Running head: EXTRAVERSION, DISSIMILARITY, AND EMOTIONAL EXHAUSTION

The Interactive Effect of Extraversion and Extraversion Dissimilarity on Emotional Exhaustion in Customer Service Employees: A Test of the Asymmetry Hypothesis

Sara Jansen Perry University of Houston 126 Heyne Building Houston, TX, 77204 832-445-7263 skjansen@uh.edu

David. F. Dubin University of Houston 126 Heyne Building Houston, TX, 77204 713-743-8500 dfdubin@uh.edu

L. A. Witt University of Houston 126 Heyne Building Houston, TX, 77204 713-743-8500 witt@uh.edu

Extraversion and Emotional Exhaustion
Running head: EXTRAVERSION, DISSIMILARITY, AND EMOTIONAL EXHAUSTION
The Interactive Effect of Extraversion and Extraversion Dissimilarity on Emotional Exhaustion
in Customer Service Employees: A Test of the Asymmetry Hypothesis

\* Manuscript without author identities

#### Abstract

In response to the high risk of burnout faced by customer service employees, we explored the interactive role of extraversion dissimilarity and individual standing on extraversion in predicting emotional exhaustion. This study represents the first test of the asymmetry hypothesis in regard to personality and personality dissimilarity in conjunction with employee well-being. Applying Conservation of Resources Theory and the similarity-attraction paradigm, we predicted that high-extraversion individuals would experience increased emotional exhaustion when their fellow workgroup members were dissimilar on the trait of extraversion. In contrast, we predicted that low-extraversion individuals be unaffected as dissimilarity increased, because they generally avoid coworker interaction. We tested our hypothesis in a sample of 313 call center employees in 39 workgroups and found support for our predictions. Extraverts experienced increased emotional exhaustion when their coworkers were lower in extraversion, but this relationship was nonsignificant for introverts. We suggest managers might provide extraverts with additional social support when they are in mostly introverted workgroups, so they might better avoid exhaustion. Contrary to stereotypes, however, introverts may be well-suited to preserve personal well-being in these high-stress call center environments, regardless of workgroup composition.

Keywords: Extraversion, Emotional Exhaustion, Group Composition, Asymmetry Hypothesis, Customer Service, Dissimilarity

The Interactive Effect of Extraversion and Extraversion Dissimilarity on Emotional Exhaustion in Customer Service Employees: A Test of the Asymmetry Hypothesis

Customer service employees face a high risk of emotional exhaustion as they consistently interact with frustrated and/or difficult customers (Dormann & Zapf, 2004; Goldberg & Grandey, 2007; Kern & Grandey, 2009; Singh, Goolsby, & Rhoads, 1994). Because exhausted customer service employees do not provide the same quality of service as engaged or otherwise healthy employees (Tsai, 2001), managers benefit from understanding what factors in the workplace buffer the negative effects of customer-related stress. One possibility is coworker support, the origins of which are partially explained by the similarity-attraction paradigm (Chiaburu & Harrison, 2008; Tsui, Egan, & O'Reilly, 1992). That is, when employees are similar, they are more likely to have productive and satisfactory interactions, thereby creating an environment of mutual support. Research consistently shows that a supportive environment acts as an effective buffer against customer-related stressors, protecting employees from exhaustion (Halbesleben & Buckley, 2004).

It stands to reason then, that dissimilarity among employees may exacerbate stressors, increasing the exhaustion experienced by customer service employees. But which employees are most affected by dissimilarity? This question is rooted in the asymmetry hypothesis (Tsui et al., 1992), which states that individual differences predispose employees to react differently to dissimilarity among coworkers. In the present study, we tested the asymmetry hypothesis with regard to personality and personality dissimilarity among customer service employees. Namely, we explored the impact of extraversion, a personality trait associated with high interpersonal orientation and effectiveness in customer service jobs (Barrick & Mount, 1991; Ones, Dilchert,

Visewesvaran, & Judge, 2007), on the relationship between extraversion dissimilarity and emotional exhaustion.

To our knowledge, we are the first to explicitly test the asymmetry hypothesis with respect to the moderating role of personality and employee well-being. We applied Conservation of Resources (COR) Theory (Hobfoll, 1989), a well-supported theory about the development of emotional exhaustion, along with the similarity-attraction paradigm (Tsui et al., 1992), to posit that an individual's standing on the trait of extraversion and actual dissimilarity from coworkers on the same trait have a joint impact on emotional exhaustion. Specifically, we asserted that extraversion dissimilarity determines the level of social support present among customer service employees, which may act as a buffer for the effect of stressful customer demands on customer service employees, depending on individual standing on the trait of extraversion.

#### Emotional Exhaustion

Emotional exhaustion is the central, most consistently-supported dimension of employee burnout, a form of psychological strain due to chronic stress at work (Maslach, 1982; Maslach, Schaufeli, & Leiter, 2001). Job satisfaction, productivity, organizational commitment, absenteeism, intent to leave, creativity, and physical and emotional health symptoms are all related to burnout (Drake & Yadama, 1996; Geurts, Schaufeli, & De Jonge, 1998; Greenglass & Burke, 1990; Halbesleben & Buckley, 2004; Moore, 2000; Schonfeld, 1989; Shirom, Westman, Shamai, & Carel, 1997). Employee burnout also appears to be a contagion, affecting not only the individual who experiences it, but the performance and well-being of others in an organization, particularly those in close proximity (Burke & Greenglass, 2001). We concentrated on emotional exhaustion, a feeling of having expended one's energy, as it is the most consistent predictor of

work-related outcomes (Cordes & Dougherty, 1993; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Maslach et al., 2001).

COR Theory takes a resource-based view in explaining the development of emotional exhaustion (Halbesleben & Buckley, 2004; Shirom, 2003). COR Theory defines resources as "objects, personal characteristics, conditions, or energies that are valued by the individual" (Hobfoll, 1989, p. 516). When employees expend resources, perceive a threat to resources, or invest resources without sufficient returns, they are susceptible to emotional exhaustion (Hobfoll & Freedy, 1993). Social support is a resource that, according to much empirical research, ameliorates the negative effects of a range of stressors (Halbesleben & Buckley, 2004). Dissimilarity in personality may determine the extent to which individuals provide social support to coworkers, and COR Theory predicts that these conditions may determine the level of emotional exhaustion experienced by employees.

#### Workgroup Dissimilarity

With this study we focused on the individual-level construct of dissimilarity, but we also leveraged research from diversity and workgroup composition to develop our hypothesis (Hobman, Bordia, & Gallois, 2003). Studies in all three areas have shown that differences among group members significantly influence both group- and individual-level outcomes. What remains equivocal, however, is exactly when heterogeneity on various characteristics is positive versus negative. On one side, scholars in favor of the supplementary view argue that homogenous groups are more compatible and better able to communicate with each other, resulting in higher group effectiveness (Humphrey, Hollenbeck, Meyer, & Ilgen, 2007; Muchinsky & Monahan, 1987). In support of this view, individual dissimilarity is associated with increased turnover, decreased social integration within workgroups, and decreased performance (Barrick, Stewart,

Neubert, & Mount, 1998; Jackson, May, & Whitney, 1995; Lau & Murnighan, 1998; Molleman, 2005; O'Reilly, Caldwell, & Barnett, 1989). These findings may be explained by selfcategorization and social identity theories (e.g., attraction-similarity paradigm), which posit that in-groups form among similar others, while out-groups form with dissimilar others. Social interaction, including the provision of social support, increases among members of the same ingroups, while members decrease their interactions with and withhold social support from members of out-groups (Hogg & Terry, 2000; Molleman, 2005).

Scholars advocating the contrasting, complementary view posit that heterogeneity adds value, improving the effectiveness of the group (Bernerth, Armenakis, Feild, Giles, & Walker, 2008; Muchinsky & Monahan, 1987; Shaw, 1981). In support of this notion, Jackson et al. (1995) reported that heterogeneity positively influenced personality, gender, attitudes, and experience on creativity and decision-making effectiveness. Similarly, Dahlin, Weingart, and Hinds (2005) found that group members with dissimilar cultural backgrounds were better at gathering a broad range and high level of detail in information-gathering efforts, compared to groups with low levels of cultural dissimilarity. In terms of affect toward one's coworkers, Glaman, Jones, and Rozelle (1996) found that top level managers preferred colleagues who were dissimilar in terms of demographics or behavior, rather than similar colleagues, possibly due to perceived competition from similar others (Dahlin et al., 2005; Glaman et al., 1996).

This continued debate has spurred scholars to explore moderators of the relationship between heterogeneity and work-related outcomes. For instance, van Der Vegt, van De Vliert, and Oosterhof (2003) found that educational and functional dissimilarity interact to predict organizational citizenship behaviors (OCB), such that when one type of dissimilarity was high and the other type was low, few OCB were performed. Other research has shown that team

autonomy, group longevity, and low interdependence exacerbate the negative effects of dissimilarity on work-related outcomes (Molleman, 2005; Schippers, Hartog, Koopman, & Wienk, 2003). Team type and study setting also act as moderators of this relationship (Halfhill, Nielsen, & Sundstrom, 2005).

In asserting that heterogeneity of any form may not affect all individuals in the same way, the asymmetry hypothesis suggests that individual differences might act as moderators to predict when dissimilarity has positive versus negative effects (Tsui et al., 1992). Indeed, in an early study testing this hypothesis, Tsui et al. (1992) found that gender and ethnicity moderated the relationship between heterogeneity and work-related outcomes, such that members of traditional majority groups (e.g., white males) experienced stronger negative effects of heterogeneity than members of minority groups. In subsequent studies, the moderating role of demographics has continued to receive quite a bit of attention (e.g., Chatman & O'Reilly, 2004; Liao, Joshi, & Chuang, 2004; Yi-Feng, Huang, & Tjosvold, 2008), but personality has received significantly less. Likewise, research on personality-based dissimilarity is scant relative to other types of dissimilarity. But, because personality influences social interactions and social support processes, both constructs are likely important considerations when predicting employee wellbeing.

#### Personality and Personality Dissimilarity

Numerous studies and meta-analyses agree that personality is important to work-related outcomes. It has incremental validity over cognitive ability in predicting job performance (Barrick & Mount, 1991), when assessed in childhood it is predictive of adult career success (Judge, Higgins, Thoresen, & Barrick, 1999), and it is predictive of leadership ability (Judge, Bono, Ilies, & Gerhardt, 2002). Our focus on personality stems from its predictive power on

employee well-being; Zellars, Perrewé, and Hochwarter (2000) found that the Five Factor Model (FFM; McCrae & Costa, 1985) of personality added unique variance in predicting burnout above and beyond role stressors.

Of the few studies to empirically test hypotheses about personality dissimilarity, most have concluded that perceived or actual personality differences have negative effects on workrelated outcomes (e.g., decreased satisfaction with coworkers and performance and increased turnover and deviance; (Cunningham, 2007; Flynn, Chatman, & Spataro, 2001; Gevers & Peeters, 2009; Liao et al., 2004; Peeters, Rutte, van Tuijl, & Reyman, 2006). However, per the asymmetry hypothesis, the specific personality traits being studied may determine whether effects are actually positive or negative. Using the FFM, Liao et al. (2004) found that different types of personality dissimilarity led to different outcomes. For instance, dissimilarity in agreeableness led to increased organization-directed deviance, while dissimilarity in conscientiousness led to increased interpersonal-directed deviance. They did not study the moderating effect of individual differences on this relationship, which would have represented a true test of the asymmetry hypothesis.

#### Extraversion

Extraversion is particularly relevant to employee exhaustion when interpersonal interaction is required, such as in customer service settings and in workgroups. It includes a tendency to be "sociable, gregarious, assertive, talkative, and active" (Barrick & Mount, 1991, p. 3). Extraverts build personal energy through social interaction and recent empirical research suggests that they are likely to be satisfied with coworkers regardless of whether they are similar and dissimilar (Flynn et al., 2001). Consistent with these characteristics, they are likely to engage in deep-acting when interacting with others at work, which is known to preserve well-being

better than surface-acting (Austin, Dore, & O'Donovan, 2008). In contrast, introverts preserve their personal energy through isolation; they typically avoid the spotlight and eschew from social interactions (Mehl, Gosling, & Pennebaker, 2006).

Extraversion has unique predictive power in I/O psychology and management research. It predicts a variety of vocational outcomes, including job performance and well-being, particularly when jobs require interpersonal interaction (Barrick & Mount, 1991; Stewart, 1996; Tokar, Fischer, & Subich, 1998). This trait is positively associated with social skills, teamwork knowledge, and OCB (Morgeson, Reider, & Campion, 2005). It is also related to job satisfaction and leader emergence (Judge & Bono, 2000; Judge, Heller, & Mount, 2002). Extraversion positively predicts the professional efficacy dimension of burnout and negatively predicts the depersonalization dimension of burnout (Bakker, van Der Zee, Lewig, & Dollard, 2006; Zellars, Hochwarter, Perrewé, Hoffman, & Ford, 2004; Zellars, Perrewé, Hochwarter, & Anderson, 2006). Although less consistently so, it has also been negatively linked with emotional exhaustion and fatigue (De Vries & Van Heck, 2002; Michielsen, De Vries, & Van Heck, 2003). Extraversion is also positively related to engagement, which is often characterized as the opposite of burnout (Langelaan, Bakker, van Doornen, & Schaufeli, 2006).

Extraversion Dissimilarity × Extraversion

Contrary to other types of personality-based dissimilarity, empirical research suggests that extraversion dissimilarity results in generally favorable outcomes, including increased satisfaction with coworkers and OCB, as well as decreased deviance (Halfhill et al., 2005; Liao et al., 2004). Because extraverts manifest leadership traits in their inherent interest in others and sociable tendencies, they often emerge as leaders (Humphrey et al., 2007; Neuman, Wagner, &

Christiansen, 1999). Leaders need followers, however, which is a role introverts often prefer; hence the value of heterogeneity in terms of extraversion.

According to the asymmetry hypothesis, however, not all individuals may react positively to dissimilarity, even extraversion-based dissimilarity. Only one study, to our knowledge, has explicitly tested the asymmetry hypothesis with respect to personality and personality dissimilarity; the results highlighted the central role of extraversion compared to other traits in the FFM. Specifically, Peeters et al. (2006) studied student project teams and found that extraversion dissimilarity led to decreased satisfaction with team members but only among introverted employees. They theorized that introverts do not enjoy working with others in general, whereas extraverts may enjoy the team environment and therefore are not greatly affected by dissimilarity on this trait (Flynn et al., 2001; Peeters et al., 2006). Moreover, because extraverts spend more time socially interacting with coworkers, this increased informationsharing may resolve any potential conflicts that would arise because of differing goals or work approaches (Peeters et al., 2006).

Building on this preliminary study, we explored the role of extraversion and extraversion dissimilarity in customer service representatives, who were grouped into loosely-collaborating workgroups, as opposed to closely-collaborating teams. Because extraversion may determine the extent to which an individual naturally offers social support and more generally, interacts with coworkers, we suggest that especially in these types of workgroups, extraversion may influence well-being in employees differently than it affected coworker satisfaction in Peeters et al.'s (2006) team-based study of students (Swickert, Rosentreter, Hittner, & Mushrush, 2002). Specifically, we expected a different pattern of results because we were interested in exhaustion, which is largely determined by energy utilization. Therefore, even if someone is generally

satisfied with their interactions, they may expend quite a bit of energy in executing them, thereby experiencing exhaustion.

According to the similarity-attraction paradigm, individuals are more likely to offer social support to similar others than dissimilar others. Extraverts may not expend as much energy in these efforts as introverts because they are naturally predisposed to engage in such behaviors; extraverts may actually derive energy from such interactions if they receive support from other in these exchanges. Moreover, the amount of energy expended in these coworker interactions is likely to be different among high- versus low-extraversion individuals interacting with highversus low-extraversion coworkers. In a customer service setting, where interactions with (often disgruntled) customers place employees at a higher-than-normal risk for emotional exhaustion, these differences in coworker interactions may become particularly salient (Singh et al., 1994). Below, we provide detailed predictions for the specific effects of extraversion dissimilarity among individuals with high- versus low levels of extraversion.

High extraversion. First, we expected that an individual high on extraversion in a workgroup comprised of other extraverted coworkers (low dissimilarity) is likely to successfully interact with similar group members, offering and receiving appropriate levels of social support. Research shows that extraverts require more social support than introverts to avoid emotional exhaustion (Eastburg, Williamson, & Ridley, 1994; Swickert et al., 2002). If extraverts are around others who understand these needs and naturally provide high levels of social support, the negative effects of customer-related stressors may be ameliorated. Furthermore, as an extravert invests energy to interact with similarly-extraverted coworkers, that individual is likely to obtain the desired result from that investment (i.e., mutual support). Therefore, we expected that an

extraverted individual in a low-dissimilarity workgroup is likely to maintain adequate energy reserves even in a stressful environment.

In contrast, a high-extraversion individual in a workgroup with mostly introverted coworkers (i.e., high dissimilarity) is likely to have a very different experience. We expected that this situation would result in increased susceptibility to emotional exhaustion for a few reasons. First, whereas extraverts may require a great deal of social support, they may not receive it from their introverted coworkers (Eastburg et al., 1994; Swickert et al., 2002). Second, social support offered to introverted coworkers may not result in a satisfactory return on investment (i.e., minimal social support in return), which puts the extravert at risk for experiencing exhaustion. This may only exacerbate the negative effects of stressors in a customer-service environment. Therefore, we predicted a positive relationship between dissimilarity and emotional exhaustion for high-extraversion individuals.

Low extraversion. Individuals who are low in extraversion (i.e., introverted) and work in a customer service environment interact constantly with customers, but this job requirement is likely contrary to their basic preference for minimal social interaction. Therefore, these individuals are likely to eschew from any other interactions at work, including coworker interactions, regardless of whether their coworkers are similar or dissimilar to them. If they work with other introverts, these individuals may be most likely to understand this preference for minimal interaction and keep their distance. If they work with mostly extraverts, they may be able to blend into the crowd among their highly social coworkers. In both cases, introverts may be largely left alone and therefore, in terms of exhaustion, we expected that introverts would be unaffected by dissimilarity in the workgroup.

In summary, applying the similarity-attraction paradigm and COR Theory, we predicted that high-extraversion individuals would procure resources (i.e., social support) through their interactions with others, but only when coworkers are similar. In contrast, we expected that lowextraversion individuals would avoid coworker interactions and therefore, remain unaffected by any level of dissimilarity. Based on this logic, we expected that dissimilarity would be harmful to well-being only among high-extraversion individuals.

Hypothesis. Extraversion moderates the relationship between extraversion dissimilarity and emotional exhaustion, such that the relationship is positive among workers high in extraversion but nonsignificant among workers low in extraversion.

#### Control Variables

Based on previous research noting a strong negative relationship between emotional stability and emotional exhaustion (Halbesleben & Buckley, 2004), we treated this as a control variable in our analyses. We also recognized that worker differences in age, gender, and ethnicity may influence the results and, accordingly, treated these forms of demographic dissimilarity as control variables.

## Method

#### **Participants**

We surveyed 313 employees in 39 workgroups of inbound customer service call center representatives in a financial services organization. The primary job of these employees was addressing customer concerns on the phone. Therefore, teamwork was not involved directly, but employees in the same workgroup were stationed in the same general area in the call center. This meant that they generally interacted on a regular basis, for both task and non-task purposes.

We collected our data using a paper-and-pencil survey, administered during work hours. Managers invited their subordinates to participate but stressed that participation was voluntary. The average workgroup size was 8.02 members. Average age was 33.96 and average tenure with the organization was five years. Furthermore, 87 percent of respondents were women and 35 percent classified themselves as members of a minority ethnic group.

#### Measures

Emotional exhaustion. We used the Witt, Andrews, and Carlson (2004) 5-item (e.g., "I feel drained after dealing with customers") emotional exhaustion scale ( $\alpha = .72$ ). Participants responded using a 5-point frequency response scale (1= "very infrequently" to 5= "very frequently"). Because this scale is primarily related to interaction with customers, we found it particularly pertinent to our study. Indeed, a majority of stressors in a call center come from talking on the phone to customers, but these may be exacerbated or allayed by the resources that an individual loses or accrues through interaction in his/her workgroup.

Personality. The Mount and Barrick (1995) Personal Characteristics Inventory (PCI) measured the personality traits. Thirty items assessed extraversion ( $\alpha = .81$ ) and twenty items assessed emotional stability (control variable;  $\alpha = .81$ ). For both, participants used a 5-point response scale (1= "Very Inaccurate" to 5= "Very Accurate").

Extraversion dissimilarity from group. We created a D statistic (i.e., Euclidian distance) to calculate actual extraversion dissimilarity for each worker. This is the square root of the sum of the squared differences between each worker's personal level of extraversion and each of their fellow workgroup members (Bernerth et al., 2008; Liao et al., 2004). In other words, this value represents the average level of dissimilarity between a worker and every other member of their workgroup (note this is not perceived dissimilarity, but rather an objective metric). The D

statistic is generally acceptable as a dissimilarity index, especially when it is calculated using multi-source data, as was the case in this study (Tisak & Smith, 1994).

Demographic dissimilarity control variables. We acquired age, gender, and ethnicity from the organization's human resources information system. Just as for extraversion dissimilarity, we calculated a D statistic for each worker's age, gender, and ethnicity dissimilarity. We followed procedures described by others for categorical data when calculating this statistic for gender and ethnicity (Bernerth et al., 2008; Liao et al., 2004). Statistical Analysis

Because these data were multilevel, we calculated the Intraclass Correlation (ICC(1) < .01 ) to assess clustering effects. This low value indicated that workgroup membership had no significant effect on emotional exhaustion. In independent testing, ICC(1)'s greater than .04 have been shown to inflate standard errors; the value in this study was below that rule of thumb (Branum-Martin, 2006). Therefore, we did not use a multilevel modeling statistical method, opting instead for moderated, hierarchical regression to test our hypothesis.

## Results

We present intercorrelations and descriptive statistics of the study variables in Table 1. As expected, emotional stability was significantly negatively associated with emotional exhaustion (r = -.30, p < .01). No other variable exhibited significant bivariate relationships with the dependent variable.

#### <INSERT TABLE 1>

We present the results of our hierarchical moderated regression analyses in Table 2. We used mean-centered predictors in all analyses. First, we entered the four control variables. Only emotional stability was significant in predicting emotional exhaustion (b = -0.49, p < .01). This

baseline model accounted for 8% of the variance in emotional exhaustion. Next we entered the two predictors to assess main effects. Again, only emotional stability was significant (b = -0.49, p < .01) and the model did not account for any additional variance in emotional exhaustion. Finally, we entered the interaction term. The interaction between extraversion and extraversion dissimilarity was significant (b = 0.33, p < .05), as was emotional stability (b = -0.50, p < .01). This full model accounted for 9% of the variance in emotional exhaustion ( $\Delta R^2 = .01$ , p < .05). Although this effect appears small, it was significant at p < .05 and furthermore, (Chaplin, 1991) stated that "even very small effect sizes may be important in the context of theory testing" (p. 169). Therefore, we felt this effect size was large enough to warrant further interpretation of the interaction to determine whether our hypothesis was fully supported (Champoux & Peters, 1987).

#### <INSERT TABLE 2>

Following Preacher, Curran, and Bauer's (2006) recommendations, we plotted three slopes corresponding to three values of the moderator (extraversion) – at one standard deviation below the mean, at the mean, and at one standard deviation above the mean. As shown in Table 3, only the high-extraversion group exhibited a significant relationship between dissimilarity and emotional exhaustion. The slope of the line for low-extraversion (i.e., introverted) workers was not significantly different from zero. Therefore, the data supported our hypothesis.

### <INSERT TABLE 3 and FIGURE 1>

#### Discussion

We applied the similarity-attraction paradigm and COR Theory to test the asymmetry hypothesis with respect to extraversion and extraversion dissimilarity in workgroups. In support of our predictions, we found that high-extraversion employees experienced increased emotional

exhaustion as their dissimilarity from coworkers increased, whereas low-extraversion individuals were not significantly affected by dissimilarity.

These findings suggest that for workers high in extraversion, having similarly-extraverted coworkers is beneficial for well-being (i.e., supplementary fit; Mehl et al., 2006; Muchinsky & Monahan, 1987). These individuals, by definition, gain energy through interactions with others, naturally assume leadership roles in workgroups, and require a higher level of social support (Eastburg et al., 1994). When they have similar coworkers, they likely receive much-needed social support in frequent, successful social interactions with similar coworkers, thereby conserving and even building energy reserves. In contrast, when extraverted workers have primarily introverted coworkers (high dissimilarity), they likely invest considerably more energy in interactions, yet do not realize the same benefits from that resource investment. Consistent with COR Theory, we found this may lead to increased susceptibility to emotional exhaustion.

Our findings also suggest that coworker dissimilarity may not affect emotional exhaustion levels among introverted employees, at least in this type of call center, customer service job. Presumably these individuals encounter more interaction with others than they would prefer as they fulfill their job duties by talking to customers on the phone. Therefore, we predicted that these individuals would not proactively pursue any other interaction with coworkers, whether they are similar or dissimilar. In other words, these individuals likely expend most of their energy resources in customer interactions and therefore have few resources left for coworker interactions. In order to preserve their own well-being, they are likely to keep their distance. Therefore, this finding brings a bit of good news in conjunction with supporting the asymmetry hypothesis, by suggesting that extraversion dissimilarity does not affect all individuals either positively or negatively, at least in terms of well-being. Instead, this form of

dissimilarity fails to affect introverts' well-being. As a result, perhaps introverts are better able to cope with coworker-related stressors and are not negatively affected by workgroup composition. Even though low extraversion is sometimes perceived as a less desirable trait for customerservice jobs (Ones et al., 2007), our finding may suggest that introverts are less likely to engage in coworker interactions, which potentially reduces conflict, deviance, and workplace politics as well. This may even suggest better task performance. Future research might explore performance outcomes in an effort to understand if the stereotypes of introverts might actually be inaccurate, at least in customer service jobs were customer interactions occur virtually rather than face-toface.

#### Theoretical Contributions

The primary contribution of this study is in testing the asymmetry hypothesis with regard to personality dissimilarity and well-being, by exploring individual differences in responses to personality dissimilarity (Tsui et al., 1992). Scholars researching workgroup composition continue to present inconsistent results regarding the relative effects of heterogeneity versus homogeneity. The asymmetry hypothesis may be the key to resolving these inconsistencies. Namely, not all individuals may react to dissimilarity in the same way; therefore individual differences may determine the impact of group heterogeneity. Although the extant literature is largely consistent in concluding that extraversion dissimilarity in workgroups (i.e., complementary fit) is desirable (Liao et al., 2004; Muchinsky & Monahan, 1987), we found that this relationship depends on each employee's level of extraversion.

This research also contributes to the group composition literature by exploring emotional exhaustion as an outcome. This variable has received scant attention in the group composition literature, but it is a particularly important outcome variable as it relates to job performance,

turnover, and job attitudes (Halbesleben & Buckley, 2004). Group composition is likely to have a salient effect on emotional exhaustion, as work-related interactions may be energy-intensive activities, thereby affecting one's overall level of resource depletion.

## Implications for Practice

In response to the potentially high toll emotional exhaustion takes on an organization and the particularly high risk faced by customer service employees, our research suggests that team composition may be another way to reduce these risks. Scholars have suggested selecting individuals for work groups based on personality (Barrick et al., 1998; Liao et al., 2004; Molleman, 2005; Morgeson et al., 2005). We agree that by properly assigning workgroups, using extraversion as one categorization factor, managers might maximize employee well-being. Ones et al. (2007) also advocated, in their review of personality meta-analyses, that personality assessment is highly valid for the purposes of selection and placement in organizations, extraversion is particularly relevant in customer-service jobs (Austin et al., 2008). Our findings suggest that extraverts may fare best when assigned with other extraverts, whereas introverts are not necessarily affected by either heterogeneity or homogeneity. Therefore workgroups with mostly extraverts may be ideal, whenever possible.

But even if personality-based team assignment is not viable for a particular organization, awareness of dissimilarity could help in diagnosing problems within a workgroup (Glomb & Welsh, 2005). Managers might monitor well-being and offer additional resources to workers who exhibit signs of exhaustion. For instance, extraverts in primarily introverted workgroups may benefit from additional social support from their leader, employee assistance programs, and coping training. These offerings would allow introverts to remain relatively isolated while preserving the well-being of extraverted workers.

#### Strengths and Limitations

Our study exhibited several strengths that lend to its contribution. First, we collected data from multiple sources and used this multi-source data to calculate dissimilarity scores for each individual. Second, we tested our hypothesis in an organization with real-world customer service employees, as opposed to using a student sample, as has been done in similar studies in the past (e.g., Peeters et al., 2006; Yi-Feng et al., 2008). Third, our study represents one of the few full tests of the asymmetry hypothesis for personality and the only test (to our knowledge) considering well-being as an outcome.

This study is also not without limitations. First, our data may have exhibited some common-source bias, as extraversion and emotional exhaustion were both self-report measures. We addressed this limitation in two ways. First, we included data reported by other coworkers in addition to self-report, when calculating the D statistic for the group dissimilarity variable. Second, we controlled for emotional stability, which has been found to relate strongly to emotional exhaustion and may have affected our self-report results for emotional exhaustion (Halbesleben & Buckley, 2004). Even with these efforts, replication is always desirable to increase confidence in our assertions. A second limitation is our cross-sectional study design, which does not allow us to conclude causality. However, because personality is a largely stable trait, it is unlikely that the level of emotional exhaustion could change responses to a personality scale (Barrick & Mount, 1991). Third, although our study reflects a popular method of assessing personality dissimilarity within a group, we did not explicitly ask participants about their perception of the personality of their peers. Thus, by only recording objective dissimilarity, we may have underestimated said effects as has been shown in past fit literature (e.g., Cable & Judge, 1997; Kristof, 1996). Inclusion of perceptions of dissimilarity would add further insight to these findings. Finally, because we conducted our study in call center setting, our results may not be generalizable outside of customer service jobs. Furthermore, the mean level of extraversion in our sample was relatively low (M = 2.23 on a 5-point scale), which may suggest that introverts self-select into call center-based, customer-service jobs, where they can avoid face-to-face contact with customers. Therefore, our findings may not be generalizable outside of the call center setting. However, this study represents only a preliminary effort to test the asymmetry hypothesis for personality and personality dissimilarity and may provide important recommendations for managers in call centers and similar settings. We encourage future research to replicate and expand our findings in other job types and organizations.

#### Future Directions and Conclusion

The results of this study suggest several potential avenues for future research. First, although we theorized about energy expenditure and the process by which high- versus lowextraversion individuals might develop emotional exhaustion, future research should explicitly measure these mediating variables to clarify the mechanisms through which personality and personality dissimilarity affect well-being. Also, continuing focus on the effects of extraversion and extraversion dissimilarity in relation to other work-related outcomes is desirable. As extraversion is highly relevant in workgroups, it behooves us to learn more about its effects on a spectrum of work-related outcomes, including performance. This research may further help clarify if introverts have an important place in call center, customer-service jobs after all. Finally, another avenue for future research is to consider other personality variables and compare the interactive effects of personality dissimilarity and individual differences across other traits. This would provide further personality-based tests of the asymmetry hypothesis, which is a critical step in advancing group composition research.

#### References

- Austin, E. J., Dore, T. C. P., & O'Donovan, K. M. (2008). Associations of personality and emotional intelligence with display rule perceptions and emotional labour. *Personality* and Individual Differences, 44, 679-688.
- Bakker, A. B., van Der Zee, K. I., Lewig, K. A., & Dollard, M. F. (2006). The relationship between the big five personality factors and burnout: A study among volunteer counselors. Journal of Social Psychology, 146, 31-50.
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. Personnel Psychology, 44, 1-26.
- Barrick, M. R., Stewart, G. L., Neubert, M. J., & Mount, M. K. (1998). Relating member ability and personality to work-team process and team effectiveness. Journal of Applied Psychology, 83, 377-391.
- Bernerth, J. B., Armenakis, A. A., Feild, H. S., Giles, W. F., & Walker, H. J. (2008). The influence of personality differences between subordinates and supervisors and perceptions on LMX: An empirical investigation. Group & Organization Management, *33*, 216-240.
- Branum-Martin, L. (2006). Intraclass correlations. Houston, TX.
- Burke, R. J., & Greenglass, E. R. (2001). Hospital restructuring stressors, work-family concerns and psychological well-being among nursing staff. Community, Work, & Family, 4, 49-62.
- Cable, D. M., & Judge, T. A. (1997). Interviewers' perceptions of person-organization fit and organizational selection decisions. Journal of Applied Psychology, 82, 546-561.

- Champoux, J. E., & Peters, W. S. (1987). Form, effect size, and power in moderated regression analyses. Journal of Occupational Psychology, 60, 243-255.
- Chaplin, W. F. (1991). The next generation of moderator research in personality psychology. Journal of Personality, 59, 143-178.
- Chatman, J. A., & O'Reilly, C. A. (2004). Asymmetric reactions to work group sex diversity among men and women. Academy of Management Journal, 47, 193-208.
- Chiaburu, D. S., & Harrison, D. A. (2008). Do peers make the place? Conceptual synthesis and meta-analysis of coworker effects on perceptions, attitudes, OCB's, and performance. Journal of Applied Psychology, 93, 1082-1103.
- Cordes, C., & Dougherty, T. W. (1993). A review and an integration of research on job burnout. Academy of Management Review, 18, 621-656.
- Cunningham, G. B. (2007). Perceptions as reality: The influence of actual and perceived demographic dissimilarity. Journal of Business and Psychology, 22, 79-89.
- Dahlin, K. B., Weingart, L. R., & Hinds, P. J. (2005). Team diversity and information use. Academy of Management Journal, 48, 1107-1123.
- De Vries, J., & Van Heck, G. L. (2002). Fatigue: Relationships with basic personality and temperament dimensions. Personality and Individual Differences, 33, 1311-1324.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demandsresources model of burnout. Journal of Applied Psychology, 86, 499-512.
- Dormann, C., & Zapf, D. (2004). Customer-related social Stressors and burnout. Journal of Occupational and Health Psychology, 9, 61-82.
- Drake, B., & Yadama, G. N. (1996). A structural equation model of burnout and job exit among child protective services workers. Social Work Research, 20, 179-187.

- Eastburg, M. C., Williamson, M. G., R., & Ridley, C. (1994). Social support, personality, and burnout in nurses. Journal of Applied Social Psychology, 24, 1233-1250.
- Flynn, F. J., Chatman, J. A., & Spataro, S. E. (2001). Getting to know you: The influence of personality on impressions and performance of demographically different people in organizations. Administrative Science Quarterly, 46, 414-442.
- Geurts, S., Schaufeli, W. B., & De Jonge, J. (1998). Burnout and intention to leave among mental health-care professionals: A social psychological approach. Journal of Social and Clinical Psychology, 17, 341-362.
- Gevers, J. M. P., & Peeters, M. A. G. (2009). A pleasure working together? The effects of dissimilarity in team member conscientiousness on team temporal processes and individual satisfaction. Journal of Organizational Behavior, 30, 379-400.
- Glaman, J. M., Jones, A. P., & Rozelle, R. M. (1996). The effects of co-worker similarity on the emergence of affect in work teams. Group & Organization Management, 21, 192-215.
- Glomb, T. M., & Welsh, E. T. (2005). Can opposites attract? Personality heterogeneity in supervisor-subordinate dyads as a predictor of subordinate outcomes. Journal of Applied Psychology, 90, 749-757.
- Goldberg, L. S., & Grandey, A. A. (2007). Display rules versus display autonomy: Emotion regulation, emotional exhaustion, and task performance in a call center simulation. Journal of Occupational and Health Psychology, 12, 301-318.
- Greenglass, E. R., & Burke, R. J. (1990). Burnout over time. Journal of Health and Human Resources Administration 13, 192-204.
- Halbesleben, J. R. B., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of* Management, 30, 859-879.

- Halfhill, T., Nielsen, T. M., & Sundstrom, S. (2005). Group personality composition and group effectiveness: An integrative review of empirical research. Small Group Research, 39, 616-635.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. American Psychologist 44, 513-524.
- Hobfoll, S. E., & Freedy, J. (1993). Conservation of resources: A general stress theory applied to burnout. In W. B. Schaufeli, C. Maslach & T. Marek (Eds.), *Professional burnout:* Recent developments in theory and research. Washington, D.C.: Taylor & Francis
- Hobman, E. V., Bordia, P., & Gallois, C. (2003). Consequences of feeling dissimilar from others in a work team. Journal of Business and Psychology, 17, 301-325.
- Hogg, M. A., & Terry, D. J. (2000). Social identity and self-categorization processes in organizational contexts. Academy of Management Review, 25, 121-140.
- Humphrey, S. E., Hollenbeck, J. R., Meyer, C. J., & Ilgen, D. R. (2007). Trait configurations in self-managed teams: A conceptual examination of the use of seeding for maximizing and minimizing trait variance in teams. Journal of Applied Psychology, 92, 885-892.
- Jackson, S. E., May, K. E., & Whitney, K. (1995). Understanding the dynamics of diversity in decision-making teams. San Francisco: Jossey-Bass.
- Judge, T. A., & Bono, J. E. (2000). Five-factor model of personality and transformational leadership. Journal of Applied Psychology, 85, 751-765.
- Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. Journal of Applied Psychology, 87, 765-780.
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. Journal of Applied Psychology, 87, 530-541.

- Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The big five personality traits, general mental ability, and career success across the life span. Personnel Psychology, 52, 621-652.
- Kern, J. H., & Grandey, A. A. (2009). Customer incivility as a social stressor: The role of race and racial identity for service employees. Journal of Occupational and Health Psychology, 14, 46-57.
- Kristof, A. L. (1996). Person-organization fit: An integrative review of its conceptualizations, measurements, and implications. Personnel Psychology, 49, 1-49.
- Langelaan, S., Bakker, A. B., van Doornen, L. J. P., & Schaufeli, W. B. (2006). Burnout and work engagement: Do individual differences make a difference? Personality and *Individual Differences*, 40, 521-532.
- Lau, D. C., & Murnighan, J. K. (1998). Demographic diversity and faultlines: The compositional dynamics of organizational groups. Academy of Management Review, 23, 325-340.
- Liao, H., Joshi, A., & Chuang, H. (2004). Sticking out like a sore thumb: Employee dissimilarity and deviance at work. Personnel Psychology, 57, 969-1000.
- Maslach, C. (1982). Burnout: The cost of caring. Englewood Cliffs: Prentice Hall.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. Annual Review of Psychology, 52, 397-422.
- McCrae, R. R., & Costa, P. T. (1985). Updating Norman's 'adequacy taxonomy': Intelligence and personality dimensions in natural language and in questionnaires. Journal of Personality and Social Psychology, 49, 710-721.

- Mehl, M. R., Gosling, S. D., & Pennebaker, J. W. (2006). Personality in its natural habitat: Manifestations and implicit folk theories of personality in daily life. *Journal of* Personality and Social Psychology, 90, 862-877.
- Michielsen, H. J., De Vries, J., & Van Heck, G. L. (2003). In search of personality and temperament predictors of chronic fatigue: A prospective study. Personality and Individual Differences, 35, 1073-1087.
- Molleman, E. (2005). Diversity in demographic characteristics, abilities, and personality traits: Do faultlines affect team functioning. Group Decision and Negotiation, 14, 173-193.
- Moore, J. E. (2000). Why is this happening? A casual attribution approach to work exhaustion consequences. Academy of Management Review, 25, 335-349.
- Morgeson, F. P., Reider, M. H., & Campion, M. A. (2005). Selecting individuals in team settings: The importance of social skills, personality characteristics, and teamwork knowledge. Personnel Psychology, 58, 583-611.
- Mount, M. K., & Barrick, M. R. (1995). The Personal Characteristics Inventory manual. University of Iowa.
- Muchinsky, P. M., & Monahan, C. J. (1987). What is person-environment congruence? Supplementary versus complementary model of fit. Journal of Vocational Behavior, 31, 268-277.
- Neuman, G. A., Wagner, S. H., & Christiansen, N. D. (1999). The relationship between workteam personality composition and the job performance of teams. Group & Organization Management, 24, 28-45.
- O'Reilly, C., Caldwell, D., & Barnett, W. (1989). Work group demography, social integration, and turnover. Administrative Science Quarterly, 34, 21-37.

- Ones, D. S., Dilchert, S., Visewesvaran, C., & Judge, T. A. (2007). In support of personality assessment in organizational settings. Personnel Psychology, 60, 995-1027.
- Peeters, M. A. G., Rutte, C. G., van Tuijl, H. F. J. M., & Reyman, I. M. M. J. (2006). The Big Five personality traits and individual satisfaction with the team. Small Group Research, *37*, 187-211.
- Preacher, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interaction effects in multiple linear regression, multilevel modeling, and latent curve analysis. Journal of Educational and Behavioral Statistics, 31, 437-448.
- Schippers, M. C., Hartog, D. N. D., Koopman, P. L., & Wienk, J. A. (2003). Diversity and team outcomes: the moderating effects of outcome interdependence and group longevity and the mediating effect of reflexivity. *Journal of Organizational Behavior*, 24, 779-802.
- Schonfeld, I. S. (1989). Psychological distress in a sample of teachers. Journal of Psychology, *124*, 321-338.
- Shaw, M. E. (1981). Group dynamics: The psychology of small group behavior (Vol. 3). New York: McGraw-Hill.
- Shirom, A. (2003). Job-related burnout: A review. In J. C. Quick & L. E. Tetrick (Eds.), Handbook of Occupational Health Psychology (pp. 245-264). Washington, D.C.: American Psychological Association.
- Shirom, A., Westman, M., Shamai, O., & Carel, R. S. (1997). Effects of work overload and burnout on cholesterol and triglyceride levels: The moderating effects of emotional reactivity among male and female employees. Journal of Occupational Health Psychology, 2, 275-288.

- Singh, J., Goolsby, J. R., & Rhoads, G. K. (1994). Behavior and psychological consequences of boundary spanning burnout for customer service representatives. Journal of Marketing Research, 31, 558-569.
- Stewart, G. (1996). Reward structure as a moderator of the relationship between extraversion and sales performance. . Journal of Applied Psychology, 81, 619-627.
- Swickert, R. J., Rosentreter, C. J., Hittner, J. B., & Mushrush, J. E. (2002). Extraversion, social support processes, and stress. Personality and Individual Differences, 32, 877-891.
- Tisak, J., & Smith, C. S. (1994). Defending and extending difference score methods. *Journal of* Management, 20, 675-682.
- Tokar, D. M., Fischer, A. R., & Subich, L. M. (1998). Personality and vocational behavior: A selective review of the literature, 1993-1997. Journal of Vocational Behavior, 53, 115-153.
- Tsai, W. (2001). Determinants and consequences of employee displayed positive emotions. Journal of Management, 27, 497-512.
- Tsui, A. S., Egan, T. D., & O'Reilly, C. A. (1992). Being different: Relational demography and organizational attachment. Administrative Science Quarterly, 37, 549-579.
- van Der Vegt, G., van De Vliert, E., & Oosterhof, A. (2003). Informational dissimilarity and organizational citizenship behavior: The role of intrateam interdependence and team identification. Academy of Management Journal, 46, 715-727.
- Witt, L. A., Andrews, M. C., & Carlson, D. S. (2004). When conscientiousness isn't enough: Emotional exhaustion and performance among call center customer service representatives. Journal of Management, 30, 149-160.

- Yi-Feng, N. C., Huang, X., & Tjosvold, D. (2008). Similarity in gender and self-esteem for supportive peer relationships: The mediating role of cooperative goals. *Journal of* Applied Social Psychology, 38, 1147-1178.
- Zellars, K. L., Hochwarter, W. A., Perrewé, P. L., Hoffman, N., & Ford, E. W. (2004). Experiencing job burnout: The roles of positive and negative traits and states. Journal of Applied Social Psychology, 34, 887-911.
- Zellars, K. L., Perrewé, P. L., & Hochwarter, W. A. (2000). Burnout in health care: The role of the five factors of personality. Journal of Applied Social Psychology, 30, 1570-1598.
- Zellars, K. L., Perrewé, P. L., Hochwarter, W. A., & Anderson, K. S. (2006). The interactive effects of positive affect and conscientiousness on strain. Journal of Occupational Health Psychology, 11, 281-289.

Table 1 Descriptive Statistics and Inter-correlations of Study Variables

	1	2	3	4	5	6	7
1. Emotional exhaustion	(.72)						
2. Age dissimilarity	03	-					
3. Gender dissimilarity	06	03	-				
4. Ethnic dissimilarity	.05	.06	.15*	-			
5. Emotional stability	30**	.02	.004	.07	(.81)		
6. Extraversion	.02	.001	.05	07	.09	(.81)	
7. Extraversion							
dissimilarity	.05	.07	.01	.06	12*	34**	
Mean	2.02	6.58	0.28	0.44	2.34	2.23	3.88
Standard Deviation	0.65	5.51	0.37	0.37	0.38	0.31	0.68

Note. Coefficient alphas appear in diagonal. \* p < .05; \*\* p < .01.

Table 2 Ordinary Least Squares Regression Statistics Predicting Emotional Exhaustion

Model	Independent variable	b	Standard error	β	t
Model 1 – Controls	Intercept	2.01**	0.04	0	57.29
	Age Dissimilarity	-0.003	0.01	-0.03	-0.45
$Adj R^2 = .08$	Gender Dissimilarity	-0.09	0.10	-0.05	-0.96
F = 7.38**	Ethnic Dissimilarity	0.18	0.13	0.08	1.36
	Emotional Stability	-0.49**	0.09	-0.29	-5.26
Model 2 – Main Effects	Intercept	2.01**	0.04	0	57.26
	Age Dissimilarity	-0.003	0.01	-0.03	-0.50
$Adj R^2 = .08$	Gender Dissimilarity	-0.10	0.10	-0.06	-1.04
F = 5.20**	Ethnic Dissimilarity	0.19	0.13	0.08	1.43
	Emotional Stability	-0.49**	0.09	-0.29	-5.26
	Extraversion	0.16	-0.12	0.08	1.29
	Extraversion Dissimilarity	0.03	0.06	0.03	0.57
Model 3 –		2.04**	0.04	0	56.07
Interaction	Intercept	2.0.	0.01	Ů	20.07
	Age Dissimilarity	-0.003	0.01	-0.02	-0.44
$Adj R^2 = .09$	Gender Dissimilarity	-0.09	0.10	-0.05	-0.95
$\Delta R^2 = .01*$	Ethnic Dissimilarity	0.16	0.13	0.07	1.25

Emotional Stability	-0.50**	0.09	-0.30	-5.41
Extraversion	0.08	0.13	0.04	0.63
Extraversion Dissimilarity	0.06	0.06	0.07	1.10
Extraversion ×	0.22*	0.14	0.14	2.36
Extraversion Dissimilarity	0.33	0.14	U.14	2.30
	Extraversion Dissimilarity Extraversion ×	Extraversion 0.08  Extraversion Dissimilarity 0.06  Extraversion × 0.33*	Extraversion 0.08 0.13  Extraversion Dissimilarity 0.06 0.06  Extraversion × 0.33* 0.14	Extraversion       0.08       0.13       0.04         Extraversion Dissimilarity       0.06       0.06       0.07         Extraversion ×       0.33*       0.14       0.14

*Note.* \* *p* < .05; \*\* *p* < .01.

Table 3 Simple Slopes

Value of Moderator	01	Standard	1.0	
(Extraversion)	Slope	Error	t	df
Low	-0.04	0.06	-0.69	309
Mean	0.06	0.05	1.09	309
High	0.16*	0.08	2.07	309

*Note.* \* *p* < .05.

## Figure1

# Figure Captions

Figure 1. Plot of Interaction between Extraversion  $\times$  Extraversion Dissimilarity Predicting Emotional Exhaustion

