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ROLE CONGRUITY THEORY APPLIED TO A LONGITUDINAL STUDY OF

ARMY OFFICERS

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ABSTRACT

This study seeks to better understand why female officers voluntarily leave the Army at a higher rate than males. Leveraging role congruity theory (Eagly & Karau, 2002) as an explanatory framework, the study examines whether personality measures of agency and communion differentially predict voluntary turnover for females versus males in a cohort of Army officers (n = 681). Results from logistic regression suggest that agency and communion do not predict voluntary turnover. Limitations and implications are discussed, as well as future research directions.

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGEMENTS

Role Congruity Theory Applied To A Longitudinal Study Of Army Officers

Opportunities for women in the Army are expanding, yet turnover challenges continue to frustrate gender integration efforts. In the male-dominated environment of the military, women, as a group, do not stay in service or get promoted at the same rates as men (Asch, Miller, & Malchiodi, 2012). However, certain women do remain and are incredibly successful. For example, General Ann Dunwoody defied the odds and became the first woman to reach the rank of General (four-stars) on November 14, 2008. Unfortunately, stories of success such as General Dunwoody's are the exception, not the rule. Addressing this problem, this study attempts to determine whether the effects of systemic gender and work role stereotypes contribute to the increased voluntary turnover of women in the Army.

Challenges regarding gender differences in turnover and promotions are not unique to military settings. Indeed, while 47% of the entire U.S. labor force is female, very few reach the highest levels—only 4.7% of Fortune 500 CEOs (Fairchild, 2014; U.S. Department of Labor, 2010). One of many reasons explaining the dearth of female top executives regards gender differences in turnover. Certain studies suggest that women are significantly more likely to leave their organizations than are men; precluding matriculation into the higher ranks (Miller & Wheeler, 1992; Schwartz, 1989). These trends are similar in the military. As of 2013, only 16.4% of the active Army's officer corps was female[1] (Department of Defense, 2013). Encouragingly, this proportion grew

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[1] Women comprised 15.8% of the active Army in 2013 considering enlisted, warrant, and officer ranks (Department of Defense, 2013)

2.4% since 2000. However, retaining these officers is proving difficult as evidenced by the proportion of women sharply declining with increasing rank. While women comprise 24.6% of junior officers (second lieutenant through captain, O1-O3), only 17.1% of mid-grade officers (majors through colonel, O4-O6) and 7.6% of senior officers (generals, O7-O10) are women (Department of Defense, 2013).[2] Increasing accession rates of women explain a portion of the higher ratio at lower ranks, but retention and promotion data reveal other significant causes of reduced ratios at higher ranks. Asch et al. (2012) studied all the services' personnel, and demonstrated that women are less likely to be retained and promoted through the rank of lieutenant colonel (O5) compared to men. In sum, these findings suggest that while the Army has increased the number of females joining the officer corps, they do not stay in service as long nor get promoted as frequently as do male officers.

For the purposes of this study, voluntary turnover is defined as "voluntary cessation of membership in an organization by an individual who receives monetary compensation for participation in that organization" (Hom & Griffeth, 1995, p. 5). Due to high financial and practical costs, myriad studies have focused on turnover (Hom, Mitchell, Lee, & Griffeth, 2012) and offered theories explaining the phenomenon (Lee & Mitchell, 1994; Maertz & Campion, 2004; March & Simon, 1958). This study leverages the unfolding model of employee turnover (Lee & Mitchell, 1994) to illustrate turnover decision processes that help explain differences in voluntary turnover rates for male and female Army officers.

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[2] Numbers do not reflect the trend of increased accessions, yet are illustrative of force composition.

Other researchers have examined gender differences in turnover and promotion in various contexts, including the military, using role congruity theory for theoretical explanation (Eagly & Karau, 2002; Kark & Eagly, 2010; Kark, Waismel-Manor, & Shamir, 2012; Miller & Wheeler, 1992). Essentially, role congruity theory suggests that women in leadership positions face the "double bind paradox," in which female leaders must behave in an agentic (e.g. masculine, dominant, assertive) manner to meet the expectations of the leadership role while simultaneously behave communally (e.g. feminine, friendly, trusting) to meet gender role stereotypes (Eagly & Karau, 2002; Kark & Eagly, 2010). Behavior inconsistent with these expectations would create conditions resulting in negative career outcomes. According to the theory, these effects are magnified in a masculine work environment (Eagly & Karau, 2002), making the U.S. Army a particularly appropriate context in which to test it.

This study has three primary objectives. First, it expands understanding of distal antecedents of voluntary turnover in a particular occupational context. Specifically, personality characteristics are hypothesized to have differential effect on turnover decisions for male and female Army officers. Previous research found conflicting results regarding gender differences in turnover with Miller and Wheeler (1992) and Hom, Roberson, and Ellis (2008) finding that women are more likely to turnover than men while Lyness and Judiesch (2001) found that women in management positions are less likely to voluntarily turnover. Furthermore, studies have also reached contradicting results regarding the effects of personality on turnover (Salgado, 2002; Timmerman, 2006; Zimmerman, 2008). Taken together, these findings suggest that further exploration

of boundary conditions could better illuminate the complex interaction among gender, personality, and turnover.

Second, answering a call for additional research on gender and leadership in specific contexts (Kark & Eagly, 2010), this study provides insight into gender diversity issues plaguing male-dominated environments. Eagly and Karau (2002) contend that context moderates the effect of role and gender congruity such that highly masculine environments amplify the salience of gendered behavior. Consequently, this study's focus on Army officers facilitates a deeper understanding of the relationship among gender, leadership, and career outcomes in such an environment.

Finally, the current study expands the application of personality in organizational research and selection by measuring leader congruity with gender stereotypes with the interpersonal circumplex personality model (Pincus, 2015; Wiggins, 1979). The interpersonal circumplex is uniquely suited to measure the focal constructs of role congruity theory, agency and communion, yet has not been leveraged to predict career outcomes for individuals in leadership positions. This model, although not widely used in organizational research, is uniquely suited to support the theoretical demands of role congruity theory in ways that the atheortical five-factor model cannot. By demonstrating the value of this tool to measure role congruency, future organizational researchers can expand research in exploring complex social interaction in work settings.

Practically, this study will provide insight into potential reasons for increased turnover for female leaders in masculine organizations. This information would be especially valuable for leaders and personnel managers interested in maximizing the potential contributions of all populations. In the following sections, I discuss voluntary

turnover, explicate role congruity theory, and relate those concepts to voluntary Army

officer turnover.

Voluntary Turnover

Turnover is costly for all organizations and, consequently, has been a subject of

research for organizational scholars for decades (March & Simon, 1958; Mobley, 1982;

Rubenstein, Eberly, Lee, & Mitchell, 2015). Considering financial implications, costs for

replacing an employee range from 90% to 200% of annual pay (Allen, Bryant, &

Vandaman, 2010). Beyond actual costs, in the closed personnel system of the Army[3],

voluntary turnover results in decreased competition for promotion and long-term

consequences for leadership quality. Therefore, determining causes driving officer

voluntary turnover has profound implications, both financial and practical, for the Army.

Lee and Mitchell (1994) offered a widely referenced model of voluntary turnover

that can provide insight into gender differences in officer turnover. Lee and Mitchell's

unfolding model of employee turnover proposed four general decision paths individuals

take when leaving organizations. In three of the paths, the authors suggest that a "shock"

induces reflection on the job that can lead to turnover. The shocks can be valenced or

neutral, but must produce job-related deliberations (Lee & Mitchell, 1994). These three

paths differ in whether a turnover script is activated by the shock and whether the force to

turnover originates from within the current organization (eg. downsizing) or from without

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[3] The Army has a closed promotion system. Officers enter the service as second lieutenants
and progress through ranks sequentially based on time in service and performance.

(eg. alternate job offer, family pressure). The fourth path does not involve a shock, but is affect-initiated and closely related to perceptions of job satisfaction.

The unfolding model of employee turnover may describe how Army officers' progress through turnover decisions, but it cannot explain why there is such a difference between retention rates for male and female officers (Asch, et al., 2012). In order to explore the driving forces behind the gender differences, this study uses Eagly and Karau's (2002) role congruity theory to suggest that experiences in the Army differ for men and women. These different experiences and subsequent individual interpretations lead women to follow certain voluntary turnover paths at greater rates.

Role Congruity Theory

Role congruity theory is derived from Eagly's social role theory (1987) that advanced the social-psychological construct of gender roles. Gender roles, as described by Eagly, are socially shared beliefs of appropriate gender attributes and behavior. Gender roles are descriptive in that they define the desired characteristics of individuals based on sex. Furthermore, the roles are prescriptive and define how individuals "should" behave based on their gender. Essentially, these stereotypes reflect common perceptions of men as agentic and women as communal and that behavior should be consistent with these stereotypes. Behavior inconsistent with these normative stereotypes creates a perception of incongruity in the mind of the perceiver and can lead to prejudice (Eagly, 1987). Importantly, individuals also evaluate their own behavior against these stereotypes and self-perceived transgressions can subsequently influence individual affect and future behavior.

Role congruity theory extends social role theory by considering the relationship of gender roles with other roles, particularly the work role of leadership (Eagly & Karau, 2002). Since leadership has traditionally been viewed as a masculine work role (Schein, 1973, Sczesny, 2003), it is often perceived as incongruent with the female gender role. This effect is moderated by the masculinity of the specific leadership role and the organizational context such that increasingly masculine roles and environments will heighten perceptions of incongruity (Eagly & Karau, 2002). These perceptions of incongruity result in prejudice toward female leaders in two ways. First, women are perceived to have less potential for success in leadership roles than men, and, second, the leadership behavior of women is generally judged less favorably because it is not congruent with gender role expectations.[4] These forms of prejudice can lead to lower performance evaluations for women in leadership positions (Eagly & Karau, 2002; Heilman, 2001) and increased harassment in the workplace (Berdahl, 2007). Consequently, this prejudice also leads to increased turnover and reduced promotion rates for female officers (Sims, Drasgow, & Fitzgerald, 2005).

Role Congruity Theory Applied to U. S. Army Officer Turnover

Turnover is a measurable career outcome and problematic concerning women in the military. Myriad reasons could be causing these higher rates of turnover, but role congruity theory suggests that female leaders in masculine work environments engender

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[4] Although social-role and work congruity theories suggest that behavior inconsistent with accepted norms would likely engender negative perceptions (Eagly, 1987, Eagly & Karau, 2002), there are exceptions. Studies have shown that in particular cases, highly competent and successful women can be rated even higher than their performance warrants (Abramson, Goldberg, Greenberg, & Abramson, 1977; Heilman, Martell, & Simon,1988).

prejudice that results in negative career outcomes such as turnover, and other studies appear to support that contention (Eagly & Karau, 2002; DiSilverio, 2003; Sims, Drasgow, & Fitzgerald 2005). In a study of 560 women who left the Air Force prior to retirement eligibility of 20 years, DiSilverio posits, "the military organizational, 'cultural,' climate is less comfortable for women than for men and that the strains and stresses of operating in a masculine culture combine with other factors to push women to separate at an earlier point than men" (2003, p. 23). Yet certain women do remain in service and thrive. Role congruity theory accounts for these different experiences by going beyond between-gender differences and suggesting between-women differences in behavior can result in different experiences and outcomes for women (and men).

The theory suggests several drivers of increased female voluntary turnover. First, women in masculine work roles would encounter more prejudice than men. This prejudice, operationalized in less positive performance evaluations, job assignments, and interpersonal interaction would likely lead to increased job dissatisfaction. Indeed, perceptions of discrimination have been shown to negatively predict job satisfaction (Goldman, Gutek, Stein, & Lewis, 2006; Jones, et al., 2013). Furthermore, research has consistently shown that job dissatisfaction predicts turnover (Griffeth, Hom, & Gaertner, 2000; Miller & Wheeler, 1992; Rubenstein, Eberly, Lee, & Mitchell, 2015). Female officers dissatisfied with the Army due to encountered prejudice and relatively less positive performance reports would likely follow Lee and Mitchell's (1994) path 4 to turnover in which affective judgments drive voluntary turnover.

Beyond being more likely to be dissatisfied with the Army, role congruity theory suggests that women in masculine work roles would be more likely to encounter certain

"shocks" that drive turnover at greater rates than men. One such shock could be increased risk of harassment. In one particular study on harassment in the military, Sims, Drasgow, and Fitzgerald (2005) found that 76.5% of 11,521 female military personnel reported experiencing unwanted sex-related behaviors while in military service. Moreover, a recent RAND project focused on sexual harassment in the military, found 22.74% of female Army soldiers self-reported experiencing sexual harassment within the preceding 12 months compared to 4.29% of male soldiers (Morral, Gore, & Schell, 2015). These targets of harassment showed significantly lower organizational commitment and increased turnover (Sims, Drasgow, & Fitzgerald, 2005). Consequently, though both men and women face challenging conditions as they perform in military contexts, women are disproportionately facing additional challenges from their peers and supervisors that their male peers do not, and may contribute to differential turnover. Considering the unfolding voluntary turnover model (Lee & Mitchell, 1994), individuals encountering the shock of harassment are more likely to consider leaving the service, develop scripts for future turnover, search out job alternatives, and voluntarily turnover.

Yet another shock that is disproportionately experienced by women regards the realization of gender differences in promotion rates. Role congruity theory suggests that women in masculine work roles are likely to receive less positive evaluations that decrease promotional chances (Eagly & Karau, 2002), and other studies show that reduced promotion chances predict turnover (Griffeth, Hom, & Gaertner, 2000; Miller & Wheeler, 1992). Results from Army promotion boards (Asch, et al., 2012) seem to support this proposition with men being significantly more likely than women to be promoted through the rank of lieutenant colonel. Because officers can readily analyze

promotion board results and determine gender differences in promotion rates, female officers would likely learn of their reduced chances for promotion; a shock that may drive turnover deliberations.

Considering gender differences in Army officer experiences through the lens of role congruity theory, one can expect higher levels of voluntary turnover for female officers. Role congruity theory predicts female officers would likely encounter prejudice in the Army, and this experience would likely reduce job satisfaction and increase the likelihood of voluntary turnover. Role congruity theory also suggests that women in masculine work roles would encounter harassment with greater frequency. This shock would trigger job deliberations and again increase chances of turnover. Finally, role congruity theory offers that due to perceived violations of work roles, women in leadership positions would receive less positive performance evaluations. These reports would decrease promotional chances and further motivate women to leave the Army at higher rates than men.

H1. *Consistent with previous findings, female officers in this sample will voluntarily leave the Army at greater rates than male officers.*

Eagly and Karau (2002) use the broad descriptors of agency and communion to capture the essential differences between male and female gender stereotypes. Agency reflects desired male attributes and behavior of dominance, aggression, and ambition, and communion reflects those for females—caring, friendliness, and tendermindedness. These stereotypes are pervasive in western society (Duehr & Bono, 2006; Nicholson, 1996) and even extend beyond gender to work roles (Eagly & Karau, 2002). For example, leadership is widely considered a masculine work role (Schein, 1973, Sczesny,

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2003) in which agentic qualities are valued. Additionally, Eagly and Karau (2002) suggest that the relative value of leaders' agentic behavior is increased in highly masculine environments such as the military. Therefore, the theory suggests that leaders in the military, regardless of gender, displaying lower levels of agency will be perceived as incongruent with their work role, be subjected to prejudiced evaluations, and be more likely to leave the service through lower job satisfaction.

However, role congruity theory suggests that agency likely moderates the relationship between gender and turnover. Agency is regarded as a masculine trait and, consequently, levels of agency would have differing outcomes for male and female officers. Males lower in agency would engender perceptions of incongruity with both their gender and work roles and result in higher levels of prejudice and turnover. Females lower in agency would be incongruent with the work role stereotype yet congruent with their gender role. Therefore, because agency is salient for both the gender and work roles for men while primarily salient for only the work role of women, its effect on turnover would be more pronounced for male officers.

H2. *Agency moderates the relationship between gender and turnover such that agency negatively predicts turnover (conversely, agency positively predicts retention) following completion of the officer's minimum service obligation[5] (five years) for all officers but more so for male officers.*

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[5] Graduates from West Point are commissioned into the Army as second lieutenants with a service obligation of five years. Certain occupations such as aviation require an additional service obligation. Individuals still serving their original service obligations were not considered.

While communion is not normally associated with the work role of leadership[6], especially in a masculine environment such as the military, research suggests a negative relationship with turnover. Personality research consistently demonstrates a strong correlation between communion and agreeableness (McCrae & Costa, 1989; Traupman, et al., 2009), and agreeableness negatively predicts turnover (Salgado, 2002; Zimmerman, 2008). This makes sense because communal traits relate to friendliness, trust, and affiliation; traits that would make it less likely for an individual to leave an organization. Therefore, communion should negatively predict turnover regardless of gender.

Role congruity theory (Eagly & Karau, 2002) also suggests that communion moderates the relationship between gender and turnover. For female officers, communal behavior would violate the leadership work role stereotype yet be congruent with the gender role. Eagly and Karau (2002) suggest that gender role congruence is more salient for women in masculine environments. Therefore, female officer congruence with the gender role would result in decreased prejudice and concomitantly lower turnover despite inconsistency with the work role stereotype. For male officers, communal behavior would violate both the gender and work role stereotypes and can lead to prejudice and increased turnover. However, this effect is decreased in magnitude because communion for men in a military leadership work role is not as salient as agency, and communion

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[6] Recent research is suggesting a change in perceptions regarding desired traits for leaders. Communal traits are becoming increasingly valued in work contexts emphasizing teamwork and cohesion (Duehr & Bono, 2006, Rosette & Tost, 2010; Paustian-Underdahl, Walker, and Woehr, 2014).

generally predicts retention (Zimmerman, 2008). Therefore, communal behavior will negatively predict turnover for both male and female officers but more so for females.

H3. *Communion moderates the relationship between gender and turnover such that communion negatively predicts turnover (conversely, communion positively predicts retention) following completion of the officer's minimum service obligation (five years) for all officers but more so for female officers.*

Research suggests that agency and communion interact with each other and are central to interpersonal relations (Wiggins, 2003; Pincus, 2015). Therefore, it is necessary to examine the three-way interaction among agency, communion, and gender with respect to turnover. According to role-congruity theory, individual officers lower on agency will be perceived as less congruent with the work role of leadership in the Army and engender prejudice that results in increased turnover. This effect will be most pronounced for male officers because low agency violates both gender and work roles for men. However, because communal behavior is congruent with the female gender role, increased communion will result in reduced turnover for female officers compared to males.

H4. *For individuals low in agency, communion moderates the relationship between gender and turnover such that communion does not predict turnover for men but negatively predicts turnover for women.*

Officers with strong agentic tendencies will be perceived as congruent with the leadership work role. While this should result in reduced turnover for male officers regardless of communion, it significantly affects female officer turnover. Female officers high in agency and low in communion violate their gender-role and will likely encounter

increased prejudice. Moreover, this population is also at greater risk for harassment (Berdahl, 2007; Burgess & Borgida, 1999) and resulting stress. Research has shown, though, that agentic women can mitigate the deleterious effects of role incongruity by displaying communal traits (Heilman & Okimoto, 2007). Indeed, Kark, Waismel-Manor, and Shamir (2012) demonstrated that female leaders with masculine and feminine personality traits received the least amount of prejudicial treatment. Therefore, for highly agentic female officers, communion is theorized to negatively predict turnover.

H5. *For individuals high in agency, communion moderates the relationship between gender and turnover such that communion negatively predicts turnover for both male and female officers, yet more so for women.*

Measuring Constructs of Agency and Communion

Most studies measuring individual differences in gender identity use self-report measures of agency and communion (Wood & Eagly, 2009). For example, a widely used measure is the Bem Sex Role Inventory (BSRI; Bem, 1974, 1981) that measures trait masculinity, femininity, and androgyny. However, directly measuring gender identity is not always practical or possible, and alternative methods are required. One such method will be used in this study—translating archival personality data (NEO-PI) into individual levels of agency and communion via the interpersonal circumplex (IPC).

Underlying role congruity theory, the constructs of agency and communion describe gender and work role stereotypes that drive different career outcomes for men and women. Agency, more closely related to the male stereotype, describes "primarily an assertive, controlling, and confident tendency—for example, aggressive, ambitious,

dominant, forceful, independent, self-sufficient, self-confident, and prone to act as a leader" (Eagly & Karau, 2002, p. 574). Communion, more related to the female stereotype, describes "primarily a concern with the welfare of other people—for example, affectionate, helpful, kind, sympathetic, interpersonally sensitive, nurturant, and gentle" (Eagly & Karau, 2002, p. 574). Considering the central importance of the constructs of agency and communion to role congruity theory, the IPC presents a model of personality uniquely positioned to measure individual differences regarding those constructs. The interpersonal tradition of personality research has its roots in psychiatry and social psychology and is used extensively today in clinical psychology (Wiggins, 1979; Pincus, 2015; McCrae & Costa, 1989). This tradition primarily uses a circumplex model that is based on two orthogonal constructs arranged as vertical and horizontal axis of a circle. In the IPC, the metaconcepts represented by the two orthogonal constructs are agency and communion (Pincus, 2015). Personality, in this model, is then defined by blends of these two metaconcepts also described by traits such as dominance and nurturance, among others, that closely align with Eagly and Karau's (2002) description of gender stereotypes.

Another tradition, generally considered atheoretical, is the widely used five-factor model (FFM). This tradition has its roots in psychometrics and evolved from efforts to empirically identify factors of personality derived from personality measures (Trapnell & Wiggins, 1990). This model goes beyond the interpersonal traits incorporated by the IPC and addresses individual differences in affective, experiential, and motivational traits as well (McCrae & Costa, 1989). Barrick and Mount (1991) and Digman (1990) described personality in terms of a five-factor model consisting of extraversion, emotional stability

(or neuroticism), agreeableness, conscientiousness, and openness to experience (or intellectence). These five factors provided researchers with reliable, valid, and measurable dimensions to describe individual differences (Digman, 1990) and have been used extensively in organizational research.

Fortunately for gender researchers, the FFM traits of agreeableness and extraversion are rotational equivalents of the IPC and can be translated into measures of agency and communion (Traupman, et al., 2009). Traupman and colleagues (2009) found that extraversion correlates strongly with agency/dominance and significantly but less strongly with communion/nurturance. Agreeableness correlates strongly with communion/nurturance and less strongly with agency/dominance.

Considering the strong relationship between the two models, it is not surprising that significant gender differences in personality were found in studies using both the IPC and the FFM (Wiggins, 1979; McCrae & Costa, 1989; Costa, Terracciano, & McCrae, 2001). Regarding the IPC, men scored higher in agency and women higher in communion (Wiggins, 1979; McCrae & Costa, 1989). Considering the FFM, a large multi-cultural study using the Revised NEO Personality Inventory found in U.S. adults that women were higher in the factors of agreeableness, extraversion, and neuroticism than men (Costa, Terracciano, & McCrae, 2001). Women were higher across all facets of agreeableness, but while women were higher overall in the factor of extraversion, men were significantly higher in its facets of assertiveness and excitement seeking. These combined results potentially suggest an underlying, individual difference explanation for Eagly's (1987) description of gender stereotypes of women being more communal—

friendly, trusting, gregarious, team-building, and men being more agentic—dominant, aggressive.

This study will leverage archival personality data based on the FFM and translate them into the IPC to measure individual congruity with gender stereotypes. Personality has been used to predict work-related behavior in numerous studies and has demonstrated moderate to strong relationships with valued organizational behaviors such as turnover and performance (Barrick & Mount, 1991; Zimmerman, 2008).[7] These results will then be used to determine whether role congruity theory explains career outcomes for Army officers.

METHOD

This study used archival personality data (NEO-PI-R) from the class of 2008 at the United States Military Academy at West Point. Each year, cadets take the NEO-PI-R for educational purposes as part of a mandatory psychology class. This data set was merged with archival officer career data managed by the Army Analytics Group and analyzed in the Army's Person-event Data Environment (PDE)—a secure, virtual data storage and workspace designed to facilitate research on military personnel.

Sample

The sample included 967 West Point Cadets who took the NEO-PI-R during mandatory psychology class in 2004. 812 of the individuals were male (84%) and 153

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[7] Barrick and Mount (1991) meta-analysis found the following correlations between FFM factors and job performance across all occupations: Extraversion (.13), Emotional Stability (.08), Agreeableness (.07), Conscientiousness (.22), and Openness (.04). Zimmerman (2008) meta-analysis found the following correlations between FFM and turnover: Extraversion (-.12), Emotional Stability (-.29), Agreeableness (-.13), Conscientiousness (-.16), and Openness (.01).

were female (16%). These data were merged with career data from the Army Analytic Group. Of the original sample of 967, 140 were dropped for lack of commissioning data (entrance into the Army as a 2nd Lieutenant between May, 2008 and June, 2009). Once commissioned into the Army, West Point graduates incur a 5-year Active Service Duty Obligation. Since this study is focused on voluntary turnover, only officers who had completed their mandatory service obligation and had the opportunity to voluntarily leave the service were considered.[8] Due to commissioning into Aviation branch and incurring a service obligation extending beyond the timeframe of the study, 76 individuals were dropped from the study. 68 individuals were removed from the study for leaving the Army for other than voluntary reasons (medical, death, adverse action). Finally, 2 individuals were removed from the study due to incomplete demographic information. The final sample included 681 individuals (Male = 571, Female = 110, replicating the percentages in the initial data set). Ages ranged from 17 to 23 (Mean = 18.7). Of the 681 individuals, 660 graduated with the class of 2008 on 31 May 2008 and were commissioned as 2nd Lieutenants in the Army. 21 individuals graduated late and were commissioned at various times between June 2008 and June 2009. Each of these 681 officers had the opportunity to voluntarily leave the Army following the end of their service obligation (starting in June 2013) and the last round of career data collection (August 2015), approximately two years.

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[8] Officers in the final sample had opportunities to voluntarily leave the service between the end of their service obligation (predominantly on May 31, 2013) until the end of the available service data (August, 2015).

Measures

Personality. West Point cadets took the NEO Personality Inventory (NEO-PI-R; Costa-McCrae, 1992) as part of their mandatory class in psychology for educational purposes in 2004. Scales developed by Wiggins and Trobst (1998) and validated by Traupman et al. (2009) were used to translate items from the domains of extraversion and agreeableness into IPC octants.[9] Internal consistencies of these 6-item octant scales ranged from α = .77 (BC) to .58 (JK) in Wiggins and Trobst (1998) and from α = .75 (DE) to .54 (JK) in Traupman et al. (2009). In this study, Cronbach alphas for the NEO-PI-R IPC octants were .54 (JK; unassuming–ingenuous), .52 (HI; lazy–submissive), .61 (PA; ambitious–dominant), .68 (FG; aloof–introverted), .64 (LM; warm–agreeable), .69 (BC; arrogant–calculating), .69 (DE; cold– quarrelsome), and .74 (NO; gregarious–extraverted). These low levels of reliability are fairly consistent with those of Traupman et al. (2009). These octant scores were transformed into Z-scores and used in measuring individual levels of agency and communion.

Agency & Communion: This study extrapolated measures of agency and communion by translating the NEO Personality Inventory Revised (Costa-McCrae, 1992) into the Interpersonal Circumplex with validated scales (Traupman, et al., 2008). Agency and communion were operationalized as continuous variables.[10]

Gender: This study defines gender as a categorical variable (female; male).

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[9] NEO-PI-R (Costa & McCrae, 1992) item numbers for the IPC octant scores: PA (12, 47, 72, 132, 142 and 192), BC (24, 39, 144, 159, 189 and 234), DE (04, 14, 74, 92, 124 and 134), FG (27, 67, 87, 127, 137 and 187), HI (42, 54, 79, 102, 162 and 222), JK (09, 19, 69, 139, 174 and 204), LM (44, 104, 184, 194, 209 and 224), NO (37, 117, 122, 177, 217 and 237) (Traupman et al., 2009; Wiggins & Trobst, 1998)

[10] Agency = .25 * (Zscore PA – Zscore HI + .71 * (Zscore NO + Zscore BC – Zscore FG – Zscore JK)). Communion = .25 * (Zscore LM – Zscore DE + .71 * (Zscore NO – Zscore BC – Zscore FG + Zscore JK)).

Criterion-Turnover. Turnover information was drawn from data maintained by the Army G1, Personnel, and reflected in the PDE. Data reveals whether separation from the service was voluntary or involuntary (death, medical, discipline, other). All individuals separated from the Army from causes other than voluntary separation were excluded. A dummy variable, where individuals remaining in the Army past August 2015 were coded 0 (n = 431) and those who had voluntarily left the Army following completion of their service obligation were coded 1 (n = 250).

Results

Data Analysis

Table 1 provides means, standard deviations, and intercorrelations among the variables. Table 2 depicts the crosstabulation of gender and turnover and provides the results for hypothesis 1. Since turnover was operationalized as a dichotomous variable (0=remain in Army; 1=voluntary separation), hierarchical logistic regression was used to test remaining hypotheses. Testing main effects, in step 1 gender, agency, and communion were entered. In step 2, two-way interactions between the variables to test for moderation were added. Finally, in step 3, the three-way interaction was added to the model. Table 3 depicts the hierarchical logistic regression and depicts results from hypotheses 1 through 5.

Table 1:   Correlations Among and Descriptive Statistics For Key Study Variables

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Table **2:** Crosstabulation of Gender and Turnover

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Hypothesis Testing

Results of the hierarchical logistic regression are reported in Table 3 with logistic coefficients (B), Wald statistics, and odds ratios. The logistic coefficient cannot be interpreted as unit changes in the dependent variable, but the Wald chi-square statistic indicates whether the relationship between the independent variable and turnover was significant. The odds ratio reflects the change in the likelihood of the dependent variable with each unit change of an independent variable.

Table **3:** Logistic Regression Results for the Effects of Gender, Agency, and Communion on Turnover

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Correlations of the variables (Table 1) indicate that gender was significantly related to turnover ($r = -.104$, $p = .006$). Crosstabulation of gender and turnover (Table 2) demonstrate that female officers in the sample were significantly more likely to voluntarily separate from the Army (48%) than male officers (35%) following completion of active duty service obligation ($\chi^2 = 7.43$, $p = .006$). Correlations also indicated that female officers had significantly higher levels of communion than males ($r = -.15$, $p < .001$). Regarding agency, results trend toward significance with male officers reporting higher levels ($r = .07$, $p = .063$). Additionally, for the total sample, neither

agency (r = .02, p = .61) nor communion (r = -.04, p = .30) were related to turnover.

Finally, agency and communion were not significantly related to each other (r = .07, p = .08).

The difference between -2 log likelihood for each model is noted in Table 3 and reflects the overall change in model fit. Step 1 of the logistic regression examined the effects of gender, agency, and communion on the dichotomous variable turnover. Gender was significantly related to the likelihood of voluntary turnover (Wald χ^2 = 8.73, p = .003, odds ratio (OR) = 1.89, 95% CI [1.24, 2.87]). The lower bound of the confidence interval was above 1.0, indicating the odds ratio was significant. Agency was not significantly, related to turnover (Wald χ^2 = .68, p = .411, odds ratio (OR) = 1.09, 95% CI [.89, 1.32]). Communion was also not significantly related to turnover (Wald χ^2 = 2.32, p = .128, odds ratio (OR) = .855, 95% CI [.70, 1.05]). In summary, officer gender affects the likelihood of voluntary separation from the Army. Trends in the data suggest that individuals voluntarily leaving the service have higher levels of agency and lower levels of communion, but results are not significant.

In this sample, female officers were more likely to voluntarily leave the service than male officers (Wald χ^2 = 8.73, p = .003, odds ratio (OR) = 1.89, 95% CI [1.24, 2.87]). In support of Hypothesis 1, 48% of female officers voluntarily left the Army in the approximately two years following completion of the active duty service obligation compared to 35% of male officers.

Hypothesis 2 proposed that gender would moderate the relationship between agency and turnover such that agency decreases the likelihood of voluntary turnover for all officers, but more so for male officers. As shown in table 3, the interaction between

gender and agency was not significantly related to turnover (Wald χ^2 = -.04, p = .770, odds ratio (OR) = 0.96, 95% CI [.74, 1.26]). Hypothesis 2 is not supported.

Hypothesis 3 predicted that the relationship between communion and turnover would be moderated by gender such that communion negatively predicts turnover for all officers but that the strength of the relationship is stronger for female officers. The two-way interaction between gender and communion was not significant (Wald χ^2 = .17, p = .67, odds ratio (OR) = 0.95, 95% CI [.73, 1.23]). Thus, hypothesis 3 was not supported.

Hypotheses 4 and 5 involved three-way interactions among gender, agency, and communion. Neither hypothesis 4 or 5 was supported as the interaction was not significant (Wald χ^2 = 1.60, p = .21, odds ratio (OR) = 1.15, 95% CI [.85, 1.56]).

Due to the low reliability of scores generated by translating the NEO-PI-R items into interpersonal circumplex octants, additional post hoc analysis was conducted to determine whether "Big Five" factors predict turnover in this sample. Information about the reliability of the NEO-PI-R is contained within the manual (Costa & McCrae, 1992). Table 4 provides the means, standard deviations, and correlations among gender, big five factors, and turnover. Gender differences in this sample regarding the big five factors are generally consistent with previous research (Costa, Terracciano, & McCrae, 2001; Feingold, 1994). None of the big five factors had a significant bivariate correlation with turnover.

Table **4:** Correlations Among and Descriptive Statistics for Key Study Variables with Big Five Factors

Place Table Here

Table 5 depicts the results of logistic regressions of turnover on the big five factors for the entire sample, male officers, and female officers. Contrary to previous research on personality as an antecedent to turnover (Zimmerman, 2008), none of the big five factors predicted turnover for the entire sample or by gender. These results suggest that personality measured with the NEO-PI-R on West Point cadets does not predict voluntary turnover for Army officers following completion of the mandatory service obligation.

Table **5:** Logistic Regression Results for the Effects of Gender and the Big Five on Turnover

Place Table Here

Discussion

The Army's closed promotion system (promotion/selection only from within the organization) increases the importance of retaining the best talent. However, as shown in this sample, a large percentage of officers voluntarily leave the service before the promotion board to major, the first competitive promotion process in an Army officer's career. Moreover, results indicate that women voluntarily leave the service at greater rates than do men, disproportionately decreasing the pool of available officers for promotion selection. Retaining more individuals through the promotion process to major, occurring after approximately nine years of service, would likely increase the quality of officers serving at higher ranks. Consequently, efforts to better understand voluntary

leavers can provide valuable information for systemic changes in human resource processes to maximize the potential of each cohort.

Results in this study indicate that personality constructs of agency and communion do not significantly predict the likelihood of voluntary turnover for Army officers. However, this study has some limitations that could have affected the results and are worth exploring.

This study assumed that personality remains relatively constant during young adulthood. Individuals in this study took the NEO-PI-R at an average age of 18.7 while beginning a transformational 4-year experience at West Point, yet outcomes were measured a decade later. Research suggests that while personality remains relatively stable in adulthood (McCrae & Costa, 1994), personality can change over the life course at different rates (Roberts, 1997), and the period of emerging adulthood (17-25) is a period of significant change (McAdams & Olson, 2010; Roberts & DelVecchio, 2000). Considering that experiences during early adulthood at West Point and in the Army might change individual personality, non-significant results in this study are not unreasonable. Future studies should determine whether West Point and early Army experiences change personality. If so, personality measures taken closer to graduation or turnover periods may have greater predictive strength on voluntary turnover. However, if personality is stable during this period, results of this study suggest that agency and communion are unlikely to be predictive of voluntary turnover for Army officers.

Another assumption central to this study is that personality predicts behavior and that behavior drives outcomes suggested by social role and role congruity theories. Yet behavior at work is complex, and personality is just one of many factors determining

behavior. Indeed, research suggests that personality best predicts behavior in weak, ambiguous environments (Funder & Ozer, 1983; Mischel, 1977). The Army may be a "strong" environment that limits personality-driven behavior and resulting outcomes. While personality has been shown to predict turnover (Timmerman, 2006; Zimmerman, 2008), other factors including context, leadership, and stress, among others, may be stronger influences driving Army officer turnover decisions (Griffeth, Homs, & Gaertner, 2000). Future research should examine other ways beyond personality to operationalize congruence with work and gender roles to better assess its impact on turnover.

Research on turnover suggests multiple antecedents, both individual and organizational, of turnover (Hom, et al., 2012). This study focused only on personality as a distal antecedent and neglected other, potentially powerful drivers of Army officer turnover that are not explained by personality or role congruity theory. It is plausible that many West Point cadets plan only to serve their service obligation and enact their turnover script upon its completion (Path 1, unfolding model of employee turnover; Lee & Mitchell, 1994). This path may be more frequently pursued by female officers due to decreased chances of promotion, family demands (pregnancy, spousal relocation), or to recently overturned restrictions on occupational choices. Another potential reason for increased female attrition is turnover contagion (Hom, et al., 2012). Female officers may be more likely to voluntarily turnover following completion of their service obligation because such a large proportion of women leave at that time it creates a contagion effect. Further research using exit interviews and surveys may reveal impactful drivers of voluntary turnover that can be used to address systemic prejudice within the Army.

Finally, a limitation of this study regards the low reliability of the scales translating the NEO-PI-R into the interpersonal circumplex. Lebreton, Scherer, & James (2014) suggest that reliability estimates below .80 are suspect, yet in this study, reliability for IPC octants ranged from .54 to .72. These low reliability levels point toward large amounts of random measurement error that undoubtedly decrease the predictive validity of the model. To address the low levels of reliability in scores of interpersonal complex octants, post hoc analyses were conducted using the big five personality factors to predict turnover. Once again, results were not significant, supporting the negative findings of analyses with the interpersonal circumplex. Personality, operationalized with the five-factor model or the interpersonal circumplex, failed to predict voluntary turnover in Army officers.

Conclusion

This study had three primary objectives. First, this study expanded understanding of personality as a distal predictor of gender differences in turnover. Previous research on gender and turnover has been equivocal (Hom, et al., 2008; Lyness & Judiesch, 2001; Miller & Wheeler, 1992), and this study contributes by demonstrating that a conceptualization of personality as measures of agency and communion does not explain disparate turnover rates of male and female Army officers. Furthermore, measures of personality using the five-factor model also did not predict turnover in this population. Second, this study sought to determine whether role congruity theory could explain differences in turnover for Army officers. Its operationalization of gender and work role congruity with measures of personality failed to support the hypotheses. However, this

failure is not an indictment of the theory. Instead, future research leveraging role congruity theory should explore other ways to measure gendered behavior and subsequent agreement with roles. Finally, this study's use of clinical psychology's interpersonal complex for organizational research points to promising directions in cross-disciplinary studies. However, low levels of reliability in the translated IPC octant scores suggests further work is necessary to make the IPC a useful model for employee selection.

Current efforts to expand opportunities in the military will expose women to increasingly masculine environments where gender and work role congruence will be highly salient. However, by opening formerly restricted occupations to women, the Army resolves a long-standing barrier to full integration and provides access to branches with higher promotion rates. Additionally, with a larger number of career choices available, women have a greater chance of finding a job that "fits" their knowledge, skills, and abilities. Taken together, these changes may have a positive effect on recruitment and retention. It is in the nation's best interest to select and retain the best officers—research should continue to support this effort.

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Table 1

Correlations Among and Descriptive Statistics for Key Study Variables

Variables	M (SD)	Gender	Agency	Communion	Turnover
Gender	.68 (.74)	--			
Agency	.0 (.80)	.071[†]	--		
Communion	.0 (.79)	-.150**	.066[†]	--	
Turnover	.37 (.48)	-.104**	.019	-.040	--

Notes. $N = 681$ individuals. For gender, $1 =$ male, $-1 =$ female. For turnover, $0 =$ remains in Army, $1 =$ voluntarily separated.
[†] $p < .10$. * $p < .05$. ** $p < .01$

Table 2

Crosstabulation of Gender and Turnover

Turnover	Gender		χ^2	ϕ
	Female	Male		
No	57 (69.6)	374 (361.4)	7.43**	-.104
Yes	53 (40.4)	197 (209.6)		

Notes. ** $p < .01$. Expected numbers appear in parentheses below group frequencies.

Table 3

Logistic Regression Results for the Effects of Gender, Agency, and Communion on Turnover

	Step 1			Step 2			Step 3		
Predictor	β	Wald χ^2	OR	β	Wald χ^2	OR	β	Wald χ^2	OR
Gender	0.63	8.73**	1.89	0.62	7.75**	1.86	0.59	6.80**	1.80
Agency	0.08	.68	1.09	0.11	0.66	1.12	0.07	0.23	1.07
Communion	-.156	2.32	0.86	-0.12	0.83	0.89	-0.09	0.48	0.91
Gender x Agency				-0.04	0.09	0.96	-0.01	0.00	1.00
Gender x Communion				-0.06	0.17	0.95	-0.08	0.33	0.93
Agency x Communion				0.05	0.14	1.05	0.84	0.84	1.15
Gender x Agency x Communion							-0.19	1.60	0.83
Δ Nagelkerke R^2						.001			.003
Total Nagelkerke R^2		.02				.021			.024
Δ-2LL						0.44			1.67
χ^2		10.07				10.51			12.18

Notes. $N = 681$ individuals. For gender, 1 = male, -1 = female. For turnover, 0 = remains in Army, 1 = voluntarily separated.
[†] p < .10. * p < .05. ** p < .01

Table 4

Correlations Among and Descriptive Statistics for Key Study Variables with Big Five Factors

Variables	*M* (*SD*)	Gender	Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness
Gender	.68 (.74)	--					
Neuroticism	85.35 (20.0)	-.222**	--				
Extraversion	119.78 (18.5)	-.033	-.296**	--			
Openness	111.64 (18.6)	-.122**	-.015	.342**	--		
Agreeableness	110.49 (17.3)	-.132**	-.220**	.127**	.141**	--	
Conscientiousness	118.88 (20.2)	-.005	-.346**	.208**	.018	.179**	--
Turnover	.37 (.48)	-.104**	.030	-.009	.006	-.056	-.055

Notes. N = 681 individuals. For gender, 1 = male, -1 = female. For turnover, 0 = remains in Army, 1 = voluntarily separated.
[†] $p < .10$. * $p < .05$. ** $p < .01$

Table 5

Logistic Regression Results for the Effects of Gender and the Big Five on Turnover

Predictor	Combined (N=681)			Male (N=571)			Female (N=110)		
	β	Wald χ^2	OR	β	Wald χ^2	OR	β	Wald χ^2	OR
Gender	-.333	8.84**	.717						
Neuroticism	-.003	.511	.997	.000	.004	1.00	-.019	3.25	.981
Extraversion	.000	.004	1.00	.000	.006	1.00	.006	.258	1.01
Openness	.000	.003	1.00	.000	.000	1.00	-.001	.002	.999
Agreeableness	-.008	2.97	.992	-.007	1.62	.993	-.022	2.71	.978
Conscientiousness	-.006	1.69	.994	-.005	1.29	.995	-.006	.250	.994
Total Nagelkerke R^2		.03			.01			.057	
χ^2		12.51			4.06			4.81	

Notes. $N = 681$ individuals. For gender, 1 = male, -1 = female. For turnover, 0 = remains in Army, 1 = voluntarily separated.
[†]p < .10. * p < .05. ** p < .01