

Citizen Soldiers and Civilian Contractors:  
Military Outsourcing, Unit Cohesion, and Retention Attitudes

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Civilian Contracting in the Modern U.S. Military

Thirty years ago, in his classic article outlining his institutional versus occupational model of the U.S. military, Moskos provided a framework to understand the degree to which the military was becoming more like civilian employment (i.e., occupational) or was maintaining its somewhat unique characteristics of a profession in arms motivated by notions of selfless service, honor, pride, and duty to contribute to our collective security (i.e., institutional) (Moskos 1977). This article was a call to examine the effects of an all-volunteer force, but even more broadly it questions the effects on our military of adopting fundamentally “civilian” characteristics; for example, in relying on the free market for labor, competing for this labor through media and other forms of recruitment, and adjusting standards and regulations to increase retention. In his more recent writings, Moskos (2000:21) suggests that one of the defining characteristics of the new, post-modern era of the U.S. military is an increased reliance on civilian contractors.

Since the fall of the Berlin Wall in 1989 signaling an end to the Cold War in Europe there has been a well documented, dramatic increase in the number of civilian contracting firms, and civilian contractors, working for the Department of Defense (DoD) (Avant 2005, Light 1999, Singer 2003, Uttley 2005). Official numbers are seemingly impossible to track given the poor regulation and oversight of contracting within the Department of Defense. Estimates of the proportion of contractors used by the U.S. ranges from one in ten during the first Gulf War in 1991, to as high as one to one in Bosnia (Robinson 2002). In the current war in Iraq there was an estimated four to one ratio of civilian contractors to military personnel in 2003(Singer 2003), but in the summer of 2007 a conservative estimate of the number of U.S. employed contractors indicated they had surpassed the number of U.S. service personnel in Iraq (Miller 2007). In June of 2007 the number of deaths among civilian contractors working for the U.S. in Iraq totaled surpassed the 1,000 (nearly a quarter of all U.S. deaths in Iraq), further evidence of the wide spread and integral use of contractors by the U.S. Scores more contractors have lost their lives in Afghanistan since 2001.<sup>1</sup>

There is no sign that the trend toward increased use of civilian contractors has plateaued. In a recent article, Bondy (2004: 49) stated that, “For strategic, bureaucratic, and garrison applications, technology and administration are best left entirely to civilians that include ex-military.” This proposition squares nicely with President Bush’s management plan which stated that competitive sourcing (military outsourcing within DoD) would increase organizational flexibility, raise employee satisfaction, and both attract and retain talented employees (Bush 2002: 14). Given this historical context and an escalating reliance on contractors by the DoD, it is surprising what little research has been done on the effects of such a manning policy.

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<sup>1</sup> “In all, at least 4,837 contractors in Iraq and 879 contractors in Afghanistan have been injured in the two wars.” Located 09-02-07 at Stars and Stripes online at <http://stripes.com/article.asp?section=104&article=55523&archive=true>

This study focuses on the effects of the management decision to use civilians as force multipliers in units deployed overseas in an attempt to close the gap between anticipated benefits versus realized outcomes of integrating civilian and military personnel in deployed units. Specifically, this study will examine whether or not contractors, as a socially distinct “out-group”, affect soldiers’ perceive unit cohesion and attitudes toward remaining in service.

### The Civilian-Military Distinction

Many civilian contractors have prior military experience –especially those who work alongside of soldiers rather than in support roles such as service and facility maintenance functions. Even so, the military as an institution takes great pains to instill in its members the notion that because they wear the uniform of the U.S. military, they are separate and distinct from the ordinary civilian population (Boëne 1990; Dyer 2005; Kier 1999; Ricks 1995). This is done in part to establish a sense of identity and solidarity within the military, partially to legitimate the service members’ role as one who may legitimately use deadly force when engaging the enemy, and also in part to increase the professional prestige of the institution and its members. The military has a separate and distinct legal code (Uniform Code of Military Justice) from civilian society which, in many instances, has superseded civil law with respect to service members even when they have been off duty (Hunter et al. 2006). The military has established a complex sub-culture in the U.S., complete with its own language, rituals, folkways, and value system.<sup>2</sup> Veterans may certainly claim membership in the fraternity of arms, but in terms of understanding who one is and what his or her roles and responsibilities are, the military has established a clear line differentiating civilian from military.

Civilian contractors are identified by the U.S. government (to include DoD) as part of the military’s “total force,” often referring to them as force multipliers. This brings up several interesting issues. First, they are outsiders (i.e., “civilians”), yet considered (by at least the higher-ups through institutional rhetoric) as inside the institution, contributing directly to the mission of the armed forces. Second, contractors are seen by and large as a method of freeing up service members to focus on its core military (i.e., combat) mission (Bush 2002; Kennedy et al. 2002; Light 1999). For this to happen, contractors must have the expertise needed to do the jobs they are given, as well as the trust of the military personnel. If these conditions are not met then the efficiency and effectiveness of the entire contracting system is at stake. Trust is eroded among service members if they do not view contractors as having the expertise needed for the job; the effect of which is likely to lead service members to circumvent the system and take on additional time and duties to make sure the mission is being accomplished. These practices directly contradict the intent and expectations of military outsourcing.

Bondy (2004: 36) makes a similar argument that trust is what connects social capital (here – expertise in one’s job) to cohesion in military units (see also Siebold 2007). Here are the beginnings of an argument whereby civilian contractors may be viewed as yet another “minority” group within the military’s total force that may negatively affect unit cohesion and soldier retention.

There is a large body of literature that examines the issue of in- versus out-groups in a military context (e.g., Belkin and Embser-Herbert 2002; Iskra 2007; Kier 1999; Rosen and

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<sup>2</sup> An example of the military’s value system are the seven Army Values: Loyalty, Duty, Respect, Selfless Service, Honor, Integrity, and Personal Courage. Located 13 November 2008 at [http://www.goarmy.com/life/living\\_the\\_army\\_values.jsp](http://www.goarmy.com/life/living_the_army_values.jsp).

Martin 1997; and Segal and Kestnbaum 2002). The groups typically identified in this literature are service members, or potential service members, with minority status characteristics: racial minorities, women, and homosexuals. Historically, these groups were excluded or marginalized through formal and informal means. Currently, there are no formal restrictions based on race in the military, though the disproportionately white special forces, and disproportionately black combat support specialties (Segal and Segal 2004) suggests *de facto* racial segregation may persist to some degree (Butler 1999). The 21<sup>st</sup> Century U.S. military continues to prohibit women from serving in certain military occupational specialties in the Army and aboard submarines in the Navy (Iskra 2007), and the persistence of the Don't Ask, Don't Tell policy restricting homosexuals from serving openly in the military remains contested forms of institutionalized discrimination. Importantly, arguments made against inclusion of racial minorities, women, and homosexuals often cite (anticipated) negative impacts on cohesion and retention as reasons to exclude or segregate members of these groups.

### Cohesion

Numerous civilian and military leaders have argued that integrating marginalized groups (e.g., blacks, women, and homosexuals) into military units would negatively impact the cohesion that is so essential to successful war fighting, in part through disrupting (non-homosexual) male bonding (Iskra 2007; Segal and Kestnbaum 2002; Rosen and Martin 1997). A review of the cohesion literature indicates it affects a range of outcomes including job satisfaction, retention, psychological well-being, and unit readiness (for example, see Oliver et al. 1999).

Three classic studies of World War II have been commonly used to support exclusion of marginalized groups in the military. The research of Shils and Janowitz (1948) on cohesion in the *Wehrmacht*, and that of Marshall (1947) on American soldiers during World War II, point to cohesion as an essential component of military units allowing them to maintain the will to fight in the face of protracted conflict. These studies have been highly criticized on methodological grounds in recent decades (e.g., Segal and Kestnbaum 2002). The survey research on American soldiers during WWII, conducted by Stouffer et al. (1947), is considered to be a valid representation of service members' perception of the importance of cohesion. This study also found cohesion to be a key aspect of military effectiveness. But as Segal and Kestnbaum (2002) rightly point out, rather than being *the* most important aspect of combat motivation, cohesion is rather *one* of the factors soldiers reported as important in contributing to sustained motivation in combat in the Stouffer et al. study. The most commonly cited motivation for continuing the fight among American WWII soldiers was "ending the task" (Stouffer et al. 1947).

Several studies have examined the relationship between cohesion, satisfaction, commitment and retention. There is a strong and consistent pattern in the literature indicating a significant positive relationship between cohesion and both job satisfaction and retention (Griffith 1988; Oliver et al. 1999; Taylor and Siebold 2006). Several studies have also found direct relationships between cohesion and organizational commitment (Leiter et al. 1994; Padskoff et al. 1996; Wech et al. 1998). Results of a meta-analysis of organizational commitment conducted by Mathieu and Zjac (1990) provides support for cohesion as an antecedent variable of organizational commitment.

### Social Comparisons

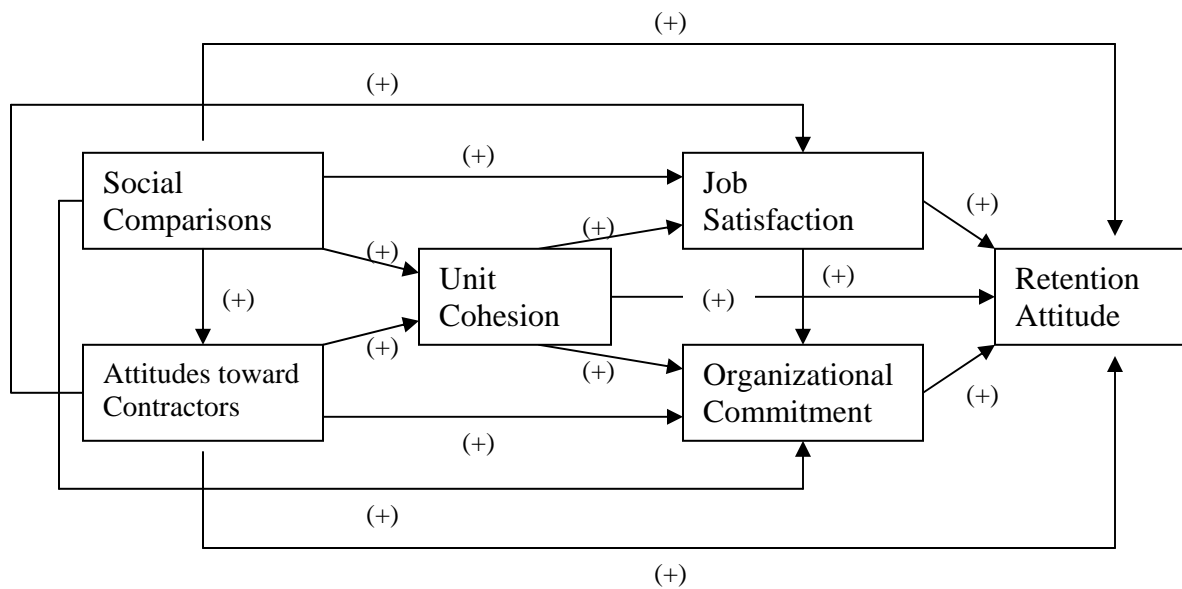
Festinger's (1954) theory on social comparisons argues that humans have an innate drive to know how they stand in comparison to others. Moreover, one only knows whether they are good or bad, successful or unsuccessful, or privileged or deprived by comparing one's self to others. As in other settings, one's work is a context for engaging in social comparisons. These comparisons have implications for individuals' feelings about themselves, their job or profession, and the particular employer for whom they work (see Crosby 1982).

With the increase in civilian contracting, especially contractors who work along side soldiers and perform similar (or at least comparable) duties, highly salient aspects of one's job are likely to become points of social comparison between service members and the civilian contractors with whom they work. For example, social comparisons could be expected, in particular, with regard to pay, benefits, autonomy, level or risk for injury and death, and impact of one's employment on one's family.

### The Retention Model

The model used in this study to examine the effect of civilian contractors on soldiers' perceived unit cohesion and attitudes toward retention is presented in Figure 1. This model is adapted from prior models examining retention in military and civilian organizations (Griffith 1988, Kim et al. 1996, Mueller and Price 1990, and Oliver et al. 1999). The model includes two measures of soldiers' views on civilian contractors (social comparisons with contractors and general attitudes toward contractors), a measure of cohesion, and measures of job satisfaction and organizational commitment, which have been shown to be significantly related to retention attitudes in prior models.

Figure 1: Model of Civilian Effects on Soldiers' Retention Attitudes



The hypotheses represented in this model follow from the direction and valence of the pathways between variables. Both outsourcing variables are positively related to the other variables in the model. More positive social comparisons with contractors are expected to elevate general attitudes toward contractors working with one's unit. The more advantaged soldiers feel compared to contractors, and the more positively they view contractors, the higher their perceived unit cohesion, satisfaction and commitment, and the more likely they are to plan to remain in the National Guard. Increases in unit cohesion are expected to elevate satisfaction, commitment, and retention. Greater levels of satisfaction will produce higher commitment and increase positive attitudes toward retention. Finally, increased commitment levels will lead to greater propensity to continue service. This model and the preceding literature review motivate the following research question:

What is the effect of soldiers' attitudes toward, and social comparisons with, civilian contractors on their perception of unit cohesion and intention to remain in service?

## Methods

The data for this study were obtained from two National Guard units returning from overseas deployment at a U.S. military detention facility. Data were collected at two separate dates in the spring of 2007 during their demobilization processing (i.e., return home processing) at a North Eastern U.S. Army post. Paper and pencil questionnaires which took 35-40 minutes to complete were distributed to approximately 163 soldiers. The current analysis includes 132 surveys. The remaining 31 surveys distributed were unusable due to either respondents choosing not to participate (n=8) or item non-response on questions required for inclusion in this analysis (n=23). The usable response rate for this survey across the two units is calculated at 83 percent. Analyses were performed using SPSS 14.0 and MPLUS.

The sample is disproportionately male (96%). Slightly over half are currently married and approximately a third never married, and almost two-thirds have at least one child. The average respondent is 35 years old and more than two thirds are in the pay grades E4-E7. The sample includes 15 officers (O1-O2) and one warrant officer (CW5). The constellation of average age, number of children, marital status and pay grade all reflect the fact that this sample is more senior than the Army in general (Segal and Segal 2004). Sixty four percent of respondents report being white, 27% indicate being African American, and 6% claimed Hispanic ethnicity which approximates each group's proportion in the Army as a whole (Segal and Segal 2004:21).

Two thirds of the soldiers indicated that they have never moved their household due to their military duties – a result of their National Guard status as opposed to active duty personnel who move every couple of years. A strong majority (93%) indicated that they had been deployed for longer than 12 months on their most recent deployment. Finally, educational attainment was split nearly evenly between those who graduated from high school (47%) and those with at least an associates degree (53%).

## Measures

The dependent variable for this study is soldiers' attitude toward remaining in military service. This was measured with a single question that asked them to circle the response that best aligns with how they would complete the sentence "Right now, I am ..." given the following response categories: a. planning to remain in the Army, b. leaning toward remaining in the Army, c. undecided, d. leaning toward leaving the Army, and e. planning to leave the Army. This measure is adapted from Reed and Segal (2000).

The key predictor variables in the model include social comparisons with civilian contractors, attitudes toward civilian contractors, perceived unit cohesion, job satisfaction, and organizational commitment. Each variable was operationalized using a multiple item scale. The social comparisons scale includes 17 items (Appendix I,  $\alpha = .75$ ) which were modeled on Crosby's (1982) *Working Women and Relative Deprivation* and Segal's (1986) analysis of the military and the family as greedy institutions. The literature on job satisfaction was used to inform additional job related characteristics which are identified as most salient by workers and likely to be used by respondents as points of comparisons with civilian contractors. Respondents rated their attitude on a five point Likert-type scale ranging from "Much Greater for Myself" to "Much Greater for Civilian Contractors" with a neutral midpoint. Several items were reverse coded for analysis so that higher values equate to more positive social comparisons for soldiers.<sup>3</sup>

Soldiers' attitudes toward contractors was measured using 15 items that refer to both salient characteristics of civilian co-workers brought into the "total force" (e.g., level of commitment, expertise, work ethic), and many that refer specifically to the espoused benefits offered by proponents of federal outsourcing (e.g., organizational flexibility, cost savings, improving morale, freeing soldiers up to perform core military duties) (Bush 2002, Light 1999). Scale reliability for this measure is  $\alpha = .87$ .

A six-item scale adapted from Siebold and Kelly's (1988) Platoon Cohesion Index was used to assess soldiers' perceived unit cohesion. Respondents were asked to indicate their level of agreement on a 7-point Likert-type scale ranging from strongly disagree to strongly agree; including a neutral midpoint, "borderline." The six items ask whether soldiers in their company care about and trust one another, whether they work well together and pull together to work as a team, whether their fellow soldiers are proud to be members of their company, and the extent to which soldiers feel they are an important part of their company<sup>4</sup> ( $\alpha = .93$ ).

Soldiers' satisfaction with their job was measured using a modified version of the short form of the Minnesota Satisfaction Questionnaire (MSQ) (Weiss, et al. 1967). Respondents indicated their level of satisfaction – very dissatisfied to very satisfied, with neutral midpoint – on a five point Likert-style scale. The original MSQ scale is twenty questions long. One item in the original scale, "My pay and the amount of work I do," was split into two separate items since it is double barreled in its original construction. Three additional items were added for a total of 24 satisfaction items used in this analysis ( $\alpha = .93$ ).

The model's final predictor variable, organizational commitment, was operationalized using the Organizational Commitment Questionnaire (Mowday, et al. 1979). This 15-item scale is the most commonly used metric for assessing organizational commitment in the literature ( $\alpha = .87$ ). A seven point Likert-type scale ranging from "disagree strongly" to "agree strongly" was provided for respondents to use in locating their level of commitment on each item. A neutral midpoint was given in this scale. For all scales in the model, higher values were assigned to more positive attitudes for service members.

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<sup>3</sup> All scales used in the model are provided in Appendix I.

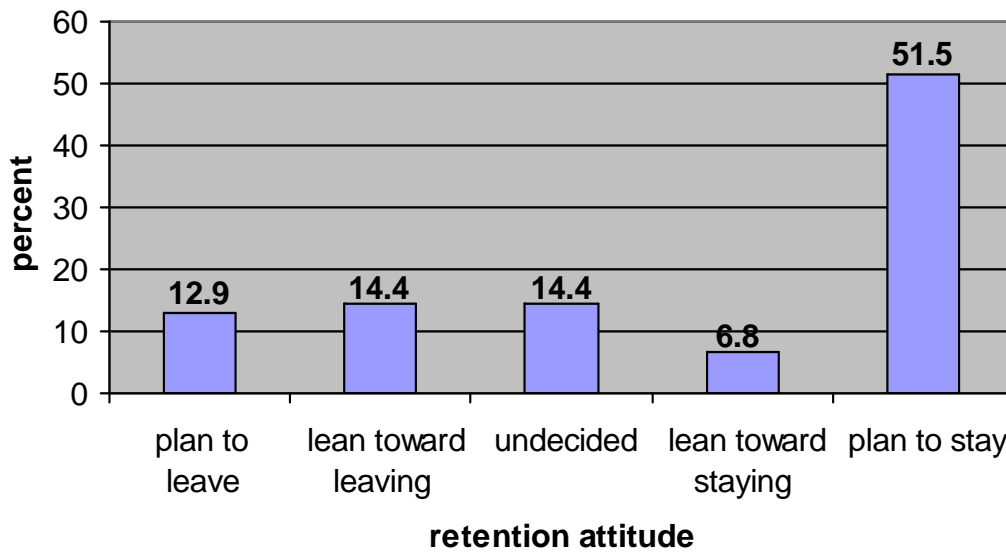
<sup>4</sup> Three questions each target horizontal and organizational cohesion, as identified by Siebold and Kelly (1988: 35).

## Results

Analysis began with examination of the distribution of retention attitudes among soldiers.

Soldiers' show a strong positive attitude toward remaining in military service with 58.3% indicating that they either plan to stay or are leaning toward staying in the National Guard (Figure 2). This highly skewed distribution is different than expected and is likely an artifact of the two units included in this study. These soldiers are older than the average service member and also have, on average, 12.5 years of service. Given that retirement benefits are an all or nothing proposition that begin with 20 qualifying years of service<sup>5</sup>, plans to continue military service may be based on pragmatic retirement calculations alone.

**Figure 2. Soldiers' Retention Attitudes (n=132)**



Results of the path analysis are presented in Figure 3. Soldiers' social comparisons with civilian contractors (.29,  $p < .001$ ) has a significant and positive direct effect on their perceptions of unit cohesion, which is consistent with the hypothesized relationships between these two variables. The more positive soldiers feel they compare relative to contractors, the higher their perceived unit cohesion. There is also support for the hypothesized positive relationship between social comparisons and attitudes toward contractors (.29,  $p < .001$ ), with more positive social comparisons leading to more favorable attitudes toward civilian contractors who work with the unit.

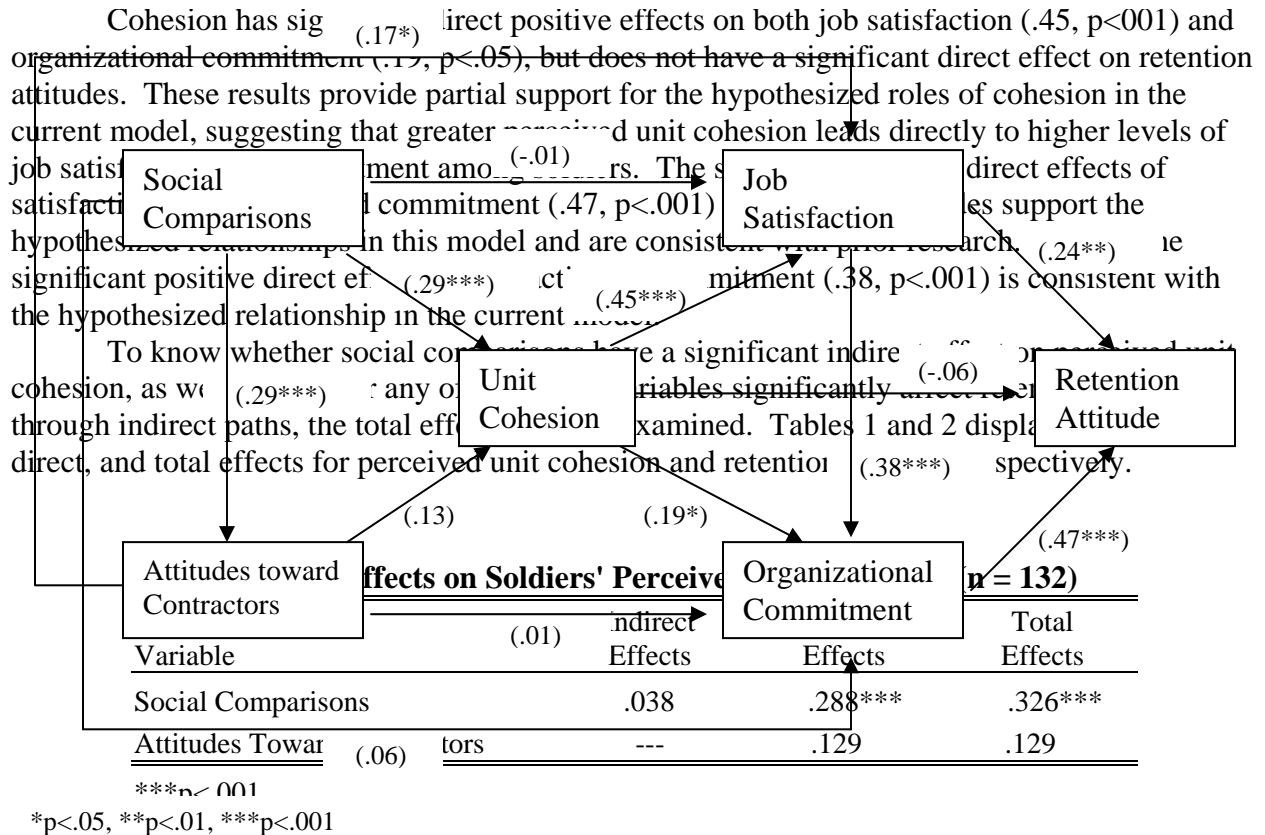
Social comparisons are not observed to have a significant direct effect on satisfaction or commitment, whereas attitudes toward contractors do have a significant positive direct effect on satisfaction (.17,  $p < .05$ ), but not on cohesion or commitment. The more positively soldiers view

<sup>5</sup> For details on how "qualifying years" are defined and counted in the National Guard toward retirement see the summary offered at <http://usmilitary.about.com/od/reserveretirementpay/a/reserveretire.htm>.



contractors the more satisfied they are with their job. These results only partially support the hypothesized relationships between soldiers' comparisons with contractors and their satisfaction and commitment to the Army, and their perceived unit cohesion. The direct pathways from both contractor related variables to retention attitude were omitted after initial examination indicated they did not have significant direct effects on intentions to remain in service. Their omission provides the degrees of freedom that allow for test of model fit. Chi square, CFI, TLI and RMSEA measures all indicate a strong model fit.

Figure 3: Civilian Contractor Effects on Soldiers' Cohesion and Retention Attitudes



Soldiers' social comparisons with civilian contractors had a significant total effect on cohesion (.326,  $p < .001$ ), consisting of a significant direct effect (.288,  $p < .001$ ) and a non-significant indirect effect (.038, ns). Not surprisingly, soldiers' attitudes toward contractors did not have a significant total effect on perceived unit cohesion since the direct effect was not significant and there were no indirect pathways specified in the model. These results offer partial support for the hypothesis that the integration of civilian contractors in military units influences soldiers' perceptions of unit cohesion.

Table 2. Total Effects on Soldiers' Retention Intentions (n = 132)

Independent Variable	Indirect Effects	Direct Effects	Total Effects
Social Comparisons	.119*	---	.119*

Attitudes Toward Contractors	.107*	---	.107*
Perceived Unit Cohesion	.274***	-.062	.212*
Job Satisfaction	.176	.240**	.416***
Organizational Commitment	---	.465***	.465***

\*p< .05, \*\*p<.01, \*\*\*p<.001

Table 2 displays the indirect, direct, and total effects of the model’s predictor variables on soldiers’ attitudes toward retention. The total effects on retention attitudes of all model variables are significant. By far, organizational commitment (.465, p<.001) and job satisfaction (.416, p<.001) have the largest effects on retention attitudes. The significant total effect of job satisfaction is achieved by a significant direct effect (.240, p<.01), and a relatively large (.176), though statistically non-significant indirect effect. The total effect of organizational commitment is solely from its direct contribution (.465, p<.001), with no indirect paths specified in the model. Conversely, it is the significant indirect effects of cohesion on retention attitudes (.274, p<.001) that produce its significant total effects (.212, p<.05). The significant total effects of both civilian contractor related scales’ are attributed wholly to their indirect effects (direct pathways not included in this model).

Alternative models in which the direct pathways from both civilian contractor variables to retention intentions were included produced positive coefficients, but failed to reach significance. These paths were omitted to provide the degrees of freedom necessary to test model fit. Were these two paths to be included, they would serve to increase the already significant total effects for these two variables. Thus, the current total effects of the civilian contractor variables are considered to be conservative estimates of their true overall impact on soldiers’ retention attitudes.

## Discussion

Civilian contractors are structurally ambiguous for the U.S. military – they are defined as an “out” group within the military’s total force with respect to chain of command, are accountable to a different legal system, and have a different culture and expectations. On the other hand, the military can no longer function without the use of contractors as “force multipliers” (Moskos 2000). As such, civilian contractors have a somewhat awkward relationship to the military institution and to the service members within it.

The findings in this study indicate that both social comparisons with contractors and general attitudes toward contractors are negatively impacting retention attitudes. Data also show that the relative deprivation motivated by comparisons with contractors is having detrimental effects on perceptions of unit cohesion. Taken together, this is powerful evidence that military and civilian leaders need to seek a better understanding of the unintended consequences of the current trend in the integration of civilian contractors with military units.

These findings extend our knowledge of the effects of contractors by determining that the significant contractor effects previously observed on satisfaction and commitment appear to be mediated by perceived unit cohesion. The finding that social comparisons with contractors affects soldiers’ retention attitudes replicates prior results on the relationship between these two variables in active duty service personnel (Kelty and Segal 2007; Kelty 2008). The significant

effect of general attitudes toward contractors on soldiers' intentions to remain in service provides additional evidence that contractors represent an important and complex variable in the 21<sup>st</sup> Century U.S. "total force" with respect to retention of service personnel.

These results are also consistent with qualitative data from prior studies examining soldiers and sailors working in civilian-integrated units (Kelty and Segal 2007; Kelty 2008). Service members recognize the positive benefits brought by contractors with respect to their expertise and efficiency, as well as the more easy-going, less formal and less hierarchical aspect they bring to the interaction. Yet, despite these positive affinities (or in this case, neutral attitudes) toward civilian contractors, service members' social comparisons with them reveal negative impacts due to significant perceived differentials across numerous highly salient job characteristics.

In the context of these structural and cultural differences, the multiple negative impacts resulting from contractor integration in one "total force" should not be surprising. Kier (1999: 46) states, "Any organization attempting to inspire the best from its members would be foolish to simultaneously degrade some of its members." When soldiers perceive civilians benefiting more for comparable work it flies in the face of fairness and the psychological contract they have with the military. Group cohesion is predicated on both trust and perceived equity. Retention attitudes are affected by perceptions of cohesion. Thus, "any form of discrimination toward organizational members is pernicious in an organization that performs group tasks and depends on the integration of all individuals and units" (Kier 1999: 46-47). This argument assumes that soldiers' reports of contractors having a better deal than soldiers equates to perceived inequity. This is not necessarily the case, for there can be equity based differences. However, informal discussion with these soldiers in combination with responses to open ended survey questions suggests that this alternative does not enjoy strong support.

This study extends the understanding of the micro-level impact of integrating civilian contractors and service members that has received very little attention in the literature to date. A growing body of research focuses on macro-level effects of this manpower strategy (Light 1999; Singer 2003; Avant 2005; GAO 2003; Carmola 2008; Hedahl 2005). Only a few studies have examined social-psychological aspects of civilian contractors working with military forces (key exceptions include Heineken 2008; Kelty and Segal 2007; Kelty 2008). Extant studies have not addressed the effect of integrating contractors in military units on unit cohesion. Given the centrality that cohesion has had historically (and presently) on U.S. military manpower policy and organizational structure this gap in our understanding is striking.

In prior, and current, cases of military exclusions the argument centers on restricting people from these "other" groups from serving in uniform along side of other (white, male, heterosexual) soldiers. What is interesting about the case of civilian contractors is that they are not uniformed service members, yet they are serving along side of those in uniform. And while they are not necessarily a marginalized group in the same way that, for example, blacks, women, and homosexuals have been marginalized, one can argue that from a sub-cultural perspective civilians are marginalized as an "other" within the military due to distinct cultural differences and the ways in which military work is contrasted to civilian employment (e.g., soldiers work longer hours, have more strenuous work, assume greater risk, and have less autonomy than civilians).

Bringing in civilian contractors who work under significantly different conditions than do military personnel is a much different proposition than integrating people of different races, genders, and sexual orientations – for in these examples they are actually brought into the

military; under oath, bound to the uniform code of military justice, in the formal chain of command, and so forth. As such these examples of inclusion have very different contexts in relation to common experiences and constraints among co-workers that promote feelings of greater equity within an organization. Not only are contractors clearly different than soldiers, often differences are intentionally highlighted by contractors, which only serves to strengthen perceptions of inequity and relative deprivation among soldiers. Whereas the race and gender integration (and perhaps sexuality integration in the near future) place everyone in the same boat, as it were, the integration of contractors with soldiers places each group in a separate boat with soldiers in a smaller, less comfortable, more restrictive, and less appealing vessel than the contractors.

The military needs to consider the unanticipated consequences of military outsourcing as it designs new manpower policies and plans future operations. Cost savings and providing an opportunity for the civilian labor market to compete for “non-essential” jobs performed by the military should not be pursued blindly without considering the effect such a manpower strategy has on important social psychological outcome variables such as cohesion and retention.

### Future Research

Future research should examine effects of integrating civilian contractors on unit readiness and effectiveness, including the relationship of each to unit cohesion in a civilian contractor integrated force. The research literature also lacks analysis of civilian contractor effects on any outcome variables, including cohesion and retention, by military specialty (e.g., military intelligence, medical services, transportation, and infantry), gender, or rank (e.g., junior enlisted, senior enlisted, and officers). It may well be that one’s structural position in the military influenced by military specialty, gender, or rank may impact experiences with and attitudes toward civilian contractors. Finally, it would be useful to have a larger, more representative sample of soldiers (and sailors, marines and airmen) to be able to speak to the generalizability of findings in this study.

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## Appendix I: Scales for Retention Model Predictor Variables

### Social Comparisons

If you were to compare **yourself** with civilian contractors (assuming comparable duties), how would you rate the following factors using the 5-point scale below?

- | (1)                        | (2)                   | (3)   | (4)                                    | (5)                        |
|----------------------------|-----------------------|---|--|----------------------------|
| Much Greater<br>for Myself | Greater for<br>Myself | About<br>Greater<br>Equal for<br>Civilian<br>Both | Greater for<br>Civilian<br>Contractors | Much<br>for<br>Contractors |
- a. \_\_\_\_ pay
  - b. \_\_\_\_ benefits
  - c. \_\_\_\_ level of risk of personal injury
  - d. \_\_\_\_ freedom to make decision about how a job is done
  - e. \_\_\_\_ task variety within one's job
  - f. \_\_\_\_ promotion opportunities based on merit
  - g. \_\_\_\_ quality of leadership in the organization
  - h. \_\_\_\_ organizational control over employee behavior (i.e., what employees can or cannot do)
  - i. \_\_\_\_ negative impacts on family members' happiness
  - j. \_\_\_\_ satisfying relations with co-workers
  - k. \_\_\_\_ freedom to negotiate employment contract
  - l. \_\_\_\_ degree to which the organization takes care of its employees
  - m. \_\_\_\_ requires one to spend time away from their family
  - n. \_\_\_\_ gaining a feeling of accomplishment from one's work
  - o. \_\_\_\_ feeling that one's work makes a contribution to society
  - p. \_\_\_\_ feeling of leadership support in facilitating completion of job tasks
  - q. \_\_\_\_ material support (e.g., supplies and equipment) to get the job done right
  - r. \_\_\_\_ time spent working per day
  - s. \_\_\_\_ clarity of job expectations (i.e., "I know what's expected of me.")

Attitudes toward Contractors

***The next group of questions focuses on experiences with, and attitudes toward, civilian contractors in the Army. Again, for this survey “civilian contractors” refers to those civilians who work directly with military units as well as private security forces under DoD hire to support the U.S. military...***

13. For each of the following statements, use the 6-point scale below to indicate your opinion. Enter the number that corresponds to your opinion on each statement in the blank provided.

(1)	(2)	(3)	(4)	(5)	(6)
Disagree Strongly	Disagree	Disagree Somewhat	Agree Somewhat	Agree	Agree Strongly

- a. \_\_\_\_ As a soldier/officer in the U.S. Army I am uncomfortable working with civilian contractors.
- b. \_\_\_\_ Civilian contractors allow the Army to operate more effectively.
- c. \_\_\_\_ Civilian contractors are important because they free-up Army personnel to train for and perform the real war-fighting duties.
- d. \_\_\_\_ Civilian contractors increase the efficiency of the Army.
- e. \_\_\_\_ I would prefer *not* to work with civilian contractors.
- f. \_\_\_\_ Civilian contractors decrease morale among Army personnel.
- g. \_\_\_\_ By having Army personnel work along-side of civilian contractors performing comparable duties, it encourages Army personnel to leave the service.
- h. \_\_\_\_ Civilian contractors are less expensive to employ than Army personnel.
- i. \_\_\_\_ The Army should not use its personnel to perform duties that the civilian work force can do just as well as military personnel.
- j. \_\_\_\_ The use of civilian contractors increases the flexibility of the Army in striving to achieve its core missions.
- k. \_\_\_\_ Civilian contractors work just as long as Army personnel.
- l. \_\_\_\_ Civilian contractors work just as hard as Army personnel.
- m. \_\_\_\_ Civilian contractors are less committed to the work they perform than Army personnel.
- n. \_\_\_\_ Civilian contractors perform at least to the same level of expertise that I do.
- o. \_\_\_\_ Civilian contractors are less motivated than I am to do a good job.
- p. \_\_\_\_ I am impressed by the abilities of civilian contractors.

## Perceived Unit Cohesion

The next set of questions focuses on the cohesiveness of your company. For each of the following statements, use the 7-point scale below to indicate your opinion. Enter the number that corresponds to your opinion on each statement in the blank provided.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Disagree Strongly	Disagree	Disagree Somewhat	Borderline	Agree Somewhat	Agree	Agree Strongly

- a. \_\_\_\_ Soldiers trust each other in this company.
- b. \_\_\_\_ Soldiers in this company care about each other.
- c. \_\_\_\_ Soldiers in this company work well together to get the job done.
- d. \_\_\_\_ Soldiers in this company pull together to perform as a team.
- e. \_\_\_\_ Soldiers in this company feel they play an important part in accomplishing the company's mission.
- f. \_\_\_\_ Soldiers are proud to be members of this company.

## Job Satisfaction

Using the 5-point scale below, please indicate in the blanks provided the strength of your opinion for each statement.

(1)	(2)	(3)	(4)	(5)
Very Dissatisfied	Dissatisfied	Neither Satisfied nor Dissatisfied	Satisfied	Very Satisfied

*In my present assignment, this is how I feel about:*

- a. \_\_\_\_\_ being able to keep busy all the time
- b. \_\_\_\_\_ the chance to work alone on the job
- c. \_\_\_\_\_ the chance to do different things from time to time
- d. \_\_\_\_\_ the chance to be "somebody" in the community
- e. \_\_\_\_\_ the way my supervisor handles his/her men and women
- f. \_\_\_\_\_ the competence of my supervisor in making decisions
- g. \_\_\_\_\_ being able to do things that don't go against my conscience
- h. \_\_\_\_\_ the way my job provides for steady employment
- i. \_\_\_\_\_ the chance to do things for other people
- j. \_\_\_\_\_ the chance to tell people what to do
- k. \_\_\_\_\_ the chance to do something that makes use of my abilities
- l. \_\_\_\_\_ the way the Army's policies are put into practice
- m. \_\_\_\_\_ my pay
- n. \_\_\_\_\_ the amount of work I do
- o. \_\_\_\_\_ the kind of work I do
- p. \_\_\_\_\_ the chances for advancement on this job
- q. \_\_\_\_\_ the freedom to use my own judgment
- r. \_\_\_\_\_ the chance to try my own methods of doing the job
- s. \_\_\_\_\_ the working conditions
- t. \_\_\_\_\_ the way my co-workers get along with each other
- u. \_\_\_\_\_ the praise I get for doing a good job
- v. \_\_\_\_\_ the feeling of accomplishment I get from doing my job
- w. \_\_\_\_\_ the support I get from my coworkers
- x. \_\_\_\_\_ the support I get from my supervisors

## Organizational Commitment

Using the 7-point scale below, please indicate in the blanks provided the strength of your opinion for each statement.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
Disagree Strongly	Disagree	Disagree Somewhat	Neither Agree nor Disagree	Agree Somewhat	Agree	Agree Strongly

- a. \_\_\_ I am willing to put in a great deal of effort beyond that normally expected in order to help the Army be successful.
- b. \_\_\_ I talk up the Army to my civilian friends as a great organization to work for.
- c. \_\_\_ I feel very little loyalty to the Army.
- d. \_\_\_ I would accept almost any type of job assignment in order to keep working for the Army.
- e. \_\_\_ I find that my values and those of the Army are very similar.
- f. \_\_\_ I am proud to tell others that I am part of the Army.
- g. \_\_\_ I could just as well be working for a different organization as long as the type of work was similar.
- h. \_\_\_ The Army really inspires the very best in me in the way of job performance.
- i. \_\_\_ It would take very little change in my present circumstances to cause me to leave the Army.
- j. \_\_\_ I am extremely glad that I chose to work for the Army over other organizations I was considering at the time I joined.
- k. \_\_\_ There's not too much to be gained by sticking with the Army for a career.
- l. \_\_\_ Often, I find it difficult to agree with the Army's policies on important matters relating to its personnel.
- m. \_\_\_ I really care about the fate of the Army.
- n. \_\_\_ For me the Army is the best of all possible organizations to work for.
- o. \_\_\_ Deciding to work for the Army was a definite mistake on my part.

