was unclear if that reply was related to the preceding message.

After generating estimates of individuals' tendencies to express emotions at baseline and align to both positive and negative emotional expressions on a monthly basis, I used the same email communications to construct an  $N \times N$  matrix. This allowed me to generate measures of individuals' centrality in the social network on a monthly basis. I also obtained data from HR on employee's sex, department, and manager status (tied to the month of their promotion). The final

data set consisted of 23,272 individual monthly observations, based on 1,253,676 total messages exchanged.

## Dependent Variables

There are three primary dependent variables measuring social network position on a monthly basis in this study. The first dependent variable is in degree centrality. This measures the number of colleagues that are directing messages to an employee in a given month. For ease of interpretation, in degree centrality scores were normalized by dividing the maximum possible connections  $n-1$ , where  $n$  is the number of people in the organization's network. Thus, normalized in degree centrality scores can range from 0 to 1. In these data, in degree centrality ranges from 0 to 0.51, with a mean of 0.09 ( $\sigma = 0.07$ ). In degree centrality scores are right-skewed as there are fewer employees with high in degree centrality scores.

The second dependent variable is out degree centrality, which captures the number of colleagues that an employee is directing messages to in a given month. Out degree centrality was also normalized such that scores range from 0 to 1. In the dataset analyzed, out degree centrality scores range from 0 to 0.70, with a mean of 0.10 ( $\sigma = .1$ ). Out degree centrality scores are also heavily right-skewed. Typically, in and out degree centrality measures are closely correlated; in these data, the correlation coefficient is 0.79 (Wasserman and Faust 1994).

The third dependent variable is network constraint. Network constraint measures the extent to which a person is invested in people who are invested in others' who are already connected to ego. For constraint, I used Burt's (1992) standard measure:

$$C_i = \sum_j c_{ij}, i \neq j \quad (1)$$

where  $C_i$  is network constraint on target  $i$ , and  $c_{ij}$  is a measure of  $i$ 's dependence on contact  $j$ .

$$c_{ij} = (p_{ij} + \sum_q p_{iq} p_{qj})^2, i \neq q \neq j \quad (2)$$

where  $p_{ij}$  is the proportion of target  $i$ 's social network invested in contact  $j$ ,

$$p_{ij} = z_{ij} / \sum_q z_{iq}, \text{ and}$$

$z_{ij}$  measures the strength of connection between contacts  $i$  and  $j$ .

Network constraint values ranged from 0.1 to 1.42 with a mean of .15 ( $\sigma = .13$ ).

For each dependent variable, I lead social network centrality measures by one month such that the effect of emotional expressions at time  $t$  are estimated on social network centrality at time  $t + 1$ . In models not reported, I estimated the effects of emotional expressions at time  $t$  on co-constructed social network centrality measures also at time  $t$ . Results are substantively similar.

## Independent Variables

I focus my analyses on two independent variables of interest. The first dependent variable that I estimate is the monthly probability of expressing positive (or negative) emotion when the preceding message from one's interaction partner does not contain any emotion words—that is

unconditional on the prior message containing the same emotion. I refer to this dependent variable as the baseline or unconditional probability of expressing positive (or negative) emotion in email communication. In contrast, the second dependent variable that I estimate is the probability of expressing positive (or negative) emotion, conditional on whether the preceding message from one's interaction partner contained words from that same emotion category. I refer to this second dependent variable as emotional alignment.

To measure emotional expressions in text, I draw on the Linguistic Inquiry and Word Count (LIWC) dictionaries to categorize words used in messages as positive or negative emotional expressions. LIWC is a widely used linguistic framework containing dictionaries of psychology-relevant words that map onto cognitive and emotional dimensions of speech (Tauszik and Pennebaker 2010). Each LIWC category is comprised of a list of dictionary words and word stems that define that particular category. I use two validated LIWC dictionaries that characterize positive and negative emotions (Kahn, Tobin, Massey and Anderson 2007; Alpers et al. 2005). Messages that contained at least one word from a positive or negative emotional category were coded as an emotional expression. For a more detailed discussion of how I constructed emotional expression and alignment, please refer to Chapter 2.

To calculate emotional alignment, or the behavioral tendency to express emotions in similar ways, I employ a Word-Based Hierarchical Alignment Model (WHAM) (Doyle et al. 2017; Doyle and Frank 2016). WHAM is a conditional model that critically assumes that one's tendency to emotionally align to another is shaped by whether other's preceding message contains an emotional expression. This method disentangles alignment from one's baseline probability of expressing positive or negative emotions.

## **Controls**

I include controls for three job functions that may shape the extent to which a person expresses emotion in their work emails: sales, marketing, and technology. Each control is a dichotomous measure indicating whether or not an employee was working in that particular department in a given month. Given that the company has two levels of hierarchy—managers and non-managers—I also control for an employee's managerial status with a dichotomous indicator.

## **Estimation**

To estimate the effect of emotional expressions and alignment on social network centrality, I estimate individual fixed-effects models to control for time invariant characteristics of each employee. Thus, the results produce within-individual estimates of the effect of emotional expressions on social network centrality. Given that gender is a critical component of these analyses but does not vary across time, I report OLS models with individual fixed-effects for men and women separately.

## RESULTS

**TABLE 1. OLS REGRESSION TABLE WITH INDIVIDUAL FIXED EFFECTS OF WOMEN'S SOCIAL NETWORK CENTRALITY ON POSITIVE AND NEGATIVE EMOTIONAL EXPRESSIONS**

	(1) In Degree Centrality (t+1)	(2) Out Degree Centrality (t+1)	(3) Network Constraint (t+1)	(4) In Degree Centrality (t+1)	(5) Out Degree Centrality (t+1)	(6) Network Constraint (t+1)
Pos. Emot. Express. <i>(base rate at t)</i>	0.0246** (0.00525)	0.0332** (0.00754)	-0.0495** (0.00859)			
Neg. Emot. Express. <i>(base rate at t)</i>				0.0326** (0.00261)	0.0432** (0.00376)	-0.0338** (0.00431)
Sales	0.0428** (0.00241)	0.0351** (0.00347)	-0.0149** (0.00396)	0.0431** (0.00238)	0.0355** (0.00342)	-0.0143** (0.00394)
Marketing	0.00351 (0.00291)	-0.00208 (0.00417)	-0.00655 (0.00478)	0.00241 (0.00287)	-0.00354 (0.00414)	-0.00539 (0.00477)
Technology	-0.0264** (0.00399)	-0.0219** (0.00573)	-0.00583 (0.00652)	-0.0231** (0.00395)	-0.0176** (0.00568)	-0.00760 (0.00652)
Manager Status	-0.0216** (0.00252)	-0.00383 (0.00363)	-0.0135** (0.00413)	-0.0220** (0.00248)	-0.00437 (0.00357)	-0.0144** (0.00410)
Constant	0.160** (0.0156)	0.197** (0.0225)	0.0108 (0.0256)	0.258** (0.0138)	0.325** (0.0198)	-0.0195 (0.0227)
Observations	6603	6603	6543	6603	6603	6543

Standard errors in parentheses  
<sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$

Table 1 reports results from six OLS regression models with individual fixed effects for women only. Models 1 through 3 estimate the role of individual base rates of positive emotional expression on three different measures of social network centrality. Women who express greater rates of positive emotional expressions in routine workplace communication are statistically significantly ( $p < 0.01$  for Models 1, 2, and 3) more likely to have higher social network centrality as measured through in and out degree centrality as well as lower social network constraint. These results from 6,603 individual-month observations for women employed at the research site provide strong support for Hypothesis 1A.

Hypothesis 1B asserted that negative emotional expressions are less likely to be associated with central social network positions for women. Models 4, 5, and 6 in Table 2 test this hypothesis. Counter to predictions, women with a greater tendency to express negative emotions are also more likely to have social networks characterized by greater centrality and lower constraint. The statistically significant coefficients for the main effect of women's monthly negative emotional expressions conveys this, 0.03 in Model 4 ( $p < 0.01$ ), 0.04 in Model 5 ( $p < 0.01$ ), and -0.03 in Model 6 ( $p < 0.01$ ).

**TABLE 2. OLS REGRESSION TABLE WITH INDIVIDUAL FIXED EFFECTS OF MEN'S SOCIAL NETWORK CENTRALITY ON POSITIVE AND NEGATIVE EMOTIONAL EXPRESSIONS**

	(1) In Degree Centrality (t+1)	(2) Out Degree Centrality (t+1)	(3) Network Constraint (t+1)	(4) In Degree Centrality (t+1)	(5) Out Degree Centrality (t+1)	(6) Network Constraint (t+1)
Neg. Emot. Express. <i>(base rate at t)</i>	0.0149** (0.00175)	0.0253** (0.00250)	-0.0499** (0.00331)			
Pos. Emot. Express. <i>(base rate at t)</i>				-0.0352** (0.00375)	-0.0334** (0.00537)	-0.0744** (0.00713)
Sales	0.0591** (0.00178)	0.0462** (0.00254)	-0.0149** (0.00337)	0.0558** (0.00179)	0.0422** (0.00256)	-0.0157** (0.00340)
Marketing	0.0353** (0.00234)	0.0333** (0.00334)	0.00464 (0.00445)	0.0331** (0.00235)	0.0310** (0.00337)	0.00114 (0.00449)
Technology	-0.0320** (0.00306)	-0.0205** (0.00437)	-0.00974 <sup>+</sup> (0.00577)	-0.0329** (0.00306)	-0.0215** (0.00438)	-0.0108 <sup>+</sup> (0.00580)
Manager Status	-0.0489** (0.00174)	-0.0414** (0.00249)	-0.0324** (0.00330)	-0.0447** (0.00176)	-0.0363** (0.00252)	-0.0321** (0.00334)
Constant	0.157** (0.00923)	0.221** (0.0132)	-0.103** (0.0174)	-0.0259* (0.0112)	-0.0109 (0.0161)	-0.0635** (0.0214)
Observations	14212	14212	14072	14212	14212	14072

Standard errors in parentheses  
<sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$



Similarly, Table 2 contains results from six OLS regression models with individual fixed effects for only men employees. Hypothesis 2A posited that male employees expressing more negative emotions are more likely to hold central social network positions. The coefficients representing the effect of a male employee's tendency to express negative emotions each month on in and out degree centrality is 0.015 and 0.025, respectively. Across both Models 1 and 2, the term is positive and statistically significant ( $p < 0.01$ ). The models also contain controls for the department that an employee works in. For example, working in the marketing department has more than twice as large of an impact on the centrality of a male employee's social network position compared to their tendency to express negative emotions. Model 3 demonstrates that the same association with men's negative emotional expressions and network centrality holds for the measure of network constraint. Male employees who express more negative emotion are associated with less constrained network positions ( $p < 0.01$ ).

Table 2 also reports results examining the effect of men's positive emotional expressions on the centrality of their social networks in Models 4, 5, and 6. For in and out degree centrality, men who express more positive emotions appear less likely to hold central network positions. However, Model 6 reveals a contradictory finding that men who express more positive emotions are less likely to be constrained in the organization's social network. Taken together, these models provide conflicting evidence for Hypothesis 2B, necessitating further investigation.

**TABLE 3. OLS REGRESSION TABLE WITH INDIVIDUAL FIXED EFFECTS OF WOMEN'S SOCIAL NETWORK CENTRALITY ON POSITIVE AND NEGATIVE EMOTIONAL ALIGNMENT**

	(1) In Degree Centrality (t+1)	(2) Out Degree Centrality (t+1)	(3) Network Constraint (t+1)	(4) In Degree Centrality (t+1)	(5) Out Degree Centrality (t+1)	(6) Network Constraint (t+1)
Pos. Emot. Alignment (at time <i>t</i> )	-0.0167 <sup>+</sup> (0.00967)	-0.0171 (0.0139)	0.00441 (0.0159)			
Neg. Emot. Alignment (at time <i>t</i> )				-0.0117* (0.00507)	-0.0176* (0.00728)	0.0236** (0.00830)
Sales	0.0420** (0.00241)	0.0340** (0.00346)	-0.0129** (0.00396)	0.0422** (0.00242)	0.0344** (0.00347)	-0.0138** (0.00396)
Marketing	0.00379 (0.00292)	-0.00182 (0.00419)	-0.00654 (0.00480)	0.00385 (0.00291)	-0.00156 (0.00418)	-0.00730 (0.00480)
Technology	-0.0277** (0.00399)	-0.0237** (0.00572)	-0.00255 (0.00653)	-0.0270** (0.00400)	-0.0226** (0.00575)	-0.00458 (0.00655)
Manager Status	-0.0202** (0.00251)	-0.00191 (0.00360)	-0.0164** (0.00411)	-0.0205** (0.00251)	-0.00238 (0.00361)	-0.0158** (0.00412)
Constant	0.0875** (0.00138)	0.0994** (0.00198)	0.157** (0.00226)	0.0922** (0.00275)	0.107** (0.00394)	0.146** (0.00450)
Observations	6603	6603	6543	6603	6603	6543

Standard errors in parentheses  
<sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$

Table 3 contains results for hypotheses about the relationship between women's tendencies to emotionally align to their colleagues' positive and negative emotions. Hypothesis 3A predicted a positive relationship between women's emotional alignment to the positive emotions of others and the centrality of their social network positions. Across Models 1, 2, and 3, no statistically significant relationship emerges, providing no support for Hypothesis 3A.

In contrast, Hypothesis 3B asserted that women's alignment to negative emotional expressions would correspond to less central positions in the workplace social network. Women who are more likely to do the emotional labor of aligning towards their colleagues' negative emotions are less likely to have central network positions and more likely to have constrained networks. Support for this comes from the coefficient on negative emotional alignment in Models 4, 5, and 6, which is consistently statistically significant ( $p < 0.05$ ,  $p < 0.05$ , and  $p < 0.01$ ). Taken together, these results provide partial support for Hypothesis 3.

**TABLE 4. OLS REGRESSION TABLE WITH INDIVIDUAL FIXED EFFECTS OF MEN'S SOCIAL NETWORK CENTRALITY ON POSITIVE AND NEGATIVE EMOTIONAL ALIGNMENT**

	(1) In Degree Centrality (t+1)	(2) Out Degree Centrality (t+1)	(3) Network Constraint (t+1)	(4) In Degree Centrality (t+1)	(5) Out Degree Centrality (t+1)	(6) Network Constraint (t+1)
Neg. Emot. Alignment (at time <i>t</i> )	0.00977** (0.00342)	0.00530 (0.00489)	0.0742** (0.00647)			
Pos. Emot. Alignment (at time <i>t</i> )				-0.0323** (0.00692)	-0.0346** (0.00990)	0.104** (0.0131)
Sales	0.0575** (0.00179)	0.0440** (0.00255)	-0.0149** (0.00339)	0.0583** (0.00178)	0.0446** (0.00254)	-0.0122** (0.00338)
Marketing	0.0346** (0.00235)	0.0326** (0.00337)	0.00135 (0.00448)	0.0357** (0.00235)	0.0335** (0.00336)	0.00361 (0.00448)
Technology	-0.0325** (0.00307)	-0.0209** (0.00439)	-0.0115* (0.00579)	-0.0318** (0.00306)	-0.0204** (0.00438)	-0.0102+ (0.00581)
Manager Status	-0.0468** (0.00175)	-0.0384** (0.00250)	-0.0331** (0.00332)	-0.0476** (0.00174)	-0.0390** (0.00249)	-0.0368** (0.00330)
Constant	0.0743** (0.00198)	0.0862** (0.00283)	0.123** (0.00374)	0.0806** (0.00113)	0.0904** (0.00162)	0.154** (0.00215)
Observations	14212	14212	14072	14212	14212	14072

Standard errors in parentheses  
<sup>+</sup>  $p < 0.10$ , \*  $p < 0.05$ , \*\*  $p < 0.01$

The fourth and final table describes the relationship between men's tendencies to emotionally align towards their colleagues' positive and negative emotions. I hypothesized that men with greater tendencies to emotionally align towards the negative emotions of others would be more likely to hold central network positions. However, results from Models 1, 2, and 3 report mixed results. Men with greater tendencies to align to their colleagues' negative emotions are associated with networks with slightly higher in degree centrality, but comparable evidence does not emerge for out degree centrality. At the same time, men who engage in negative emotional alignment also appear to be associated with more constrained social networks. These conflicting results suggest the need for further investigation to more precisely understand the relationship between men's alignment towards their colleagues' negative emotions and their social positions in the network.

Table 4 also reports results for Hypothesis 4B that men who engage in more positive emotional labor are less likely to have status in the workplace social network. Results from the main effect of men's positive emotional alignment across three models provides support for this hypothesis. Men with a greater tendency to align to the positive emotions of their colleagues are likely to have social network characterized by lower in and out degree centrality ( $p < 0.01$ ). Reinforcing this finding is Model 3, which reveals that men with a greater tendency to positively emotional align are associated with social networks characterized by greater constraint ( $p < 0.01$ ). Thus, results are inconclusive for Hypothesis 4A and supported for Hypothesis 4B.

## DISCUSSION

This study finds that valuable social positions in an organizational network are associated with emotionally expressive tendencies that vary by gender. Women with greater tendencies to express both positive and negative emotions are likely to hold more central, less constrained, positions in a workplace network. In contrast, men with greater tendencies to express negative, but not positive emotions, are likely to valuable positions in the network. Engaging in the emotional labor of aligning towards the emotions of one's colleagues is not clearly associated with social network benefits but does differentially penalize the local status of men and women. Women face social network penalties for aligning towards their colleagues' negative emotions whereas men are penalized for aligning towards their colleagues' positive emotions. Engaging in the emotional labor of emotional alignment is not associated with valuable social positions for either women or men. I draw on the social functions of emotions to unpack how gendered expectations facilitate and hinder routine communication between employees where status judgments are made and relationships are formed. By extending arguments about the social psychology underlying emotional exchanges in interpersonal relationships to status in broader organizational networks, I develop theory that begins to unearth differences in the interactional strategies that women and men employ at work.

Empirical evidence for these findings stem from 23,272 monthly snapshots of 1,704 employees' social network characteristics and tendencies to express emotions in their email messages. I integrate methodological tools from sociolinguistics, sociology, and social

psychology to unpack relationships between men's and women's emotional expressive tendencies and their social positions in an organizational network. Variation in people's emotional expressions in email and their social position over time allows me to unearth these gendered relationships.

## **Limitations**

Despite these findings, there are several limitations to this work. First, this study examines the social network and interactions of all employees within only one company with a distinct gender distribution of employees over seven years, posing limits to the generalizability of these findings to other types of organizations in the U.S. and other countries. While there are strong theoretical reasons that gender differences in emotional expressions and social networks should generalize to other organizational contexts, empirically testing the generalizability of these findings across other contexts, with varying contextual factors is a critical step for future research. Second, this article focuses on a few measures of position in an organization's social network, centrality and constraint, thereby bounding our understanding of how emotional expressions shape other dimensions of social networks such as betweenness centrality or eigenvector centrality. Future research can extend upon this research design to investigate the extent to which gender and emotional expressions are associated with other dimensions of people's networks and the process through which people acquire valuable social positions within organizations.

Third, this article draws upon one dimension of emotions, the valence of positive and negative emotions, expressed in one form, electronic mail messages comprised of text, limiting our visibility into other dimensions of emotions, such as intensity, or other approaches to emotions, such as discrete approaches. Future research can adapt this research design to investigate the extent to which gender differences in patterns of emotions exchanged generalizes across other emotional dimensions, forms of expression (e.g. nonverbal expressions), and other types of emotions. Finally, this research design assumes (a) that social networks determined by electronic mail messages accurately measure intraorganizational networks, and (b) that people notice and attend to expressed emotions in text. Future research can more directly observe this by investigating other dimensions of interaction, such as in-person, through telephone calls, or chat systems, and other cultural dimensions of communication, for example, norms of politeness, which may potentially result in patterns of expression and response that vary by gender

## **Contributions**

This paper extends our understanding of the dynamics underlying intraorganizational networks by theoretically unpacking the role of emotional expressions for individuals' social positions. Results provide evidence of a relationship between the types of expressed emotions in routine workplace interactions and men's and women's positions within an organization's social network. Understanding how emotional expressions vary with more and less valuable positions

within social networks is a critical component of understanding inequalities in how individuals acquire status, form relationships, and navigate organizational social networks. Future research can more directly test a causal effect of expressing certain emotions on obtaining valuable social positions for women and men in the workplace by employing a research design that randomly assigns emotional expressions to real people interacting in an organization.

This paper extends research on emotions by theoretically linking both positive and negative emotional expressions to a heretofore untested outcome, individual social position within an organization's social network for women and men, in two specific ways. First, I examine emotional expressions in the context of a real organizational network where people navigated actual relationships with colleagues. Second, I focus on emotional expressions as they emerge across a range of workplace situations, not just in a few specific contexts, and are expressed in text-based email communications. Future research can examine different situations in which emotions are exchanged, such as group meetings or hiring scenarios, and in different expressive formats, such as with nonverbal behaviors in person or using emojis on other communication platforms. Similarly, future research can expand the types of emotions investigated by drawing upon other conceptual tools, such as discrete approaches to the study of emotions.

Finally, this work contributes to gender research by detecting how gender socialization constrains women's and men's tendencies to express emotions but also identifying how gender shapes patterns that link individuals' emotional expressions to social position within an organizational social network. Prior work has tended to focus on identifying differences in women's and men's workplace networks. I extend this work by considering how gender shapes the underlying interactional processes through which relationships are formed and valuable social positions are obtained. I focus on the congruence of emotional expressions with established gendered expectations. Future research can further investigate potential penalties for expressing emotions in ways that are misaligned with cultural conceptions of gender. Future research can also adapt this approach to study other types of cultural content such as how sexual orientation socialization shapes the way that people exchange emotions at work and navigate social networks.

## **Conclusion**

In sum, this study highlights the social insights gained by merging research on linguistic patterns and the social psychology of expressed emotions to understand how gendered routine interactions relate to status in organizational networks. This type of interdisciplinary work opens the door to future inquiries about how gender differences embedded in routine workplace interactions shape other individual, network, job, and organizational outcomes.

# **CHAPTER 4: FUTURE DIRECTIONS**



This dissertation lays the groundwork for a research program investigating the micro-interactional dynamics of emotional expression and alignment that underlie social network position and attainment within an organization. Further research remains to be done to further clarify and enhance theoretical precision around the relationships between these individual, social network, and organizational factors.

## **Chapter 2**

Chapter 2 can be extended by further unpacking the micro-interactional dynamics that shape emotional expressions and alignment by women and men within the workplace. This can be done by more closely examining and theorizing about emotional exchanges at the dyadic level within same-gender, female to male, and male to female interactions. For example, a dyadic lens would shed light on whether men and women alter their emotional expression tendencies based on the gender of their interaction partner. Furthermore, deeper examination into how people's emotional behaviors change over time could reveal the extent to which these tendencies are learned within organizations. Understanding the underlying mechanism that drives women and men to express themselves to their colleagues differentially (and potentially result in differential social rewards) is critical to theoretical development and for designing interventions that begin to ameliorate gender differences within organizations.

## **Chapter 3**

Similarly, much work remains to be able carefully characterize the relationship between emotional expressions and individuals' social network characteristics. First, multicollinearity concerns limited my ability to include both positive and negative emotional expressions in the same regression models. Thus, this also prevented me from comparing the effects of different types of emotional expressions on social network centrality and drawing inferences to develop theory about which emotions matter more for network outcomes. One possible next step to investigate this is to add weights to both positive and negative emotional expressions and alignment, thus forcing both types of emotions onto a relative distribution from which comparative theoretical statements and empirical inferences can be drawn. Furthermore, there are other research designs that can be employed to provide additional insights around the extent to which emotional expressions contribute to network change. For example, simulation approaches can be employed to model dynamics of networks, such as the *Simulation Investigation for Network Analysis* ("SIENA"). Empirical evidence in Chapter 3 can also be strengthened by employing coarsened exact matching methods to pair women and men along various characteristics over time in the organization to draw better inference in regression models (that do not produce within-person estimates).

Lastly, the arguments detailed in this dissertation can be extended to other types of network variables, such as eigenvector centrality, and other organizational outcomes, such as promotion, compensation, and turnover. How emotional expressions and alignment relate to

one's promotion within the organization, overall compensation, and likelihood to stay employed remains unknown. This research design can be extended to answer such questions and further expand theories of the role of emotions at work.

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# APPENDIX

**FIGURE A.1. POSITIVE AND NEGATIVE BASELINE EXPRESSION AND EMOTIONAL ALIGNMENT FOR ALL EMPLOYEES, INCLUDING MANAGERS**

<i>Baseline</i>		
N = 710 employee communications across 425,649 email threads of messages and replies		
	<b>Mean (%)</b>	<b>Credibility Interval</b>
Probability of <b>Negative</b> Emotional Expression by Any Employee	0.74	0.73 – 0.74
Probability of <b>Negative</b> Emotional Expression by Men	0.78	0.77 – 0.79
Probability of <b>Negative</b> Emotional Expression by Women	0.67	0.66 – 0.68
Probability of <b>Positive</b> Emotional Expression by Any Employee	4.54	4.52 – 4.57
Probability of <b>Positive</b> Emotional Expression by Men	4.36	4.33 – 4.40
Probability of <b>Positive</b> Emotional Expression by Women	4.87	4.82 – 4.92

**Alignment**

N = 710 employee communications across 425,649 email threads of messages and replies

	<b>Log-Odds Estimates</b>	<b>Credibility Interval</b>
<b>Negative</b> Emotional Alignment by Any Employee	0.48	0.47 – 0.50
<b>Negative</b> Emotional Alignment by Men	0.43	0.41 – 0.45
<b>Negative</b> Emotional Alignment by Women	0.56	0.53 – 0.58
<b>Positive</b> Emotional Alignment by Any Employee	0.04	0.04 – 0.05
<b>Positive</b> Emotional Alignment by Men	0.04	0.03 – 0.05
<b>Positive</b> Emotional Alignment by Women	0.05	0.03 – 0.06