

The Impact of Diversity on Air Force Mission Performance: Analysis of Deployed Service- members' Perceptions of the Diversity/Capability Relationship

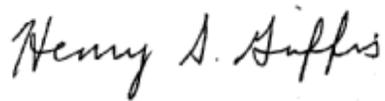
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A handwritten signature in black ink that reads "Henry S. Griffis". The signature is written in a cursive style with a large initial 'H'.

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Executive summary

Background

United States Air Force (USAF) personnel planners want to better understand the relationship between force diversity and force capability. Background research indicates that the diversity/capability relationship in an organization or work group is both context dependent and indirect: Workforce diversity increases *and* decreases capability through mediators and moderators, such as task type, organizational culture, and diversity climate. More specifically, these results suggest that it is important to understand and identify the organization-specific contexts in which diversity can and should be leveraged to improve mission capability, as well as those in which it should be managed to avoid process loss.

Issues and approach

The primary issue addressed in this research memorandum is the role of group diversity as a determinant of group performance in the combat environment. In the spring of 2005, staff from the Air Force Office of Strategic Diversity Integration interviewed recently deployed USAF personnel to get their insights about the diversity/capability relationship in this vital setting. Interviewers asked about the following topics, which define the specific issues to be addressed:

- Respondents' perceptions of the impact of four types of diversity—demographic, cognitive, structural, and global—on team productivity
- Respondents' evaluations of how their own skills, knowledge, and experiences (SKEs) affected their abilities to use diversity to enhance mission capability

- Respondents' ideas about the SKEs that would have improved the use of diversity to enhance mission capability.

Working with transcripts of the 37 interviews that were conducted, we analyzed the qualitative data using an iterative method to code successive interviews in rotating pairs of researchers. We developed two coding schemes to separately analyze respondents' perceptions about the impact of diversity and the SKEs needed to manage it.

Summary of results

Based on our coding, the vast majority of respondents perceived that work-group diversity of all types mattered in their deployments. In some cases, respondents perceived that diversity improved mission capability. In other cases, they perceived that diversity hampered mission capability. Respondents were slightly more likely to perceive that demographic, cognitive, and global diversity had a positive rather than a negative impact; only for structural diversity were respondents more likely to perceive a negative impact. Indeed, there were two consistent negative themes for structural diversity. The first was lack of trust and lack of understanding between the USAF's active and reserve components. The second was difficulties creating unit cohesion among newly formed functionally diverse teams in the time available during deployment.

Although respondents described many unique scenarios to illustrate how diversity mattered in their deployments, most diversity effects could be assigned to one of two general categories: indirect effects via group dynamics and direct effects in terms of having more or less skill in the group or having too many or too few perspectives to manage.

These mixed results are consistent with empirical evidence from studies of workforce diversity in the corporate sector in two important ways. First, corporate-sector research indicates that diversity in work teams can lead to greater creativity and innovation. Without explicit management, however, it is more likely to lead to higher turnover among minority team members, less social cohesion, and more conflict. Second, diversity has been shown to affect work-group perfor-

mance via the same types of group dynamics described by the respondents in this study.

In terms of diversity management, the respondents identified many specific SKEs. The most frequently mentioned was the need to be open to and respectful of differences, regardless of the source. Other SKEs related to basic management and leadership practices, such as the need to understand the mission and be able to motivate diverse team members around it. Respondents also highlighted the importance of having knowledge and understanding of the "other" group's cultures and practices. The former group of SKEs tended to be associated with demographic and cognitive diversity; those in the latter group were mostly associated with structural and global diversity.

Respondents' perceptions about how diversity management SKEs were acquired differed across dimensions in a similar pattern. Respondents indicated that the SKEs needed to manage demographic and cognitive diversity either were inherent (due to personality traits) or were developed with career experience. In contrast, possession of the SKEs needed to manage structural and global diversity was attributed to career experience and formal training.

Implications for the mission case

The fact that the impact of diversity appears to vary by diversity dimension, with the quality of diversity management, and with the organizational context means that there is no empirical support for the notion of a universally or even an organizationally optimal amount or type of diversity. Furthermore, other than the compelling notion that demographic diversity among our troops is symbolic of the mission to spread democracy, there was no reference to the argument that the USAF workforce should be demographically representative of the U.S. population. Instead, these results support the case for diversity management to create conditions in which the negative effects of diversity are mitigated and the positive effects can be fully realized.

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Introduction

Background and tasking

Changes in the demographic makeup of the U.S. labor force, combined with changes in the national security environment, have spurred the U.S. Air Force (USAF) to explore the role of diversity in its total workforce—active duty, reserve component, civilian, and contractor. More specifically, as the entire defense community is transforming, both organizationally and operationally, to meet the new threats and challenges of the 21st century, USAF personnel planners want to better understand the relationship between force diversity and force capability.

Background research indicates that the diversity/capability relationship in an organization or work group is both context dependent and indirect; workforce diversity is linked to capability through mediators and moderators. In particular, recent research has focused on task type, organizational culture, and the diversity climate as important moderators.¹

In some respects, the USAF fits the organizational profile in which managed diversity has been shown to be productive at the organization level. The USAF's collective, mission-based culture lends itself to creating the conditions in which workforce members can create work-relevant social categories that supersede nonrelevant other categories. Furthermore, the transformational emphasis on change itself, as well as on innovation strategies, indicates that a need for flexibility and nontraditional thinking may make diversity particularly valuable, if it is managed well.

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1. This research is summarized in [1], CNA's USAF-sponsored review of empirical studies of the effects of workforce diversity in the corporate sector.

There are aspects of USAF culture, however, that are not conducive to gaining benefits from diversity, such as its competitive, up-or-out promotion process and the fact that group membership is in constant flux as people rotate from assignment to assignment. In addition, although the USAF is seeking innovation and creativity, combat environments may require that decisions be made quickly and that people be ready and willing to act on command.

The fact that USAF culture has characteristics that are both consistent and inconsistent with the organizational profile in which managed diversity is productive suggests that it is important to understand and identify contexts in which diversity can and should be leveraged to improve mission capability as well as contexts in which diversity needs to be managed for cost avoidance.

In this context, the Deputy Assistant Secretary of the Air Force for Strategic Diversity (SAF/MRD) asked CNA to undertake foundational research that will inform the Service's understanding of the diversity/capability relationship in USAF-specific settings.

Issues and approach

The primary issue addressed in this memorandum is the role of group diversity as a determinant of group performance in the combat environment. In the spring of 2005, SAF/MRD staff interviewed recently deployed USAF personnel to get their insights about the diversity/capability relationship in this vital setting. The interviewers asked questions about the following topics, which define the more specific issues to be addressed:

- Respondents' perceptions of the impact of each type of diversity on team productivity
- Respondents' evaluations of how their own skills, knowledge, and experiences affected their abilities to use diversity to enhance mission capability
- Respondents' ideas about the skills, knowledge, and experiences that would have improved the use of diversity to enhance mission capability.

Using transcripts of the 37 interviews that were conducted, we analyzed the qualitative data using an iterative method to code successive interviews in rotating pairs of researchers. We developed two coding schemes to separately analyze respondents' perceptions about the impact of diversity and the skills, knowledge, and experiences (SKEs) needed to manage it.

Outline

This introduction is followed by a background section that describes the interview protocol, the sample of respondents who participated, and the coding schemes used to interpret and organize the information contained in the interview transcripts. The main findings are reported in two sections. The first addresses respondents' perceptions about the impact of diversity on mission capability. The second addresses respondents' perceptions about the SKEs needed to manage and leverage diversity. The research memorandum concludes with a summary of the findings and their implications for the diversity mission case.

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Data and methodology

Purpose

In their request for approval to conduct the interviews, SAF/MRD staff members gave the following statement of justification and purpose:

The purpose of these interviews is to collect qualitative, and to a lesser extent quantitative, data from AF (AC/RES/ANG/CIV)² personnel recently deployed regarding their insight on diversity in the combat environment. The Office of AF Strategic Diversity, under the auspices of the Assistant Secretary of the Air Force for Manpower and Reserve Affairs, has been commissioned to collect data that aids development of a theoretical model and business case for diversity. These interviews represent an incremental step in that direction.

The request also indicated that the qualitative data collected would be subject to thematic analysis so that it could be used to identify USAF-specific themes regarding the diversity/capability relationship and diversity management. Our analysis here fulfills that intention.

Qualitative analysis

Why use a qualitative approach?

SAF/MRD staff chose a qualitative rather than quantitative approach to study the impact of group diversity on mission capability for a variety of reasons—some practical and some research driven. To understand why a qualitative approach was deemed most appropriate, we begin by discussing why more traditional approaches were considered less appropriate or infeasible.

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2. The abbreviations used are defined as follows: AC = Active Component; RES = Air Force Reserve; ANG = Army National Guard; CIV = civilian.

Empirical testing with controlled manipulation of diversity variables in real-life field situations is the most direct way to assess the causal relationships between force diversity and mission capability. Field tests, however, are also the most difficult to execute effectively because they are the most difficult to control: any field-based research effort must be carefully designed and monitored, which requires substantial cooperation and buy-in from all parties involved.

These requirements have two important implications. First, and most simply, field tests are expensive and time-consuming, requiring greater resources than were available for this research effort. Second, designing a field test that will yield meaningful results requires a sophisticated, nuanced understanding of the phenomena being studied. Specifically, all aspects of the test must be defined at the outset so that researchers know what to observe, what to measure, and what types of data to collect. Although SAF/MRD has developed the building blocks for a future field test in the form of a USAF-specific model of the diversity-capability relationship, more work is needed to identify salient variables and relevant processes.³ Some of the information needed will come from this effort.

Another potential approach to the diversity/capability question is a written survey administered to many respondents. Large-sample surveys have two main benefits: (1) they generate data that can be analyzed using statistical methods, and (2) they elicit opinions from a potentially representative sample of the target population. The drawback to such surveys is that their rigid structure limits the type of information that can be collected. Specifically, the survey can include only questions about factors that researchers have anticipated before the data collection effort; there is little scope for uncovering unanticipated factors or issues. In addition, survey questions typically ask respondents for their opinions or preferences about the factors of interest. It is very difficult, however, to design questions that allow respondents to indicate why they hold the opinions they do or to explain the importance of context. Thus, written surveys frequently generate as many questions as they answer.

3. See [2] for a description of the model.

In this study, the goal was to explore the experiences of recently deployed Servicemembers and to gain deep insights into those experiences. Researchers did not have a priori knowledge about the respondents' likely answers. Thus, the exploratory nature of the project lent itself to the collection of qualitative data and, consequently, to qualitative analysis. With a simple interview protocol (described in the next subsection), SAF/MRD researchers engaged respondents in complex, detailed discussions about the impact of diversity on mission capability in which unexpected issues and issues of context and personal history were able to surface.

Validity, reliability and generalizability

The chief feature of quantitative research is that the phenomena of interest (both dependent and explanatory variables) can be measured and represented with data that can be analyzed using statistical methods. In this context, and assuming proper application of statistical techniques, the validity of a result is derived from (a) the accuracy with which variables are measured, (b) the statistical significance of the results, (c) the extent to which results can be replicated, and (d) the generalizability of results to groups outside the estimating sample.

In contrast, the chief feature of qualitative research is that the phenomena of interest aren't easily reducible to quantified measures, either inherently or because they're not yet well enough understood. Nor are the contexts in which the research occurs easily replicated. Thus, one aim of qualitative analysis is to systematically interpret, rather than measure, respondents' stated perceptions about the phenomena of interest and to draw conclusions about these perceptions, including their implications for either theory or policy.

In this context, the validity of results is defined in terms of their credibility, trustworthiness, and authenticity, and is based on the richness and detail of the data. As with quantitative analysis, credibility and trustworthiness are determined by the soundness of the methodology and the transparency with which the methodology and results are presented [3]. The subsections that follow describe the methodology for this study (i.e., the data collection techniques, the interview protocol, and the data coding process) in detail; here, we note aspects of the methodology that relate to validity and credibility.

The data collection techniques contributed to validity in two ways. First, authenticity is context dependent. Thus, we can say that the sample itself enables us to make authentic inferences: because participants had recently returned from deployment, their experiences were fresh in their minds, and we could infer that what they described truly characterized their perceptions of those experiences. Since participation in the project was voluntary, however, it is important to note that there is almost certainly some bias among the respondents. Second, we recorded and transcribed the interviews, so our coding and analysis are based on the actual conversations—not notes, summaries, or recollections. Also, in reporting our interpretations, we cite the respondents' actual words rather than our paraphrases.

The design and use of the interview protocol contributed to the validity of our approach. The interview protocol was designed to be as direct as possible. It asked, "Did diversity have a positive impact, a negative impact, or no impact?" Of course, even with this simple and direct line of inquiry, simply asking the question was likely to suggest to respondents that the interviewers believed diversity to have an impact. The potential for this inherent bias was balanced by explicitly allowing respondents to indicate that diversity had "no impact," as well as by directing interviewers to avoid making any statements about the expected nature of the impact.⁴

The data coding process included individual coding, team consensus building, and routine calibrations. By combining systematic methods and multiple investigators, we used a form of triangulation to develop our understanding of recently deployed Servicemembers' perspectives on the impact of diversity on mission accomplishment. This type of triangulation has two benefits. First, it acts to decrease the potential impact of any individual researcher's bias on the results [4]. Second, it also allows us to define reliability in terms of the stability or

4. Despite specific guidance on how to conduct the interviews, there were both intra- and inter-interviewer differences in how actual interviews were conducted. Interviewers followed the protocol structure quite closely, but there were variations in how they followed up on responses. In general, though, interviewers did avoid leading respondents toward any particular type of diversity impact.

consistency of the coders' interpretations of those responses.⁵ This is known as inter-rater reliability.⁶ Several researchers have devised methods for measuring and judging inter-rater reliability [6, 7, 8, 9]. Recently, [10] found high inter-rater reliability for a coding scheme and process similar to ours. In particular, the key findings in [10] pointed to the importance of the type of consensus building between coders and routine calibrations that we employed.

Finally, the context-dependent nature of qualitative research and the small samples on which it is based mean that results are not normally generalizable from the sample of respondents to a broader population. Instead, generalizability (i.e., the external validity from applying results from one study to new situations or data sets) can only be achieved indirectly [11]. Specifically, researchers can gain a small measure of generalization by aligning their results with similar research, or research on like populations or under similar conditions [12]. This type of connection is more like extrapolation [13] and can be enhanced by a combination of detailed context description and close transfer context analysis [3].

In this case, we compare the results of our study with those of studies we reviewed previously [1]. Research on diversity and performance in the corporate sector has found that a strong organizational culture, especially a collective culture, appears to be the most favorable context for getting a performance dividend from diversity in the workforce. Further, anecdotal evidence has shown that the deployed environment is a space where the mission itself creates such a collective culture. So, the results of this study can be placed within the context of other studies on the effect of collective culture. Therefore, we believe that our results will be useful for informing both policy and theory.

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5. This type of triangulation can be thought of as small-picture triangulation, which focuses on a single approach and data set. Large-picture triangulation combines multiple approaches and data sets to triangulate an understanding of a single phenomenon. See [1, 2, and 5] for additional explorations of the role of workforce diversity in the USAF.
 6. More inter-rater reliability is more likely to produce replicable interpretations of the same data.

Data collection

Dimensions of diversity

The interview protocol explicitly defines diversity in terms of four broad dimensions that can determine an individual's identity within a work group:

1. *Demographic diversity*—inherent or socially defined personal characteristics, including age, race/ethnicity, religion, and gender
2. *Cognitive diversity*—work, thinking, and learning styles, including extroversion/introversion, Type A/Type B personalities, and quick, decisive thinking versus slow, methodical thinking
3. *Structural diversity*—organizational background characteristics, including Service,⁷ work function,⁸ and component⁹
4. *Global diversity*—national affiliation other than U.S. (e.g., members of foreign military services and foreign nationals).

The use of this multidimensional definition of diversity follows the empirical research on group and organizational performance, which finds that a wide array of personal differences (such as background, occupation, or skill set, and employment history) can have significant impacts on production processes and outcomes.¹⁰

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7. The four Services are the Army, Navy, Air Force, and Marine Corps.
 8. Examples of work functions include operations, maintenance, civil engineering, fighter, and airlift.
 9. The organizational components are the Active Component (AC), the Reserve and Guard Component (RC), civilian Air Force employees, and contractors.
 10. Indeed, such research could not even address demographic differences until recently because the work groups studied, especially management groups, were overwhelmingly composed of white men. For more information on the evolution of diversity research, see [1].

Interview protocol

For each diversity dimension, the interview protocol includes one question addressing each of the three main issues of concern: the impact of diversity on work-group performance, the SKEs that respondents actually used to manage or leverage diversity, and the SKEs that respondents thought would have helped to better manage or leverage diversity. The questions for each dimension were worded slightly differently, as shown below:

- Demographic diversity
 - Describe any examples of how demographic diversity impacted work team productivity across identity lines, such as age, race, religion, gender, and ethnicity. (We are interested in positive, neutral, and/or negative effects.)
 - What SKEs did you bring to your deployment leadership responsibilities that affected your ability to enhance mission capability?¹¹
 - What other SKEs would have helped your deployment leadership capabilities to use demographic diversity to enhance mission capability?
- Cognitive diversity
 - Describe any examples of ways cognitive diversity impacted mission capability. (We are interested in positive, neutral, and/or negative effects.)
 - What SKEs did you bring to your deployment leadership responsibilities that affected your ability to use cognitive diversity to enhance mission capability?
 - What other SKEs would have enhanced your deployment leadership capabilities to use cognitive diversity to enhance mission capability?

11. As worded, this question does not ask about SKEs that affected respondents' abilities *to use demographic diversity* to enhance mission capability. Since most interviewers used this wording, many of the responses in the transcripts don't address actual SKEs used to manage or leverage demographic diversity.

- Structural diversity
 - Describe any examples of how structural diversity impacted mission capability. (We are interested in positive, neutral, and/or negative effects.)
 - What cultural skill sets do you believe are necessary or desired for optimizing "total force" capabilities? Please share with me why these are the most important to you.
 - What other SKEs would have affected your ability to use structural diversity to enhance mission capability?
- Global diversity
 - Describe any examples of global diversity that impacted the USAF ability to work effectively in the presence of foreign national/military cultures and norms. (We are interested in positive, neutral, and/or negative effects.)
 - What SKEs do you bring to the USAF that allows the USAF to use global diversity to enhance mission capability?
 - Beyond the SKEs you mentioned in the previous question, what other skills, knowledge, and/or experiences do you feel you need that would allow the USAF to use global diversity to enhance mission capability?

The sample

The sampling strategy for this study was based on the research goals and methodology, as well as funding constraints. First, the population of interest for this study was USAF personnel who had recently returned from being deployed in support of an operational mission (i.e., Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF)). The requirement that participants have operational experience clearly follows from the research focus on the deployment context. The requirement that this experience be recent ensures that recollections are fresh.¹² Second, this broad population of interest was substantially narrowed to only Servicemembers stationed in the

12. Most respondents had returned from deployment within 6 months of the interview period.

Washington, DC, area (at the Pentagon, Bolling Air Force Base, or Andrews Air Force Base) as of May 2005. This restriction was imposed due to lack of funding for travel. Based on a then-current list supplied by the personnel department, the target population comprised 102 officers and enlisted members from a wide range of Air Force Specialty Codes (AFSCs) and from both the AC and the RC. All Servicemembers on the list were contacted, and 37 chose to participate.¹³

In addition to answering the main questions from the interview protocol, each respondent provided information on his or her gender, age, race/ethnicity, position during deployment,¹⁴ years of service (YOS), and rank. Table 1 shows how the sample was distributed across both Service-related and demographic characteristics.

Although the data show that the respondents are indeed fairly diverse in terms of both their service-related and demographic characteristics, the sample cannot be considered representative of the Service as a whole. Indeed, the data show that, relative to the USAF as a whole, officers, women, and racial/ethnic minorities are substantially over-represented in the sample.

The general fact that the sample is not representative of the USAF is a direct result of the sampling strategy, which focused on recent deployment and current locality, rather than representativeness. The particular ways in which the data show the sample to be unrepresentative are specific to the research itself. It is likely that there is some sample selection bias based on the interests of the target population: Servicemembers who chose to participate are likely to have specific interests in or opinions about diversity issues.¹⁵ As indicated in the description of qualitative analysis, non-representativeness of the sample does not decrease the validity of the analysis.

13. The response rate of 36 percent was lower than the expected rate of 50 to 60 percent.

14. Information on position during deployment was not available for this analysis.

15. For example, many of the respondents congratulated the interviewers for the broad definition of diversity, suggesting that that was something they had wanted to put on the table.

Table 1. Service-related and demographic characteristics of respondents

Characteristic	Count	Share (%)
SERVICE RELATED		
Status		
Active Duty Component	27	73.0
Air Force Reserve	9	24.3
Air National Guard	1	2.7
Total	37	100.0
Community		
Officer	25	67.6
Enlisted	12	32.4
Total	37	100.0
Rank		
E1–E4	3	8.1
E5–E6	2	5.4
E7–E9	7	18.9
O1–O3	6	16.2
O4–O6	19	51.4
Total	37	100.0
Years of service		
0–5	5	13.5
6–10	1	2.7
11–15	8	21.6
16–20	10	27.0
21–25	8	21.6
25+	5	13.5
Total	37	100.0
DEMOGRAPHIC		
Gender		
Male	25	67.6
Female	12	32.4
Total	37	100.0
Age		
20–25	2	5.4
26–30	3	8.1
31–35	4	10.8
36–40	14	37.8
41–45	8	21.6
46–50	5	13.5
50+	1	2.7
Total	37	100.0

Table 1. Service-related and demographic characteristics of respondents (continued)

Characteristic	Count	Share (%)
Race		
Asian	3	8.1
Black	10	27.0
White	17	45.9
Hispanic	5	13.5
Other	2	5.4
Total	37	100.0

Methodology/analytical framework

The coding process

The coding process was designed to minimize individual researcher bias and to maximize the likelihood that important themes would surface. Specifically, coding was done in two-person teams. Each team member first coded on her own. Then, through discussion, the team came to a consensus on what the final codes for each interview should be. If a team couldn't reach consensus on a particular code for a particular interview, a three-person arbitration team was called to assign the final code. In addition, periodic calibration coding was done with all members of the research team to ensure that the coding schemes were being consistently applied. The primary coding was done by a team of three CNA researchers and one SAF/MRD staff member. Three additional researchers—two from SAF/MRD and one from CNA—participated in the calibration and arbitration processes.¹⁶

The coding schemes

Two separate schemes were developed: one to assess respondents' perceptions about the impact of diversity on mission capability and another to summarize their views on the SKEs needed to manage diversity.

16. We wish to express our appreciation to Chief Master Sergeant Cheryl Adams, Major Richard Cooney, and Dr. Amy Franklin-McDowell for their participation in the coding process.

The impact of diversity on mission capability

The Diversity Impact coding scheme focuses on respondents' perspectives on the impact of each diversity dimension on mission capability in deployment operations. The main impact code has two components: a number from 1 to 3 that indicates the respondent's level of engagement with the diversity/capability relationship¹⁷ and a sign that indicates whether diversity was perceived to have a positive or negative impact on mission capability. Thus, there are six symmetrical impact codes:

- **Category +1/-1.** Responses in category 1 express, in general terms, a moderate belief that diversity had an impact on deployment operations.
- **Category +2/-2.** Responses in category 2 give specific examples of how diversity affected mission capability. Responses in this category may also draw clear connections between the diversity dimension being addressed and specific SKE(s).
- **Category +3/-3.** Responses in category 3 include detailed descriptions of the impact of diversity and display the respondent's thoughtfulness and active engagement with this perspective on a deep level. Responses in this category also indicate that the respondent has a broad perspective on the overall diversity/capability relationship.

In addition to these six main coding categories, a no-impact code was assigned when respondents indicated that diversity had no impact on mission capability, and a no-response code was used to handle responses that did not address diversity's impact at all.

All codes were assigned based on respondents' descriptions of the actual impact of diversity during their deployments—not on their expressed beliefs about the potential or ideal impact of diversity. Therefore, in some scenarios, the perceived impact of diversity depended on how the diversity was managed in the work group.

17. In other words, the number codes are not intended to capture the level or intensity of diversity's impact, but rather the strength or reliability of the stated perception.

Diversity management SKEs

The SKE coding scheme assesses the extent to which respondents attributed the possession of diversity management SKEs to inherent personality traits, career experience, or formal training. The codes were assigned based on respondents' statements about both their own SKEs and the additional SKEs they identified as being potentially valuable for managing or leveraging diversity in their work groups. Therefore, the three main SKE codes are:

- **Code P.** SKEs are attributed to personal characteristics or personality traits.
- **Code C.** SKEs are attributed to career experience.
- **Code T.** SKEs are attributed or amenable to training.

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The perceived impact of diversity on mission capability

In this section, we describe and interpret respondents' perceptions of how each dimension of diversity affected mission capability during their most recent deployments. Although our coding scheme captured multiple layers of impact perceptions, we focus on only three basic impact categories: positive, negative, and no impact/no codable response. The discussion is organized by diversity dimension and impact category and, within each dimension/impact pairing, we identify the main themes that emerged from the interviews.

In addition, we provide summary data on the specific types of diversity addressed within each broad dimension. These data give more specificity and insight into which dimensions of diversity were perceived to matter during deployment.

Demographic diversity

Based on our coding of the interview transcripts, the majority of respondents perceived that demographic diversity did affect mission capability in their deployments. Specifically, of 37 respondents, we coded 13 as perceiving that demographic diversity had a positive effect on mission capability and 10 as perceiving that demographic diversity had a negative effect on mission capability. We coded 8 respondents as perceiving no impact associated with demographic diversity and 6 as giving answers we considered uncodable.

Types of demographic diversity

The broad category of demographic diversity includes many demographic characteristics that could be relevant. Recall that the interview protocol phrased the question by referring to age, gender, race/ethnicity, and religion. As a result, most respondents focused on one

or more of these characteristics. One respondent, however, did refer to geographic region of origin as an additional salient dimension of demographic diversity, and several respondents discussed demographic diversity in general or all-encompassing terms.

Table 2 shows how frequently each demographic characteristic was mentioned—both overall and by impact code. Age, race/ethnicity, and gender were mentioned with about the same frequency; however, while age and racial/ethnic diversity were about equally likely to be associated with positive and negative impact codes, gender diversity was more likely to be associated with positive than negative codes.

Table 2. Type of demographic diversity mentioned in interviews,^a by impact code^b

Demographic diversity type	Positive	Negative	No impact	No response	Total
Age	5	4	1	1	11
Race/ethnicity	4	4	2	1	11
Gender	8	3	0	0	11
General/all	2	0	2	1	5
None mentioned	0	0	2	2	4
Religion	0	0	0	1	1
Region of origin	0	1	0	0	1
Total ^c	19	12	7	6	44

a. Diversity types are listed in descending order of total frequency.

b. These counts are based on our assessment of whether the respondent's mention of a demographic diversity type was related to the impact code.

c. The overall total is greater than 37, the total number of interviews, because some respondents mentioned more than one type of demographic diversity.

Positive demographic impact

Respondents perceived demographic diversity, in its various forms, to have a positive impact on performance in a variety of ways. In some cases, demographic diversity affected how group members worked together to achieve their collective mission. In other cases, respondents perceived that team members made valuable contributions based on a particular demographic characteristic. Other respondents indicated that demographic diversity has important symbolic value.

Of the five respondents who described positive group dynamics associated with demographic diversity, three talked about age diversity. For example, one 38-year-old white male captain described how younger and older troops learned from each other:

I think in my situation we had a wide range of age diversity. We had young troops, a few older troops, not just in age but as far as young for their rank. But I think it was a positive factor in our deployment because we were able to draw on each other's experiences. And some of the younger ones that didn't have the experiences were able to give fresh ideas to the ones that had been in a while, who had seen things done the same way for a long time. So I think it was a positive even where we were able to draw [from] those experiences and work together to get the best possible product. Every now and then, you did run into that individual that had been doing things the same way for a long time and was unwilling to change, but that was a rare occasion. For the most part, we were able to draw from each other's experiences. (INT2)

Expressing the same idea, a white male E9 said:

Okay, diversity in the workforce, having a bunch of young folks—kids I call 'em—without any disrespect, but they are kids to me. They often bring new ideas and a great sense of enthusiasm....The young guys and gals are really enthusiastic about what they're doing, and the older guys and gals that remain around after the 20-year point are there because they care about what they're doing and sometimes either group can have a positive or negative influence on the middle: the Techs and Master Sergeants in the 12- to 16-year group. Some are not as enthused about what they do and some are pretty much just...tired of deploying. (INT33)

Two respondents talked about the importance of having older troops to provide experience and mentoring to younger troops. First, a 42-year-old female major spoke generally about the value of experience:

I would say age. It was a very positive impact because... [a]long with age comes experience level. You had your older people, more senior people who have that experience level, so we were able to help them to get to where they needed to be. (INT22)

Then, a Hispanic male lieutenant colonel with 31 years of service talked about his role as a mentor to the younger troops in his unit who had no previous overseas deployment experience:

I personally had experience in that area; many of my other colleagues did not. Many times I found myself in a mentoring position saying, “Okay, here’s how you want to approach these people, here’s what you need to do.” And that goes not only with the foreign nationals, it goes with the other Services also. Many of my colleagues had never worked with the Army, had never worked in a situation of a joint environment, and I think the joint training would have helped them a little more, as well as cultural training. (INT26)

Respondents also described positive group dynamics associated with other types of demographic diversity. For example, a white female lieutenant colonel described a productive group dynamic associated with both gender and racial diversity:

On a more positive note, with the diversity—mainly men versus women, African American versus Caucasian, and we had some Hispanic people in the office also. I think our diversity kind of helped bring us together. We really had a strong team. I think part of that was everybody brought a gift to the table and that built synergy, and I think we were able to work off that. And maybe that was just the personalities and the sense of humor and the background that we all brought. I think that we were able to get along and achieve our goal over there. (INT27)

An Asian male lieutenant colonel described how adding a woman to an all-male work group changed the group culture and helped the group better integrate with the other groups in the wing:

[W]e were a tight unit, but when she came in, she said, “Now it is going to be like this,” and I supported her. So the guys did not appreciate that change until a little bit later when they realized that we started becoming more integrated with this wing and they realized, “Hey, you know, look at all the things that she is doing. She is bringing the benefits of the larger organization back into our unit, the awards and recognition, ...and when the DVs¹⁸ come, making sure that we have the right protocol and making sure that the chiefs and the senior NCO¹⁹ groups are involved.” So that happened and it was because she came into the unit. So she was a

catalyst not only because she was a senior, but also she just brought a...different feel and a different touch. But maybe it was just more of the guys' club before that and then things changed. (INT19)

In other cases, participants perceived that members of different demographic groups brought specific, unique abilities to the table. A black female major noted the benefits of gender integration in her medical unit:

Gender. I think it was helpful with the tasking....If I was on an all-woman crew, it would have been much harder to ask a male to help with certain things that we just can't do. If I had seven women with no men I just can't do certain things. I think integration of my crew—this male and female—is very helpful to accomplish the mission. (INT22)

In two separate passages, a black male captain described different ways that women and people with different ethnic backgrounds brought specific attributes that improved the overall capability of the group. First:

I think also because of the nature of the culture, the fact that we had women also made a difference because there were instances where—you know...my role specifically was in the medical arena and as a gynecologist—we needed, I needed, a female chaperon. I preferred a female chaperon. So women as part of the diversity also helped. (INT8)

Second:

For example,...our group included people of ethnicities that spoke the native language where we were and were able to serve [as] interpreters in addition to local interpreters.... That was specifically...as I said to you ethnicity because of those language skills. (INT8)

Finally, two respondents indicated that demographic diversity among American troops abroad has important symbolic effects. First, a black female major described the value of showing that people who are

18. "DVs" are "distinguished visitors."

19. "NCO" stands for "Noncommissioned Officer."

demographically different can work together to achieve a shared objective:

I would say [demographic diversity] is very important because what it does is show that different people with a lot of different things going on—a lot of different ages and the two different sexes—even though they have different ways of thinking, they can still work together to accomplish a goal. In Iraq, it was Saddam's way, or no way, whereas what we brought to the table was all these different types of people, and they were all working towards the same goal and enjoyed working together and they were happy and passionate about their work. (INT14)

Second, a male major of other race took an even bigger-picture perspective and described the demographic diversity of the American forces as symbolic of the goals of the overall mission in Iraq—that is, to spread democracy and freedom:

I think, number one, having the demographics there, the diversity in demographics is not only important for us in terms of how we do our mission but I think it needs to be a visual representation to wherever we're at. So we can't say be democratic, be...you know...we accept all cultures if the forces that we send are all blond haired, blue eyed, and white. It's contradict[ory] to what we are saying. If we have a female as a commander or leader, if we have someone of color or someone of a non-majority religion in levels of responsibility, of senior responsibility, then I think it sends a clearer signal that there is weight behind the words we provide. And that's a huge factor, I think, when it comes to trying to win over a people or show a whole nation where they need to go or the direction they need to go. (INT1)

Negative demographic impact

Respondents described two general ways in which they perceived that demographic diversity had negative effects on mission capability. The first was lack of skill associated with a particular demographic characteristic, and the second was reduced communication, sometimes based on bias.

Of the ten respondents we coded as describing negative impacts, three talked about age diversity. In two examples, the respondents

indicated that age—being either too old or too young—made people ineffective in the intensity of the deployment environment. For example, a 40-year old black male lieutenant colonel doubted whether younger members were experienced enough or adequately trained to carry out their assignments:

[A] lot of those folks who were doing the refueling or driving the trucks are very young folks, you know maybe fresh out of high school. And they're just—their experience level isn't quite there. And I think that you know the experience level is directly related to their age being that they just—they don't have the experience. So they're not fully aware of what's going on and so just their job knowledge isn't quite there yet. You know, maybe they shouldn't quite be there yet if their job knowledge, their level, is not up to where it needed to be. Because, you know, harsher conditions of deployment might possibly affect that. (INT7)

At the other end of the spectrum, a 38-year-old white male captain perceived that some older members were not physically fit enough to perform their job tasks:

[I]f there is any impact on mission accomplishment, the age factor may come into play. And, the only reason why the age factor would come into play is working in the total force environment out in a deployed situation where you may have some reservists or Air National Guard that you know, quite frankly, are a little older than some of their active duty peers and may not be in the same physical shape to carry out a mission in a deployed location. (INT3)

A third respondent, a black male 43-year-old E9, described a situation in which age diversity in the unit created issues within the command structure:

Now that we actually deploy with the Guard and Reserve (which is a good thing), there were several others that were so much older than the rest of the active duty people. And a lot of times, I think some of the older guys had problems, you know, taking orders, if you will, from the younger. (INT6)

Note that both respondents who described negative effects associated with older people in the work group attributed their presence to

greater interaction between the Active Component (AC) and Reserve Component (RC).²⁰ Thus, in this case, increased structural diversity in the deployed situation had an impact on the type and amount of demographic diversity.

Other respondents described situations in which demographic diversity impeded communication. (Communication difficulties are a primary cost of diversity, according to the literature.) In two cases, senior leadership seemed unable to hear, or accept input from, people who were demographically different from themselves. First, a white male major described a base commander who was biased against members of demographic groups other than his own:

Big picture is, I think whenever the demographic is the ruling focus, it often invites negative effects. And that's what we experienced at the base. We experienced negative effects because that individual came in with a centered bias on his own demographics and it effectively brought the entire operation to a halt. It was unfortunate [that] he had to be removed, but it was a very painful experience for all of us. But the underlying effect was we focused strictly on this demographic. If you were not a member of this demographic, then you had no say. I'm trying to think of a proper word. The positive side of that experience was it helped gain insight into where some folks of other demographics than myself may have perceptions and issues. I mean, so, I guess there's always a positive side to the experience like that. But it was very negative and it did bring the base to really a dangerous level in terms of mission capabilities. (INT25)

Second, a white female E8 described feeling that her subject matter expertise, although acknowledged in her immediate work group, was not respected by senior leadership because of her gender:

I think there might have been questions of a female's capability of being involved, and I'm talking about me. I represented the team at the meetings and it was in my opinion from the officers that I was communicating with that the word of [inaudible] wasn't good enough....Regardless of...the fact that I am at the age of 20 years of active duty, it's

20. The RC, or Reserve Component, encompasses both Air Force Reserve (AFR or RES) and Air National Guard (ANG).

almost still as if you don't have the capability to do the job. But that was the bigger population. The smaller population again that I was working with...[saw] that I had the capability,...that I could get the job done, and had no problems accepting it. (INT28)

Two respondents described situations in which work-group members formed cliques based on race/ethnicity and other demographic characteristics. In the first case, a white male first lieutenant indicated, with some ambivalence, that this process caused some group members to disengage from their work:

I would say that the only experience that I had in my environment was along the lines of race where I saw basically cliques you would form within the work center as far as on-duty and off-duty performance. I don't believe there was a detriment at all to the work environment; however, I did notice more of a lack of wanting to participate, so to speak with, like a flight function in my instance, where they just prefer to go off and do the wrong [thing] versus participate [in] more of a group setting. I'm not sure if that was based on a rank structure, but there was definitely demographics involved as far as certain ethnicities, if they bound together while I was over there. (INT29)

In the second case, a white male E7 described cliques that formed on the basis of home base region of origin:

Yeah, we had 100 troops under age 20. Ah, all ethnic backgrounds, all races, all everything, and that led to an immediate mix of people that may have never been together. Some of these people have been in 6 months or 4 months. This was their first time in a big unit with a big group of people and everything else. At first, people kinda sorted into their own separate groups and I would say it wasn't so much by race, but it was more the base they came from or coast. They were all from the east coast and they were from the west coast and things. (INT36)

The respondent went on to indicate that the negative impact in this situation was on communication and ease in forming work groups, but that this effect diminished over time as people worked together. Eventually, the work groups created to carry out the mission substituted for the early cliques that were based on demographics:

I would say certain groups wanted to stay with certain groups of people. And this was really what happened at first. What happened in that type of job, you're put on a post for 12 hours a day to watch someone work, you're gonna talk; it's just a matter of time. You're gonna sit with someone, even if you hate that person, 12 hours in silence? You're gonna talk. So, that was definitely towards the beginning. As people got posted more and got swapped around more, the cliques actually almost became the elements. We had three elements. People were protective then of their element because those were the people they worked with and shared shifts with. (INT36)

Finally, two respondents described situations in which performance issues were not addressed because they were complicated by demographic issues. In the first case, a Hispanic male colonel described a fellow Hispanic who did not get support he needed to do a job for which he was not trained:

[A]s a Guardsman, and maybe as a Hispanic, he wasn't about to volunteer and say, "Well, hey, you know, I'm being put in a tough position here. I'm trying to do the best I can but I'm really not qualified for this. I'm learning on the job." He wasn't forthcoming with that information. So I think had we been more proactive, understanding his particular personality, his strength, his skills, his training, we could maybe have avoided that. Because clearly, he was providing benefit to the ops²¹ center, but he wasn't trained for that position. They ended up moving him out of the ops center to another position entirely. So, it did impact us because we ended up having to move them all out of the ops center. So his position was unfilled for weeks before we could actually train someone else that is qualified for that position. (INT23)

In the second case, a Hispanic female senior Airman described a situation in which another young woman experienced overt negative treatment in her work environment, but she was not supported by her supervisor:

[I]t was like the whole time that I was there, I felt like the boys versus us females....Like, they would make us feel like we're stupid, like we couldn't do anything. Like I can't really

21. "Operations" is often abbreviated as "ops."

remember the jokes, exactly and stuff, but they, they were kind of, like we felt degraded; like we felt it was wrong in being there at that time. That's how they made us feel, like we couldn't do anything....It wasn't really more towards me. I mean it felt like that at times, [but] it was more towards the white girl. I guess she had short-term memory, and she would forget things, and they would kind of get on her about that and she would cry all the time. And I was like, "Why isn't her Supervisor trying to support her, or talk to her and see what's going on instead of blending in with the group and just ignoring her and not doing what I would think is a leader Supervisor?" But that's my opinion. (INT30)

No demographic impact or no codable response

Most of the respondents to whom we assigned a no-impact code gave short, direct responses that clearly indicated they did not believe that demographic diversity had an impact on mission capability. Two examples of this type of response were: "I think it was basically a non-issue" and "Nothing in particular....No, nothing I can think of that was impactful. No."

Responses that were considered not codable either addressed some other dimension of diversity or described scenarios in which demographics were a factor, but the description wasn't specific enough for us to infer that there was an impact on mission capability. For example, a black female senior Airman indicated that some members were surprised, and perhaps threatened, by the fact that a majority African-American work group could perform effectively. She said:

Specifically, from when we were forward deployed, the vast majority of our members, say 70 percent, are African Americans or black, and going into the location we replaced a lot of people who were from a variety of different bases that were primarily white Caucasians or others. And there was a little bit of talk about how we did feel a little bit of animosity that we came in, manned the airport, and did a good job of it, and we are primarily African Americans. (INT11)

In another example, a white male captain described the personal and social benefits of having team members with different backgrounds:

Now, of course, when we're in the AOR,²² you pretty much become family with people that you're with. [W]e had a black female on our team and a white female on our team, and it was interesting, their story....I don't think it had anything [to do] with their race per se, but it definitely helped us in our daily lives in speaking to us and the different cultures that they had. And it certainly helped when you're deployed, when you have different folks from different areas....It was just in the conversation, I guess, from being from different areas. We went to service together, and she had a different way she worships, and I had a different way that we worshipped. And we were open in talking about how it mattered with race, but it was interesting. It helped in discussion and conversation, and getting us through the 90 plus days. (INT31)

Although we did not code either of these scenarios as having an impact on mission, they do illustrate that there is some variation in the diversity climate and in perceptions about racial/ethnic diversity across the force.

Cognitive diversity

As with demographic diversity, we coded a majority of respondents as perceiving that cognitive diversity had an impact on mission capability during deployment. Of 37 respondents, we coded 13 as perceiving that cognitive diversity had a positive effect on mission capability, and we coded 12 as perceiving that cognitive diversity had a negative effect. We coded only 2 respondents as perceiving no impact associated with cognitive diversity, but there were 11 respondents whose answers we considered uncodable.²³ In fact, there were more uncodable responses to questions about the impact of cognitive diversity than to questions about the impact of any of the other three broad diversity dimensions. We discuss possible reasons for this result below.

22. "AOR" is defined as "Area of Responsibility."

23. The total number of codes adds to 38 rather than 37 because one respondent gave two examples of how cognitive diversity affected mission capability. One scenario described a positive impact, and the other described a negative impact.

Types of cognitive diversity

The interview protocol defines cognitive diversity as people’s work, thinking, and learning styles, and it refers to extroversion vs. introversion, Type A vs. Type B personalities, and quick, decisive thinking vs. slow, methodical thinking as examples to motivate that definition. In addition to the examples mentioned by the interviewers, respondents also described their own types of cognitive diversity; table 3 lists all the named cognitive diversity types that were associated with cognitive diversity impact codes.

Table 3. Type of cognitive diversity mentioned in interviews,^a by impact code^b

Type of cognitive diversity	Positive	Negative	No impact	No response	Total
Quick (decisive, intuitive) vs. slow (methodical)	3	2	0	2	7
General personality	1	2	1	1	5
Aggressive/proactive vs. passive/reactive	2	1	0	1	4
Style and approach based on background	2	1	0	1	4
Other ^c	2	0	0	2	4
Type A vs. Type B	2	1	0	0	3
Ability to innovate/improvise vs. inability to do so	2	1	0	0	3
Learning ability ^d /level of preparation	0	2	0	1	3
None	0	0	0	3	3
Introvert vs. extrovert	1	1	0	0	2
Total ^e	15	11	1	11	38

a. Listed in descending order of total frequency.

b. These counts are based on our assessment of whether a respondent’s mention of a cognitive diversity type was related to the impact code.

c. “Other” cognitive diversity comprises four types of diversity that were mentioned only once each.

d. Learning ability refers to both learning speed and learning style.

e. The overall total is greater than 37, the total number of interviews, because some respondents discussed more than one type of cognitive diversity.

The most frequently mentioned type of cognitive diversity was variation in work pace—that is, being quick and decisive vs. slow and methodical. Furthermore, if being aggressive vs. passive and being willing and able to improvise and innovate vs. being unwilling or unable to do so capture the same concept, work pace was even more dominantly salient than the table’s presentation of the data suggests.

The examples of how cognitive diversity mattered in deployment indicate that this is a reflection of the high intensity of the combat environment.

More generally, respondents were most likely to characterize cognitive diversity in terms of inherent aspects of a person's personality, either in general or with respect to specific traits. Some respondents, however, described cognitive diversity in terms of the training and other life experiences that shape a person's approach to work and problem solving. As a result, there is some overlap between cognitive diversity and other types of diversity, especially structural.

Finally, respondents discussed cognitive diversity in more varied terms than they discussed any of the other three broad diversity dimensions. Indeed, the "other" category includes four types of cognitive diversity that were mentioned only once each. Combined with the relatively large number of uncodable responses, this apparent struggle to narrowly define cognitive diversity suggests that it is the least well understood and most all-encompassing of the four diversity dimensions of interest. We hypothesize that the ambiguity associated with cognitive diversity results from the fact that such terms as *Type A personality* and *learning style* originated as carefully defined scientific terms but have been adopted for popular usage with interpretations and levels of understandings that vary among users.

Positive cognitive impact

Respondents who described positive mission effects associated with cognitive diversity discussed the group dynamics in their units and the benefits of having multiple skill sets and perspectives from which to draw in order to achieve the mission.

In terms of group dynamics, several respondents perceived that cognitive diversity, in the form of personality type, brought balance to their work groups, while cognitive homogeneity had the potential to create conflict. For example, a white male captain described how a group dominated by extroverts tended toward conflict until the introvert stepped in to restore balance:

...And on top of that you have to deal with your introverts and your extroverts, your Type A personalities. In protocol,

most of our personnel are Type A. We all strive for excellence, we all, you know, want to get things done and we all want to leave. So that is another challenge when we have those same individuals in the same office, all trying to strive for the same thing, sometimes you get that conflict where, you know, not everybody can be the leaders....

[W]e were very fortunate that even though we had the Type A's, and most of us were extroverts, we only had one that was kind of an introvert....And what I think, you still need that introvert because they kind of bring that sense of reality back sometimes and say, "Hey did you think about this? Or how about this?" Because we, as extroverts, or as Type A's want to just, you know, do the world and, you know, do things to a level that sometimes it doesn't need to be done. And I think that introvert sometimes brings that added plus to an environment. (INT2)

Along these lines, a black male captain described the value of having both leaders and followers in the group:

[S]ome of the personnel that were in our unit were more, more actively involved and more doers, and I think made some difference because they were kind of able to take charge of situations that we were in and motivate people to do what needed to get done. (INT8)

A third respondent, a Hispanic male captain, indicated that cognitive diversity is particularly important in deployment because personality traits can be magnified when stress levels are high:

I guess a good mix will be appropriate because some of us were on kind of the quiet side, so when things got heated up we were able to slow down and think and then not act. I guess people were stressed, so I guess this extroverted more than introverted side of people comes out. (INT13)

In terms of mission achievement, a number of respondents indicated that diverse approaches to problem solving enhanced creativity and innovation. A male major in the Air Force Reserve (AFR) introduced this notion in very general terms:

[W]hen I go to hire people in my civilian job, I look at diversity. I don't look at diversity just in the sense of, you know, race or age or, you know, sex or whatever. I look at diversity

in what's your background, where did you come from, what did you study—you know, what you're thinking. I mean I don't want to, in dealing with policy issues, I don't want to have people think, everybody thinks like me. I prefer...not to have anybody [who] thinks like me. We're all different, we all bring something different to the table. And so what I've learned in managing over the years is that you want to have people with differences in opinions and different, different backgrounds. You know, if I've got an MBA and a law degree, I want to get somebody who has a public administration degree and maybe a philosophy degree. So, you know some, to counterbalance that, so that when you're looking at an issue, you can look at it from all four ways because you can get the synergy to build something better. (INT21)

Two other respondents gave specific examples of the importance of cognitive diversity in the deployed environment. In the first example, a black male lieutenant colonel described how difficult it is for pilots to deviate from established procedures in environments that call for improvisation and innovation. In this case, cognitive homogeneity may have stifled creativity:

When you're in a deployed location, you sometimes do what you can to make the mission work. It's not especially in the flying world, there are so many rules and regulations that we live by daily here flying in the States or locally. Now, when you're in a location like that,...there's plenty of rules and regulations that you're governed by, but there is also a lot more gray area. And there is, there become situations where you have to do whatever it takes to get the mission done. And I'd say that being able to come up with those ideas and that cognitive thinking of... Most pilots are Type A personalities, and so their creativeness is sometimes, sometimes maybe not there. We are very set in our ways and so when something is not normal, it takes a little bit for us to go out of the norm and think, and maybe think a little bit outside the box. (INT7)

In the second example, a colonel from the AC described the value of cognitive diversity that came from working with not only members of other Air Force components but also members of the other Services and people from other countries:

The value was, by having all that diversity there, in terms of the way people thought, in terms of backgrounds. Some people were much more rigid in their thinking. You could see that in some Services where you go, you kind of characterize it. After awhile, this was not really preconditioning. After awhile it's like, "Okay, I know what the Marines are going to think, I know what the Army would say. I think I know what the Navy might say, blah, blah, blah." Anyway, the point is there's a lot of diversity from these communities, but it really helped in the decision-making process because they all had different ideas and perspectives. And we could sit there and sit back, as well as have an open mind to consider all of them for what they bring, and then try to make the best decision. So, it was a huge plus in my mind to see that diversity continue. Again, from Guard type of duty to Reserve to other countries, to the local nationals. That was always fascinating to hear. We all had our own ideas. ... (B)ut we always wanted to hear what would the local nationals who lived there think, who had a real stake in what was going to happen, from that perspective. (INT23)

In these two examples, the general cognitive diversity type was diversity of perspectives, and the perceived source of the diversity was not personalities but group members' functional backgrounds, Service affiliation, and country of origin. As such, either of these responses could have been coded as part of structural or global impact. We chose to include them in the coding and discussion of cognitive diversity because the respondents themselves characterized these differences as aspects of cognitive diversity and because they serve as examples of how the lines between the different diversity dimensions are not always distinct.

Another set of respondents indicated that different types of people are needed for different roles and different environments, and that cognitive diversity among the troops made it possible to fill assignments appropriately. In the first example, a male captain with previous enlisted experience described the importance of having some group members who could take a strategic perspective and others who could take a more operational approach:

Certainly, as an officer, my cognitive thinking was on a different scale than my two enlisted folks that I had with me.... I have never been a personnel team leader before, yet

these other two individuals had been on personnel teams and, in fact, one had been deployed four or five times. So she had the knowledge and skills to run a personnel office; she probably could have run the office. However, she didn't have a lot of leadership skills. And cognitively I had to think outside of the box and, I think, more strategically than she was just thinking. You know, I had to think how this affected the Army there, the Marines there, and the different offices that we were placed in. Where she just thought about keeping them on the personnel that we were responsible for tracking. Cognitively thinking, I had to be more aggressive. I had to be more skilled in communications than she did, or both of them did. It was easier for me to work with the other officers and the senior officers at that level of command of where we were. (INT31)

In this example, the sources of cognitive diversity were training and rank, and the strategic and operational roles were filled on that basis. In the next examples, respondents describe situations in which identifying the right person for each role was not so straightforward and, in these contexts, the positive benefits of cognitive diversity were dependent on proper selection and assignment. For example, another male captain talked about the importance of knowing how to use people as assets to accomplish a mission:

I think PME²⁴ basically helps you...identify...those leaders, you know, leaders and followers, and, you know, the various personality traits that folks have. And with that in mind, you know, you recognize what's going on within your unit or the people that you're working with, and you go from there. If I'm in a leadership position—and in a couple of my deployments I have been—where I've been leading a bunch of folks, we just tend to....You don't identify individuals based on (well, at least I don't identify individuals based on) race, color, or creed, religion. I identify individuals with assets and what type of capability they bring to the fight. Okay? And if person X is a follower and person Y is a leader, would be a good manager, then obviously I'm going to place person Y in certain positions and I'm going to put person X behind the line so that they can follow along and go from there. (INT3)

24. "PME" is the abbreviation for "Professional Military Education."

Other respondents described how assignment choices vary depending on the task and the setting. First, a female major described a scenario in which she, as the team leader needed to be quick and decisive, but some of her group members did not. By assigning people appropriately, she was able to create a well-functioning team:

We flew as a seven-man team, and on that seven-man team I had a wide diversity. I was the medical crew director on all our missions. I'm classed as Type A: I'm anal retentive, I'm to the point, I'm direct, I'm a quick thinker, I have to think on my toes. That's the way I am. So I would handle those type of situations vs. my flight nurse may not have been a quick thinker. And I have several flight nurses who weren't, and they were responsible for overall patient care. They did not have the responsibility of rapid decisions that needed to be made. They were focused on patient care, so that a lot of them from the time within the way that they function and think okay, "This patient needs....I can think about it, I have a 13-hour mission. I've got 13 hours to accomplish my goal." And, you know, and then I had techs who were supporting me....What we did in my crew is we always sat together and we talked. What was my strength, what was my weakness? Who did something better? (INT22)

Another respondent made a similar distinction between fast, decisive thinkers and slow, methodical thinkers. In the opinion of this male major, the latter contributed best in the planning stages of an operation, while the former were needed to carry out the mission:

I believe that sharp, short thinkers impacted the mission in a greater capacity than slow cognitive thinkers. I think that the people that took a deliberate amount of time were extremely effective at a planning stage but in an implementation stage, I think you need to be sharp and quick on your feet.... [I was] a medical crew director so I was in charge of seven AE²⁵ Members. I was in charge and responsible for determining who was sharp, quick, and valuable as opposed to people that were slow, deliberate, and maybe not as contributive. So, yes, I had a very huge role in skills, knowledge, and experience required of me to be able to determine those things to get the mission accomplished. (INT12)

25. "AE" stands for "aeromedical evacuation" or "air evac."

Finally, selection could be made more complicated in deployment situations when time for evaluation and training is short. For example, a female lieutenant colonel described a successful tradeoff between initial training time and later performance and commitment:

[A]gain talking about thinking and learning, we had one individual in our office that was a civilian. He was a technician level, not in a leadership position; more just doing the work. And he came over and he really had a tough time. I thought I was going to have to send him back home. In fact, I had mentioned to my boss, "I think we're going to send that fish back." And for whatever reason, my boss saw some redeeming qualities in this individual and said, "Okay, let's watch, let's see."

The challenge is over there, when you get there, you've got to hit the ground running. There really is not a lot of random time. You've got to learn on the run, and you're expected to perform from day one. This individual...was very slow. You had to repeat over and over. He made many mistakes; we had to correct the mistakes. And of course, again, you're working 15 hours a day every single day; you don't have time. But the bottom line is we took the time to train him and, you know what? He turned it around. Believe it or not, by the time we left there he really was performing well. He was performing outstanding. He was performing at a level that was valued. And it really ended up being a success story because he ended up staying. He came over for a 6-month stint and then he extended for like 3 more months. That's always good over there because the turnover is so great that you have to have that continuity. But kind of like, once he got it, then he could perform. And I was really glad that my boss said, "You know, let's just see." And I think what my boss saw in him was that here's a civilian that has volunteered. He did not have to be there; he was not ordered like the military are. And I guess this civilian felt, because maybe he had to retire too early from the military, he had a calling. He wanted to serve his country. And so we kind of gave him, maybe, a little bit more leeway to get on board and it ended up being very positive. He also ended up being one of the most loyal. Because you know how it is, you bond over there and because he had been like a knucklehead when we first got him. It took about a month (which is forever over there, by the way) to kind of get him on board, but once he did, it was like, "Okay, you have proven yourself. You are strong now." (INT27)

Negative cognitive impact

In general, the perceived negative impacts of cognitive diversity were expressed as negative versions of the positive impacts. Specifically, respondents described unproductive work dynamics associated with cognitive diversity and scenarios in which the selection process did not result in having the right type of person in a particular assignment.

Starting again with group dynamics, some respondents indicated that, instead of creating balance in the work group, cognitive diversity created friction. In the first example, a female senior Airman described conflict in a group made up of extroverts and introverts:

Definitely I think that within our group that was a big issue because we had a little bit of extremes on both ends. We had a lot of introverts and a lot of extroverts, and they clashed quite often. And, to give an example, within the passenger service terminal we had some people who were go-getters—"I'm going to go out there and I am going to do the mission"—and were pretty much gung ho, while others were more...getting the job done a little bit more laid back as long as everything is good to go....[H]ad a couple of meetings regarding that. It escalated a little bit and had to resolve the problem at the lowest level, which wasn't a problem. We had a lot of inter-riffs within each other, stress was one thing but it's different personalities....[W]e feel a love for each other and we've been together for years and years, but when we get into a stressful environment, the personalities definitely take over, and in such close confined conditions and deployed location, it was definitely evident. It was actually very interesting to see everybody in their element and how everybody's personality just brought out a little bit. (INT 11)

Another respondent, a female major, indicated that cognitively homogeneous groups functioned better:

[W]hen I say air evac crew, I mean we have two nurses and three med techs. And usually if you have a group of five who are alike in personality—whether that be Type A or Type B—the work gets accomplished better. They tend to work better as a team. I think from my own experience...when you have a 5-man crew that you have different types of personalities, then, you know, I think that can be an

impedance....The mission will still get done, but it is a little rockier. Versus if you have five Type A's and then I will tell you things go smoothly, things get done, we are ready for the mission. If you have Type A and Type B mixture, you know, there is a lot of discussion. Things still get done, but the pace is definitely slower. (INT 17)

A third respondent described a situation in which group members chose to work around a single member who did not fit in. According to this male major, the result was lost potential contributions:

There was an individual who worked...he was a contractor... and he had a very abrasive personality with his co-workers.... He was a retired sergeant major. He just had issues. I think part of it was insecurity. So he relished calling officers by their first name and he challenged them. He had retired E8's and E7's who worked for him. He just had a different way of thinking, you know. Everything was driven by the contract and reality could not interfere with that. He was very abrasive with officers in most cases, other contractors and sometimes with the Afghans, including Afghan general officers. So I think a lot of people shied away from him....He did some good things; he also damaged. He could have done more. (INT24)

Moving to issues of selection and assignment, several respondents indicated that cognitive diversity in the force introduced the possibility that the wrong person could be selected for a given role. For example, two respondents talked about lost opportunities due to indecisive and passive leadership that was inappropriate during deployment. The first situation is described by another male major:

[I]n any organization, it's going to take on the morale, the personality of the command. It's going to be based upon the commander himself. And, you know, the commanders that we had, some were very outgoing who were able to motivate the troops, able to identify with what the mission was and where we fit and, therefore, we had a sense of where we needed to go. Other commanders were not like that....They were there and knew they had a job to do, but you never really knew what was going on in their head and therefore we were always kind of...we were never a straight line. We always kind of wavered trying to get to that final solution of whatever that mission requirement was. Whether it was develop a plan, but really what is the plan that you want us

to develop? Why exactly do you want us to do something so that we could formulate it better? So there wasn't, you know, some of the things, you had extrovert vs. introvert. I think that extroverted commanders...were able to kind of gather that momentum a little bit easier....[B]ut at the same time you have folks that, if it's important and if it's upcoming, you have to have those quick, decisive thinkers...[that are] able to make a decision regardless of how good that decision is... on, you know, 50, 60, 70 percent accuracy of information you're getting. Unfortunately...because it seemed like their career may be on the line or they're worried about the outcome, they always try to wait for that 100-percent solution. And we have lost many opportunities because of that. And while here, I mean it's easy to say that because it's kind of, it's quiet. But there, you know, you're operating in a different environment. (INT1)

The second scenario is described by a male first lieutenant:

I was over there; the Commander that we had was—how do I want to say?—laid back, a little bit more on the passive sense, and we all got along. We thought he was a great Commander and then, to our surprise, on New Year's Eve he got fired. And then they brought in a new Commander—about 30, 45 days later—and basically to fix what they foresee as the problem, the lack of leadership. Initially, we were all taken aback....It wasn't until probably about 45 days after the new Commander came that we realized that the leadership style of the previous Commander might not have been what we initially thought it was. I think, looking back, the Commander that was relieved of duty was not pro-active in a lot of his decision-making and not moving the train where it needs to go. And I'm not sure what. There was an incident that may have been the final straw in being relieved from duty that was probably just set up at a high level function....It was at that point that we as leadership and senior NCOs over there realized that there really is no room for errors in the leadership style of having the vision constantly out there. This is where we are going and leading us vs. when the previous Commander, we were kind of just....We had some goals and some things we were doing, so it was more kind of we were going at our own pace. Whereas, when the new Commander came in, he was more directive. This is what we are going to do, very demanding. He kept on reminding us, this is a wartime environment, and I think that kind of got us back in the, the mind set to go forward. (INT29)

A female colonel talked about the extra time it took to ensure that people were assigned to roles for which they were well suited:

Those folks who have a quick intuitive reasoning style identify solutions to problems and are pretty confident based upon inferences and things of that nature. They can get you out of situations and make tactical choices without always coming to a commander. They can solve the problem out there if you empower them. And they by...and large are extraordinarily valuable. But occasionally in the Air Force we don't respect that leadership style. Because it sometimes appears just a little bit non-conformist. However, I will tell you, if your security forces don't think and act for themselves, sometimes the situation gets ahead of you and you need local decision-making....And oftentimes it's not a methodical thinker to do that. It is a person who has been trained and given that responsibility.

Across an entire wing there are places where you need methodical thinkers. You cannot deviate from just habits. And out in the flight line you have to have a very structured day that's very rule based, very pattern based, very important to do that and do that with an attention to detail. There are other places that are more planning in nature, planning a month ahead like in civil engineering, and some of the other places. So I spent a fair amount of time getting the right people in the right place.
(INT5)

Note that, although this response does acknowledge the need for different types of people for different assignments, it was coded as negative because the respondent focused on the extra time it took to get assignments right and because she indicated that cognitive diversity had only moderate overall importance.

Finally, in contrast to the success story about the slow learner who grew into a productive team member, two respondents described situations in which the desired level of productivity was never achieved. The first example is given by a male technical sergeant in the AFR and relates to general poor performance:

We talked about this yesterday with someone else. I had a problem with learners. There were things that were learned and talked about every day and when something came up and it wasn't done, I'm like, "We've been [here] 2 months—how come? We talk about this every day, I don't understand." So, I

had a problem [with] people not catching on as fast as I thought, or if you've been doing the same thing every day, why are you still doing it wrong? That was my experience. (INT9)

The second example is given by female senior Airman and involves issues associated not only with learning speed but also with learning style:

There were times when we would receive like reservists, they were Army Reserves, and I remember one time we had three of them, three Army guys....Two of them were really good, because we trained them and they actually did the job very well. I mean they made mistakes, but they were only there for 2 weeks. Then the other reservist, I think he had potential, I mean I tried showing him stuff...but I think our team or whatever, we like probably made him feel stupid....A fight...almost broke out between that reservist and one of our guys we got deployed with. And I think it was just, I guess he was the type of person where, I mean....Like I am more hands on; if somebody were to tell me to do something, I'm not going to know exactly what to do unless I've done it before, I mean hands on. There are some people that are [seers] and they can do it by seeing or hearing, whereas I'm more hands on. He seems like he's more hands on, but everybody just expected him to do everything like that. Because he did show potential....He did show that he wanted to help and everything. But, there were times we were like, "Just give it up to us, we'll handle it. Just sit there in the corner and just look stupid or whatever." (INT30)

Note that in this example, the slow-learner problem was exacerbated by the very short 2-week assignment length.

No cognitive impact or no codable response

Only 2 respondents indicated that cognitive diversity had no impact on mission performance, but 11 gave answers that were considered uncodable. About half of the uncodable responses either reflected a lack of understanding of the concept or didn't provide enough detail to say whether there was an impact on mission performance. Four of the uncodable answers reflected an unwillingness to acknowledge a place for cognitive diversity or an inability to see beyond individual effects. The last response in this category discussed AFSC-specific differences and was included in the coding for structural diversity.

Structural diversity

Based on our coding, the vast majority of respondents perceived that structural diversity had a significant impact on mission capability. Specifically, we coded 14 respondents as perceiving that structural diversity had a positive effect on mission capability; we coded 19 respondents as perceiving that structural diversity had a negative effect on mission capability. We coded only 2 respondent as perceiving no impact associated with structural diversity and only 4 respondents as giving answers we considered uncodable.²⁶ Structural diversity is the only diversity dimension for which we coded more responses as negative than positive.

Note that the total number of codes assigned exceeds the number of interviews because, in a few cases, respondents described more than one scenario. Based on our reading of the interviews, we infer that the existence of multiple codes per interview, combined with relatively few no-impact and no-response codes, reflects the relatively narrow, concrete definition of structural diversity and the fact that there is an obvious basis for comparison: There is significantly more structural diversity in the deployed environment than in the typical home base environment. As a result, most respondents had specific examples of how structural diversity affected unit performance.

Types of structural diversity

Structural diversity is more concretely defined than demographic and cognitive diversity, and there are fewer types. Table 4 identifies the different types of structural diversity and shows the frequency with which each type was mentioned by the respondents. The data show that respondents talked most about the variety of approaches and management policies associated with joint operations (i.e., Service diversity). It is this diversity type that is associated with the largest number of negative impact codes. Diversity based on Air Force component and job function were the next most frequently discussed and were mentioned with similar frequency. A handful of respondents talked about military-civilian and interagency issues.

26. As with cognitive diversity, there are more than 37 impact codes for structural diversity. Again, this is because some respondents described multiple scenarios with different impacts.

Table 4. Type of structural diversity mentioned in interviews,^a by impact code^b

Structural diversity type	Positive	Negative	No impact	No response	Total
Service	9	13	2	2	26
Active Component vs. Reserve Component ^c	5	6	0	2	13
Job function ^d	4	5	0	1	10
Military vs. civilian/contractor ^c	2	0	0	0	2
Interagency	1	1	0	0	2
Total ^e	21	25	2	5	53

a. Diversity types are listed in descending order of total frequency.

b. These counts are based on our assessment of whether a respondent's mention of a structural diversity type was related to the impact code.

c. The general diversity type, AF component, was divided into two categories: AC vs. RC and military vs. civilian.

d. For example, AFSC or platform.

e. The overall total is greater than 37, the total number of interviews, because some respondents mentioned more than one type of structural diversity.

Positive structural impact

The responses we coded as indicating a positive impact from structural diversity, in its various forms, described some notion of increased capability due to the presence of a broader range of perspectives, experience, or skills.

Three respondents described situations in which structural diversity generated better solutions because people from different specialties, components, Services, and agencies brought a variety of perspectives to bear on the problems at hand. First, a major in the AFR described contributions made to an aeromedical evacuation mission by players from multiple AFSCs:

[Y]ou do get different structures involved—TPMRC,²⁷ medical crew directors, flight crews, aircraft commanders, ASTs,²⁸ AMDs,²⁹ Ramstein Air Base—you get several structural components to one decision....A positive experience

27. A “TPMRC” is a “Theater Patient Movement Requirements Center.”

28. “AST” is defined as either “Aircraft System Trainer” or “Aircrew Systems Trainer.”

29. “AMD” is short for “Air Movement Designator.”

was the arrival to the area of operation with equipment that was necessary to carry on the AE mission. And because there were so many structural diversities involved with the problem-solving approach, we were able to formulate a rapid solution to handling the overall mission, which was to move patients out of the area of operations. So, very positive. (INT12)

An active-duty lieutenant colonel described the different approaches to flying that Army and civilian pilots brought to his unit's mission, as well as the different perspectives contributed by Army and Air Force analysts:

[W]e had Army pilots who had been trained by the Army to fly the C-12³⁰ and we had Air Force people, and civilians. Those civilian and Army pilots coming together were fabulous because each of them brought a different skill set. The Army guys were very disciplined, into the checklist and flying by the book in a certain way. The civilian pilots were like, "Hey, you know that we could make our engines last a little bit longer if we crank back the power a little bit. We will still fly the same air speed in the same settings, but we are going to crank back the power a little bit because we are going to make these engines last a little longer, so we do not have to change them out as often. Then we can continue to fly a little bit more than what we would do if we were constantly jockeying the throttles back and forth and putting a lot of wear and tear on the engine." That kind of cross-pollination was good between the Services. Then I had my Army guys that were the enlisted analysts. That was also very good because they had the Air Force guys there next to them, and so they were constantly saying, "Hey this target looks like this on the ground." That Air Force guy says, "Well no, from the air it really looks like this." And then they would help each other out. (INT19)

The third respondent, a colonel in the Active Component, described the value of multiple perspectives (i.e., pilot perspective vs. others) in a brainstorming session:

[O]ne of the flights got compromised when an explosive device had been put on board. So the bottom line is, how do

30. The C-12 Huron is a passenger and cargo airlift aircraft.

you deal with that? We had to bring in all the folks who had a piece of security at that particular airport and around Iraq. So that involved all of the Services and governmental agencies and again we had to brainstorm both a near-term and a long-term solution. How do we fix the current problem? What is the problem? What should our reaction be? What course of action should we take to restore security? In the long term, what do we need to fix for things to change so that this doesn't happen again, so we don't have any more security compromises? So I participated in all of those initial meetings and following meetings and, again, seeing the different Services, the different perspectives [that] come to the table as we brainstorm ideas, is extremely useful. Because I remember coming in as a pilot. I came in with a certain mindset about things. But non-pilots, guys who had different backgrounds, came in with great perspectives and great ideas. (INT23)

Seven respondents talked about the additional skills that come with structural diversity. Of these, three perceived that members of the Reserve Component had extra skills because of their civilian experience. A major in the AFR made the following general statement:

Believe it or not, reservists brought much more knowledge than some of the Active Duty individuals because of their vast experience in the civilian sector and the military sector. So, I believe that across the board it was a positive experience. (INT12)

Another respondent, an active-duty major working in a civil engineering unit whose mission was to "rebuild Iraq," referred to the additional skills brought by guardsmen and reservists as "force multipliers":

The Guard and Reserve aspect of it was pretty good. And what I mean by that was...okay, we're in a position now where we're not blowing things up and hurting people; we're doing just the opposite in this organization (which, by the way, is a nice way to go to war, you ever have a chance). And so when you get...the Army Guard two star who also owns his own construction business back here in the states, he has a good idea about how to build things and that process, at least from, you know, an American point of view. When you can incorporate that type of knowledge and skill set into this endeavor, man,...that's a force multiplied....

[A]lso the guardsmen and reservists that were over there, these are guys typically that volunteered for this. And so these are people that want to be there and come with a different set of skills in addition to their military skills. (INT15)

The third respondent, an active-duty E9, mentioned the extra experience that comes from working in the same occupation in both the military and civilian sectors:

What I've noted most recently in the deployment and in my previous experiences...when we bring the Guard and Reserve folks on,...typically, they are very much more experienced than the average Airman because that's their profession in the civilian life. They bring a lot of knowledge to the table and they share that freely. (INT33)

Echoing a theme from the section on the impact of cognitive diversity, three respondents indicated that structural diversity resulted in greater likelihoods of having the right person or the right skill for the job at hand. First, an active-duty lieutenant colonel described the benefits of having people from different Air Force functional communities to fill specific roles in air traffic control:

We had people from all over. We had people from, in my area of aerospace management, you had people from the fighter world—fighter world, in the sense that they came from a base where they had fighter aircraft—[and] the tanker world. Those presented some problems. Controlling tankers, having combat airspace management or aircraft control for tankers, is very different than having it for fighters. They're going to move faster. So having that diversity from other areas and structure really helped. We were able to, in the position I was in, to select and to bring in people from certain areas and place them where it was effective for the mission and best suited for getting a particular mission, for that particular position, accomplished. (INT26)

Next, two respondents described bringing extra administrative and technical skills to joint missions. First, a major from the active component described how he, as an Air Force member, was able to contribute to a joint mission because the members from the other Services were open to his ideas:

[F]rom my perspective, now again we weren't out there doing combined military type operations, you know kicking in doors and so on. But overall...the Marines I worked with, the Navy guys I worked with, the Army guys I worked with, they were good, they were all good. And they also were willing to listen to...what the Air Force had to say as well. They did not have a tracking system set up when I got there... So I came in and introduced them to the Air Force staff summary sheet and to a tracking system similar [to that] used here...just a watered down version. And they accepted that. And, you know, there were some people that felt like I invented the wheel. It's like, not really, I just plagiarized a lot. You know but, but again there was a need for that, and you come up with the product. And people are happy to see it because this is going to enhance the mission. So you know I mean overall everybody worked real nice. (INT15)

Similarly, an E8 from the Air National Guard described the extra computer and administrative skills she brought to her team:

I was assisting an Army O7 and she didn't have some skills, but I had skills then, so I helped her develop some stuff, some programs and everything...I helped because of some of the skills that I brought to the table—an opportunity of training officer. Whereas, she'd been there for a year, and what I helped her do just helped her track some information that she needed to track and allowed her to do it in a quicker way. (INT28)

Finally, an active-duty first lieutenant explained that, although there can be conflict with contractors over income differences, their longer assignments can bring stability to an operation:

We had approximately a little over 30 contractors within our squadron and there was definitely some animosity between the military and contractors. Given the fact we're over there, doing the same job, making \$100,000 plus. Sometimes it was, I wouldn't say intentionally put in their faces, but there was some, definitely some tension between the military and contractors over there....On the other hand, though, I believe now that we're going to a little bit longer deployments, you know a little more stability, that contractor in key position is valuable in that environment given...the constant turnover. And the knowledge that they have within their particular job is, I think is, definitely mission critical. It's a

matter of getting the right folks over there and I believe that in some cases that the military, the military members,...may take that too personally. (INT29)

Negative structural impact

The responses we coded as indicating a negative impact from structural diversity covered multiple themes: having the wrong person for the assignment; team-building difficulties, including anti-RC biases among active duty members; and cross-Service and cross-component differences in management policies that impeded or detracted from mission accomplishment.

In general, the responses that addressed having the wrong person for a given assignment addressed the fact that people who appear to be substitutable on paper may not be so in actual practice. For example, a major described how assigning an Air Force general to lead an Army mission created credibility problems within the command:

We had an Air Force general officer who was responsible for our organization. And this was primarily an Army-driven mission, and so when you have someone who is not familiar with the requirements for long-term mission keeping—or nation building as part of their mission—it made things extremely difficult...from the senior officer to junior officer credibility perspective. What does this Air Force general know about, you know, a plan to pacify the insurgency in a city? What does he know? So he has to, so can he do it? Or do we have to rely on junior, more junior, officers and, you know, like colonels, lieutenant colonels, and perhaps majors to be able to shape that? And, therefore, are we heading in the right direction? Are there things that we don't know or haven't heard or thought of because we're not privy to a lot of the senior officer discussions that are going on or intel briefings? And so I think that there was a lot of friction within my personal organization on that, that was basically driven because we had an Air Force guy trying to drive what the Army or the Marine Corps had to do in their, you know, in their mission. And theirs was much more critical because literally lives were on the line. And so, you know, “Could we have done better as a multinational force?” are questions that I have. Could we have, as a coalition force, been further along now if we had a different general officer in place? I don't know. (INT1)

At a lower level of focus, another major noted that, across the Services, people who were in specialties that were nominally similar may not have had the same skills or received the same training:

[W]e requisition for security forces folks. We're looking for, say, personnel to be what we call personnel security details for the generals, to pretty much drive them, be ready and armed—kind of like body guards, so to speak. Well, a lot of this stuff happened before I arrived there, but the going-in thought was we would order Air Force transportation folks as their drivers—yada, yada, yada—they are very good at that. What they failed to realize was, unfortunately, Air Force personnel, even if they are transportation folks, are not as skilled as someone carrying a weapon every day and stuff like that. So they are not up to par with the hands-on stuff, they might be drivers but they may not...necessarily be good high-speed drivers, combat drivers. So what we did to remedy that is we started convoy training for all transportation drivers before they go overseas, and we started pulling people from other AFSCs to go [to] convoy training. That is what the Air Force did to remedy that and to get them so all the people are more comfortable with the rules that go into play when they are overseas. (INT14)

In addition, three respondents who were part of AE crews described difficulties associated with working across platforms and environments. A technical sergeant in the AFR first addressed the issue of making the transition from delivering patient care in a hospital to delivering care in the air:

[I]t could be individual personalities or it could be just what that person brings to the table—that if they were a drill instructor in a former life and now they're a medic, well then they have to kind of switch hats. And some folks have difficulty making that [transition]; some folks don't. It's the same way with flight medics. A lot of time when you do patient care in a hospital it's different than when you do it on an airplane. In a hospital, you may have unlimited resources and people to help. On an airplane, you've got limited resources and limited time, and you've got all these patients and just one or two of you. (INT10)

Then she noted that this transition was made even more difficult if a crewmember was working in an unfamiliar plane with little time to adapt:

I think a greater knowledge of individual airplanes would have probably helped. You know the school has to run you through each one of them before you got there—in a low-stress environment—as opposed to you getting on that airplane right now. A better understanding of the way different crews function. A [inaudible] crew is going to work with you differently than say a crew that is more of a transport patients, you know, C-130³¹ or 141³² or vs. a KC-135³³ or a KC-10.³⁴ You move folks differently in those environments. (INT10)

Along the same lines, a major in the AFR questioned the validity of the “universal-member” concept, especially during deployment:

[T]here were positive impacts, but there were huge negative impacts in the way that it was put together. Because the timing of bringing in some of these folks, like the folks from like Scott Air Force Base. We were flying C-130's, they flew C9's.³⁵ Well this universal call or universal member, or whatever they want to call the person that they can fly any mission, that doesn't necessarily pan out. And that's not the time to test the policy like that, or to, to implement a policy like that, which is more along what was doing, was implementing. 'Cause right now we're starting to train 2 years after the war. But that caused major problems, because I had to break up crews that already had set, and then I had to train these people on how to fly in a C-130, and then I had to put them into the crews. And, you know, you're doing this all in a matter of hours, and so...you're putting all that out there and so it increases the risk. (INT21)

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31. The C-130 Hercules is a cargo aircraft that is used for aeromedical missions.
 32. The C-141 Starlifter is a cargo and troop transport aircraft.
 33. The KC-135 Stratotanker is an aerial refueling and airlift aircraft.
 34. The KC-10A Extender is an aerial tanker and transport aircraft.
 35. The C-9A Nightingale is an aeromedical evacuation aircraft; the C-9C Nightingale is a distinguished visitor support aircraft.

Finally, another AFR major described a situation in which bad management exacerbated cross-platform substitutability issues:

[W]e were assigned 141's. We had a unit that was given the leadership position because they had the leadership tasking in there, but they flew C-130's. And their primary mission was to run a [inaudible], not to fly air evac. So they didn't [inaudible] command structure. And the problem with that is you don't know the regulations that are governing your fly squadrons and you've not been put into that position because that's not something you did all the time. As flying a short-range 130 mission vs. flying a long-range 141 mission is two different beats. So when you offer insight to the leadership there you were...ah...you faced retribution, literally. And I was the person who was given retribution for offering, you know, "This is against regulatory guidance...." So the regs were thrown out, policy was disregarded....Just because you're at war, you don't throw the things out the window. So everything went out the window. And so when you offered your advice and stuff, 'cause clearly I have more experience than you, you just want, because your leadership UTC³⁶ was in your squadron is how you wound up there. I offer you something and tell you according to military guidance in an appropriate manner. There were three of us in that room, all three of us faced retribution for that statement....We got sent home. We got sent home from the deployed location.... When I talked with my Commander—and my Commander knew me well enough to know—and the three of us were there, you know, but we clearly told her. And then what came out of that is the number headquarters got involved and put out a policy behind that. So but, you know what? It was already too late for me. (INT22)

Another group of respondents talked about barriers to effective total force integration due to a perceived active-duty bias against members of the Reserve Component. In one example, a captain explained how this bias affected mission capability because it marginalized Reserve and Guard members:

[Structural diversity] impacted the mission because, unfortunately, a lot of our active duty tend to think about the Guard and Reserve as the weekend warriors and not as

36. "UTC" stands for "United States Unified Transport Command."

committed as we are. And that may have been true in the past as far as their involvement in, you know, some of our deployments, but I don't think that is any longer. But you still have a lot of the senior NCOs and the senior officers that have, for whatever reason, had the perception that the Guard and Reserve won't give the 100 percent that the active duty give. I think it's more treating people as individuals. It doesn't matter if they're Guard or Reserve or active duty, that you treat them as an individual: If they're performing, they're performing. If they're not performing, you have to do what it takes to get them to perform. It doesn't matter what you know, whether they're a Guard or Reserve or active duty. But those attitudes are still out there. And because of it that did affect some of the, you know, the mission capabilities because people wouldn't give them the responsibility because they were afraid, "Well they're Guard, they won't, you know, take on that responsibility." (INT2)

In the second example, another captain described the lack of trust between the Active and Reserve Components more explicitly and gave his explanation of why it exists:

The Air Force is great, we're talking total force. And, you know, we all like to think that...there is no competition or animosity between Guard, Reserve, active duty. That's bullshit, okay? I mean, quite frankly, that's just nonsense. Because, while we all like to work together and all that, you know, the bottom line is that, active duty, if we're out there and somebody says they're Guard, right away there is, right away, whether it's right or wrong, there is a measurable amount of, "Can I trust this guy?"...because, you know, you just feel that right away. And I say that just from personal experience. I say that from what people have said to me over the years.... [T]here has always been a sense of apprehension when I'm working alongside Guard and Reserve people because you wonder whether or not,...what they're in it for, I'll put it that way. You know, and this is, I wouldn't say it's really from personal experience as far as, you know, me feeling that way. I've never come across a Guard or Reserve person that I've just said, "Oh, man, that Guard." I've never had that. But people who are under me, they're always talking about, you know, there is just not as much dedication to the mission.

I think it's a result of a number of things. I think it's a result of, number one, the stereotype of years ago, Cold War type

thinking of, you know, Guard and Reserve, weekend warriors, you know, [who] do their weekend, do their 2 weeks a year, or whatever the heck it is. And, you know, thank you very much, and I progress towards my retirement pay—you know, my retirement check when I'm 55 or whatever. And so you have a little bit of that still. That backwards thinking in there. You have...the known commodity of reading a lot, when Guard and Reserve units get called up, you hear more about protests, i.e., reading in the papers and the media protests of why this unit is not able to activate or something like that. And the perception there is that, from the active duty force, that I get from folks (and myself included at times), it's like, "Oh, God, you guys getting called up—hey, man, you're paid to do a job, go do it." You know? And so you get the perception of, yeah, these guys they joined for the weekend duty, but guess what? You know, there was that fine print that said if needed you will be called. So I don't think...we have evolved, the military, as an Air Force, to where the thinking is, leadershipwise it might be total forces, you know, is what we need. But, you know, that's true, but however down in the ranks, you know, we're still leery of "Does this guy have my back?" (INT3)

The last respondent who spoke about RC/AC integration issues told the story from a reservist's perspective. First, this female major spoke of the impact on morale:

And if I was told one more time that you're just an activated reservist, I was going to lose my mind. I'm out here, I'm fighting the war, I left my family, packed my four kids up, sent them to live with someone else in another state, and I can be killed just like you; don't tell me [I'm] an activated reservist. That's the mentality you got from active duty. I show my ID card, my ID card is the same as yours, I wear the same uniform, and I'm out here performing the same mission. Don't call me an activated reserve. And you got that from anywhere. Active duty in the medical: I go in and get a shot: "You're an activated reservist, you got to wait; I'm active duty." And I needed to be treated like that. (INT22)

From here, the major addressed the impact on the mission in terms of inefficiency:

And integrated again, active duty into the mission. They don't understand what the reserve mission is. The Reserves

are out here doing it; they don't understand it, you know. And they fly different platforms and, again, they didn't have the knowledge we had on the 141's 'cause they weren't flying. They were flying C-9's before the C-9's were gotten rid of. So when you brought active duty in and then when you put them in the command structure, and they think active duty, they throw... They literally walked in and pulled all of the Reserves back out to start from scratch. This is a Reserve-supported [mission]. You have to understand the Reserve had a previous command because active duty comes and it doesn't mean you were doing it wrong. (INT22)

Note that this selection reiterates points made by the same respondent regarding issues associated with cross-platform transitions, but the additional issue here is the perception that the problem was exacerbated by lack of trust between components.

Other respondents indicated that it took significant extra management effort to create smoothly functioning teams out of groups that were structurally diverse. In one case, Air Force and Army units never became fully integrated. The Reserve E8 who described the situation attributed the lack of integration to the fact that their common task was artificially split between them:

At the second location overseas, we were assigned to an Army base. We were actually Air Force working on an Army installation. Our primary function was to load and unload the aircraft, but the Army was doing a function that we normally do, which was the load plans. And a lot of times the planes would be delayed because they would send the load plans to us 10 minutes after the plane arrived, and we should have had it 2 or 3 hours prior to the plane getting there. And that was one problem we consistently had the whole tour I was there. And I felt that anything dealing with the aircraft, the Air Force people should have been involved, and not let the Army take one part and we do the other part.

Well we couldn't load the plane until we would get the load plan, which would mean that we'd have an aircraft waiting for us to load, sitting on the ground, and these guys are flying around, they're in a bad location, they want to get in and get out, and they have to wait. We can't do anything until we'd get the load plans, we can't even pull the load

until we get the load plan, which lets you know what's going on the plane. So, yeah, it impacted our ability.

It was not resolved by the time we left. We had a lot of people involved in it and at one point did consider giving us their capability, but they felt that they didn't have a proper amount of people there to take over that mission. (INT35)

In other cases, the lines weren't administratively drawn; they resulted from more organic group dynamics. For example, an O6 described the need to build integrated teams around the current mission rather than around preexisting Service- or unit-specific identities:

...Army, Navy, Marines, and the Air Force too, we have a tendency to bring our pride to the table first. So there's an esprit de corps. There's a positive nature of who you are and the capabilities that you have, but that positive esprit de corps sometimes has a tendency to be viewed as pride. Guard and Reserve sometimes have that with unit integrity. And that's not helpful in a deployed situation. Because you have to re-form your team around your wing's mission in the deployed location, and it has less to do with your previous identity and it has everything to do with your common cause. And so a leader has to be able to listen, hear that other person, and then move them past that into the new wing's mission. (INT5)

Two respondents gave specific examples of this phenomenon.

First, a medical crew director (MCD) in the AFR described the extra communication that was necessary to work effectively with active duty flight crews who were more accustomed to flying non-human cargo:

[W]e may get an active-duty front-end crew who has never flown an air vac mission ever. And that can be challenging because, you know, we are not cargo and we have, you know, we have a whole....The mission is different,...you know, when you are on the head set with the pilot and he is on his own agenda, forgetting that really the mission is for us, for the patients in the back. So that can get a little....I never really had a hard time with it, but I know some people just kind of, you know, you would get an MCD and a pilot who just bumped heads immediately. [T]hat was...a challenge to deal with. (INT 17)

Second, an active-duty E7 described culture clashes that occurred when members from different AFSCs came together to work in the same environment:

The number one diversity on my team is that they came from 55 different AFSCs. I had everything from ammo to surgical techs to cops to engineers to a full gamut and that made it hard because...I hope it's okay to be blunt here. I had a female ammo troop that would swear all the time, that would say offensive things all the time. She got counseled twice while she was there for saying "I'll kill you." And in her world, in that environment out in the bomb dump they talk like that all the time. The only reason I know that is 'cause the Shirt³⁷ I had with me was from ammo and he kinda gave me an idea of what that world was like.

Well, I come from a dental clinic. And words are very soft, touchy, carey, feely side. We're about as far from the bomb dump as you can possibly get. And when you put two of these people on a team or two of those people to work they offend one another without even knowing they're offending them. And their communication is poor because they may be, like, uh, I hope you don't mind me being blunt. One of the engineers said to me, where are those fuckin' Airmen? I almost died. If I were in the dental clinic or the hospital, no one would ever in a million years....This Captain turned to me and said that....But in that world, in CE³⁸ that was, they're supposed to be digging there where they're at....I understood that, but it caught me off guard because that's not my environment or my world. I fought that battle every day. Every day, I had someone who was a cop and someone who was hospital, or someone who worked finance and someone who was a dirt boy who pushed bulldozers all day. And these people had to work together. They had to work together and they had to be a team. So, definitely, it was a negative, and we worked really hard at it the whole time we were there because these people were so diverse and from so many different areas that it was really, really hard to even get them on the same page at first. (INT36)

37. "Shirt" is an informal way to refer to the First Sergeant position.

38. "CE" abbreviates "Civil Engineering."

This same respondent also described inefficiencies that arose due to structural differences in management policies and management systems:

[I]n one squadron, it might be real common to administratively slam someone—to get a LOR³⁹ from the commander, or they'd get an Article 15⁴⁰ for that matter. In another squadron, it may be outside of the realm....Well, you come to this environment, which is also highly scrutinized, which is highly watched, and everything else. And they don't know how to act because they just lost whatever they did know. So, yeah, it was hard. It was really hard to get all of these people to do....And I will say we lost a few. I mean, a few of them got stripes removed. A few of them had things like that happen and, you know, that was, I'm not gonna say they were set up to fail, but I don't think any of them were thinking that when they got there. You know, I don't think they left their parent base with the thought in mind that I'm gonna screw up bad enough here and lose a stripe. (INT36)

Continuing with the theme of structural differences in policies and management, several respondents indicated that short deployment lengths for the Air Force relative to the other Services impeded performance in joint settings. Specifically, two respondents indicated that their short tours limited their and their Air Force colleagues' opportunities to contribute to their missions. First, a major in the Active Component said:

The Air Force is there for 3 months, and they just increased it to a whopping 4 months, which the Army, who was there for 12 or more months, did not appreciate and derided it every possible opportunity. Usually, they were just joking, and we would just laugh back. They were just jealous; we would be back with our families much quicker. But that was a bone of contention, I think. It was handled with humor, but it did not sit well. The Navy and Marines were there 6 months. There was disunity right away. The Air Force folks, they don't really have an opportunity to make as big an impact as they could because the Air Force has a different way of thinking than the other Services. (INT24)

39. An "LOR" is a "Letter of Reprimand."

40. This is a non-judicial punishment awarded by a commander for minor offenses or misconduct, after appropriate inquiry.

Second, an active-duty colonel said:

[T]he folks who are on the shortest assignments were the Air Force. And so, right away, I got to see there was an immediate bias against the Air Force because of that. Now the Guard and the Reserve, the Air Force Guard and Reserve, typically, because of their Guard and Reserve positions, were there for 1-year assignments. They were the exception....And, so, I saw very clearly from the other Services, in particular from the Army, that there was that bias: "You're a short timer, you only have 4 months. I'm here a year. We're going to spend minimum time with you. Get your 4 months in and get you out of here." So they didn't really want to invest in you. They didn't want to put you in some of the key positions that had an impact on the organization, which was unfortunate.

So, anyway, that really stood out to me and it was very eye opening to see that there is a built-in prejudice—there really was—against the Air Force folks. And I saw it clearly. The problem is, it has a long-term impact. In any organization, there are critical leadership positions and, let's face it, there are less critical leadership as well. Guess where they're putting the Air Force guys? They automatically structure the organization such that the Air Force guys would go to those lower level positions so they would break up, and they should have a lower impact on the entire organization, which is unfortunate.

Like I said, the Guard and Reserve, Air Force specifically, really weren't biased per se.... [F]or the most part, they were there on longer tours, so they were treated, I think, a little bit better. I will tell you that there was...a significant number, more than I expected, of the entire Strategic Operations Center and the headquarters; there were more Guard and Reserve than I ever expected. (INT23)

A third respondent, a lieutenant colonel, indicated that shorter Air Force deployment lengths meant that Air Force members had to constantly prove that they brought something to the table:

I felt as an Air Force person there is an institutionalized discrimination against the Air Force over in these deployed sites....We went from being deployed for 3 months to being deployed for 4 months, 120-something days. Well, all the other Services are there for much longer. The Army is there

for a year, maybe longer. The Navy is there for 6 months, approximately, and the Marine Corps is there for 7 months approximately, give or take a couple of months on either end. And, so, when the Air Force comes into town, automatically there is, "You know, you guys aren't here long enough, blah, blah." You know, there's some discrimination going on. So, in my case, I think I fought that whole 4 months just to prove myself: "Hey, I'm value added. All of the Air Force is value added. We've got some good ideas. We've got the right skills and the right mix." (INT27)

Finally, a few respondents perceived that structural differences in management practices created inefficiencies and distracted troops from their missions. For example, a major noted that the existence of unique personnel systems for each Service created extra work, and other administrative differences took energy and focus away from the mission:

Even in the area I worked, in the Manpower and Personnel shop, just doing decorations for the different Services. That was amazing to me that we have such different processes and my thought behind the whole thing is, "Why do we do that to ourselves?" We are the United States Military, we go into a combat environment, and yet we have to have four different ways of doing something as simple as a decoration. We are still dealing with other Coalition forces, so we have to do things the way the other countries need [to] have their stuff done. Why can't we, as a United States Military, have one process for say....I mean, everything was separate for each Service: in-processing, out-processing, how time-in-station is counted. Every single thing is separate and different for each branch of Service.

The other thing that I remember...was we continued to have in our personnel shop huge discussions over what badge Army personnel in our command are to wear. My boss was an Army lieutenant [inaudible] and one day, I got really upset about the entire thing, and I said, "You know sir, this is not a discussion for in a combat zone. Higher level Army ranking personnel should make the decision. You wear this badge or that badge and call it a day. Subject closed." So, that's what the Air Force [does]; we wear one badge, regardless of who we deploy with, we wear one badge. You know badges are different for the Army, and they mean different things. For the Air Force, they are not as significant as they

are with the Army. They are significant but not as significant as the Army so just something like that, in a combat zone, we are having these huge discussions and debates about what badge they wear and on which shoulder. It was interesting and frustrating, but it was exciting and I would work in a joint environment again in a heartbeat. (INT14)

Next, a first lieutenant indicated that setting different rules of behavior for members of different Services impeded joint functioning:

There were multiple Services there, but there was approximately 23,000 Army to the 3,000 Air Force that was there. It was basically an Army installation, and we were there just for flight line operations. There was a lot of animosity between the Army and the Air Force in a sense that, although we are the same installation and we basically had the same general orders, number one, but there were definitely two sets of rules...and that caused, I believe, unnecessary strife between two Services. (INT29)

Finally, an active-duty E9 gave two examples of distractions that occurred at an even more detailed administrative level. The first example is trivial, but the second had implications for safety:

[B]eing in a joint environment over there, you know, each Service kind of got their different rules and different answers. Like the Marines over there, because they're in a combat zone, I mean they don't salute. Whereas the Air Force folks had to salute. So that kind of brought up, you know, "Hey, why can they...?" You know what I mean? People you're saluting, don't salute me....You know, that kind of thing. (INT6)

I think it's important as people arrive there...I mean, part of the processing should be to tell how each branch, this is how they conduct their business. I mean, even down to each unit. Because you've got elite units such as CEs,⁴¹ the Red Horse Unit. I mean, there was one issue because they came there and they had their red hats and there was an issue, kind of back and forth, about them wearing their red hats because normally you just wear the regular desert hat. But, and it was a big issue, they wanted to wear their red hats.

41. "CEs" are "civil engineers."

And when it came down, they wore their red hats. You know you're a target in the desert with a red hat on. But, you know, the troops looking at that, "How did they get to wear the red hat and I couldn't wear my other hat?" That kind of thing. (INT6)

No structural impact and no codable response

Only six responses fell in this general category: two were coded as no impact and four as no response. There is no particular pattern to these responses. For example, one respondent indicated only that being deployed with members of other Services was a positive personal experience, and another spoke in terms of hypothetical rather than actual impact. An additional respondent did talk about cross-Service differences in rules governing how uniforms should be worn (i.e., sleeves rolled up or not), but he said that this didn't have an impact on his group's ability to carry out its mission.

Global diversity

Based on our coding, most respondents perceived that global diversity had a significant impact on mission capability. Specifically, we coded 14 respondents as perceiving that global diversity had a positive effect on mission capability and 11 respondents as perceiving that global diversity had a negative effect on mission capability. We coded 5 respondents as perceiving no impact associated with global diversity and 7 respondents as giving answers we considered uncodable.

Types of global diversity

Like structural diversity, global diversity is defined fairly narrowly, with only four types mentioned (see table 5). The most frequently discussed source of global diversity on a work team was the presence of coalition members, but respondents discussed the impact of working with host country nationals (HCNs) almost as often.

Several respondents also discussed issues that arose simply as a result of being deployed overseas. Although working in a foreign environment is not conceptually the same as working in a globally diverse work team, enough respondents applied this interpretation that we

included it in the coding scheme. These responses all dealt with U.S. forces' lack of cultural sensitivity and awareness and were, therefore, given negative impact codes.

Table 5. Type of global diversity mentioned in interviews,^a by impact code^b

Global diversity type	Positive	Negative	No impact	No response	Total
Coalition members	10	1	1	3	15
Host country nationals	4	5	2	2	13
Third country nationals	2	1	1	1	5
Foreign/overseas environment	0	3	0	0	3
None mentioned	0	0	0	2	2
Total ^c	16	10	4	8	38

a. Diversity types are listed in descending order of total frequency.

b. These counts are based on our assessment of whether the respondent's mention of a global diversity type was related to the impact code.

c. The overall total is greater than 37, the total number of interviews, because some respondents mentioned more than one type of demographic diversity.

Positive global impact

Responses that were coded as indicating that global diversity had a positive impact on mission capability ranged from being very general statements about good working relationships among coalition partners to very specific examples of improved performance. Examples of statements about good working relationships include the following:

It was great working with [the British]....It was really no animosity or competition or anything like that. We all worked together well. (INT36)

Working with the British forces, Australian forces, as well as numerous other forces that were in the location where I was at, I thought it was amazing how well everyone worked together. (INT7)

Two respondents indicated that the good working relationships were the result of openness to new ideas and thoughtful management,

respectively. The first respondent, a major, described working with a multinational force that included Bulgarians, Australians, Canadians, and Dutch:

[The mission] was coalition centric and...we were really able to work together. I don't think that just because you were from Bulgaria I wouldn't take your input as credible as someone else's from America. It was definitely a, you know, who is the best player. (INT1)

And the second respondent, an E9, described working with host country nationals:

We got along well with them. We even had a recognition program at the end when I left. I mean good working relationship. And by them seeing that we kind of cared about them, they provided better service for us. (INT6)

Other respondents more definitely perceived that global diversity added to the ability of the United States to achieve its missions. Two respondents talked about the importance of acknowledging that other militaries can bring something to the fight. First, a captain noted that global diversity in warfighting is now a given and that we are not so powerful that we cannot benefit from it:

[I]t is a global environment now. We have all types of countries that are assisting in NATO and assisting in our deployments. And we have to understand that, as powerful as we are, we benefit from the assistance of all these countries and all this help that we're getting....[M]y Dad—Canadian born, a U.S. citizen now—and I understood the difference of cultures growing up in that and always accepted that. But we still have a lot of, you know, Americans that don't think we need anybody else's help. But I think the more we have of other countries helping us in this fight against terror, or whatever other mission we're on, it just helps bolster that strength that we need.... (INT2)

Similarly, a major referred to the additional experiences from which foreign forces can draw:

[W]e tend to think that we are the number one military in the world and, therefore, there's nothing else that anyone can bring to us. But there are a lot of false, you know, it's

false. There's just so much that we can learn from other organizations because they have contingencies and they have had experiences that I think can contribute just as much as what we can. (INT1)

Other respondents provided more specific examples of how global diversity expanded the force's experience base and brought more players to the table. Overlapping with a theme from cognitive diversity, a lieutenant colonel noted that having work group members from a different culture created discussion and debate that sped up decision-making:

I worked specifically with Australia. They're pretty much, go to the heart of it. They're much more than Americans are thought to be. That led to sometimes a debate and we would get to a solution quicker. (INT32)

Another respondent, a colonel, carried this theme further, noting that having a variety of perspectives was especially valuable at the strategic planning level:

I mean that's the coalition environment. You expect your other coalition members to be there and you give them an equal voice. Everyone was listened to, just as long as you had a good idea. Everyone had really the same opportunity to be heard. And so that environment, I think, was very conducive and greatly facilitating to get the mission accomplished. Because, again, you brought a variety of opinions and a great set of backgrounds and experiences that really helped contribute. And, like I said, especially with the Strategic Operations Center, there was no right or wrong answers, just what do we all think collectively—what's the right way to go here? Especially leading up to elections. There are so many things happening leading up to the 30 January elections, which were the first elections in 60 plus years in Iraq. It was just...every day it was a different crisis, a different set of problems. There was a diverse amount of opinions and ideas. Again the expectations from that societal norm. At coalition headquarters we want difference, think differently, different skill sets and ways of thinking. That was all very useful and very successful, mind you. (INT23)

Other respondents focused on the additional skills that coalition troops and other foreign team members had. In some cases, these

were skills that Americans would or might develop, but they couldn't be quickly learned. One example is foreign language capability:

[S]ome of the Coalition folks, they came well equipped in Arabic, so that helped a lot. Eventually, we started getting more Americans with Arabic skills. (INT14)

Similarly, facility dealing with people from foreign cultures typically develops over time:

...I had foreign nationals working for me. I had a Brit and an Australian....They were more polished. I had a major, American, and I had a major-equivalent Brit, and would much rather send the Brit to deal with the foreign nationals. The American major, he knew his job, he could deal with it. If he was in the United States, he could deal with it because he knew how to deal with Americans. But when it came to dealing with Iraqis and respecting another culture, the polish wasn't there. On the other hand, the Brit had that training. Like I say, whether it was ingrained or whether it was taught in his school or a civilian school (he also had a Master's Degree, just like the American did), it was there and I could send him to deal with the people and it was very easy and I was comfortable. With the American, I was not comfortable. And I think that kind of training for our people—just general training on culture—it's glossed over when they're sending us over: "Hey, you better be sensitive." Well that's fine for the average person who is walking the street. You're a truck driver or whatever. They're not in positions to where major decisions in air traffic control affects lives if you make a wrong decision. Or if you don't get what you need to make an air traffic control environment safer, it's going to hurt you. It's going to hurt the American way of flying around, the American structure that we're trying to put in there as far as air traffic control. So, training there would help get across our point. (INT 26)

More specific to the current engagements, another respondent referred to the benefits of working with coalition members who had previous experience in a Muslim country:

The other positive would be the Australians. There were a number of Australians there in the Strategic Operations Center who also had previous experience in other theaters. And the other theater also had a predominant Muslim

community. So they were very sensitive from that culture and religious perspective, and they were very good at assessing if we do this, do that, do this. (INT23)

Other types of experience were also valuable. A major with responsibilities for pipe security throughout Iraq talked about how he benefited from working with a foreign contractor who had both previous counterinsurgency experience and local knowledge in his region:

I could take a trip down to Basra, Southern Iraq, and meet with our group down there. And our group, I mean, we didn't have a regional coordinator, but it's primarily run by one of our security contractors down there. And they happen to be primarily British....Now this gentleman that I met with down there who's running this, he is of Irish decent, okay? But he's Protestant, okay? And he was in the...British Army, okay? He's a retiree from the British Army. And he also has worked for some, ah, non-governmental organizations in his life; he was also part of Doctors Without Borders, but the French version, okay? So he's been...in Iraq...for quite some time....[U]nique individual and with, again, a unique perspective on that area. And somebody who has been there for a while, not like us who come in for 4 months at a time or depending on what Service you're in. And so meeting with a person like that and hearing...his thoughts and his methods of doing business, you know, huge lights went on. And we were able to make some adjustments and changes in the way that we handle regional, primarily regional, PCO⁴² life support (providing that food, shelter, logistic support for our people out in the field doing reconstruction) based on what this one man said. And so, you know, of course, you know he comes with a different perspective, because of his experience,...where he grew up, and where he served and so on. (INT15)

The examples so far have primarily dealt with coalition troops or third country nationals. In contrast, the two final responses focused on the value of working with host country nationals who provided insights that went beyond just language and customs. In one case, a captain described the extra security gained from having local security

42. "PCO" stands for "Primary Control Office."

escorts who understood the relative dangers associated with different neighborhoods and regions:

Yeah, in our situation, again with the host nation, we did have host interpreters that worked directly with us and that really enabled us to complete our mission because, not only did they know the language, but they also understood the cultural differences with the local folks. Also, again, I mentioned we also had host security and so they understood you know the places that we would go to and be escorted, and they understood which places had more of a threat compared to other places and they would send out the force that was required depending on where we went. (INT8)

Finally, a colonel described how Iraqi military strategists helped re-focus U.S. forces' view of a mission so it would be more likely to accomplish its broader goals:

I would say one in particular, very enlightening, was, I attended a senior meeting. This was a planning meeting in preparation for a major combat operation. And the bulk of the game plan on how would we commit combat forces to accomplish the military objectives in Fallujah came from U.S. forces. And, yeah, we had contributions from sister Services but it was developed primarily, from what I saw, primarily by U.S. forces, in particular the Army. So what was very interesting was we came to the final planning, we had all the senior officers there and general officers, including senior Iraqi general officers. We went over all the details of this combat operation, from phase 1 to phase 4, how we were going to take back Fallujah. It was extremely fascinating. Throughout, as we presented what we thought was the way to approach this problem, Iraqis would vote and say, "Well, we agree (or disagree)," and they were very candid with our assessment and our game plan. So they made some very constructive criticisms of our plan and told us where they thought we were wrong and...where they thought we could do better. So it was just amazing to hear Iraqi generals say, "Here's how the people will react. Here's how the man on the street will more than likely react to what you're planning on doing." And there were some cases where we were fine. In other cases, it was different. And so, the diversity of the Iraqi generals, and their opinion, of course, was just invaluable to hear. Just how a local Iraqi man [or] woman was really going to perceive this operation or this particular

action or this event. The closing of the borders or closing down the religious buildings or whatever. So, that was one eye-opening experience. There were multiple others. I'm just trying to think of the most valuable.

And let me give you one example. This is a classic, I think. The very first name we gave this major combat operation for Fallujah was Operation Phantom Fury. Okay? Sounds pretty dynamic, pretty fast-paced, pretty overwhelming. Well, that's what we named this major combat operation where we take Fallujah from the [inaudible]. Well, as we got feedback from the Iraqis they said, "Well, is that really the name you want to go with for this major operation?" The operation was combined. It was U.S. forces plus combined forces and coalition forces but also Iraqi forces. But the bulk of these clearly were U.S.; other nations and Iraqi forces were only a small part. But the point was,...what kind of message are we sending? Calling this operation where you're going into a major suburb like Fallujah and taking it over and claiming it by calling it Operation Phantom Fury. So they suggested a different name, and of course we took that different name. The different name was called Operation Al-Fajr, which means new dawn. Operation New Dawn. It put a completely different spin on the same combat operation to reinforce the notion that, hey, we're trying to help the common man or woman who lives in Fallujah and trying to give them a sense of stability and security. A new dawn, a new start, a new beginning. And instead we named it something that was more classic, shove it down the throat. That experience was very useful. We all kind of agreed afterward, yeah, we probably should have come up with a different name.... (INT23)

Negative global impact

Among respondents whom we coded as perceiving negative impacts from global diversity, there were two interpretations of the concept. Some respondents interpreted global diversity in a way that was consistent with their interpretations of the other diversity dimensions (i.e., as diversity among work team members). Other respondents, however, talked about the more general notion of troops' ability to function in a foreign culture, which will nearly always be the case when deployed.

In terms of global diversity in work teams, one respondent talked about difficulties presented by the need for HCNs to work on coalition and U.S. computer systems, saying that the extra layers of security decreased efficiency and impeded cooperation (INT29). A more interesting example, however, related to difficulties agreeing on a common goal based on the different cultural backgrounds of coalition members—the negative side of having multiple perspectives:

The General Nation and the State Department and...their inability to work together. They were both like career police officers, but come from two different ways. USA should not have national police so, our perceptions, our ideas of how to build a police force is based on counties, cities, states. And the Germans have a national police force that works well for them. And that's how they want to do it in Afghanistan, and they are the lead nation. The State Department did not want to go along with that. They fought them every inch of the way. It was very frustrating. They would both go to the administrative defense or staff individually, basically like a child runs to mom and dad. And these two professional bodies were putting the Afghans in that position where they could actually manipulate both of these. (INT24)

Other respondents addressed issues of cooperation, trust, and communication. In one instance, working relations between the U.S. military and the host military were friendly but marred by lack of communication:

There were miscommunications. Their military people were on the flight line with us and they had to inspect or know what was going on with each aircraft coming in and leaving out. At first, I would say the first month or so, they were just quiet standing back and then...there was an incident where they were looking for someone and they didn't let us know that they were looking for someone. We were friendly with each other; we spoke with each other, and we asked about each other's cultures, so it was a friendly environment. But there was a point where they were looking for somebody who escaped from somewhere (we had quite a few of them), and they didn't tell us. They didn't tell anyone that they were looking for this person. So, I had a load master to come in one night and said, "Can you go out and ask the locals to stop harassing every passenger getting off the plane?" And I'm like, "I don't understand what you're

asking.” He said, “Well, they’re asking each person to see their ID or whatever and we usually just show it to them.” I was like, “Okay,” and I kind of forgot about it. And then, I went on the next mission out to the aircraft and I saw them intercepting each passenger getting on the plane, so I ran over. I was like, “Okay, what’s wrong, what’s wrong?” And he was like, “Do you have a [inaudible]?” And I showed it to him, and he was like, “Is everybody American?” And I said, “Yes, sir, everybody’s American.” And he was like, “Okay that’s all I wanted to know.” I went back and told our superintendent that they were asking questions. He said, “We’re going to see about it in the morning.” Come to find out—in the middle of the night, we got called out of the bed—they were looking for somebody and we didn’t know they were looking for somebody, and they found him. He was on one of the aircraft coming to where we were. He was let on somewhere else, and that’s a whole other issue. (INT9)

In a second example, it was lack of trust that impeded cooperation across national lines:

We were on a mixed flight line with another country. So our maintenance folks were out there, our security folks were out there. And the base commander came to me and he said, “I need your folks to stay in just one area on the flight line. This is where your parking spaces are. That’s where your security is. Please don’t come into our area.” I said, “Well, do we have an example of something we’ve done, you know, that, not offended you, but would cause you to do that?” And he goes, “Well, in my host nation we don’t have just our nationals in our service. We have third country nationals in our service and some of them have weapons, and I don’t know if somebody might [be] a lone maverick and decide to shoot an American serviceman.” I said, “You’re kidding me!” And he said, “Well, I just don’t know.” And I said, “Okay, well, in that case, let’s you and I work really hard to make sure we don’t have any, anything that causes [inaudible].” On the flight line, you know, things go fast and a security forces person will say something to somebody and they might take it as an offense or something. So as soon as I began to go, “Can I trust the host nation? All of the other members in there?” it began to affect my thinking. And I realized how important trust is. So, the other part of this, I’ve also worked with multinational partners in training and exercises and things like that. And so, probably from a leadership perspective, the most important thing that you

can do is nurture that relationship every day. Because if it breaks down, you really don't have a team. So that's just to say that it's hard work to maintain an international cohesion. (INT5)

The remaining responses addressed ways in which lack of cultural awareness among U.S. troops decreased our forces' effectiveness. Frequently, respondents attributed the lack of awareness to lack of experience or youth. Two respondents spoke about this issue in very general terms. First, a 35-year-old major offered the following comments:

It's easier if you are stationed overseas first before you get deployed. The people who have never stepped foot outside of the U.S. have much more of a culture shock and it is more insular guidance...Because if you let them out and have them come across, you have got the obnoxious American coming through, doing something that will get anybody in trouble.... "Keep your mouth shut" or "You speak up here and you do not get stripes until you truly know what is going on," because, I vow, you do not have a clue what is going on. But try convincing a 19-year-old on that. (INT18)

Second, a 46-year-old colonel said:

You've got a lot of people doing a lot of good work, doing hard work, making do with the best they can. And you tend to see isolated problems here or there where maybe someone is doing something stupid. It may be attributed to their lack of understanding; it may be their lack of life experiences that cause them to make a wrong choice. And you see some of those things like at Abu Ghraib prison. Some of those kind of things. I think it's—you've got maturity issues, you've got life experience issues. It's kind of across the board, global kinds of issues. (INT4)

A third respondent wondered if younger Airmen have the maturity, training, and guidance to make the right decisions in a counter-insurgency environment:

Well, one of the missions that we did get involved with, I think, was watching some of the foreign nationals do some work details on the base there. And, I think that program needs some more training for those young Airmen that are going to be watching those foreign nationals and I think

that perhaps the Air Force is already addressing this. But there could be some complacency and some, also some, just lack of understanding of the culture when you are dealing with the foreign nationals....[T]hey have prayer time, for example, and are you going to make them work through prayer time...are they going to be able to take time out for that? I do not know....What does the Air Force think about that? The other thing is that, you know, when you put these young people out there on this mission, with loaded weapons and perhaps, you know, that is pretty dangerous because then when you have these folks that are coming on....I mean these folks may be coming on for quite some time and then you gain their trust. All of a sudden, they may not be able to be trusted because they are actually an insurgent. And so how do you distinguish that? That is a hard situation over there....And I do not know of any specific examples that had happened, but I think that what I heard and observed in discussion about that mission was that is an important mission because that work needs to get done. It is important to bring those foreign nationals in because it is their country and they are wanting to become... improve what is going on there after suffering for so long. But there needs to be, perhaps that mission needs to not be something where it is a punishment. (INT19)

Another respondent described the cross-cultural issues that arise out of the stress of war when people on opposing sides cease to see each other as people:

Because education helps to dilute any discriminatory thoughts or propaganda that you have, that an individual has in their head, and they actually start to think about what they're doing. But you put them in a deployed environment, where they're surrounded by their peers, all it takes is for, you know, a little bit of that peer pressure, you know, and before you know it, you find yourself calling that Arab over there, you know, a raghead. And it's not because you don't know any better. You do. It's just that for whatever reason you've gotten to the point where now it's okay to do it. Whether or not you do it when you come home or not, I don't know. But in that deployed location in that deployment at that time, something has built up to the point in that individual where now it's okay to do it. And you'll find that a lot. I mean, it's hard for people not to do that because of the peer pressure. After a while, when you're in a

deployed location, you don't look at people as people anymore. A lot of folks start looking at people as things. (INT3)

The final respondent in this section provided a specific example of how this occurred in her deployment:

And I remember one time I was sitting outside the chapel and a Muslim service was going on. It was during Ramadan, a very holy month for the Muslim faith. I was sitting outside the chapel talking with one of the civilians...and two Marines walked by and were absolutely obnoxious. Very loud, very rowdy, very disrespectful. And I remember them walking by and I remember being offended by it, and I didn't say anything and I thought, "Well, they're on their way out. Well, they must have gone to chow or something." And then they were coming back and they started on the same thing. And this time it was very obvious to me that they were intentionally trying to disrupt the Muslim service. And I mean really, really loud, like yelling loud. And so I made the gesture for them to, "Sssh, be quiet." Very simple. And one of them said, "What?" And he kind of got close to me and I told him, "Sssh. There are services going on here. You need to be respectful." And he basically said, "I don't really care what they're doing." And so I kind of had to take him aside and do a little mentoring moment and basically say, "Unacceptable." And he basically told me, "They're killing my friends." And it was like, "You know what? Huh-uh, don't even go there. The bottom line [is] these people are in our work environment. They are working with us. They happen to be of Muslim faith." Most of them were Iraqis. Some of them were military people. "But the bottom line is, it's not yours to say if it's right or wrong. But be respectful and don't disrupt it as a minimum." And, of course, then it became a rank thing. He was a staff sergeant, I'm a lieutenant colonel: he shut his mouth. And I basically told him to stop doing that and got his supervisor and stuff like that. And that bothered me, to be honest, because I thought, "Wow, we've got to bridge this gap if we're going to make things work over there." And I ended up talking to his captain who was his supervisor. Again, with some Services, rank is more than with others. And the captain is like, "Well, you have to understand, their friends are being killed." Well, I don't understand. And that's the truth. I didn't understand. And this is an embassy, there are diplomatic things going on here, and I think that that was inappropriate and uncalled for. And I think he needs to respect that and understand

that. And so we went from there. You know, I think that that's an example of, these guys were security folks that truly were out on what we call the front lines. And then you've got someone like me, a bean counter, who's like, "Oh, well, protocol dictates this." And so you've got a little bit of a clash there. I think we worked it out but I think that that went on. (INT27)

No global impact or no codable response

Responses that were coded as indicating no impact typically came from Airmen who did not work with any non-Americans in their deployments, although there were a few respondents who did experience global diversity in their work teams but explicitly indicated that it had no impact on mission performance. Some others spoke about global diversity from a personal perspective, rather than in terms of its impact on mission.

Finally, one respondent spoke eloquently about the issue of seeing people as people, but he didn't discuss any particular incident, so we did not code his comments as positive or negative:

If someone sees you as less than an enemy, you've driven a wedge in their mind, so they'll think twice before they shoot you. But in terms of when we were there, the tensions were very high. So trying to find ways of just smiling or waving or whatever it took to help lower that tension is important. And to get in their minds, "Hey, you know, this person is a friend. Or at least this person is a person." And I guess with those... recognizing that it's difficult to even...I mean, I guess the human mind for some reason wants to categorize and go, "Hey, I want to classify you as a Brit." Well, okay, I kind of laugh about that because if you live over there, it doesn't take long to figure out that it's really fragmented. Now if an outsider comes in, look out, they'll try to pick a fight. And I guess that trait is similar within just about all those groups. You can't necessarily do in Rome what the Romans are doing, but you can maybe appreciate their paradigms and perspective and gain greater insight to help translate back to you. (INT33)

Summary

The preceding selections show, in their own words, respondents' perceptions about whether and how the various dimensions of diversity mattered during their deployments. There were many specific examples, but the two main ways that diversity affected mission capability were in terms of group dynamics and mission accomplishment. Discussions about group dynamics related to communication, group cohesion, and trust. Discussions about mission accomplishment related to having the right people or skills to perform the tasks at hand and/or having a wide enough range of perspectives to generate creative, appropriate solutions to problems. Using these two themes, we summarize the impact discussion for each diversity dimension.

Summary of demographic impact

Group dynamics

Positive group dynamics associated with demographic diversity. Most of the responses in this category related to age diversity and the opportunities for learning that it brought. Respondents gave not only examples in which older, more experienced team members mentored their younger counterparts but also examples in which older and younger members learned from each other. In either case, this required group members to be both open to learning and willing to teach.

Two respondents also described positive synergies from other types of demographic differences among group members. In one case, the respondent attributed the positive dynamic to the personalities of the people involved. In the other case, a single demographically different person required support from her supervisor to have her difference not only accepted but appreciated.

Negative group dynamics associated with demographic diversity. Some responses in this category addressed issues of unit cohesion. For example, the well-documented tendency to form cliques based on common demographics⁴³ made team building and task assignment

43. Clique formation is discussed in [1].

more difficult. One respondent noted, however, that with time and management the demographically based cliques were replaced by mission-related work teams.

Other responses dealt with ineffective communication. These examples described situations in which upward communication did not occur. In some cases, respondents perceived that their leadership was not open to input from people who belonged to demographic groups other than their own. In another case, a respondent perceived that a team member did not ask for needed training and support because he did not want to draw attention to his demographic (and structural) difference. In all cases, the negative impact was in terms of potential for missed contributions, as well as lower morale.

Mission accomplishment

Demographic diversity as a facilitator. Responses in this category described scenarios in which team members had unique abilities or skills by virtue of membership in a specific demographic group. In these examples, the impact of demographic diversity was context dependent: specific language skills were valuable because of the deployment location, and gender diversity was valuable both because of the deployment location and the task being performed. The positive impact was also dependent on leadership's ability to identify and use the skills in question.

Demographic diversity as an impediment. Responses in this category described situations in which team members *lacked* skills or abilities because of their membership in a specific demographic group. These examples dealt primarily with age diversity: some respondents perceived that older team members were no longer physically capable of functioning at the wartime pace, while other respondents perceived that younger team members were either too unprepared or immature to do so.

From the information in the transcripts, it is not possible to determine why respondents perceived both positive and negative impacts of age diversity. Some perceived a *positive* impact on group dynamics, while others perceived a *negative* impact on mission accomplishment. For example, these differences could reflect either management

shortfalls, such as inadequate training or inappropriate assignment, or variations in peoples' willingness to mentor and/or learn from others. It could also be the case that the impact of age diversity is context dependent, such that age diversity was valuable for some tasks but not for others.

Demographic diversity's positive symbolism

For demographic diversity only, there was a third category of positive impact: the idea that diversity among American troops is symbolic of the nation-building mission. Two respondents indicated that the message of democracy and freedom is conveyed by more than just words when the troops we send overseas are demographically diverse, especially at leadership levels.

Summary of cognitive impact

Group dynamics

Positive group dynamics associated with cognitive diversity. Respondents who perceived that cognitive diversity created a positive group dynamic typically spoke in terms of balance. They indicated that having a mix of personalities in the group (e.g., both leaders and followers or both Type A and Type B personalities) mitigated the extremes associated with any particular personality type.

Negative group dynamics associated with cognitive diversity. Respondents who perceived that cognitive diversity created a negative group dynamic typically spoke in terms of friction. These respondents indicated that cognitively homogeneous teams functioned more smoothly. One respondent also noted that a person who didn't fit was marginalized within the work team. Again, these respondents interpreted cognitive diversity in terms of inherent personality traits.

Mission accomplishment

Cognitive diversity as a facilitator. Respondents perceived that cognitive diversity improved mission capability in a variety of ways. Several respondents characterized cognitive diversity in terms of approaches to problem solving. These respondents indicated that cognitive diversity improved overall problem-solving capabilities and increased

creativity. In these scenarios, the respondents (and probably their fellow team members) were open to hearing different ideas.

Another set of respondents discussed the role of cognitive diversity in the assignment process. Specifically, these respondents indicated that cognitive diversity within their work groups allowed them to appropriately fill assignments that called for specific approaches or personality types. When rank or functional specialty didn't naturally put people in the right tasks, managers and supervisors had to do it explicitly. Positive situations were ones in which managers did this without perceiving it to be an extra burden.

One respondent also addressed the issue of learning ability or speed. According to this respondent, what might be considered reasonable on-the-job learning time in a normal environment may be too slow during deployment: she said, a month is "forever over there." In her example, though, there was sufficient time to allow a slow learner to come up to speed, and the final payoff occurred when that person extended his deployment by 3 months.

Note that, in these examples, respondents were as likely to see cognitive diversity in terms of differences in training or background as they were to see it in terms of differences in inherent personality traits.

Cognitive diversity as an impediment. Respondents who perceived that cognitive diversity hampered mission accomplishment gave examples that illustrated negative outcomes of the same processes described by other respondents who perceived that cognitive diversity facilitated mission accomplishment. For example, several respondents described scenarios in which cognitive diversity made it more difficult to fill assignments that called for specific approaches or characteristics. In particular, respondents described slow, methodical work styles as being valuable in low-stress environments or during planning but inappropriate during the fast pace and high stress of deployment. They also indicated that slow learners either hampered mission with mistakes or had to be worked around. In these cases, deployment seemed to narrow the range of required approaches. In addition, these respondents tended to see the time needed to select the appropriate person for any given task as detracting from mission accomplishment.

Summary of structural impact

Group dynamics

Positive group dynamics associated with structural diversity. There were no responses that primarily addressed positive group dynamics due to structural diversity. One might assume that scenarios in which structural diversity enhanced mission capability in other ways were also characterized by good team relationships, but these examples are summarized in the section on mission accomplishment.

Negative group dynamics associated with structural diversity. Responses in this category dealt with issues of communication and group cohesion. Some respondents described scenarios in which communication was impeded by lack of trust between members of the Active and Reserve Components. Specifically, members of the AC tended to doubt whether members of the RC were equally dedicated to the mission. Other respondents spoke more generally about team building and unit cohesion, indicating that it took substantial extra effort to create mission-specific teams out of teams that were structurally diverse, whether in terms of component, functional specialty, or Service.

Another set of respondents indicated that structural differences in management policies and practices created disunity. A frequently mentioned point of contention in joint settings was the Air Force's relatively short deployment lengths.

Mission accomplishment

Structural diversity as a facilitator. Responses in this category identified no new mechanisms for diversity impact. Mirroring a theme from the demographic section, several respondents indicated that some people had additional skills based on their component affiliation. Specifically, members of the RC were perceived to have skills related not only to their military functional specialties but also to their civilian occupations. These respondents described situations in which the civilian skills were both relevant to the tasks at hand and apparently effectively leveraged.

Mirroring a theme from the cognitive section, several respondents characterized structural diversity in terms of approaches to problem

solving and indicated that having a variety of approaches, either as a result of differences in functional backgrounds or Service cultures, increased creativity. In these situations, respondents were open to ideas from members of other groups.

Another set of respondents indicated that structural diversity, like cognitive diversity, increased their ability to fill assignments. In these examples, structural diversity resulted in having enough people with relevant training and backgrounds.

Structural diversity as an impediment. Responses in this category indicated that structural diversity made it more difficult to fill assignments with people who had the right training and backgrounds. In these examples, respondents described real difficulties associated with making transitions across platforms, work environments, or missions, especially in the fast-paced deployment environment. It is not clear from the transcripts whether these issues existed as a result of inaccurate assessments of the extent to which people can be substituted across specialties and Services or as a result of potentially incomplete billet descriptions.

Summary of global impact

Group dynamics

Positive group dynamics associated with global diversity. Responses in this category generally described positive working relationships among coalition forces. There was very little information in the transcripts to indicate how these relationships were formed, but some respondents indicated that they were the result of team members' mutual willingness to listen to people from other militaries and countries.

Negative group dynamics associated with global diversity. Responses in this category described communication difficulties between U.S. Servicemembers and either other coalition forces or military members and civilians from the host country. In these examples, respondents perceived that the underlying problem could have been lack of trust.

Mission accomplishment

Global diversity as a facilitator. As with cognitive and structural diversity, many respondents perceived that global diversity increased the range of perspectives and approaches that were brought to bear on any given problem or task. In some cases, the differences were based on cultural background; in other cases, they were based on country-specific experiences (e.g., counterinsurgency in the United Kingdom or Australians' previous deployment in a Muslim country). Respondents who described positive scenarios perceived that having a broad range of perspectives increased creativity and enhanced problem-solving.

Other respondents indicated that, in addition to extra experiences, members of other militaries also had extra skills. In some cases, these skills were ones that American Servicemembers eventually developed or might develop, so that coalition troops could be seen as providing short-term solutions, or stopgaps. In other cases, however, foreign troops were perceived to more fundamentally expand the skill base, especially members of host country militaries who had both cultural knowledge and local neighborhood knowledge.

Global diversity as an impediment. The bulk of responses in this category addressed U.S. troops' inability to function easily and appropriately in a foreign environment. In particular, several respondents indicated that our young troops' inexperience and immaturity had a negative impact on mission capability.

Diversity's positive/negative duality

For each diversity dimension, there were examples to illustrate both positive and negative effects on mission capability. Frequently, the positive and negative effects were opposite outcomes associated with the same phenomenon. This positive/negative duality suggests three potential interpretations of respondents' experiences:

1. Some people are comfortable with diversity and the interactions it generates, while others are not. For example, for each positive and negative scenario described in this section, it is

possible that there is another person from the same unit who would characterize diversity's impact in the opposite way.

2. Diversity is valuable in some contexts but not in others. This is consistent with findings from empirical research in the corporate sector, which indicates that diversity is most valuable in situations that call for creativity and innovation and least valuable in situations in which efficiency is the primary goal.
3. In some cases, diversity was well managed; in other cases, it wasn't. This is also consistent with corporate-sector research, which indicates that diversity is most likely to yield benefits and least likely to generate costs when it is explicitly managed.

In the next section, we address diversity management issues.

Diversity management

In addition to questions about diversity's impact on mission capability, respondents were asked to identify or describe the SKEs that they thought were needed to effectively manage diversity. Here, we highlight some of the SKEs that respondents identified for each diversity dimension, using results from the SKE coding process to guide the discussion. Then, drawing on lessons learned from empirical research on workforce diversity in the corporate sector, we summarize the implications of this Air-Force-specific research for diversity management in the Service.

SKEs by dimension

SKE codes

Recall that the SKE coding scheme captured the extent to which respondents perceived that diversity management SKEs are inherent to the individual, developed with career experience, or learned through formal training. Table 6 summarizes the SKE coding by diversity dimension. The data show that, overall, respondents were most likely to refer to their career experiences as being the source of skills needed to manage diversity. Indeed, based on our coding, career experience was the most frequently mentioned source of diversity management skills for every diversity dimension except global diversity.

Looking more closely at the dimension-specific SKE codes, the data show that, for demographic and cognitive diversity, having desirable management SKEs was most frequently attributed to career experience and personality; management SKEs for these diversity types were infrequently associated with formal training. These results suggest that respondents perceived that the ability to manage demographic and cognitive diversity is either inherent or comes with experience—but is not taught. We will show that most of the SKEs that respondents

identified as effective for managing cognitive and demographic diversity can be characterized as people skills and/or basic leadership and management skills.

Table 6. SKE codes by diversity dimension

SKE code	Diversity dimension				Total
	Demographic	Cognitive	Structural	Global	
Personality	12	11	7	10	40
Career	16	20	22	15	73
Training	6	4	19	21	50
No response	7	10	4	6	27
Total ^a	41	45	52	52	190

a. The total for each dimension is greater than 37, the total number of interviews, because some respondents discussed multiple SKEs associated with a given dimension.

In contrast, for structural and global diversity, possession of effective management SKEs was most frequently attributed to career experience and formal training. There were also more total SKE codes for these diversity dimensions because respondents' discussions about career experience and training frequently overlapped. Especially for structural diversity, it was difficult to distinguish between work experience and Professional Military Education (PME). The selections that follow will show that respondents' discussions about SKEs for these diversity dimensions focused on having more knowledge about members of groups other than their own (e.g., other Services, other components, or other countries or cultures).

SKEs to manage demographic diversity

Respondents described several management skills that were based on individual personalities; these were primarily related to being open to and accepting of difference, but they were also related to personal management styles and approaches. Consider the following two statements about the importance of openness:

[M]y approach has always been (1) is being very, very open minded and (2) trying my best to make sure I understand,

you know, regardless of, of who you are....Because for me, relating to an African American male and a Caucasian female from Arkansas or Boston, I mean, I think you have to be cognizant of where those folks come from and their cultures, and I think that's important. So that's one thing that I work hard on trying to understand and, you know, to effect change. To truly lead folks, I think you have to know exactly what affects them, what moves them, what motivates them. And I think in the past, I think I've been effective....Right, and making sure that I learn and understand exactly what's important to that person, because it's not equal across the board. (INT20)

I am usually a very open and receptive person; easy to talk to. It is just my personality. So it usually, it usually makes it easier to sit down and say "hi" to somebody and bring them out a little bit. And also helps when you are extremely upbeat, especially when you deploy. Learn that positive attitude, that upbeat, you know, it is going to be okay. We are getting through the day and we are going to accomplish something. It is worthwhile being here. If you have been away from family, do something good about it. They respond accordingly, which is a great technical skill. You might as well have it cheery, rather than just miserable and depressed. (INT18)

In a later passage, the respondent who made the second statement indicated that managing demographic diversity required understanding the personalities of the team members and tailoring one's management style for each team member accordingly. Thus, his perspective on demographic diversity overlapped substantially with his perspective on cognitive diversity.

A third respondent indicated that, to work well in a demographically diverse environment, it is important to see other people's perspectives and not take things too personally:

My thing is, I'm a pretty calm person, so I don't let the first thing that hits me offend me. I just kind of let it go over. But after you hear it over and over, I say, "I understand where you're coming from," and I try and show them my point of view, and that's what kind of got us to blend. They got to see where I was coming from. (INT35)

In terms of diversity management, this respondent also boiled things down to being open-minded; his advice for preparing others was:

To be open-minded. Make sure you tell them to stay open-minded, to see where they're coming from. Trying to recognize that certain things they're saying and doing, they're not doing it to you, or at you, it's just where they're from and how they act. It's totally different. (INT35)

A fourth respondent tied her ability to establish priorities and look out for her team to her strong personality:

I'm pretty strong willed and we needed that over there because things are so chaotic; things are so hectic. People are so stressed out that often times, you know, it's who shouts the loudest. The squeaky wheel gets oiled, but that isn't always necessarily the one that needs attention. And so I was able to basically stand firm on certain things and say, "No, we're not going to do it that way," or, "We'll do what you need, but this is how we're going to do it." And so I think just my ability to recognize what's important and what isn't. And again, that for me, when [it came] down to my guys, kind of protected them, if you will. (INT27)

It is interesting that this respondent did not explicitly connect her good management skills to the positive work dynamic in her group, which was diverse in terms of both gender and race/ethnicity. Her statement is included here because the empirical research on diversity and group dynamics in the corporate sector indicates that the leadership and prioritizing she describes are important for diversity management.

Respondents who attributed demographic diversity management ability to career experience identified a different set of SKEs that primarily related to basic leadership and management. For example, reflecting the consistent mentoring theme associated with age diversity, one respondent simply said:

Once again, 31 years of my experience and mentoring of the younger troops did help. (INT26)

A second respondent tied previous experience managing a demographically diverse work group to the development of a very particular management skill:

I had been a previous commander and so I had dealt with a diverse unit that I had previously out at Nellis. And so knowing how to praise publicly and critique privately, very important skill. (INT19)

A third respondent attributed his general leadership ability to his long service in the Air Force and a mix of experiences both as an enlisted member and an officer:

Well, one of, I think, my things that I brought to the table was my experience and longevity in the Air Force; I've been in just over 20 years. Young in the officer corps but bringing all those experiences as an enlisted corps working with a variety of enlisted and officers, I was able to understand what it takes to get a job done. What it takes to be a leader and lead those individuals and help them want to do the job and accomplish it by helping them understand what the mission is. (INT2)

Although the experiences described above relate to differences between officers and enlisted, the respondent was able to translate the lessons learned in that context to the more general lesson that diversity of any type requires leaders to tailor their management styles to each subordinate's needs. In particular, he noted that team members' need for instruction and guidance varied with age and experience:

You had to kind of tailor the way you explained your task to someone who has been doing things for a while. Most of them just say, "Give me the facts, cut to the chase, and then I can press on from there." And with the younger troops, you had to kind of break it down into steps: "Okay...we're going to work on this area, then we're going to progress to this, and this is how it affects the mission." And, yeah, we did have to kind of tailor it. And one of the things that I always like to do is try to find out what makes that person tick and what makes that person, you know, perform based on what their likes and dislikes are. And try to tailor the way you're explaining it to them in that way. And that usually gets better performance out of the individual. (INT2)

Another respondent indicated that long experience working in a female-dominated field allowed him to act as a bridge between the women in his group and the other men who had less experience working in gender-integrated units:

I would say the biggest thing is being a MSgt and being medical. I come from a predominately female squadron. And there was a number of females, I'll say, maybe 8 or 10, that were also medical and they got assigned to CE. So, there were 12...or 15 of them out of 450 men. And, I was still able to relate with them, I think because most of my troops have been female; most of my supervisors have been female, and I'm used to that rapport. It's not an oddity to me at all to have a female in the unit. But some of the other people there who were maintenance side or civil engineers, or whatever, for them it was an oddity to have that many females as part of the unit. I think that would have been the biggest thing that I brought, was that I was pretty comfortable with a lot of stuff. I was used to a lot of it. It made them comfortable, you know. They would bring their issues to me just 'cause they were comfortable talking to me about it. (INT36)

In this example, knowledge of and comfort with an “other” group was the key factor.

A sixth respondent indicated that his leadership skills resulted from his technical capability and work experience combined with his natural people skills:

If I could say, I brought a lot of leadership skills. I mean, I deployed in the same job that I'm doing here and I deployed before doing the same job. So I had done that job before. And being able to work with people. I like working with people, so that kind of makes me good. (INT6)

Finally, one person did indicate that team building is an important skill for managing demographic and other kinds of diversity and that it could be taught formally:

[Y]ou need to address the differences in people—whether it be race or religion or just experience level, what they bring to the table--when you facilitate a group, or leadership is a better term, and bring that group together. They're

taught on understanding what the different agendas are that come with the folks that come to that group and training to do that...I think there's a course in negotiation and team building and stuff like that. Those classroom type subjects are important, and diversity is addressed in that. I think that is important in that classroom setting, but we need to follow the opportunities so that when there is opportunity... I mean...I wouldn't keep someone away from an opportunity to lead, if he hadn't had a class in diversity, but I think hopefully he'll need to step up; he may need to. Hopefully he will have some classes or classroom experience in diversity and negotiations and bringing groups together prior to, or earlier in his career. (INT34)

SKEs to manage cognitive diversity

As with demographic diversity, respondents usually associated the SKEs needed for managing cognitive diversity with inherent personality traits and career experience. Regarding personality, one respondent simply stated:

I think there are people who are natural leaders and there are people who are not. (INT17)

Another respondent indicated that managing cognitive diversity requires strong communication skills, which, in turn, requires patience:

I think the biggest thing is knowing how to talk to people...and knowing how to repeat yourself without blowing up right away. (INT9)

SKEs associated with career experience included general leadership, team building, and the ability to process input based on different perspectives. Starting with general leadership, one respondent said that she developed her approach by taking leadership classes and emulating a mentor when leadership opportunities arose:

[M]y Commander...was a great mentor. [She] helped my growth so from the very first day that I met her. And I've been able to follow and emulate her and we've talked and I've been put in key positions that allowed me to grow and form my leadership skills. And I've taken on, well, I've gone

to leadership classes and I've done that to try to make myself be the best leader that I can. (INT22)

In terms of team building, a second respondent talked about the importance of keeping the team focused:

So the skill I think that I brought to the environment was pulling the team together when I saw the team starting to, you know, spread out in its own individual path instead of us working together as a team to focus on the mission. So I think that was one of the main things I brought to it, was being able to, you know, corral the team so to speak. (INT2)

He attributed this ability to his long experience in the Service, especially his understanding of Air Force history and the evolution of its missions over time:

Well again, and I keep repeating it, but the experience in the Air Force itself, having seen so much and how things have changed over the, you know, the past 20 years. And being able to see where we're going and how the structure of the force is, and the numbers of the force, that we're deploying a lot more. We're having to do a lot more with less people. Not necessarily always the workload increasing, but just, you know, more of a mission scope and less people to do it with. It allowed me to bring to the table—to these individuals that were a little bit younger—and explain to them how we've progressed from this point to this point and it's always been for the better. And no matter how things look right now, and how you feel about how they're deploying a lot, you have to remember why we're doing it, where we've come from and where we're going. And if you can keep those things in focus, it helps just to make, you know, that deployment a little bit easier. (INT2)

Recall that one of the identified benefits of cognitive diversity was the variety of perspectives it brings. One respondent indicated that past experience in crisis situations helped him more effectively draw from those different perspectives to achieve the mission:

I had previous experience, of course....[K]nowing that you had very little time, you had to make on-the-spot decisions. Many times you just didn't have the luxury of time to sit back and get the 80-percent solution. Whether you came into the headquarters as someone making quick decisions or not,

pretty much, that environment forced you to basically take whatever measures were available and make the best decision. If you were going to do well, and survive, you had to really do that. You can basically be comfortable with taking 60, 70 percent of the information and make the best decision. I had already had that from crisis mission planning kind of things I'd done in my previous assignments. I've got quick, rapid-reaction kind of thinking I already helped develop, and so that was really useful. (INT23)

As with demographic diversity, one respondent did indicate that management training can provide some SKEs needed for managing cognitive diversity. Repeating a selection from the section on the impact of cognitive diversity, one respondent indicated that assigning the right people to the right roles is an important part of team building, which can be learned through training:

I think PME basically helps you...identify...those leaders, you know, leaders and followers and, you know, the various personality traits that folks have. And with that in mind, you know, you recognize what's going on within your unit or the people that you're working with....I identify individuals with assets and what type of capability they bring to the fight. Okay? And if person X is a follower and person Y is a leader, would be a good manager, then obviously I'm going to place person Y in certain positions and I'm going to put person X behind the line so that they can follow along and go from there. (INT3)

SKEs to manage structural diversity

In analyzing respondents' discussions of the SKEs for structural diversity management, it was frequently difficult to distinguish between career experience and training as the main vehicle by which the SKEs were or could be developed. In many cases, respondents mentioned both experience and training; in other cases, they spoke in terms of increased interaction between groups that could occur during formal or on-the-job training. Therefore, rather being organized by the preponderant SKEs (i.e., Career and Training), this section is organized by structural diversity type (i.e., Service, function, and component).

The SKE that respondents were most likely to mention as effective or necessary for managing all types of structural diversity was knowledge

of other groups' practices or cultures. Several specific skills were also mentioned, especially the ability to communicate across structural or functional boundaries.

Starting with Service-related diversity, one respondent said that successful functioning in a joint setting requires the ability to communicate across the Services, which he developed in several assignments as an instructor:

[T]he communication skills of working with other Services. Over the years of my service, I've worked with the Navy. I worked with Security Forces Academy at Lackland Air Force Base, worked with the Navy in that police training. Then I became an instructor and had several different Services as a part of my instructor course because we had the Canine School there, so I had Navy and Marines and Army folks going through our instruction course. Working AATC⁴⁴ protocol, working all the different things there. I was deployed in '90 during Desert Storm One. And we worked with the same types of people, so those skills that I had there were able to help me deal with the folks there. Communication skills, I guess the biggest thing, and leadership. And to see that those folks recognized what you knew, what you were doing. You weren't there just to fill a square. (INT31)

Two other respondents indicated that more familiarity with and knowledge of the other Services was key. They recommended early and more participation in joint settings for all members:

I think that just more, more joint operations. I think that we make the concept of a Joint Staff Officer kind of that cream of our crop supposedly. And I think that we ought to just make it much more general to, of an opportunity for everyone. I think that, you know, down to the lowest person should have the opportunity to work with the other Services more often. (INT1)

I think anybody who had the sets of responsibilities that I had would have wanted to have an earlier time frame of having worked in a joint setting, so you knew the different

44. "AATC" is the abbreviation for "Air National Guard Air Force Reserve Test Center."

predispositions. The Army is very different than the Marines; the Marines are very different than the Special Forces. And when you have a base that has all of those individuals represented in your base structure, if you aren't familiar with what their wants, needs, and missions are, you have a hard time wrapping that in. So earlier on—early joint, early multinational—for our young coming up NCOs and officers lays the right foundation. (INT5)

Several respondents indicated that the best preparation for working with members of other Services is actual practice. When such practice isn't possible, classroom training can be an imperfect substitute:

[T]he best training for jointness is to go out and do some joint operation, I would say. It'd be nice if you had a little training on structure and what your job is; on what your mission is. In the joint arena, maybe that changes with every conflict in reality, I think. Now, the overall structure of the joint operations probably changes year to year; that's what ACS and SOS,⁴⁵ the equivalent leadership schools on the enlisted side, do give you that. They try to keep up, and I think that's good, they do need to keep up. We do need to have a good overview of that, but...I really think that's probably secondary to actually doing operations in a theater. You learn from doing better than you learn from reading. (INT34)

Definitely the training and experience itself is great, if you can get that before, but if you're putting together a team you may not be able to have that luxury. Then you definitely need some kind of, maybe a quick course on how the Army is structured. You know, we did some of that on PME, but...you're putting junior people in there and they haven't gotten to the point where they've gotten that kind of thing.... (INT32)

I would argue that as the Air Force we do a very poor job in preparing our officers to function at a joint operational level. We really don't spend a lot of practical experience time in locating and focusing and giving them practical training. We give them a scholastic approach or we go, "Oh, here's your PME," you know, this is by the book. What you

45. "ACS" and "SOS" abbreviate "Air Command and Staff College" and "Squadron Officer School," respectively.

realize when you get [to] the field and you actually work in those joint environments, that the PME may be a good start but it's nowhere near the knowledge that you really need in hand. So because we have a lack of, persons and their doctrine seem to be missing, if you will. To help give that company grade and junior field grade an advantage or a better opportunity in that joint environment. I was very fortunate, though. I made a lot of close Army friends and they took care of me. So I was just lucky that by the grace of fellow engineers that took me under their arm and showed me their paradigms and showed me what lines of communication were the terms in the things that caught me. They gave me a whole new world of insight that the Air Force hadn't been able to, that I hadn't been able to get within the Air Force. (INT25)

Another respondent said that he did have helpful training experience before deploying:

Now, working with the Joint Services, I don't know how you could actually prepare for something like that with the exception of contacting enough. Like, we do training exercises with the Army units up the road. We contact them when they have equipment that we don't have. (This was during the time frame when we had 141's.) They'd bring their trucks and stuff that we don't have and we would inspect it and load it on the aircraft, which would be a static load; it's not going anywhere. We showed them how we would actually load and tie down an aircraft. (INT35)

Finally, one respondent indicated that he would have liked more information that was specific to his field:

I guess commands sometimes have different expectations of what we can do [with] the patient or how to manage particular patients. And sometimes things as simple as, how was a person going to be evacuated from the areas they needed to be; I guess they were different in the Army, Navy. And the forms that we had to fill out that go back to command—sometimes [we] were wondering, where do we find these forms? How do they usually do this kind of stuff in the Navy or [Army] or whatever? I guess knowing a little bit about my specific field, how it operated in other branches of the military, how would that work? (INT13)

Moving now to functional diversity, one respondent indicated that mentoring and career experience, especially as an instructor, allowed him to develop the general leadership skills needed to manage functionally diverse work teams:

I am very fortunate in that for the 20 years before that I've been put in situations and I had the opportunity to lead—manage—you know, do all those things in the past. You know, I've been put in those positions from having the opportunity to lead flights, or sections very young to. . . . I also had an opportunity for, for 2 and a half years to work in the tech training world where you've got 2,000 students coming through, you know, every year. All the different problems that you encounter in a squadron are compressed. So I've got, I think I've got 10 years' worth of experience, you know, working 2 and a half years in tech training. So I think I've been put in some situations in the past and had a chance to see some mentors, you know, in the way they've handled situations that I think I was pretty well prepared for it. (INT20)

Another respondent indicated that it was important to understand the types of issues that arise in cross-functional environments. He said previous experience that gave him this understanding helped him manage functional diversity during his deployment:

One thing that helped me a lot is that I had been an under-shirt, or a shirt-in-training, here at my base and so I was out of my career field getting to deal with different career fields already. Now that I think about it, I was a shop chief for a Readiness Shop. No one in that shop was in my AFSC; everyone I supervised and worked with was a different AFSC. So, I've had chances to be outside of my career field in the past. I'm not quite that far—not Cop, CE—but, at least I was out of my field, of just dental just doing what I did, and I was ready for some of the differences and changes. I just didn't quite realize how severe they would be that some of these shops really are rough. I didn't know that. But, as far as skills, those skills were developed there, that's where I got those skills from, and the same with the abilities; the skills and the abilities in line. (INT36)

Two respondents discussed the importance of learning to work in not only functionally diverse teams, but also teams in which members were not familiar with each other. The first respondent suggested that

the Air Force should provide more practice working in the Air Expeditionary Force (AEF) setting:

Just more practice in an AEF setting with a team that you don't know ahead of time. In other words, throw a couple hundred people together, give them a mission, and let them practice through learning how to get leadership in place and the patterns. Because that's more....Right now we have a tendency to do our AEF training as if it's a set piece, but it's a lot more random. And it wouldn't hurt to let our AEF training just throw people together and give senior leaders the opportunity to have to work through the problem of "Do I know my team leaders?" (INT5)

The second respondent described participating in a training exercise that brought together people from multiple specialties and required them to learn to work together:

We went through a training one time in Wisconsin, and the type of training that gets you in with the mind set of deployment, with multiple sections doing different job functions. And I would highly recommend every unit to go through that type of a atmosphere because it exposes you to the medical, to the security forces. You're all interacting together, you get to work together, and you're in the same room together. I would definitely recommend that type of training prior to being deployed. Because you never know when you're going to get deployed so that would be part of my annual training plan, to do something like that. (INT35)

Finally, another respondent suggested the need for training across platforms to occur *before* rather than *during* deployment:

I think a greater knowledge of individual airplanes would have probably helped. You know, the school has to run you through each one of them before you got there, in a low-stress environment as opposed to you getting on that airplane right now. A better understanding of the way different crews function. A [inaudible] crew is going to work with you differently than say a crew that is more of a transport patients, you know, C130 or 141 vs. a KC-135 or a KC-10. You move folks differently in those environments. (INT10)

Consistent with the other types of structural diversity, respondents who talked about managing teams composed of members from the

Active and Reserve Components wanted more information. Two respondents from the AC indicated that they just didn't know enough about the RC to manage their RC members effectively:

Even me, a career field manager of 9,000 Active-Duty folks and approximately 12,000 Guard folks, you know, I don't know enough about, you know, the difference between, what an ART is...an Air Reserved Technician, or the folks that, you know, that are GS's during the day. I don't know enough about that, but I should. But, you know, there's nothing, and again I understand that, you know, it's for me to go pull that kind of information and learn it. But at the same time if I, if I look in the PME today, I doubt if you see anything about it in there. Or it might be something in there, but it's not to the depth that would be necessary. And the same thing with Senior NCO Academy. You know, I think we definitely need to do a better job there. Especially given the way we are at home station is totally different, especially when you go to a contingency location, and, I mean, it's totally different because there is such a mixture, because we, we count on the ART so much. (INT20)

We don't teach enough working with the Reserves and the Guards. We don't understand it. Even at my level, who has worked with Guard and Reserve, we don't understand how they all work. And maybe it needs to be taught in the earlier PMEs: Here's how the Guard works, here's how the Reserve works, and here's how it's going to affect....Here's how you can change things with the Guard. Here's how you would manage a Reserve person. We're seeing more and more integration of the Guard and the Reserve in our Air Force as well as deployed locations, and I think taking more of a look into how [we] can make the active force more cognitive of how the other Services work would help quite a bit. It's that training. Get them started from the beginning. I know what mandates are, I know you have to request them, but how they all work is a mystery to me. I'm talking to my boss, who's a general, it's a mystery to him sometimes, for both the Guard and the Reserve. And it really would help. Then I know what my limitations are. I know how I could best use those people. Because they're a combined force and I know they really do the work. I think a Guard and Reserve person are often confused by it. Maybe because many of them came from active force and went into the Guard and Reserve. But it's a mystery how Guard and Reserve work sometimes. (INT26)

A third respondent indicated that the key to managing structural diversity is the technical and management skills of the senior NCOs:

I will tell you that I think by...and large, the senior NCOs helped bridge structural diversity. And it's in your masters through chiefs. If they don't know one another's jobs or they don't know how to work Guard and Reserve knitting together, then there is virtually no way to make it happen. (INT5)

Finally, a fourth respondent indicated that, as with jointness, the best way to improve total force integration is to increase contact among members of the different components, especially during training:

I personally think more training together is another. I go to a lot of different PME schools and all that, and I mean—you as well—I mean, you'll sit there and—you tell me from your own experience—you sit there and it's like, say there are 100 people in the class. Okay, 90 of them are active duty, you know, 5 of them are Guard and Reserve, and the other 5 Guard and Reserve are chaplains. You know...you have that type of a ratio. Then you're not doing anything to reinforce the concept of a total force. It's active duty and some Guard and Reserve. I mean, I know that operationally—when I say operationally, I'm talking primarily Air Force with flying—yeah, there's probably going to be a little more camaraderie there because we have such a large portion of the Air Force these days as Guard and Reserve units that are flying. So that, you know, you find a little bit more camaraderie at that level, but not in the trenches, so we need to get more people together in training so that there's more of a, more of a [balance]....Now I could go to a PME, you know, go to some school tomorrow, and I'll see a few people in this class that I've known for, you know, 20 years. I may not have seen them over the years but you know I've known them for 20 years. And you get that with the active duty....[B]ut you don't get that with Guard and Reserve guys because you don't see that many of them. And so when you're seeing them for the first time in a deployed location, that, you know, that doesn't, that's not a great environment to begin with, conducive to accomplishing a mission in an effective manner. (INT3)

SKEs to manage global diversity

Discussions about the SKEs needed to manage global diversity reflect the two interpretations of global diversity that surfaced during the impact discussion: (1) global diversity on work teams and (2) working in a foreign environment. For both, the most frequently mentioned SKE was knowledge of the other group—either knowledge of foreign militaries and how they operate or knowledge of the host-country culture. Additional themes for each interpretation also arose.

Respondents attributed the development of the SKEs needed to work with coalition partners or host country nationals to both career experience and training. One respondent spoke about his previous assignment as a foreign liaison officer:

Having been a foreign liaison officer helped me tremendously. I'd been working overseas 12 years, and it helped me quite a bit to be able to go in and understand that these are not Americans...so you have to treat them differently, know about what their customs are. Before you start talking any business you better have their tea with them. You'd better sit down. You'd better not cross your legs in front of them. All these things I knew, but I think others may have not been so apt to deal with them easily. And at the same time, to sway them in the direction that we want to go, in the direction that would be best for the United States as well as their own country. Because if you go in, start talking business right away, don't have their tea, don't tell them you're their best friends, or cross you legs, now you've turned them off. They don't want to listen to you. It doesn't matter how friendly you are, it doesn't matter how good a business person you are, if you don't respect their culture, they're not going to respect you. And being a foreign liaison person helped me, and I'm afraid that other air traffic controllers going in there have failed because of that. (INT26)

Two respondents indicated that training and exercising with members of foreign militaries before deployment was valuable:

I have had the opportunity to train and be in multinational exercise settings since being a Captain. And that routine experience of being in somebody else's country and training in other places is invaluable. (INT5)

[P]rofessional military education. I had worked with Israelis; Saudi Arabians were in my seminar. So for a year I dealt with these folks and, again, got to understand their perspective on things. And it was always fascinating to ask when we dealt with a controversial issue, "What do you think? What is your perspective?" And they gave their perspective. And it was just invaluable to see how a Muslim or an Israeli, how they viewed the world and how they view an American policy, American actions. It was amazing, very enlightening to see how work is perceived outside. So both Air Command Staff College and Air War College, like I said, I had Israelis, Saudi Arabians, Pakistanis, in my seminar. Plus they were part of the school, so you dealt with them on essentially a daily basis. That was a very enlightening experience that helped a lot. (INT23)

Other respondents talked about the information or training they would have liked to have had before deploying with coalition forces. At the most basic level, one respondent expressed the need to understand the structure of the partner militaries:

Kind of the same as with the other Services. Like they have like their generals over there, their colonels, but looking at their rank, you have no idea what that is unless somebody tells you. So there was nothing, no charts or anything over there to say, okay, this person is equivalent to our general, equivalent to a master sergeant, that kind of thing. (INT6)

Another respondent indicated that, before deployment, he did not get enough information about the cultural and political backgrounds of our coalition partners and how these might affect how each partner approached the problems at hand:

I think greater focus on learning how your allies think and being able to anticipate that, just the awareness of it. Because it took me a while to realize, you know, just the different frames of reference that these two groups had and how that was, you know...our stalemate. How that was not moving anything along. And then how to work through that. I think that would've been better. I mean, my focus going over there was to learn more about Afghanistan—their culture and the Afghan way of doing business, which obviously affects their thinking. They're used to doing favors for each other and for being [tolerant] under the table for that. And that's what I mentally, intuitively had researched

for. The ability to anticipate problems with American contractors or Germans coming in, having the different backgrounds that basically caused the work stoppage or mission stoppage....And I think that clear cultural awareness or our perception of the allies would be beneficial in our case over there. Not just the Taliban and Al Qaeda, but the other competitive nations to the United States who have foreign intelligence over there and what their agendas might be and why. (INT24)

Another respondent indicated that he would have functioned better in the coalition environment if he had had more general training on how each partner was expected to contribute to the mission:

I think there is still a lack of big picture. On that I feel I was cold going over. [T]here probably could be more attention put on the actual environment, the customers, the forces that you're going to be dealing with over there. (INT29)

Using terms similar to those in the discussions of the SKEs needed to manage demographic and cognitive diversity, one respondent identified open-mindedness as an important facilitator of communication:

What I'd try to impress upon my team and the teams that were going in for us—the military and the civilian and Reserve teams—you have to realize is that these are all, everybody, everybody is proud of whatever they're doing, and you need to understand that. And just because they do it differently doesn't mean it's wrong, and just because we do it differently doesn't mean we're right. And what we have to do is go in there open minded and say, "This is how we do it, but how do you do it?" And say, "Oh, okay, well here's the differences, actually we have a lot of similarities." And when you look at it from that angle and try to identify what your similarities are as opposed to what your differences are, then it minimizes the amount of differences instead of maximizing them, and it allows for a more open communication. (INT21)

Respondents who interpreted global diversity in terms of simply being deployed overseas also wanted more information before deploying. Some respondents expressed the need for more information about the culture in the region of deployment. For example:

I think more training about other countries, more education on other countries. I didn't have a whole lot of education on those different Eastern countries...the Southwest, Southeast Asia countries. I didn't know a whole lot about them. And if I would have, I think that would have helped out in dealing with some of the cultural issues over there. (INT2)

Other respondents felt that, in addition to giving training on the cultural differences of the host country relative to the United States, leadership needed to provide more explicit guidance about the operational implications of those differences. Two respondents had very specific examples of this type of guidance:

It's different than what they tell you in the book or the handouts or whatever to what's actually happening in real life. One of those things, like when we were in Oman, the locals, during their prayer times, they don't like movement. It's one of those things if you got to be somewhere you need to be there before they start or after. That kind of hampered our launch and recovery efforts and kind of hampered the way our missions were flown, so I mean it's one of those things you got to look at. (INT10)

But there could be...some, just lack of understanding of the culture when you are dealing with the foreign nationals. Then perhaps they have prayer time, for example. And are you going to make them work through prayer time or...are they going to be able to take time out for that? I do not know. What does the Air Force think about that? (INT19)

An additional type of training that some respondents identified was what they called sensitivity training. Since it is not possible to fully educate all Servicemembers about the nuances of the deployed culture, they should at least learn how to act respectfully in the face of unfamiliarity. One respondent said:

So sensitivity training, I think would be important. I don't think I got any. In fact, I don't think I got any sensitivity training before I went over because that probably would be a good thing of just, you know, respect for the culture. I know during intel briefings we got some cultural, you know, here you go, the climate, this or that, what to expect from disease, infectious disease, and awareness. But I'm not, don't

plunk your left heel, etc., etc., but really just being respectful of that country. That would have been helpful. (INT31)

Another respondent indicated that sensitivity training is especially important because of the stress of deployment:

You get those briefings before you leave your home station. But those briefings are basically, you know, it's cultural diversity. You know, don't show the bottoms of your feet to an Arab person. I mean, you know, it's stuff that is great if I'm going to be sitting in a room hanging out, and it just, it teaches you, or it's designed to teach you, manners....I think if you had more of the global training, more of the diversity training in a deployed location, you would find less of a, you'd have less problems. Like, something like Abu Ghraib or something like that where, quite frankly, the reason why, I mean this is just my opinion, the reason why you had Abu Ghraib, it's not a case of interrogation. It's a case that we're mistreating Arabs. Right? Because, hey, freakin' Arabs. And I say that as that's the opinion of people out there. So if I can mistreat them, why not? You know, I mean, it's almost like the old Vietnam thing, you know, where you see people, they don't look like you, they don't talk like you, so they're gooks, they're not Vietnamese. You know, the Arabs are, you know, ragheads, whatever you want to call them. And you don't see them as people anymore. And that in a deployed location is not emphasized enough. (INT3)

Finally, other respondents indicated that career experience, rather than training, was the best way to develop the cultural skills to function properly in a deployed environment. For example:

It is easier if you are stationed overseas first before you get deployed. The people who have never stepped foot outside of the U.S. have much more of a culture shock.... (INT18)

Implications for diversity management in the AF

Lessons from the corporate sector⁴⁶

Based on our previous review of empirical research in corporate settings, workforce diversity has two main effects. On the negative or cost

46. Reference [1] reports on these lessons in more detail.

side, the major measured impact of diversity is the concomitant effects of social categorization, or in-group/out-group, dynamics on retention and turnover. Specifically, the formation of in-groups and out-groups based on various diversity dimensions tends to lead to more absenteeism and lower retention for members of the out-group. These effects occur not just for women and racial/ethnic minorities but for any group with low representation, whether characterized by age, functional specialty, or time of entry into the organization as a whole or into a specific work group.

In addition to affecting individual engagement, the social categorization process also affects work group processes. Specifically, the empirical research has found that diversity can lead to short-term, increased conflict among workers. Again, this result applies to the broader dimensions of diversity as well as the narrow, traditional dimensions.

On the positive (i.e., benefits) side, there is evidence that dissimilarity in terms of race/ethnicity, gender, functional experience, and so forth, is valuable for cognitive, creative tasks. The corporate research also indicates, however, that capturing the creative potential of diversity is conditional on whether heterogeneous groups are able to overcome negative work group dynamics to resolve their differences. This means that the group process matters. In [1], we say that

the potential increase in productivity is vulnerable to process losses, due to misunderstandings or other communications problems, a failure to confront or resolve conflicting points of view, or lack of attention to motivational issues. In other words, managers need to use the growing body of evidence about the impact of diversity to manage it.

Thus, the research shows that unmanaged diversity can have significant business costs for an organization, but managed diversity can bring significant benefits in the right contexts. In addition, the research suggests that recent efforts to manage demographic diversity may have a larger-than-expected impact on performance because conflicts due to functional and structural diversity have traditionally not been "managed" but rather taken as given.

The research identifies the following management practices as proven ways to gain benefits from diversity while avoiding its costs:

- Individual level
 - Helping the employee to recognize different perspectives and see them as an opportunity for work-related learning
 - Altering selection processes
- Work-group level
 - Developing process management skills (e.g., negotiation and conflict management)
 - Facilitating effective communication
 - Paying attention to diversity attributes, including status differentials, in composing groups, and/or designating roles within them
 - Paying attention to the duration of the group's time together
 - Instilling mission-specific identifies or other team-specific identities.⁴⁷

Lessons from the Air Force interviews

The impact and SKE evaluations of the data from the interviews indicate that the diversity-capability relationship in the Air Force is similar to that documented in the corporate sector. Respondents' comments about the impact of diversity on mission capability revealed that diversity in work teams had both positive and negative effects on group processes, especially communication and unit cohesion. Diversity also had positive and negative effects on mission capability. Positive effects were primarily in terms of greater creativity due to a broader range of perspectives and skills. Negative effects were primarily in terms of assignment-related difficulties that made team building more complicated, especially in deployment scenarios when time is short.

Table 7 summarizes the SKEs that respondents identified as necessary for managing the four broad diversity dimensions. Two points are noteworthy. First, although worded somewhat differently, this list looks quite similar to the list of diversity management practices

47. For organization-level management strategies, see table 2 in [1].

identified in [1]. Second, there is substantial overlap across the four broad diversity dimensions. This is true despite the differences in SKE coding across dimensions, which indicated that respondents attributed possession of demographic and cognitive SKEs to inherent personality traits and career experience, but they attributed possession of structural and global SKEs to career experience and training.

Table 7. SKEs identified by interview respondents, by diversity dimension

Diversity dimension	SKEs
Demographic	<ul style="list-style-type: none"> Openness to and respect for differences Ability and willingness to mentor Ability to motivate based on an individual's personality and goals Understanding of mission and ability to motivate people around it Knowledge of and/or comfort with an "other" group Team building and negotiation abilities Ability to appropriately prioritize competing demands
Cognitive	<ul style="list-style-type: none"> Patience Communication skills General leadership ability Team building and negotiation abilities Understanding of mission and ability to motivate people around it Ability to make appropriate assignments based on an objective assessment of an individual's best role on a team Ability to weigh competing inputs
Structural	<ul style="list-style-type: none"> Communication skills General leadership ability Knowledge of and/or comfort with an "other" group Openness to and respect for differences Understanding of potential impact of differences Team building and negotiation abilities, especially for newly formed teams
Global	<ul style="list-style-type: none"> Communication skills Knowledge of and/or comfort with an "other" group Openness to and respect for differences Understanding of potential impact of differences

Implications

The two main implications of this analysis are that diversity of all types needs to be managed and the necessary skills to do so can and should be purposefully developed with training and through career experience. Specifically, the positive scenarios described by the respondents indicate that diversity can be managed to improve mission capability. The negative scenarios indicate that it is likely to be too costly to leave the acquisition of diversity management SKEs to personality or ad hoc career development.

In general, the training should provide tools to both leverage diversity for benefits and manage it to avoid costs. Some training should provide information about relevant other groups and emphasize respect for differences. In particular, training for personnel who are deployed overseas, especially young troops, should go beyond basic briefings on culture and climate, to include guidance on how to behave in foreign environments.

Most training, however, should focus on concrete aspects of process management. Some specific focus areas follow:

- Conflict management
- Communication skills, including listening
- Team building, especially in short time frame of deployment
- How to use knowledge about other groups
- How to motivate around a common mission
- How to assign people to teams and roles within teams.

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Conclusions

Summary of results

Based on our coding, the vast majority of respondents perceived that workgroup diversity of all types mattered in their deployments. In some cases, respondents perceived that diversity improved mission capability; in other cases, they perceived that diversity hampered mission capability. Respondents were slightly more likely to perceive that demographic, cognitive, and global diversity had a positive rather than a negative impact; only for structural diversity were respondents more likely to perceive a negative impact. Indeed, there were two consistent negative themes for structural diversity. The first was lack of trust and lack of understanding between the AC and the RC. The second was difficulties creating unit cohesion among newly formed functionally diverse teams in the time available during deployment.

Although respondents described many unique scenarios to illustrate how diversity mattered in their deployments, most could be assigned to one of two general categories: indirect effects via group dynamics and direct effects in terms of having more or less skill in the group or having too many or too few perspectives to manage.

These mixed results are consistent with empirical evidence from studies of workforce diversity in the corporate sector in two important ways. First, corporate-sector research indicates that diversity in work teams can lead to greater creativity and innovation. Without explicit management, however, it is more likely to lead to higher turnover among minority team members, less social cohesion, and more conflict. Second, diversity has been shown to affect work-group performance via the same types of group dynamics described by the respondents in this study.⁴⁸

48. See [1].

In terms of diversity management, the respondents identified many specific SKEs. The most frequently mentioned was the need to be open to and respectful of differences, regardless of the source. Other SKEs related to basic management and leadership practices, such as the need to understand the mission and be able to motivate disparate team members around it. Respondents also highlighted the importance of having knowledge and understanding of the “other” group’s cultures and practices. The former group of SKEs tended to be associated with demographic and cognitive diversity; those in the latter group were mostly associated with structural and global diversity.

Respondents’ perceptions about how diversity management SKEs were acquired differed across dimensions in a similar pattern. Respondents indicated that the SKEs needed to manage demographic and cognitive diversity were either inherent (due to personality traits) or were developed with career experience. In contrast, possession of the SKEs needed to manage structural and global diversity was attributed to career experience and formal training.

Table 8 summarizes the main findings regarding respondents’ perceptions of both the impact of diversity on mission capability and the SKEs needed to manage it.

Table 8. Summary of impact and SKE results, by diversity dimension

Diversity dimension	Impact	SKEs ^a
Demo-graphic	<ul style="list-style-type: none"> • Positive group dynamics: Learning across age cohorts; positive synergies from other differences • Negative group dynamics: Ineffective communication; clique formation • Facilitator of mission accomplishment: Additional skills directly as a result of demographic characteristics • Impediment to mission accomplishment: Lack of skills directly as a result of demographic characteristics • Other positive: Symbolic of mission 	<ul style="list-style-type: none"> • Openness to and respect for differences • Ability and willingness to mentor • Ability to motivate based on an individual’s personality and goals • Understanding of mission and ability to motivate people around it • Knowledge of and/or comfort with an “other” group • Team building and negotiation abilities • Ability to appropriately prioritize competing demands

Table 8. Summary of impact and SKE results, by diversity dimension (continued)

Diversity dimension	Impact	SKEs ^a
Cognitive	<ul style="list-style-type: none"> • Positive group dynamics: Balance; lack of conflict • Negative group dynamics: Friction; presence of conflict • Facilitator of mission accomplishment: More innovation and improved problem solving; greater probability of having the right person for the job • Impediment to mission accomplishment: Lower probability of having the right person for the job; assignment more difficult and time-consuming 	<ul style="list-style-type: none"> • Patience • Communication skills • General leadership ability • Team building and negotiation abilities • Understanding of mission and ability to motivate people around it • Ability to make appropriate assignments based on an objective assessment of an individual's best role on a team • Ability to weigh competing inputs
Structural	<ul style="list-style-type: none"> • Positive group dynamics: None specifically • Negative group dynamics: Communication problems, low group cohesion^b • Facilitator of mission accomplishment: More innovation and improved problem solving; greater probability of having the right person for the job • Impediment to mission accomplishment: Lower probability of having the right person for the job^c 	<ul style="list-style-type: none"> • Communication skills • General leadership ability • Knowledge of and/or comfort with an "other" group • Openness to and respect for differences • Understanding of potential impact of differences • Team building and negotiation abilities, especially for newly formed teams
Global	<ul style="list-style-type: none"> • Positive group dynamics: Good working relationships • Negative group dynamics: Communication problems • Facilitator of mission accomplishment: More innovation and improved problem solving • Impediment to mission accomplishment: Inability of U.S. troops to function well in foreign environment 	<ul style="list-style-type: none"> • Communication skills • Knowledge of and/or comfort with an "other" group • Openness to and respect for differences • Understanding of potential impact of differences

a. This column duplicates the information in table 7.

b. For AC vs. RC, the issue was lack of trust; for Service, it was shared mission; for function, it was cultural differences and platform issues.

c. Lack of true (or quick) substitutability across platforms.

Implications for the mission case

The results of this research bear out the conclusion drawn in [1] regarding the mission case for workforce diversity in the USAF: The fact that the impact of diversity varies by diversity dimension, with the quality of diversity management, and with the organizational context means that there is still no empirical support for the notion of a universally or even an organizationally optimal amount or type of diversity. Furthermore, other than the compelling notion that demographic diversity among our troops is symbolic of the mission to spread democracy, there was no reference to the argument that the USAF workforce should be demographically representative of the U.S. population. Instead, these results support the case for diversity management to create conditions in which the negative effects of diversity are mitigated and the positive effects can be fully realized. One respondent stated it this way:

I think our environment does impact us. And I think in some ways it's been very positive, and in some ways it's negative. I think the focus that we had early on, on diversity being gender, ethnicity, age—those types of things—were very good. But at some point there's a transition that has to be made to more global diversity...I think that one of the things that we haven't done well is that. We haven't moved to that. I mean, we still look at what's the percentage of males and females. We still look at what's the percentage of Caucasians and non-Caucasians. We still look at those types of things. And...I think as a culture we've moved beyond that. And I think that...while that is important and that's a good monitor to make sure that we're not slipping and you know if it starts to drop dramatically to make sure to say, "What's going on here?" But I think the bigger thing is kind of a group thing.... (INT21)

Recommendations

Based on our analysis of the data contained in the interview transcripts, combined with the general conclusions regarding diversity management drawn in [1], we make five broad recommendations:

- Review current management training curricula and leadership guidance to see where diversity-specific elements can or should be integrated.
- Develop more nuanced predeployment cultural sensitivity training to help prepare troops for the difficulties of being deployed in foreign environments.
- Develop training exercises and programs to improve total force integration, including more education about the different management structures for the AC and the RC.
- Develop training exercises to allow Servicemembers to practice operating in functionally diverse groups with unfamiliar members.
- Explore ways to expose more people to working in joint settings and to provide this experience at earlier stages in both enlisted and officer careers.

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