

The Civilianization of the US Military: Army and Navy Case Studies of the Effects of Civilian Integration on Military Personnel¹

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1 Introduction

Since the late 1980s the United States federal government has been pushing for dramatic increases in the civilianization of jobs formerly performed by military personnel. This trend is particularly evident in the increased pace and scope of military outsourcing. Yet the impact of integrating military personnel and civilians at the unit level is not well understood. The future appears to hold more of the same, judging by the rhetoric of the current administration. This relatively new but dramatic shift in military organizational policy merits close examination. This chapter examines effects of civilianization of the military on service members assigned to units that incorporate civilians. This study differs from most examinations of civilianization because its focus is on social-psychological outcomes rather than macro-level effects of using civilians to support the military effort (e.g., fiscal outcomes that are expected from this management decision). We examine the impact that structural change brought on by civilianizing the military has on the attitudes and behavioral intentions of military personnel. Two military units, one Navy and one Army, are used as case studies to examine this question. This study uses level of contact and social comparisons between civilian and military personnel as two civilianization-related variables predicted to impact retention intentions directly, and indirectly through job satisfaction and organizational commitment. This work demonstrates that organizational structure matters with respect to perceptions of relative advantage or deprivation on numerous highly salient job characteristics. Further, our data show that service members' social comparisons with their civilian co-workers do have a significant effect on their retention attitudes.

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2 Civilianization of the Military

The civilianization of the military is at the heart of the Institutional-Occupational Model of military organization proposed by Moskos (1977). The institutional military is one in which Soldiers serve in response to a call to duty and honor. Traditional values and norms are paramount in manning the armed forces in an institutional military, shaping the service members into a distinct and cohesive group (Moskos 1977). By fostering internalization of these values, the military is able to elicit performance and dedication above what might otherwise be expected (Moskos/Wood 1988). In contrast to the institutional military, individuals in an occupational military are driven by self-interest and the free market (Moskos 1977). They are externally motivated, especially by monetary compensation. These occupational qualities run counter to the institutional model's emphasis on the collective group's benefit as expressed via values, norms, and internal motivation. The Institutional-Occupational Model asserts that, "the overarching trend within the contemporary military is the erosion of the institutional format and the ascendancy of the occupational model" (Moskos 1977: 44). This trend is linked to the influence of civilian norms and values on the military. Until 1967 and the publication of the Gates Commission Report, the US armed forces were characterized as an institutional military (Moskos 1977). The Commission recommended conversion from a conscription based military force in America to one based on volunteers, recruited through the dynamics of the labor market (see Segal 1989). Moskos observed the shift from conscription to an all-volunteer force as a departure from military personnel engaging in public service through civic obligation and toward military "service" as another of many alternative jobs. By contrast, Mastroianni (2005–06) suggests that the institutional structure of the military is still intact more than three decades after the end of conscription.

The shift to an all-volunteer force in 1973 compelled the military to compete for personnel with the private sector. To be competitive, the military transformed its policies and manpower models. Changes included: adjustments in pay scales, the use of monetary and educational enlistment incentives, marketing campaigns highlighting the specialized training provided by the military, the development of more family friendly policies, and the increased recruitment and participation of women. The military currently engages in two forms of civilianization of personnel – DoD civilians and civilian contractors. The biggest difference between these two groups is that DoD civilians are federal employees but the civilian contractors are employed in the private sector by private military companies that have secured contracts with the Department of Defense. Though distinct in their organiza-

tional position, both types of civilian employees are central to the military's strategy to increase efficiency and effectiveness.

2.1 Historical Context

The employment of civilians to enhance military strength has its roots in European and Middle Eastern practices of war. Historically, outsourcing military functions has been the rule rather than the exception. In the modern era the practice fell into disfavor, only to resurface as an open and legitimate convention of military organization within states in the late 20th century. The use of civilians by the US military has been an integral part of the American war-making capacity since before the Civil War (Avant 2001; Robinson 2002; Schwartz 2003). Indeed, the history of civilianizing military functions in the US parallels the history of national defense itself. The multitude of contractors serving with the US military in Afghanistan and Iraq is a continuation of this practice. However, this increased reliance on civilians in recent times should not be mistaken for a linear trend. The use of contractors is best understood as a continuous process that ebbs and flows with socio-political changes within and among states (Thomson 1994).

The end of the Cold War in Europe in the late 1980s brought about an organizational change in the US military. The armed forces shifted from a large standing professional force that had been dictated by the Soviet Union's challenge as a world superpower, to a smaller, more specialized fighting force. Since the number of missions and frequency of deployments have continued to rise in the wake of the European Cold War resolution, increasing numbers of civilians have been hired to compensate for the reduction in military personnel (Avant 2002; Light 1999; Moskos 2000; Singer 2003a). Jobs transferred to civilians may take the form of either product or service related jobs. In addition to performing menial, the increased reliance on civilians "is due to the military's greater reliance on technically complex weapons systems, with the corresponding need for technical experts, both contract and direct hires, to work in the field and at sea" (Robinson 2002: 21; see also Avant 2002; Moskos 2000).

The increasing technological sophistication required of many military specialties has resulted in a greater reliance on private sector support in order to maintain a cutting-edge military. Light (1999) notes that outsourcing is motivated by a desire to increase flexibility by targeting qualified labor for specific project goals without carrying long-term costs for training and maintaining personnel (and their families). Economic constraints and personnel caps have also motivated force reductions and base closures. Thus, aside from soldiers, sailors, airmen, and marines perhaps becoming more 'occupa-

tion' oriented themselves (Moskos 1977), there has been a conscious effort to infuse into the military a pure form of occupationally oriented personnel via civilian contractors. Contemporary use of civilians by the military represents both a quantitative and a qualitative shift from the modern western conventions of military organization. Indeed, today America's military cannot function effectively without these contractors and DoD civilians. The question remains, what are the effects of this organizational metamorphosis on the service members in units directly affected by this manpower strategy?

This research focuses on the effects of civilianization of the military on attitudes and behavioral intentions of service members that have the potential to impact the dynamics and structure of the military. Thus, the structure of the organization provides the context in which military and civilian personnel become explicit employment reference groups for each other, and as a result produces favorable or unfavorable views of one's employment situation. Our outcome variable is service members' retention intention, either to remain or to separate from service. We have adapted a retention model that uses two civilianization-related variables, job satisfaction and organizational commitment, to predict intentions to remain in service.

2.2 *Sample and Data Collection*

This study employs a multiple case study design, using survey data and informal interviews with military and civilian personnel.² Subjects for this study were recruited from a Navy ship in the Pacific fleet and an Army combat aviation squadron located outside of the continental United States. Data collection for both case studies consisted of paper and pencil surveys and informal interviews conducted in the winter of 2004. Civilians in both units worked in close proximity to uniformed service personnel and were organic to their units, meaning that they performed duties critical to the ongoing operations and mission success of their respective units. While in both cases the civilians were critical to the overall functioning and mission of their units, the units incorporated their respective civilians in different ways. The civilians working with the Navy were DoD (Federal) employees, while those working with the Army were civilian contractors. With rare exceptions, the Army contractors were brought in to work alongside the soldiers. Conversely, the civilian mariners (CIVMARs) with the Navy performed jobs that had

2 We recognized that in choosing a case study design there are limitations on the generalizability of our findings. However, a case study design facilitates a clearer understanding of the social comparison dynamics of the given military communities under examination, potentially highlighting contextual differences in the civilianization of military units that might be obscured by more aggregate data collection methods.

been categorically civilianized so that there were no sailors performing the same duties as the civilians.

The social-structural characteristics of the sailors and soldiers included in this study are summarized in Table 1. The modal sailor is an unmarried, 27 year-old white male with a high school education and no children. He has served for almost seven years and has just over 2 years of service obligations remaining. Among soldiers, the modal respondent is a 26 year-old white male of the pay grade E4 or below, has a high school education, is not married, and does not have children. The average soldier has been in uniform for five years and has an additional three and a third years of service obligations remaining.

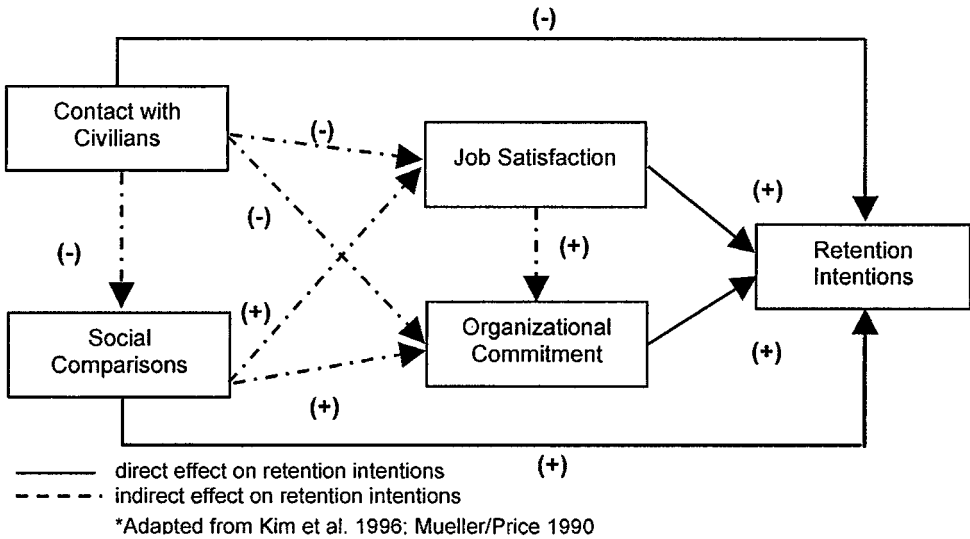
Table 1: Service Members' Descriptive Statistics

Variable	Sailors		Soldiers		Sailors	Soldiers
	<i>f</i>	%	<i>f</i>	%	mean	
Age					27.05	25.85
Years in service					6.71	5.03
Years left in service					2.30	3.32
Number of children	(mode = 0)		(mode = 0)		0.73	0.64
Gender						
men	78	92.9	157	91.8		
women	6	7.1	14	8.2		
Education						
high school or equivalent	62	73.8	117	68.4		
associates	15	17.9	30	17.5		
bachelors	7	8.3	20	11.7		
masters	0	0.0	4	2.3		
Marital Status						
never married	41	48.8	78	45.6		
married	34	40.5	76	44.4		
separated/divorced	9	10.8	17	9.9		
Rank/Pay Grade						
E1-E4	37	44.0	100	58.5		
E5-E9	47	56.0	47	27.5		
WO1-CW3	-	-	11	6.4		
O1-O5	-	-	13	7.6		
Race						
white	45	53.6	113	66.1		
black	14	16.7	18	10.5		
Asian	6	7.1	12	7.0		
other	19	22.6	28	16.4		
	N=84		N=171			

2.3 Conceptual Model of Retention

The model in Figure 1 identifies direct and indirect effects of two civilianization variables, level of contact and social comparisons with civilians, on retention intentions. The model predicts that greater levels of contact between military personnel and their civilian co-workers will result in more negative social comparisons among service members. Further, level of contact with civilians is predicted to have negative effects on job satisfaction, organizational commitment, and retention intentions. The more contact military personnel have with civilians, the lower their job satisfaction, commitment to the military, and desire to remain with the military. The relationship between social comparisons and satisfaction, commitment and intentions to remain in the military are all hypothesized to be positive. This means that when service members' social comparisons with their civilian co-workers are positive they will be more satisfied with their work, more committed to the military, and more likely to want to remain with their respective services. Figure 1 also indicates that when job satisfaction is high, so too will be organizational commitment and intentions to remain in service. Finally, greater organizational commitment will result in higher levels of intention to stay in the military.

Figure 1: Conceptual Model of Retention-Turnover*



3 Model Variables

3.1 Contact with Civilians

Prior research has identified a unique cluster of characteristics associated with military service that are likely to become highly salient in a civilian integrated military unit. Characteristics such as risk of death or injury, frequent geographic mobility, periodic family separation, living overseas, and normative pressures placed on service members' spouses have been identified as greedy institution factors (Segal 1988) and have been shown to affect satisfaction, commitment, and retention attitudes of service members. Additionally, the fact that service members cannot quit whenever they wish has been shown to have an impact on service members' work related attitudes. Service members' level of contact with their civilian co-workers is presented in Table 2. These data display a general trend of soldiers having more frequent contact than sailors with the civilians in their units while performing their daily duties. Over a third of the soldiers (38.6%) versus less than a quarter of sailors (23.8%) reported daily contact with civilian co-workers. Conversely, 21.4% of sailors, but only 15.8% of soldiers indicated never having contact with civilians in their units while performing their jobs. A higher percentage of sailors (16.7%) compared to soldiers (9.9%) also indicated working with civilians about once a week; a mid-level frequency of contact.

Given the nature of constrained spaces aboard ship, it seems a bit counter intuitive that sailors would have less frequent contact with the civilians than the soldiers. An explanation is found in the way the civilians were integrated in their respective units. Though in closer quarters, and representing approximately 50% of the personnel on board ship, the civilians were separated from sailors by organizational structure, precipitating greater physical segregation during working hours, and in their living quarters. As a result, civilians tended to be relatively isolated from those working in other departments (e.g., engineering rooms and galleys), and they typically had separate (larger) berthing from the sailors. This contrasts with the more integrated, open, and fluid organizational and physical structure of the soldiers' work environment.

Table 2: Service Members' Level of Contact with Civilian Co-Workers

Level of Contact	Sailors		Soldiers	
	<i>f</i>	%	<i>f</i>	%
daily	20	23.8	66	38.6
several times a week	15	17.9	29	17.0
about once a week	14	16.7	17	9.9
about once every couple of weeks	6	7.1	14	8.2
about once a month	4	4.8	6	3.5
less than once a month	7	8.3	12	7.0
never	18	21.4	27	15.8
Total	84	100.0	171	100.0

3.2 Social Comparisons

Social comparisons are a subjective assessment of how one stacks-up in relation to a specific other individual or group of people. Service members were asked to compare themselves to their civilian co-workers across a number of job characteristics identified in Table 3. A Likert-type scale was used for the response categories, where 1 = “much greater for civilians” and 5 = “much greater for myself”.³ A neutral midpoint was included. High scores indicate that the respondent feels relatively advantaged compared to his/her civilian co-workers. Low scores indicate that the respondent feels relatively deprived compared to his/her civilian co-workers. Sailors and soldiers both indicate significant negative social comparisons for pay, autonomy, ability to negotiate contract, and degree organization cares for workers. Sailors, but not soldiers, feel deprived relative to civilians in promotional chances based on merit. While soldiers feel relatively deprived with respect to risk of personal injury and negative impacts on their family due to their work duties, sailors did not report attitudes significantly different from neutral on these items. Sailors report feeling relatively advantaged compared to CIVMARs on benefits, while soldiers feel relatively advantaged over civilians in feeling that the work they do contributes to society.

3 The items risk, negative impacts on family, and hours worked per day have been reverse coded so that the values presented in Table 3 align appropriately. Higher values mean greater positive impact on the respondent in comparison to their civilian peers.

Table 3: Service Members' Social Comparison Item Means Tested Against Neutral Midpoint of Scale

Social Comparison Item	neutral midpoint	Sailors		Soldiers	
		mean	deviation from midpoint	mean	deviation from midpoint
Pay	3	1.42	-1.58***	1.57	-1.43***
Benefits	3	3.51	0.51***	3.1	0.1
Risk of personal injury (R)	3	3.01	0.01	2.17	-0.83***
Autonomy	3	2.38	-0.62***	2.2	-0.80***
Task variety	3	2.82	-0.18	2.95	-0.05
Promotion chances based on merit	3	2.66	-0.34***	2.96	-0.04
Quality leaders in organization	3	2.86	-0.14	2.91	-0.09
Negative impacts on family (R)	3	2.84	-0.16	1.94	-1.06***
Satisfying relations with peers	3	3.07	0.07	2.94	-0.06
Ability to negotiate contract	3	1.81	-1.19***	1.66	-1.34***
Degree to which organization cares for its workers	3	2.73	-0.27*	2.57	-0.43***
Feeling of accomplishment from one's work	3	3.07	0.07	3.07	0.07
Feeling that one's work contributes to society	3	3.12	0.12	3.13	0.13**
Leadership support in facilitating task completion	3	3.00	0.0	2.94	-0.06
Hours worked per day (R)	3	3.24	0.24	1.74	-1.26***
Total scale score	3	2.77	-0.23***	2.53	-0.47***

** p < .01, ***p < .001

Issues surrounding the military as a greedy institution have been identified as potential negative characteristics associated with military life (Rosen/Durand 1995; Segal 1988). Data presented in this study show that greedy institution characteristics of military employment (e.g., family separation and risk of injury or death for service member) appear to produce negative social comparisons among service members, and positive comparisons among civilians. Another significant difference related to the military as a greedy institution was the level of risk of personal injury to personnel. While the civilian contractors with the Army were in rear echelon positions, the soldiers were expected to be ready to engage in forward action if needed (and the pilots and crew frequently flew missions near hostile territory). The army situation contrasts with that of the personnel on the Navy ship. Due to the nature of shipboard operations the CIVMARs were literally in the same boat as the sailors and subject to the same degree of personal risk. In this context, it is

not surprising that social comparisons were not significantly different from neutral for personal risk in the Navy sample, but a significant difference in social comparisons for personal risk was observed for the Army sample. The mean social comparison scale scores indicate that both sailors (2.77, $p < .001$) and soldiers (2.53, $p < .001$) compare themselves negatively to their civilian co-workers', indicating that on balance they feel relatively deprived compared to the civilians with whom they work.

3.3 *Job Satisfaction*

This variable is a key intervening variable in the retention model adopted for this study. The job satisfaction facet scale chosen for this study is the Minnesota Satisfaction Questionnaire (MSQ) short form⁴ (Weiss et al. 1967). This scale is 20 questions in length. Responses were coded so that high values correspond with greater satisfaction and low values with greater dissatisfaction. A neutral midpoint was included (Table 4). The general pattern observed in service members' job satisfaction attitudes is that both sailors and soldiers are satisfied with their jobs. This is reflected in their total scale scores which deviate significantly and positively from the neutral midpoint of the scale.

4 One of the original items in this scale ("My pay and the amount of work I do") was split into two items ("my pay" and "the amount of work I do") for this study because it was double barreled in its initial formulation.

Table 4: Service Members' Job Satisfaction Item Means Tested Against Neutral Midpoint of Scale

Satisfaction Items	Sailors			Soldiers		
	neutral midpoint	mean	deviation from midpoint	mean	deviation from midpoint	deviation from midpoint
Being able to keep busy all the time	3	3.29	0.29**	3.71	0.71***	0.71***
The chance to work alone on the job	3	3.61	0.61***	3.34	0.34***	0.34***
The chance to do different things from time to time	3	3.33	0.33**	3.61	0.61***	0.61***
The chance to be "somebody" in the community	3	3.42	0.42***	3.39	0.39***	0.39***
The way my supervisor handles his/her men and women	3	2.99	-0.01	3.36	0.36***	0.36***
The competence of my supervisor in making decisions	3	3.01	0.01	3.35	0.35***	0.35***
Being able to do things that don't go against my conscience	3	3.64	0.64***	3.64	0.64***	0.64***
The way my job provides for steady employment	3	4.24	1.24***	4.15	1.15***	1.15***
The chance to do things for other people	3	3.64	0.64***	3.94	0.94***	0.94***
The chance to tell people what to do	3	3.38	0.38***	3.36	0.36***	0.36***
The chance to do something that makes use of my abilities	3	3.43	0.43***	3.80	0.80***	0.80***
The way the Navy's/organization's policies are put into practice	3	2.71	-0.29**	2.71	-0.29***	-0.29***
My pay	3	2.62	-0.38**	2.88	-0.12	-0.12
The kind of work that I do	3	3.45	0.45***	3.36	0.36***	0.36***
The amount of work that I do	3	3.39	0.39***	3.87	0.87***	0.87***
The chances for advancement on this job	3	2.92	-0.08	3.32	0.32***	0.32***
The freedom to use my own judgment	3	3.00	0.00	3.23	0.23**	0.23**
The chance to try my own methods of doing the job	3	3.13	0.13	3.41	0.41***	0.41***
The working conditions	3	3.21	0.21*	3.12	0.12	0.12
The way my co-workers get along with each other	3	3.44	0.44***	3.73	0.73***	0.73***
The praise I get for doing a good job	3	3.04	0.04	2.99	-0.01	-0.01
The feeling of accomplishment I get from doing my job	3	3.38	0.38**	3.70	0.70***	0.70***
The support I get from my co-workers	3	3.32	0.32**	3.57	0.57***	0.57***
The support I get from my supervisors	3	3.18	0.18	3.21	0.21**	0.21**
Total Scale	3	3.28	0.28***	3.45	0.45***	0.45***

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

While sailors' results identify a majority of the item means deviating significantly from the neutral midpoint, two of the means fall significantly below the neutral midpoint indicating dissatisfaction: the way the Navy's policies are put into practice (2.71) and their pay (2.62). By comparison, soldiers also indicated feeling dissatisfied with the way their organization's policies are enacted (2.71), though they do not report significant levels of dissatisfaction with their pay. Sailors report being most satisfied with their ability to work alone (3.61), being able to do things that don't go against their conscience (3.64), the chance to do things for others (3.64), and steady employment (4.24).

Soldiers' results indicate that all but three of the job characteristics deviate significantly from the neutral midpoint. Interestingly the items that do not differ from neutral are pay, work environment, and receiving praise for doing a good job. By comparison, sailors reported significant satisfaction with their working conditions (3.21) and echoed the sailors' neutral attitude on satisfaction for praise for a job done well. Of the soldiers' 21 job satisfaction items that reached significance, soldiers reported being dissatisfied with only one: the way the Army's policies are put into practice (2.71), mentioned above. Soldiers' mean satisfaction scores were highest for having a job that provides steady employment (4.15), the chance to do things for other people (3.94), and the amount of work they perform (3.87).

3.4 *Organizational Commitment*

Commitment to one's organization is a second intervening variable identified in the retention model used in this study. The instrument selected to measure organizational commitment was the Organizational Commitment Questionnaire (OCQ) (Mowday et al. 1979). Responses were coded from 1 = "disagree strongly" to 7 = "agree strongly", with a neutral midpoint. Service members' responses to the organizational commitment scale items are presented in Table 5. The most striking result is that the total scale mean for organizational commitment is significant and positive for soldiers (4.67), but neutral for sailors (3.97). Soldiers' item means are significant for all but one of the commitment items in the scale: for me the Army is the best of all possible organizations to work for (3.89). Conversely, sailors indicated having significantly low commitment on this item compared to the neutral midpoint of the scale (3.58). Of the soldiers' fourteen significant items, three had means below the neutral midpoint, indicating lack of commitment based on that item: accepting almost any job to stay with the Army, could just as well be working for another organization, and often finding it difficult to agree with the Army's personnel policies. The other eleven commitment items are sig-

nificant and positive for soldiers, most notably being willing to extend a great deal of effort for the Army's success, loyalty to the Army, sharing the same values as those of the Army, being proud to be in the Army, caring about the fate of the Army, and feeling as though it was not a mistake to join the Army.

Sailors' item means were not significantly different from neutral on four items: talking up the Navy to friends as a good place to work, could just as well be working for another organization if job was similar, my job inspires the best in me, and it would take very little change in my present circumstances for me to leave the Navy. For all of these items soldiers' means were significantly different from neutral. On all other items (except for the Navy being the best of all possible employers), sailors' item means deviated significantly in the same direction (above or below) the neutral midpoint as the soldiers' item means.

Table 5: Service members' Organizational Commitment Item Means Tested Against Neutral Midpoint of Scale

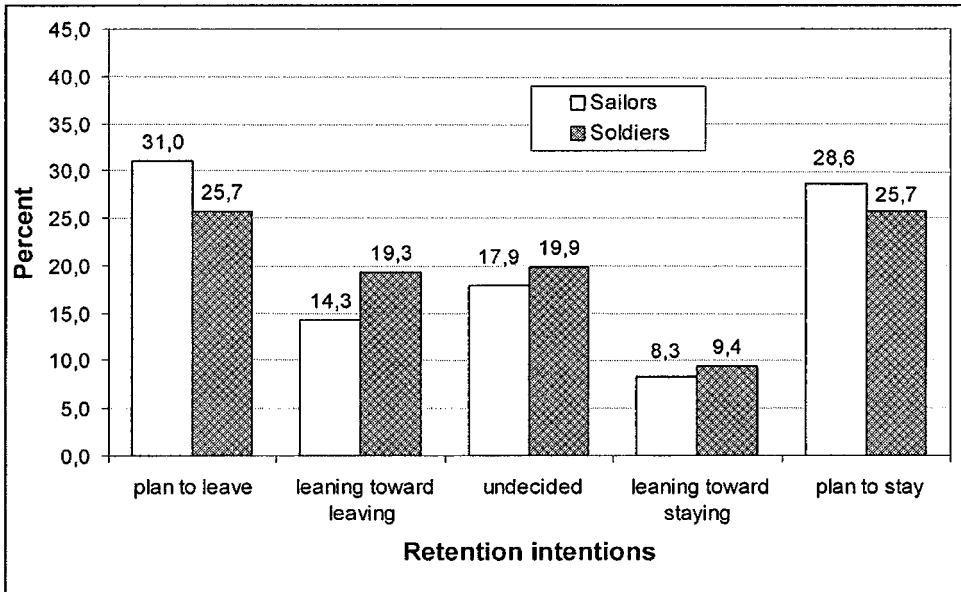
Organizational Commitment Items	Sailors			Soldiers		
	neutral midpoint	mean	deviation from midpoint	mean	deviation from midpoint	deviation from midpoint
I am willing to extend great deal of effort to help the Navy/Army be successful	4.00	5.57	1.57***	5.83	1.83***	
I talk up the Navy/Army to my friends as a great organization to work for	4.00	4.27	0.27	4.70	0.70***	
I feel very little loyalty to the Navy/Army (R)	4.00	5.05	1.05***	5.35	1.35***	
I would accept almost any job assignment to keep working for the Navy/Army	4.00	2.73	-1.27***	2.71	-1.29***	
I find that my values and those of the Navy/Army are very similar	4.00	4.38	0.38*	5.39	1.39***	
I am proud to tell others that I serve in the Navy/Army	4.00	5.71	1.71***	6.09	2.09***	
I could just as well be working for a different organization as long as the work was similar (R)	4.00	3.77	-0.23	3.52	-0.48***	
The Navy/Army really inspires the very best in me in the way of job performance	4.00	4.18	0.18	4.70	0.70***	
It would take very little change in my present circumstances to cause me to leave the Navy/Army (R)	4.00	4.05	0.05	4.32	0.32*	
I am extremely glad that I chose to work for the Navy/Army over other alternatives I was considering at the time I joined	4.00	4.64	0.64***	4.69	0.69***	
There's not too much to be gained by sticking with the Navy/Army for a career (R)	4.00	4.57	0.57**	4.86	0.86***	
Often, I find it difficult to agree with the Navy's/Army's policies on important matters relating to its personnel (R)	4.00	3.19	-0.81***	3.26	-0.74***	
I really care about the fate of the Navy/Army	4.00	5.31	1.31***	5.48	1.48***	
For me the Navy/Army is the best of all possible organizations to work for	4.00	3.58	-0.42*	3.89	-0.11	
Deciding to work for the Navy/Army was a definite mistake on my part (R)	4.00	5.23	1.23***	5.26	1.26***	
Total scale	4.00	3.97	-0.03	4.67	0.67***	

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

3.5 Retention Intentions

The dependent variable in the model for this study is retention intentions. This variable is measured on a five-point Likert scale from 1 = planning to leave to 5 = planning to stay, with a neutral midpoint. Figure 1 shows that sailors and soldiers are about equally split between those who are undecided on their retention plans. Generally speaking both groups have similar patterns on either side of the neutral midpoint. Just under half plan or lean toward leaving, while approximately a third are leaning toward or planning to stay. The two groups show remarkably similar retention attitudes.

Figure 1: Percent Frequency Distribution of Service Members' Retention Intentions



4 Path Analyses

4.1 Reliability and Correlation Statistics for Variables in the Path Models

Reliability estimates and correlations among variables in the sailors' and soldiers' path models are presented in Tables 6 and 7, respectively. Standardized reliability estimates for the social comparisons, job satisfaction, and organizational commitment scales range from .71 to .89 for the sailors, and from .74 to .93 for the soldiers. Reliability coefficients of these magnitudes indicate that the three scales used in the path analyses have strong internal consistency. Correlations presented in Tables 6 and 7 are partial correlations,

controlling for age, sex, race, education, marital status, number of dependent children, number of work-related relocations, and number and length of family separations in the past 12 months, confidence in finding civilian employment, rank, time in service, and time remaining in current service obligation.

Table 6: Estimates of Internal Consistency and Correlations among Study Scales for Sailors

Measure	alpha [†]	Intercorrelations				
		1	2	3	4	5
1. Contact with contractors	---	1.00				
2. Social comparisons	.84	0.25*	1.00			
3. Job satisfaction	.89	0.02	0.48***	1.00		
4. Organizational commitment	.71	0.11	0.38**	0.53***	1.00	
5. Retention intention	---	-0.09	0.25*	0.23	0.33**	1.00
N = 84						

[†]standardized Cronbach's alpha, *p < .05, **p < .01, ***p < .001

The inter-item correlations of the sailors' model (Table 6) indicate that the social comparison variable is significantly and positively correlated with each of the other four variables in the path model. This means that increases in sailors' level of contact with CIVMARs is related to sailors having more positive social comparisons ($p < .05$). This result was counter to what was anticipated. Further, more positive social comparisons are associated with higher levels of satisfaction and commitment, and increased intention to remain with the Navy. Significant positive correlations are also observed between job satisfaction and organizational commitment, and organizational commitment and retention intentions. These results are in line with expectations. Interestingly, level of contact with CIVMARs was not related to satisfaction, commitment, or retention intentions. Also counter to expectations, job satisfaction was not significantly related to retention intentions.

For soldiers, the social comparison variable is significantly and positively correlated to each of the other model variables except level of contact with contractors (Table 7). This indicates that for soldiers more positive social comparisons with contractors are associated with increases in satisfaction, commitment, and intentions to remain in the Army. Satisfaction, commitment, and retention intentions are significantly and positively correlated with each other; increases in one correspond to increases in the other two. Level of contact with contractors was not related to any of the other model variables.

Table 7: Estimates of Internal Consistency and Correlations among Model Variables for Soldiers

Measure	alpha [†]	Intercorrelations ^a				
		1	2	3	4	5
1. Contact with Contractors	--	1.00				
2. Social Comparisons	0.74	0.07	1.00			
3. Job Satisfaction	0.93	0.11	0.47***	1.00		
4. Organizational Commitment	0.88	0.12	0.48***	0.69***	1.00	
5. Retention Intention	--	0.13	0.24**	0.28***	0.48***	1.00

N = 171

^a Correlation values are partial correlations; [†] standardized Cronbach's alpha
 ** p < .01, *** p < .001

4.2 Path Models

Path analyses were used to examine both the direct and indirect effects of civilianization on retention intentions among sailors and soldiers. Controls for the path analyses were the same as those used in the partial correlation analysis presented above. The coefficients presented on the pathways of the models are the standardized, direct path coefficients. These path coefficients are interpreted in the same way as multiple regression coefficients. Coefficients with higher absolute values indicate that the predictor variable for that pathway is explaining a greater amount of variance in the pathway's outcome variable than a predictor variable with a coefficient with a lower absolute value.

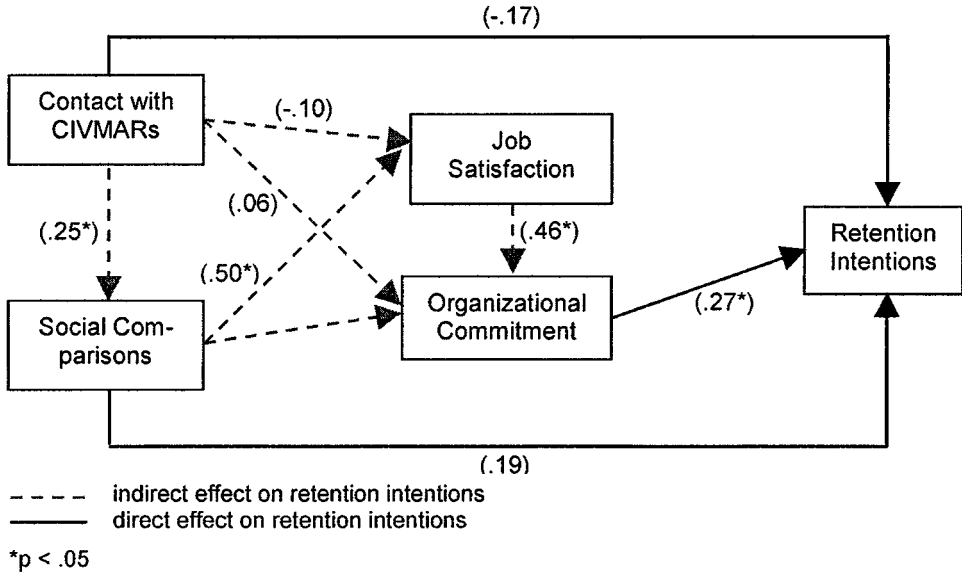
The two pathways with darker arrows represent the direct effects of the two civilianization variables on retention intentions. The lighter arrows in the models indicate the indirect pathways by which the civilianization variables affect retention intentions. The absence of a pathway leading from job satisfaction to retention intentions is deliberate.⁴ In order to run the path model at least one degree of freedom is necessary.

4 Results from multiple regression models (not presented here) using the same control variables as the path analysis showed that job satisfaction did not have a significant direct impact on retention intentions. When the path analysis was rerun including the pathway from satisfaction to retention and omitting the pathway from contact with contractors to social comparisons the coefficient failed to reach significance. While regression analysis revealed that several model variables did not have a significant direct effect on retention intentions, a decision was made to retain all of the pathways related to the civilianization variables for illustrative purposes.

4.2.1 Sailors' Path Model

Results of the sailors' path analysis indicate that although the signs of the two direct civilianization pathways are consistent with expectations neither of the two path coefficients are significant (Figure 2).

Figure 2: Sailors' Path Model with Estimated Path Coefficients



The sailors' path coefficients are positive and significant between level of contact with CIVMARs and social comparisons (.25), social comparisons and job satisfaction (.50), job satisfaction and organizational commitment (.46), and organizational commitment and retention intentions (.27). Thus, the more contact sailors have with CIVMARs, the more positive their social comparisons, which lead to greater satisfaction with their work. Increased satisfaction significantly raises commitment to the Navy, which in turn elevates sailors' intentions to remain in service. The civilianization variables seem to have a significant impact in the model, but examination of the total effects of the model is necessary to be more certain. The indirect, direct, and total effects of the model's independent variables on retention intentions for sailors are presented in Table 8. Significant total effects are observed for social comparisons, job satisfaction, and organizational commitment. The largest total effect is associated with social comparisons (.29). The significant total effect of social comparisons on retention intentions is the product of a significant indirect effect (.10) operating through satisfaction and commitment, and a larger, though statistically non-significant, direct effect (.19).

Table 8: Total Effects on Sailors' Retention Intentions

Independent Variable	Indirect Effects	Direct Effects	Total Effects
Contact with Civilian Mariners	0.08	-0.17	-0.09
Social Comparisons	0.10*	0.19	0.29*
Job Satisfaction	0.13*	--	0.13*
Organizational Commitment	--	0.27*	0.27*

N = 84

*p < .05

The total effect associated with the organizational commitment variable is also significant (.27). This total effect is entirely due to the direct effect since there were no indirect pathways leading from organizational commitment to retention intentions. Conversely, the total effect of job satisfaction (.13) is entirely indirect, operating via organizational commitment. This is a product of the exclusion of the direct pathway from satisfaction to retention in order to maintain one degree of freedom in the model for analysis purposes. If this pathway were included (which theory and prior research would support), a non-significant direct effect would be obtained and a concomitant increase in the total effect would be observed. Since the effect of satisfaction is already significant, inclusion of the direct pathway would only serve to strengthen (not mitigate or reverse) this finding.

The total effect of level of contact with CIVMARS failed to reach significance. The fact that the indirect (.08) and direct (-.17) effects are in opposite directions contributes to this non-significant finding because their effects are canceling each other out in large measure. The positive value of the indirect effect of level of contact with CIVMARS is due to its significant positive relationship with social comparisons that then impacts retention intentions through the significant chain of pathways leading through satisfaction and commitment. The failure of the level of contact with CIVMARS variable to reach significance directly, indirectly, or in combination suggests that level of exposure to CIVMARS is not contributing substantially to sailors' attitudes on continued service in the Navy.

4.2.2 Soldiers' Path Model

Figure 3 displays the retention model tested in this analysis with the standardized, direct path coefficients identified for each pathway. Results indicate that soldiers' level of contact with contractors is not significantly related to their social comparisons (.07), suggesting that it is the mere presence of the contractors in the organization, rather than level of contact with them, that is driving the negative comparisons expressed by the soldiers. Soldiers' level of contact with contractors is also not significantly related to satisfaction (.08),

commitment (-.06), or retention attitudes (.09). Taken together, these results indicate that soldiers' level of contact with contractors does not significantly impact any of the other variables in the model. Further, the direct pathway from social comparisons to retention intentions is near zero and failed to reach significance (.01). Social comparisons are observed to have a significant influence on both satisfaction (.46) and commitment (.20). Satisfaction with one's job is observed to have a significant effect on organizational commitment (.60), which in turn has a significant effect on retention intentions (.48). All significant coefficients are positive, which is consistent with the conceptual model hypothesized. The more favorably soldiers compare themselves to their civilian contractor co-workers, the greater their job satisfaction and commitment to the Army, and the more likely they are to intend to remain in the Army.

Figure 3: Soldiers' Path Model with Estimated Path Coefficients

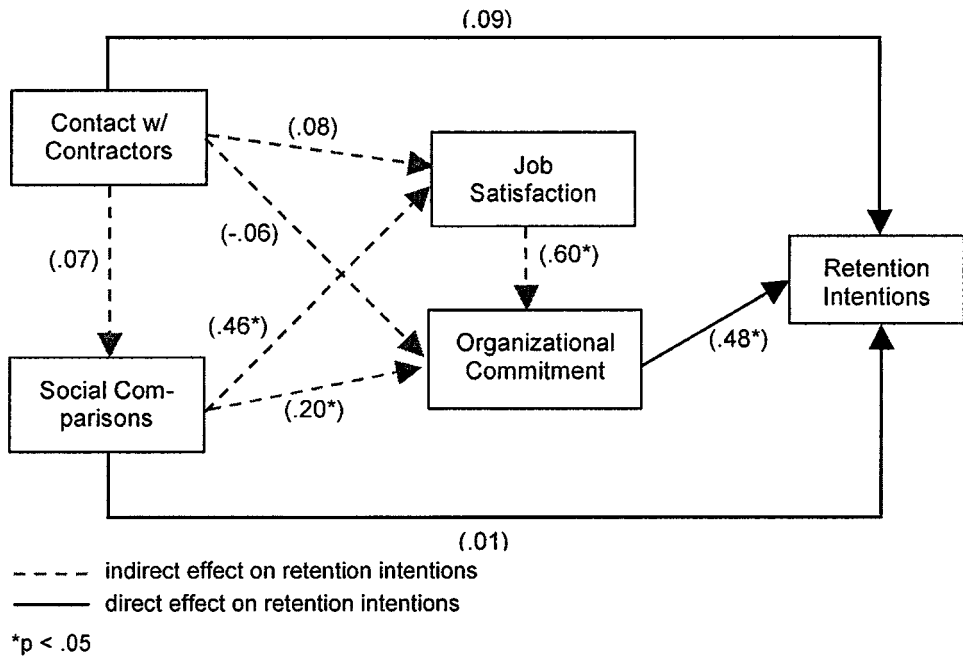


Table 9 presents the direct, indirect, and total effects of the model variables on soldiers' retention intentions. Significant total effects on retention intentions are observed for social comparisons, job satisfaction, and organizational commitment. The largest total effect is obtained from the organizational commitment variable (.48) and is due solely to its direct effect (.48). The total effect for the job satisfaction variable (.29) is entirely indirect, operating through organizational commitment. Again, this is an artifact of the decision

to omit the direct pathway from satisfaction to retention intention in the analysis. Were this pathway included, a non-significant direct effect of satisfaction on retention intentions would be observed, along with a slight increase in its already significant total effect.

Table 9: Total Effects on Soldiers' Retention Intentions

Independent Variable	Indirect Effects	Direct Effects	Total Effects
Contact with Contractors	0.01	0.09	0.10
Social Comparisons	0.23*	0.01	0.24*
Job Satisfaction	0.29*	--	0.29*
Organizational Commitment	--	0.48*	0.48*

N = 171

*p < .05

The significant total effect (.24) of social comparisons on retention intentions is due primarily to its indirect effect (.23), operating through job satisfaction and organizational commitment. The total effect of level of contact with contractors failed to reach significance (.10). This provides additional support that the impact of the civilian contractors on the soldiers' retention intentions has more to do with social comparisons from their mere presence, making them a ready social comparison group, rather than the extent of soldiers' knowledge or experiences gained through frequent personal contact with them.

4.3 Summary and Discussion of Model Results

Path analysis of the retention model indicates that social comparisons do have significant impacts on retention intentions for both military groups examined, but only indirectly through job satisfaction and organizational commitment. The results show that when soldiers and sailors compare themselves to the civilians with whom they work, they perceive themselves as relatively deprived and, as a result, are less satisfied with their jobs. This reduced satisfaction, in turn, negatively affects their organizational commitment, leading to decreased likelihood of remaining in the military.

This finding is an example of the irrationality of rationality (Ritzer 2003). A primary motivation for civilianization of the military is to make it more streamlined and effective by allowing the service members who are retained as permanent employees to focus on performing the core mission of the military. However, the integration of the civilians with military personnel has resulted in negative comparisons among service members and a concomitant decline in their intentions to remain in service. As a result of its civilianization, the military is negatively affecting the retention attitudes of the soldiers and sailors on whom they are counting to remain in the military to

carry on its core duties and to achieve the efficiency, effectiveness, and cost savings goals of civilianization.⁵ This could lead to a problematic (and most likely unanticipated) skill and leadership vacuum.

Level of contact with contractors did not significantly impact soldier job satisfaction, organizational commitment, or retention intentions. This implies that it is the presence of the contractors in the squadron that is affecting these variables regardless of the frequency of interaction between contractors and soldiers. This finding suggests that rumors, hearsay, and/or individual assumptions were more important than personal interaction and experience with civilians.⁶ For example, soldiers voiced discontent with not having the same freedoms as civilian contractors in negotiating employment contracts. However, discussions with the contractors revealed that they had very little, if any, negotiation in the terms of their employment. Several described their employment contract negotiations as take-it-or-leave-it 'cookie cutter' offers. Two contractors argued strongly that they had more power negotiating their re-enlistment terms while they were in the Army than they did in negotiating their terms of employment with their private contracting firms.

Another example of how rumors and assumptions can affect satisfaction, commitment, and retention attitudes net of level of contact with contractors is the "knowledge" disseminated among service members about disparities in pay between contractors and military personnel. While all service members interviewed knew that contractors were paid more than they were, they did not know how much more.

Level of contact with CIVMARs was not related to satisfaction, commitment or retention for sailors, though it did affect their social comparisons. While level of contact with CIVMARs significantly affected social comparisons for sailors, it was in the opposite direction from that predicted. Greater exposure to CIVMARs made sailors feel more advantaged by comparison, not more deprived. This result may be a function of the way in which civilianization was done on the Navy ship as compared to the Army squadron in this study. Civilianization of military jobs on the ship was done by transferring entire departments to Military Sealift Command. One of the departments transferred to civilian (MSC) workers was the services department, which included jobs such as cooking, cleaning, and laundry. Deck maintenance was also civilianized, which included jobs such as scraping and reapplying paint to the ships interior and exterior surfaces. Additionally, watch standing was

5 A similar conclusion was reached by Kennedy et al. (2002), who examined the effects of outsourcing engineering jobs in the Air Force.

6 One answer to this seeming contradiction is that the service members were exposed more frequently to the second-hand information than they were to the civilians themselves, causing them to have a greater attitudinal affinity toward the second-hand information.

civilianized. In general, sailors were not required to post at the quarterdeck to monitor who boarded and disembarked the ship – this was the full-time job of a handful of CIVMARs.⁷ Most of these jobs are ones typically performed by sailors as temporary duties on board USS ships.

It seems reasonable to argue that the more sailors observe CIVMARs performing these menial jobs, with the understanding that on most other Navy ships the sailors get tasked with the same jobs as extra duties, the more sailors feel advantaged by comparison. Thus, by virtue of the kinds of jobs civilianized aboard ship (jobs the sailors do not want), the sailors appear to have engaged in downward social comparisons, which is to say they feel they are comparing themselves with others whom they feel are less well-off. This has been noted in the literature as a self-esteem enhancing type of social comparison (Willis 1981). The CIVMARs may be relatively advantaged in some areas, but the more the sailors know about and interact with the CIVMARs, the less emphasis sailors appear to place on these advantages. This is consistent with their responses to the commitment item about whether they would accept any job to remain in the Navy. Clearly there are jobs that the sailors do not want to do if they can be avoided – and the jobs that were civilianized appear to be high on the list.

Neither contact with contractors nor social comparisons had a significant direct effect on retention intentions. This is further support that the mechanism by which social comparisons affect retention is mediated through job satisfaction and organization commitment. The social comparisons alone are not as important as how those comparisons affect one's satisfaction and commitment.

These findings are consistent with the theoretical distinction that social comparisons and social information processing theories function jointly to produce effects based on differential characteristics between an individual and his/her comparison individual or comparison group. Social information processing theory states that job characteristics are inherently neither satisfying or dissatisfying (Salancik/Pfeffer 1978). Further, job characteristics are viewed as fundamentally neutral in their capacity to produce organizational commitment. Instead, positive and negative job related attitudes are socially learned through experience and social contexts. They are constructed, reaffirmed, and renegotiated by social processes. Relative job satisfaction or dissat-

7 During interviews, two sailors commented that a few times while the ship was in Asian ports, sailors were asked to stand watch-duty along side of CIVMARs. Both voiced dissatisfaction in having to listen to CIVMARs talk about the overtime they got paid for their duty. Sailors never get overtime, regardless of their job or the number of hours they work. The sailors felt they were being asked to do a job that others were being paid (very well) to do, and that their presence was not necessary at that duty station. This command decision was not popular with the sailors.

isfaction, commitment to an organization or lack of commitment, stems from socially available information and can only be generated in the context of social comparisons. Individuals' positive or negative attitudes on satisfaction and commitment go on to affect retention attitudes (Mueller/Price 1990; Porter/Steers 1973). The relationships among job satisfaction, organizational commitment, and retention intentions for the three groups tested were positive and significant, as predicted. These results are consistent with the large body of research on the interaction of these variables (Fuller et al. 1996; Kim et al. 1996; Mobley 1982; Mueller/Price 1990; Porter/Steers 1973).

5 Implications

The structure of an organization affects those who work there. Prior research has documented effects of structure on workers attitudes and retention behavior (Callan 1993; Deavel 1998; Kennedy et al. 2002; Merton 1961; Nelson et al. 1995; Wong/McNally 1994). This study fits within this tradition and its findings support the notion that workplace context impacts individuals' experiences which in turn shape their attitudes and intentions. Both civilian and military leaders have been expressing increased concern over the impact of increased civilianization of the military on the readiness of the armed forces (Avant 2004; Crock et al. 2003; Macomber 2004; Robinson 2002; Singer 2003a; Wayne 2002). In addition to these more manifest outcomes of military civilianization, military leaders need to be aware that their personnel are making comparisons with their civilian co-workers that affect retention (and potentially other important outcome variables such as morale, cohesion, and readiness).

Applewhite et al. (1993) suggest that the natural state of a service member may be one of perceived relative deprivation. In the context of the present study, this assertion would suggest that even in the absence of civilians in their units military personnel will find someone else who is getting a better deal. In the present study, however, the (ubiquitous) feeling of relative deprivation among service members is corroborated by the civilians with whom they work who also feel that the military personnel are less well off than they are. Regardless, military policy makers cannot afford simply to acknowledge that service members feel relatively deprived and go about their regular routine as they did in the era of conscription when a steady flow of new recruits was guaranteed. Recruits are ever harder to come by now, and the loss of personnel with critical skills costs the military both in expertise and money.

Taking steps to correct misperceptions from rumors in the ranks, or individual assumptions, is exemplified in an exercise the Army squadron commander performs with soldiers who express an interest in separating from

service to pursue jobs as contractors. First, he points out that it is a buyer's market, with too many ex-soldiers and not enough job slots. Second, he estimates for his soldiers their figures for salary, benefits, retirement pay, and in-kind benefits, what they would have to have already bankrolled, and what they would have to earn in their new job in order to compete with their current Army employment package. This exercise is done to provide information so the soldier may make an informed decision, not as a hard sell to retain the soldier. The commander's feeling is that once the facts are known, the comparison favors military service. Given the commander's comment that this exercise produces results that surprise the soldiers, it would seem that a more progressive and systematic initiative would be helpful in reducing some of the negative social comparisons felt by the soldiers. Good communication has been shown to reduce negative impacts of military life among service members (Segal/Harris 1993; Wong/McNally 1994).

Organizational structure, in terms of what gets civilianized, is also important. For example, sailors and soldiers were significantly negative on the item that asked whether they would accept any job assignment in order to stay with their current employer. Conversely, neither civilian group had significant results one way or the other on this variable. This suggests that military personnel view themselves as specialists rather than generalists, which is consistent with Moskos's (1977) occupational military model. Alternatively, this result could also mean that military personnel do not value the military as an employer (or military service) more than the specific job they perform. This alternative explanation is also consistent with Moskos's (1977) occupational military model.

Given these findings, civilianizing the service and deck/maintenance departments aboard the Navy ship appears to have been a good command decision. By transferring these duties to civilians it eliminated the 90–100 days of 'crank duty' that enlisted sailors typically have to perform. Crank duty is described by sailors as temporary duty assigned to most junior enlisted sailors who are new arrivals to a ship. In order to keep the ship operational a great deal of menial work must be done, such as cleaning, cooking, and the never-ending job of chipping and reapplying paint. Effectively, this means that sailors, regardless of specialty (e.g., IT, radar, medical, engineering), must perform these menial jobs for upwards of three months before they are reassigned to their 'real' job on board ship. One medical specialist commenting on this tradition stated, "There is nothing more disheartening than not being able to do my job." In addition to doing menial labor, the time spent on crank duty affects sailors' ability to maintain their skills in their specialty, which can impact their evaluations and promotion rate. Numerous sailors reported being very happy that the service and deck jobs aboard ship

had been civilianized. Thus, by structuring the work environment so that sailors were immediately assigned duties that they were trained for (and expected to do) civilianization of duties on board the ship appears to have achieved some of its goals.

The finding that the level of contact military personnel have with civilians is not a significant predictor of social comparisons in one context (Army), but is a significant predictor of social comparisons in another context (Navy), has important implications for how this management strategy can be best implemented. The results presented in this study suggest that social comparisons can be positively influenced by increased contact between groups in the context of civilianizing entire categories of jobs that are viewed negatively by military personnel, especially those jobs that the service members would have to perform as extra duties. When the civilianized jobs are similar to those performed by the service members the positive effect of group contact disappears.

Despite the feelings of relative deprivation in comparison to their civilian co-workers, military personnel have many positive things to say about the civilians in their units. Soldiers and sailors expressed a good deal of respect for the expertise, proficiency, and professionalism that their civilian co-workers bring to the unit. For example, one sailor commented that having the CIVMARs on board made the ship safer because, "sailors aren't as thorough (...) CIVMARs are more responsible and get things done right". Both soldiers and sailors also appreciated that because the civilians are outside of the formal hierarchical military structure, they are more easy-going and speak their minds more freely. These qualities of the civilians were viewed positively because they break up the otherwise constant, rigid military environment.

It is interesting and important to note that military personnel at both the Army and Navy sites went out of their way to question why this study was being done. They did not feel there was a problem with the integration of civilians in their units. Even so, the soldiers and sailors studied are comparing themselves negatively to their civilian co-workers and these comparisons are negatively impacting their attitudes about remaining in military service. This is important because it demonstrates that even though the group of employees performing the "core duties" of the organization may not mind having the other group of employees in the organization, indeed they enjoy having them as part of the organization, the structural difference between groups and the differential benefits and constraints that accompany these structural differences generate negative social comparisons that impact satisfaction, commitment, and ultimately retention intentions. The negative effects of social

comparisons do not appear to impact service members' feelings toward their civilian coworkers.

The service members appear to be distinguishing between their affinity for the civilians as co-workers and the structural differences that define the work lives of service members versus civilian personnel. The contact hypothesis (Allport 1954) provides an explanation for the service members' positive attitudes toward the civilians with whom they work. This hypothesis states that under certain necessary conditions interaction between individuals of different groups will result in more positive attitudes with regard to members of the "other" group (Pettigrew 1998). Even so, the perceived differences on highly salient job characteristics between civilians and service members produce negative comparisons among military personnel. This effect of social-structural variables, net of personal attitudes toward comparison others, is consistent with prior research on the fundamental impact of social comparisons on individuals' attitudes based on highly salient items (Hodson 1985; Merton/Kitt 1950; Milkie 1999).

The study presented in this chapter is an initial attempt to understand some of the ways in which civilians integrated into military units affect (intentionally and unintentionally) the service members with whom they work. The everyday interactions experienced by the personnel in these units become a context for defining reality (always experienced subjectively), which shapes attitudes and motivates behavior. Since the behaviors resulting from these individual understanding of social reality have the potential to significantly impact the military's organizational structure, it is important to continue to expand our understanding of how service members conceptualize and react to having civilians integrated into their units.