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JOINTNESS, CULTURE, AND INTER-SERVICE PREJUDICE: ASSESSING THE IMPACT OF RESIDENT, SATELLITE, AND HYBRID JOINT PROFESSIONAL MILITARY EDUCATION II COURSE DELIVERY METHODS ON MILITARY OFFICER ATTITUDES

by

Charles Mark Davis
B.S. October 1986, DeVry Institute of Technology
M.S. November 2002, University of La Verne

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Approved by:

Steve A. Yetiv (Director)

Patricia B. Strait (Member)

Joshua Zingher (Member)

ABSTRACT

JOINTNESS, CULTURE, AND INTER-SERVICE PREJUDICE: ASSESSING THE IMPACT OF RESIDENT, SATELLITE, AND HYBRID JOINT PROFESSIONAL MILITARY EDUCATION II COURSE DELIVERY METHODS ON MILITARY OFFICER ATTITUDES

Charles Mark Davis
Old Dominion University, 2017
Director: Dr. Steve A. Yetiv

The efficacy of United States (U.S.) military forces is predicated on a condition of jointness, which enables members of different military services to overcome their cultural and experiential prejudices and operate interdependently. Joint Professional Military Education Phase (JPME) II, offered through the Joint Forces Staff College (JFSC), is the principal mechanism within the Department of Defense to reduce the inter-service prejudices held by military officers and to cultivate the optimal joint perspectives and attitudes associated with jointness. The JFSC employs three different methods for delivering JPME II—Resident, Satellite, and Hybrid—yet it remains unknown whether significant differences exist between them regarding their effectiveness in reducing inter-service prejudice. Accordingly, this study explores the following question: What is the impact on inter-service prejudice by the various JPME II course delivery methods provided by JFSC? To provide an answer, the study first considered the nature of organizational culture, the origin of inter-service prejudice, and how intergroup contact can reduce such prejudice. Second, it considered each JFSC JPME II delivery method in the context of Intergroup Contact Theory to develop related hypotheses, and employed analysis of variance and multiple regression techniques using JFSC archival longitudinal survey data collected from students attending each delivery method. The results of analysis

demonstrate that, while each method contributes to the reduction of inter-service prejudice, significant and possibly consequential differences exist between the delivery methods in terms of the levels of cognitive inter-service prejudice both before and after treatment.

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This dissertation is dedicated to my wife, Cathy, who gave me her unconditional support and loving sacrifice during the countless days and nights I devoted myself to this research. I could not have succeeded without her.

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CHAPTER I

INTRODUCTION

"The U.S. military must continue to develop leaders who understand jointness in order to fight as a joint force. This is important because the nation needs the strength created when all armed services work together."
- Congressman Ike Skelton

The very effectiveness of the United States (U.S.) military rests on a fulcrum called jointness. Not since the end of the second World War has the U.S. employed military force during conflict purely in the form of individual and independent military service components. In that time, however, General Eisenhower, the Supreme Allied Commander, possessed a vision that only through a single, unified commander vested with authority over all assigned forces and across all warfighting domains could hope to realize greatest military efficacy.[1] Eisenhower articulated a vision for jointness, though it would not be realized to an appreciable degree until four decades later. The Goldwater Nichols Defense Reorganization Act of 1986 (GNA) was watershed legislation enacted against the backdrop of a string of recent military failures attributable in part to the inability of the different military services to work together cooperatively and coherently.[2] In the years following, the meaning and implications of jointness, which the act aimed to more strongly instill in the U.S. military, have been the subject of continuing debate and interpretation. Though a commonly accepted and descriptive definition of jointness remains elusive, the value of jointness to the efficacy of war fighting is a widely accepted truth within the defense establishment. This attitude has taken hold despite a lack of empirical research specifically examining the effectiveness of joint education programs

[1] Dwight D. Eisenhower, Opening Remarks to the Armed Forces Staff College, February 1, 1948.
[2] These failures include Operation EAGLE CLAW (1980 Iran Hostage Rescue), Operation URGENT FURY (1983 Invasion of Grenada), and the Vietnam War in general.

to instill the joint perspective and attitude necessary for true jointness in the minds of officers from the different military services. Additionally, the nature and complexity of the contemporary security environment have transformed considerably since 1986, making jointness, as manifested by strategically minded, critically thinking, joint warfighters, all the more important.

Jointness, Joint Acculturation, and Inter-service Prejudice

The GNA recognized that, in addition to officers proficient in their own service, the military needs high-quality officers competent in joint matters, which is defined in law as those subjects related to the understanding of national military strategy, planning for contingencies and emerging crises, command and control of joint forces, national security planning with other agencies, and combined operations with forces from allied nations.[3] Competency in joint matters, however, hinges on the condition of jointness, defined in the context of this research as *the military circumstance enabled by trust and understanding transcending the core beliefs and assumptions of any particular service and exemplified by the effective integration and employment of the different service capabilities and competencies within a unified command structure.*[4] This definition is critical because it establishes that jointness is nonexistent if not recognized and accepted in the minds of military officers—it does not rest merely on a collection of doctrine, platforms, and capabilities from the different military services. Rather, it relies on the trust and understanding between officers from different services and signifies that

[3] *Definitions, U.S. Code 10, (2015a): §668.*
[4] This definition is developed and presented in detail in Chapter 2.

alternative assumptions and beliefs exist beyond those inculcated by the organizational culture of any particular service.

To achieve a condition of true jointness, military officers must move beyond the strongly-instilled cultural beliefs of their respective service and adopt new values and beliefs that amplify their appreciation for, and reinforce the trust they place in, colleagues from other services.[5] A joint attitude and perspective are essential to achieving the highest degree of coordination and harmonized integration of service competencies and capabilities during conflict. This psychological change is termed "joint acculturation" and is defined as *"the process of understanding the separate Service cultures (and other organizations) resulting in joint attitudes and perspectives, common beliefs, and trust, which occurs when diverse groups come into continuous direct contact."*[6] In 1989, Congressman Ike Skelton described the process of joint acculturation as "the mutual understanding and rapport that develop when students from all services study in mixed seminars and share the ideas, values, and traditions of their services, when they solve joint military problems together, and when preconceived notions about the nature of and solution to problems of warfare, learned during service training and education, are challenged daily."[7] Without a cohesive culture of shared values transcending service interests and inspiring joint-minded warfighters to think as a team, service parochialism will often mute genuine jointness. Indeed, service parochialism generates tremendous tension between the vibrant, powerful cultures of the services and the joint community responsible for

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[5] In his 1992 book, *Organizational Culture*, Edgar Schein describes in detail the nature and composition of organizational cultures and also the power of organizations to recruit, select, and promote their members, which provides powerful cultural reinforcement, making any transition difficult.
[6] This definition is also developed and presented in Chapter 2.
[7] . *U.S.Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services, [1989]: 64*.

the employment of military force. Optimal employment of military force during conflict dictates that the separate services operate not in a de-conflicted manner but in an integrated or, ideally, interdependent relationship. The joint acculturation of military officers from different services helps realize this end. It is important to recognize, however, that joint acculturation represents volitional behavior on the part of military officers, and officers cannot, within the context of joint education, be forced to adopt a joint perspective and attitude and to share common values with officers from other services. Such change is voluntary and is inhibited in the presence of prejudices and discrimination demonstrated by officers from the different services.[8] Such inter-service prejudices result primarily from deeply instilled service cultural beliefs and from personal experience. Accordingly, optimal joint acculturation is enabled by a situation and environment that deliberately minimizes the inter-service prejudice held by officers.

Within the Department of Defense (DoD), Joint Professional Military Education (JPME) is the primary means to provide expertise in the integrated employment of land, sea, and air forces. More importantly, it is also the mechanism by which to achieve the joint acculturation described by Skelton. Current legislation prescribes two key graduated phases for joint education: JPME I and JPME II.[9] The first phase is delivered by each of the military services to their early to mid-career officers, who receive this coincident with additional service-specific education. The second phase is delivered principally, but not exclusively, by the Joint Forces Staff College (JFSC) to mid-to-late career officers of all services and in an exclusively joint

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[8] Rupert Brown and Hanna Zagefka, "The Dynamics of Acculturation: An Intergroup Perspective," *Advances in Experimental Social Psychology* 44 (2011), 129-84.

[9]. *U.S. Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services: 10.*; *Joint Professional Military Education Phase II Program of Instruction, U.S. Code 10, (2015b): § 2155.*

context. An important milestone in the professional development of military officers is to become designated as a Joint Qualified Officer (JQO), which signifies that the officer has not only accumulated a prescribed amount of experience in a joint assignment but has also received credit for attending JPME II. Such designation indicates that the officer is educated, trained, and experienced in joint matters and able to enhance the joint warfighting capability of the U.S. through a heightened awareness of joint requirements including multi-service, interagency, international, and non-governmental perspectives.[10] Unlike JPME I, however, law requires the delivery of JPME II in-residence and for a specific duration, presently set at 10 weeks. However, these requirements are subject to interpretation within the defense establishment.[11] An important distinction regarding the JPME II programs offered by the JFSC and those offered by other institutions is that JFSC is specifically charged by the chairman of the Joint Chiefs of Staff to instill in its graduates the joint attitude and perspective discussed earlier. This places special emphasis on the joint acculturation of officers attending the JFSC.

Presently, the JFSC employs three joint staff-accredited JPME II delivery methods. The first is the Joint and Combined Warfighting School (JCWS), which is a 10-week resident program at the JFSC. The second is the Non-Resident Satellite Program (NRSP), which is nearly identical to the 10-week JCWS approach but delivered off-campus at the location of a major joint command. The third method is the recently renamed JCWS-Hybrid program conducted by JFSC primarily for reserve component officers. This program employs a blended approach of online

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[10] *U.S. Department of Defense. DoDI 1300.19 - DOD Joint Officer Management (JOM) Program (Washington, D.C.: Office of the Secretary of Defense, March 4, 2014).*

[11] The chairman, Joint Chiefs of Staff, recently accredited a hybrid program employing a blend of distance education and resident techniques for the delivery of JPME Phase II. This decision stemmed from an interpretation of recent amendments to law regarding "programs offered through" the JFSC, though such language was added specifically to authorize the continuation of the JPME Phase II Satellite program by the JFSC. See CJCSI 1800.01E Change 1.

and resident education conducted over 40 weeks and, because of its recent accreditation for delivery of JPME II, this program is also expected to begin accepting active component officers in the near future. Though each program is accredited to deliver JPME Phase II, considerable differences exist between them in practice, and such could be consequential to creating the situation and environment that can minimize inter-service prejudices to enable optimal joint acculturation. At present, the defense establishment lacks any awareness of how effectively these programs minimize inter-service prejudice, much less whether they are achieving optimal joint acculturation of students attending them. This begs the following question: Do the various JFSC JPME II course delivery methods influence self-reported perceptions of service prejudice among military officers? This study seeks to provide an answer.

Why the Differences Between Delivery Method Outcomes Matter

There is growing interest within the defense establishment in reevaluating the statutory approach to producing JQOs. Pressures to increase throughput, reduce cost, and expand accessibility of joint education are increasingly leading to more creative approaches for the delivery of JPME II. This is most recently evident in proposals to amend GNA legislation by removing the prescribed duration of the resident JCWS program, and also by recent decisions to expand the delivery of JPME II through the use of distance learning and satellite JFSC campuses.[12] Such initiatives may indeed increase the opportunities for military officers to receive JQO designation and plausibly achieve greater cost-effectiveness in the delivery of JPME. But pursuing alternative delivery approaches with little awareness of their efficacy in

[12] *National Defense Authorization Act for Fiscal Year 2012, Public Law 112–81, (2011): Sec 552(b).*

overcoming inter-service prejudice could have adverse implications for the joint acculturation of officers, which lies at the center of GNA legislation and the chairman's direction regarding JPME Phase II. This is to say that such initiatives may actually represent a disservice to the cause of jointness.

The outcomes of this study are consequential to gaining a better understanding of how to inculcate joint perspectives and attitudes in military officers slated to serve in joint assignments, specifically those in the unified military commands responsible for the planning and employment of military force in pursuit of U.S. national interests. Without assessing the impact of the various JFSC JPME Phase II delivery methods on inter-service prejudice we cannot understand if alternate delivery methods represent an improvement to, or degradation of, the joint acculturation of officers relative to the principal method of in-resident attendance to JCWS. By extension, the answer to this question carries implications for military operational effectiveness and the imperative to reduce service parochialism within a joint context. To date, there has been no formal research examining if differences exist in the joint acculturation outcomes of the various JPME Phase II delivery methods, and this work seeks to address a portion of this void.

The nation also finds itself in a period of fiscal austerity that is, in some respects, unprecedented, and the defense budget is slated to absorb considerable cuts for the remainder of the decade. Undoubtedly, joint education programs effecting joint acculturation will come under careful scrutiny. Since this research seeks to distinguish the delivery methods by their efficacy in producing positive attitudinal change in officers, the findings are expected to influence subsequent decisions regarding investments in joint education and changes in the

delivery approach. The intent of GNA legislation regarding the JPME Phase II requirements is in large part to effect joint acculturation through sustained interaction among students who are physically proximate to each other. Since the delivery methods exhibit differences not only in the amount of social contact, the academic setting, and student composition, the findings may also provide some indication of which aspects of the acculturation experience are most consequential to the development of joint attitudes and perspectives among military officers. Individual differences also matter and officers receiving JPME Phase II regardless of delivery method will each have a unique experience and outcome. Though differing widely in degree, every officer harbors prejudices toward members of the other services, and the direction and depth of this inter-service prejudice is largely due to differences in their professional background. This study will also examine how these differences in professional background relate to the efficacy of the three JPME Phase II delivery methods in minimizing inter-service prejudice in order to achieve optimal joint acculturation. The findings from this study may offer joint education insights important to any state possessing a standing military comprised of more than one branch of service and where acculturation represents the means toward greater military efficacy that would otherwise be hindered by distinct and independent service cultures. Indeed, such may be the case with China, where recent GNA-style reforms within the military are creating joint command structures similar to the combatant commands employed by the U.S. In doing so, the Chinese military is likely to face challenges involving the same sort of inter-service rivalry that crippled many U.S. military operations in the decades leading up to the GNA.[13]

[13] Phillip C. Saunders and Joel Wuthnow, "China's Goldwater-Nichols? Assessing PLA Organizational Reforms," *Joint*

Assessing the Outcomes of JFSC JPME II Delivery Methods

To answer the research question, this study will employ a quantitative approach to establish the impact on inter-service prejudice by the various JPME Phase II delivery methods offered by the JFSC. Specifically, it will employ a three-group, pre-test/post-test design to measure levels of inter-service prejudice as indicated by student officers in a self-reported attitudinal survey. The design will establish not only the remaining levels of inter-service prejudice at the conclusion of each of the three treatment methods—Resident, Satellite, and Hybrid attendance—but also the magnitude of change in inter-service prejudice for subjects in each of the groups. It will first test if a statistically significant difference exists between the residual levels of inter-service prejudice achieved by the treatment methods by performing an analysis of variance (ANOVA) of the group mean of post-course results among the three groups. Second, it will employ ANOVA on the group mean of change between pre-course and post-test results. Lastly, it will employ multiple regression to predict the change in inter-service prejudice as a function of professional background factors such as total active military service, total service in operational joint headquarters, military rank, level of education, and age. These factors can provide some explanatory value regarding the change in the degree of inter-service prejudice each student harbors. The primary source for this data is archival longitudinal survey data provided by the JFSC for each of the three delivery methods conducted in 2016. The survey is administered pre- and post-course by the JFSC and measures the change in student prejudices and attitudes toward officers from the other military services. This study uses this data to establish the degree to which inter-service prejudice is reduced by each delivery

method and to identify if a statistically significant difference lies in the final level of inter-service prejudice at the conclusion of each. The survey data also includes de-identified student information regarding professional background in an attempt to explain any differences between the changes in individual levels of inter-service prejudice across the three treatment methods.

The Contributions of this Research

This research is distinct in that it is the first to formally recognize the social psychology involved in the complex processes of joint acculturation and the reduction of inter-service prejudice. The services are inherently social organizations, each constructed for distinctly different military purposes. Accordingly, each has a powerful organizational culture comprised of specific structures, protocols, and doctrines guiding members in their attitudes, behavior, and performance. Theories of organizational culture illuminate not only why organizations behave in the manner that they do, but also why their members believe and act in strong accordance with organizational values and beliefs. Allison presents an organizational process model predicated on early organizational theory and this model provides explanatory power in understanding why organizations produce the behavioral outcomes that they do.[14] It does this by examining the underlying organizational structure and, specifically, the inherent pre-established routines. Contemporary theories of organizational culture provide additional understanding of how organizational culture governs the behavior of its members. Schein, as well as Trice and Beyer, wrote of the organizational norms and beliefs that serve to knit

[14] Graham Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown and Company, 1971)., 67-96.

individual members together into a coherent whole to provide for institutional stability.[15] While some norms and beliefs guide members to behave and act in a manner that advances organizational goals, they also influence how members interact with others from different organizations. Very often the differences between cultures, and, specifically, organizational beliefs, are the basis for contempt toward members belonging to different organizations; and therein lies a principle source of prejudice.

Much is also written in the field of social psychology regarding the broad topic of prejudice, and the contemporary body of knowledge is based on the work of pioneers such as Williams, in 1947, and Allport, in 1954.[16] In the following decades, researchers built on this foundation by conducting hundreds of prejudice-reduction studies and experiments. These studies, however, were not guided by a central theory of prejudice reduction until Pettigrew, in 1998, began to formulate his theory of how intergroup contact can reduce the antipathies between members of different social groups.[17] In 2006, Pettigrew and Tropp published their Intergroup Contact Theory (ICT), founded upon the work of Allport and his facilitating conditions of contact by which prejudice between members of different groups is reduced. ICT provides the theoretical basis for this study.[18]

Though much has already been written extolling the importance of joint education, there is little formal research into the subject of joint acculturation from the standpoint of

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[15] See Edgar H. Schein, *Organizational Culture and Leadership, 3rd Edition* (San Francisco: John Wiley & Sons, 2004).; Also, Janice M. Beyer and Harrison M. Trice, *The Cultures of Work Organizations* (Englewood Cliffs: Prentice Hall, 1993).

[16] See Robin M. Williams Jr, *The Reduction of Intergroup Tensions: A Survey of Research on Problems of Ethnic, Racial, and Religious Group Relations.* (New York: Social Science Research Council, 1947).; Also, Gordon Willard Allport, *The Nature of Prejudice* (New York: Addison-Wesley, 1979).

[17] Thomas F. Pettigrew, "Intergroup Contact Theory," *Annual Review of Psychology* 49, no. 1 (1998).

[18] Thomas F. Pettigrew and Linda R. Tropp, "A Meta-Analytic Test of Intergroup Contact Theory," *Journal of Personality and Social Psychology* 90, no. 5 (2006).

social science and virtually none concerning the relationship between joint acculturation and latent levels of inter-service prejudice present in a particular JPME II venue. This research is also unique in describing the theoretical relationship existing between the two—that joint acculturation is negatively impacted by the levels of inter-service prejudice within a JMPE II program. As such, there exists no previous investigation into the efficacy of different JPME II delivery methods in minimizing inter-service prejudice in order to foster optimal joint acculturation of the officers in attendance. This makes it difficult to compare the various proposed approaches to joint education in an environment of accumulating pressure to do more with less and to do things differently.

In a broader context, the dearth of research regarding the efficacy of joint education inhibits the development of a common understanding of acculturation as it applies to military officers and of jointness overall. This research contributes to this field of knowledge by exploring the outcomes of the different delivery approaches in order to establish if any method may be more or less advantageous in terms of effecting acculturation, and to identify which aspects of the professional background of the students, if any, are of particular consequence. Such knowledge can inform decision makers regarding future investments into, and changes in, JPME II delivery methods. Additionally, this research helps establish objective definitions for jointness, joint acculturation, and inter-service prejudice, and these may be adopted as terms of reference for the joint community and used to improve related doctrinal or legal definitions.

Layout of this Study

This study explores the relationship between joint acculturation and inter-service prejudice by examining the effectiveness of the three JPME II delivery methods offered by the JFSC in reducing the levels of inter-service prejudice harbored by officers. Chapter II, Review of the Literature, is comprised of two parts. The first part discusses the purpose and nature of jointness by examining the concept of jointness and the importance of military officers possessing an understanding of, and appreciation for, the interdependency of military service components in the context of joint operations. JPME II is the means for encouraging officers to adopt a joint attitude and perspective through the process of joint acculturation, but such an outcome is only attainable after overcoming the deep-seated service cultural prejudices toward members of other services. JPME II delivered by the JFSC is the principle venue for joint acculturation to occur, and this is accomplished by creating an environment where inter-service prejudice is minimized. Pressures to produce more graduates, reduce costs, and expand accessibility are driving alternative approaches to the traditional in-resident approach to delivering JPME II. Yet, the efficacy of these alternatives in reducing inter-service prejudice, much less achieving optimal acculturation, remains unknown. It is possible that such alternative approaches to delivering JPME II may, in fact, undermine jointness. The latter half of the chapter first examines what exists in the body of knowledge regarding organizational culture, military service culture, and how culture contributes to prejudicial attitudes. It does this by exploring the theoretical basis for understanding organizational culture and, in turn, the distinct cultures of each military service. Members of the specific service cultures hold certain values and beliefs that can lead to over-generalizations and stereotypes toward those

perceived as belonging to “out-groups,” and this results in prejudicial attitudes and behaviors harmful to jointness and military operational effectiveness. Next, it examines ICT as the theoretical framework in understanding not only how to reduce these inter-service prejudices, but also understanding the relationship between joint acculturation and levels of inter-service prejudice present in a contact encounter. The facilitating conditions of ICT that moderate the reduction of prejudice provide the theoretical basis by which to distinguish differences between the different JPME II delivery methods offered by the JFSC.

Chapter III, Methodology, uses these five facilitating conditions to examine the three JPME II delivery methods offered by the JCWS (Resident), the Non-resident Satellite Program (Satellite), and JCWS-Hybrid (Hybrid) and highlights theoretical distinctions between them to argue why their efficacy in reducing inter-service prejudice may not be the same. Accordingly, it also presents the research design employed to ascertain the findings with respect to two hypotheses. The design employs ANOVA and multiple regression techniques using JFSC archival longitudinal survey data collected from students attending each of the delivery methods during calendar year 2016, and attempts to determine which delivery method achieves the highest reduction in inter-service prejudice and which student population demonstrates the greatest change between post- and pre-course results. In addition, it employs regression analysis to establish the explanatory value of professional background factors to self-reported changes in attitude and inter-service prejudice.

Chapter IV, Results, presents the outcomes of analysis of the three methods with respect to their differences and similarities. Drawing on a dataset consisting of subject samples from each JPME II program, statistical analysis is used to identify how the delivery methods

differ in terms of which delivery method achieves the highest level of reduction of inter-service prejudice among its subjects and which group demonstrates the greatest pre- to post-treatment change in levels of inter-service prejudice. In addition, the analysis considers the influence of several professional background factors, which compositionally distinguish the three groups on the pre- and post-treatment scores of subjects.

This study concludes with Chapter V, Summary, which revisits the original research question and hypotheses in light of the results of the statistical analysis. It discusses the finding and the contributions of this study to the broader field of social psychology and social science, as well as the topic of joint education. More specifically, the chapter highlights the implications of the research findings in the context of ICT, the Organizational Process Model, cognitive biases, and JPME II. With the last of these, the discussion attempts to provide some answers regarding the impact of JPME II programs offered by the JFSC on inter-service prejudice—specifically, the similarities between the outcomes of the Resident and Hybrid methods and also differences in the outcomes of the Satellite method from the other two. Lastly, the chapter identifies limitations affecting the generalizability of the findings and interpretations to other accredited JPME II programs outside the JFSC and provides recommendations for further areas for research.

CHAPTER II

REVIEW OF THE LITERATURE

"Jointness is more than a word, it is a mindset." [1]
- General Jean-Paul Paloméros

Jointness and the Purpose of Joint Education

Military and civilian leaders have recognized the importance of jointness for much of the last century, yet efforts over the decades to achieve a lasting and penetrating appreciation for jointness within the military have been, since the end of the second World War, a Sisyphean experience. While an operational definition follows later, it is important to understand that jointness lies preponderantly in the mental realm rather than in a collection of platforms and capabilities from the different military services. It requires officers of all services serving in a joint context to harbor a joint perspective and attitude. A focus of military reforms over the last 30 years, JPME is seen by many as the principal means to surmount strongly implanted service bias and prejudice in order to impart the joint attitude and perspective necessary for the condition of jointness. While contributing much to the cause of jointness, the efficacy of traditional methods for delivering JPME are coming into question. As the U.S. military struggles to expand jointness during a period of fiscal austerity, increasingly diverse proposals for modifying the delivery of JPME threaten to erode the ability to impart joint attitudes and perspectives.

[1] Stated in his graduation address at the Joint Forces Staff College, June 14, 2013.

What Jointness is and Why it is Important

According to law, it is the responsibility of the individual military services—Army, Navy, Air Force and the Marine Corps—to organize, train, and equip military forces.[2] Though the services are also responsible for providing forces and capabilities for use in military operations, the same law requires a Joint Force Commander (JFC) to employ those service forces jointly to achieve mission objectives. The JFC is one who exercises authority over forces from two or more service components, has the support of a joint staff, and must gain and exploit command of the land, air, and sea, by integrating the capabilities and efforts of the different services.[3] The most senior of these are the combatant commanders, and they are vested with the broadest geographic or functional authority under which to employ joint military forces.

"Joint" is the term distinguishing the JFC and military operations from those of the individual services and is understood as "the activities, operations, and organizations where the involvement of two or more service components is present."[4] Though codified in military doctrine, the definition is hardly without contention because it fails to speak to the inter-service cooperation and coordination indispensable to the effectiveness and efficiency of military operations. Rather, the term "jointness" picks up where "joint" falls short. Jointness, as a derivative, is complicated because it is an invented term. It does not reside in a dictionary and so it is difficult to establish a broadly accepted meaning for the term. Since the passing of the DoD Reorganization Act of 1986, commonly referred to as the GNA, the meaning and implications of jointness have been the subject of profound debate and interpretation.

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[2] See 10 USC Subtitles B, C, and D, which more explicitly and completely describe the roles of each service department.
[3] Lawrence Legere, "Unification of the Armed Forces" (Doctoral Dissertation, Harvard University, 1950), 399.
[4] *Joint Publication 1-02 Department of Defense Dictionary of Military and Associated Terms (Washington, D.C.: Joint Chiefs of Staff, 2010a).*

According to some, Colin Powell, former chairman of the Joint Chiefs of Staff, offered the most concise definition when he stated: "[in jointness] we train as a team, fight as a team, and win as a team."[5] Others have defined it as "a holistic process that seeks to enhance the effectiveness of all military operations by synchronizing the actions of the armed forces to produce synergistic effects within and between all joint integrators at every level of war."[6] Deptula adds to this definitional diversity by describing jointness as "a separate array of capabilities … provided to a joint force commander whose job is to assemble a plan from this 'menu' of capabilities, applying the right force, at the right place and the right time for a particular contingency. It is when these core functions combine into one synergistic, seamless operation that true jointness occurs."[7] Although jointness appears to mean different things to different people their definitions most often coincide with the effective integration of service capabilities at the JFC level.[8]

More observantly, Wilkerson concludes that true jointness derives from the trust and understanding that service members place in their sister service comrades as experts in their core competencies. By stating, "the essence of jointness is understanding and trust," he touches on a dimension unacknowledged by the others: the psychological realm where trust and understanding exist and operate.[9] Jointness is nothing if it is not recognized and accepted in the minds of soldiers, sailors, airmen, and marines working together to achieve common objectives. A mere collection of platforms and capabilities cannot create it. Nor can fiat alone

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[5] General Colin L. Powell, "A Word from the Chairman," *Joint Force Quarterly* 1 (Autumn 1993): 4.; Don M. Snider, "The U.S. Military in Transition to Jointness," *Air & Space Power Journal* 10, no. 3 (1996): 18.
[6] Michael C. Vitale, "Jointness by Design, Not Accident," *Joint Force Quarterly*, no. 9 (Autumn 1995): 28.
[7] David Deptula and Harold Adams, "Joint's True Meaning," *Armed Forces Journal* 146, no. 10 (2009): 38.
[8] Snider, *The U.S. Military in Transition to Jointness*: 9.
[9] Lawrence B. Wilkerson, "What Exactly is Jointness?" *Joint Force Quarterly*, no. 16 (Summer 1997): 66.

effect true jointness as the joint environment requires a more concerted course than an "I command you" approach.[10] The need for trust and understanding between members of the different services implies that transcendent cultural assumptions and beliefs must exist beyond those associated with any particular branch of service. Some aspects of a joint culture are necessary to achieve the highest degree of coordination and harmonized integration of service competencies and capabilities by a JFC. Therefore, in the context of this study, true jointness is defined as *the military circumstance enabled by trust and understanding transcending the core beliefs and assumptions of any single service and exemplified by the effective integration and employment of the different service capabilities and competencies.*[11]

According to joint military doctrine, the profit of jointness is the synergistic combination of cross-service capability wherein the capability of the joint force is greater than the sum of the individual capabilities of the individual service components.[12] The harmonization of different service forces to act as a single coherent organization is widely understood to amplify the effectiveness of a military force. Powell considered jointness to be a major factor contributing to the high quality of the U.S. military, though "less tangible than training or weaponry," or the quality of the best and the brightest of young Americans that are our volunteers.[13] During the military operations of the last decade, the U.S. military demonstrated a high level of jointness evidenced by unprecedented levels of cross-service exposure and inter-service cooperation. The GNA reforms to the defense establishment since 1986 have yielded a

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[10] *. U.S. Department of Defense. "the Joint Staff Officer Project" Final Report (Washington, D.C.: Joint Chiefs of Staff, [April 2008]).: 7.*

[11] Charles M. Davis, "The Culture of Jointness: A Definitional Approach" (Research Paper, 2013).

[12] *Joint Publication 1 Doctrine for the Armed Forces of the United States (Washington D.C.: Joint Chiefs of Staff, 2013).*

[13] Powell, *A Word from the Chairman*: 5.

great deal of progress. However, this level of jointness has not always been the norm. During much of the twentieth century, the powerful cultures of the individual services—the Army and the Navy in particular—wielded profound and parochial influence over the manner in which America fought its conflicts. As will be discussed later in this chapter, this often resulted in enormous inefficiency and sometimes with disastrous ineffectiveness. Put simply, the individual services possessed inordinate power to influence the employment of their forces provided for military operations. Yet, each service usually held different and often conflicting perspectives regarding the operational approach. Compounding this circumstance was the difficulty in unifying the service forces participating in a military operation under the command of a single JFC. Historically, the distinct cultural differences between the services made it an extraordinary challenge to get them to relinquish control of their forces to a commander from another service component and this reluctance impeded the effectiveness of military operations. Without such unity of command any degree of cooperation achieved between the services remained proportional to their mutual interests—cooperation came easily wherever their interests intersected. Wherever they diverged, which was often, the services often worked at cross-purposes to one another. Disunity and competition between the Army and the Navy had reached such a crescendo by the start of the twentieth century that agitation for reform led to the creation of a Joint Board in 1903 to foster coordination and understanding between the two. Though a forerunner to the present day Joint Chiefs of Staff, the board failed to accomplish anything of note—meeting only twice during the course of World War I and falling into disuse by 1919.[14] During the inter-war period, the military establishment continued

[14] Legere, *Unification of the Armed Forces,* 59-60.

to resist efforts, internal and external, to bridge the service bureaucracies that often worked against each other. For much of the twentieth century, "mutual cooperation" was often the preferred basis for employing different service forces when the Army and Navy could not agree on a unified command arrangement.[15] Indeed, the committee investigating the attack on Pearl Harbor cited the command arrangement of mutual cooperation between the Army and Navy commanders in Hawaii as a contributing factor to the success of the Japanese attack.[16]

The U.S. military entered into World War II (WWII) under circumstances that were only marginally better. General Marshal successfully argued at the Arcadia Conference, held shortly after the attack on Pearl Harbor, for a unified approach to European operations to minimize the possibility of inter-service squabbling and to establish greater unity of effort toward achieving objectives. He noted, "we cannot manage by cooperation. Human frailties are such that there would be emphatic unwillingness to place portions of troops under another service. If we make a plan for a unified command now, it will solve nine-tenths of our troubles."[17]

While such would be the case in Europe, this was not to be the circumstance in the Pacific theater, which held three separate co-equal military commands and where the lack of a single overall commander hindered overall operational effectiveness. The activities of these commands were characterized by confusion over operations and logistics, uncoordinated attacks on the same targets—sometimes simultaneously—and disruption of the logistical

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[15] Vernon E. Davis, *The History of the Joint Chiefs of Staff in World War II*, Vol. I - Origin of the Joint and Combined Chiefs of Staff (Washington, D.C.: Historical Division, Joint Secretariat, Joint Chiefs of Staff, 261., 37.; See also *Joint Action of the Army and Navy, ed. The Joint Board (Washington, D.C.: Government Printing Office, 1935)., 5.*

[16] *. U.S Congress. Report of the Joint Committee on the Investigation of the Pearl Harbor Attack (Washington, D.C, [1946]): 240.*

[17] Davis, *The History of the Joint Chiefs of Staff in World War II*, 152.; See also *ARCADIA Meetings, ABC 337 (Washington, D.C.,, December 24, 1941), Sec 4, TAB JCCS 2, p2. Sec 4, TAB JCCS 2, p2.*

organization of the Pacific Ocean areas.[18] By the end of the war, the military establishment clearly recognized that the arrangement of mutual cooperation was undesirable for employing forces in future conflicts, even with standing joint boards to facilitate. Shortly after the war ended, General Marshall again articulated his disdain for cooperative command relationships: "a system of coordinating committees ... cannot be considered a satisfactory solution. It necessarily results in delays and compromises and is a cumbersome and inefficient method of directing the efforts of the Armed Forces."[19]

The National Security Act of 1947 addressed concerns regarding inter-service cooperation by establishing, among other things, a secretary of defense, but the legislation fell short in engendering a spirit of cooperation between the still all-too-powerful military services. Though there were other attempts at reform, the defense establishment languished for much of the next four decades, leaving a string of embarrassing military failures. These include the loss of the Vietnam War, the embarrassing performance of military forces employed in the Mayaguez rescue in 1975, the failed 1980 rescue attempt of American hostages in Iran, and the less-than-resounding victory by the U.S. military over Cuban forces in Grenada in 1983. Unequivocally, these outcomes were attributable in part to the undue influence of the individual services in operational matters and, more innately, the conflict and competition between the services driven by their unique cultures. The specific cultures and interests of the different services inhibited any inter-service cooperation within a spirit of jointness, leading instead to convoluted decision-making, entangled chains of command for military forces, and

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[18] Ferdinand Eberstadt, *Unification of the War and Navy Departments and Postwar Organization for National Security. Report to Honorable James Forrestal, Secretary of the Navy.* (Washington, D.C.: U.S. Government Printing Office, [1945]): 79.

[19] Appendix to JCS 560, pages 2-3 as referenced in Legere, *Unification of the Armed Forces*, 250.

confusing lines of authority.[20] The tragic bombing of the Marine Corps barracks in Beirut in 1983, which claimed 238 Marines, was partially the result of antagonistic service and operational chains of command. Specifically, the failure to properly train and resource the Marine units headed to Lebanon highlighted the dysfunctional service barriers erected by the Department of the Navy against the operational authority of the combatant commander responsible for the operation.[21] More than anything, the aggravating circumstance of the Beirut bombing was parochialism by the services and their cultural resistance to joint authority. The Holloway commission, which investigated the failed Iranian hostage rescue mission, keenly cited the lack of cross-service exposure by the officers involved in the operation as a compounding variable to its failure, and it was their belief that such exposure would have fostered greater understanding and cooperation among the participating forces.[22]

The accumulation of military failures such as these precipitated the landmark reforms to the DoD in the 1980s.[23] These reforms, known collectively as the GNA, sought to improve military effectiveness by strengthening jointness within the department. Prior to the act, the military establishment largely operated under the arrangement where each service educated their officers in exclusively service-specific matters, assigned their most talented officers to key service positions, and promoted them to leadership positions within their own service. Due to the formidable and influential cultures of the services, which were especially so by 1986, the

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[20] James R. Locher III and Sam A. Nunn, *Victory on the Potomac: The Goldwater-Nichols Act Unifies the Pentagon* (College Station: Texas A & M University Press, 2004), 4.
[21] Ibid., 160-1
[22] *. Department of Defense. Iran Hostage Rescue Mission Report (Washington, D.C.: Joint Chiefs of Staff Special Operations Review Group, [1980]).: 25-6.*
[23] Harry Thie and et al, *Framing a Strategic Approach for Joint Officer Management* (Santa Monica, CA: RAND Corporation, [2005]): 111.

defense department found itself paralyzed in its ability to effect reform from within.[24] So pronounced were the distinct cultures and rivalries that each service expended great effort and formidable resources to sustain and protect their respective missions and capabilities.[25] Reform had to come from the outside, and Congress recognized that cultural change was necessary to move away from service parochialism toward inter-service cooperation and coordination. Under the GNA and subsequent legislation, joint education became a key mechanism to instill and strengthen a culture of jointness and to foster inter-service coordination in joint operations and activities. Through joint education many believed that service-specific values and beliefs would give way to joint values and beliefs.

Jointness Requires a Joint Attitude and Perspective

The GNA recognized that, in addition to service-competent officers, the U.S. military needs high-quality officers competent in joint matters, which law defines as those subjects related to the achievement of unified action.[26] This is because each service develops its members as specialists to dominate in the particular domain in which that service primarily operates. Accordingly, each service maintains a unique and powerful culture and perpetuates such by inculcating service-specific values and beliefs in every member beginning with entry training. These cultural values and beliefs reflect the broad understanding of not only the core mission of the service but also how best to accomplish that mission. Successive duty assignments and periodic service schooling serve to further develop and reinforce these values

[24] For more information on the inability of the Defense Department to implement reforms see General David C. Jones, House Armed Services Committee testimony, February 3, 1982.
[25] Ibid., 111.
[26] *Definitions, U.S. Code 10, (2015a): § 668.*

and beliefs throughout the member's career. This underlying service cultural foundation is common to all other members and represents a commanding guide for members to act in the best interests of their respective service.

Schein argues that promotion potential within a particular organization (service) will closely track with the degree to which a member of that organization (officer) embodies the attitude and perspective corresponding to the specific beliefs and values of that culture.[27] Such attitudes and perspectives can evoke a belief in the dominance of one's own service over others and predispose members to military solutions principally involving the forces and doctrine of their respective service.[28] As discussed later in this chapter, service-specific attitudes and perspectives encompass certain prejudices toward members of different services, seen as members of "out-groups," and these inter-service prejudices are detrimental to jointness because of the imperative for a joint attitude and perspective in the context of joint operations. However, the more familiarity and understanding officers have of the culture, capabilities, and forces of other services the less likely they are to default to military solutions favoring their own service.[29] Schoomaker validates this by asserting that to achieve interdependence between the members of a joint force they must possess an understanding of the strengths and limitations of each service, agree on how they will integrate those capabilities, and trust that the capabilities and forces will be employed as agreed.[30] This is to

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[27] Edgar H. Schein, *Organizational Culture and Leadership, 3rd Edition* (San Francisco: John Wiley & Sons, 2004), 244.

[28] *. U.S. Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services, [1989b]).: 58.*

[29] Ibid., 56; The same conclusion may be inferred from the findings of the Holloway Commission in its report on the Iran hostage rescue attempt.

[30] Peter J. Schoomaker and R. L. Brownlee, "Serving a Nation at War: A Campaign Quality Army with Joint and Expeditionary Capabilities," *Parameters* (Summer 2004): 11.

say that a joint-minded officer must possess an individual appreciation for the competencies and capabilities of members of another service as well as the value of working collaboratively toward a common end. Therefore, creating true jointness within an operational setting requires much more than just unity of command over a collection of forces from different services, it requires trust and understanding.[31] Trust and understanding are prerequisites for jointness and stem from having an appreciation for the cultures, competencies and capabilities of the other military services. Officers possessing such trust and understanding are said to have a "joint attitude and perspective," and establishing joint attitudes and perspectives is a substantial goal and valuable byproduct of true JPME. One may formally establish unity of command clearly and quickly, but cultivating lasting attitudinal change takes much more effort and time. It could take weeks or months to overcome the powerful cultural bias the respective services spent years instilling in their members.

The proponents of the GNA recognized the absolute need to overcome this circumstance and established requirements in law for, among other things, the education of officers selected for joint duty. The very intent of the provisions relating to JPME was to effect a rebalance from principally service-centric attitudes toward those valuing joint service. JPME is the institutional mechanism for ensuring that officers understand and implement joint ideas, and it represents a baseline for the appreciation of service competencies and the value of jointness. Its purpose is to develop the joint operational expertise and perspectives of officers so as to adequately prepare them to perform effectively in a joint assignment.[32] Joint education in the right context and structure is an effective approach toward instilling and

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[31] Wilkerson, *What Exactly is Jointness?*: 66.
[32] *Joint Professional Military Education Phase II Program of Instruction, U.S. Code 10, (2015c): § 2155.*

advancing a culture of jointness, and it comes primarily at the expense of service parochialism.[33] JPME accomplishes this in part by focusing on Joint Matters, which is defined in law as "matters related to the achievement of unified action by multiple military forces in operations conducted across domains such as land, sea, or air, in space, or in the information environment."[34] Joint education reforms have considerably improved the performance of those selected to serve in joint duty assignments, but of all the provisions within GNA they have been among the most difficult to implement.[35]

The GNA did not mark the inception of JPME, however. Joint education focusing on the study of joint operations largely came about during and after WWII—first through the Army-Navy Staff College established in 1943 and then the Armed Forces Staff College (AFSC) established in 1946. Subsequently, these became the National War College and the JFSC respectively. In the aftermath of WWII, career military officers viewed attendance at these schools as preferential. This attitude shifted over the succeeding decades, however, and officers generally began to avoid attending these joint schools, favoring instead the service-specific schooling and assignments regarded as more valuable for promotion. Reflecting this reality, only a very modest fraction of the officers serving on the Joint Staff had attended either school in the years immediately prior to GNA reforms.[36] As part of the sweeping reforms of the legislation, Congress sought to strengthen joint education for officers—to incentivize attendance to joint schools by requiring officers to complete JPME to be eligible for joint duty

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[33] Wilkerson, *What Exactly is Jointness?*: 67.; Vitale, *Jointness by Design, Not Accident*: 27-8.
[34] *Management Policies for Joint Qualified Officers, U.S. Code 10, (2008): §661.*
[35] James R. Locher, "Taking Stock of Goldwater-Nichols," *Joint Force Quarterly*, no. 13 (Autumn 1996): 15.; See also 2010 HASC Report titled "Another Crossroads? Professional Military Education Two Decades After the Goldwater-Nichols Act and the Skelton Panel"
[36] Gordon Nathaniel Lederman, *Reorganizing the Joint Chiefs of Staff: The Goldwater-Nichols Act of 1986* (Westport: Greenwood Press, 1999), 215.: 43.

assignments. Additionally, joint schooling and creditable joint experience together conferred a "Joint Specialty" designation and the act required the services to promote these joint specialty officers at the same rate as those possessing only service-specific experience.[37]

GNA legislation also added considerable rigor to the joint education requirements for military officers. At the recommendation of the 1989 Skelton Panel, the FY1990-91 National Defense Authorization Act prescribed the development of officers in joint matters through a two-phased JPME program.[38] The first phase, JPME I, is integrated into the curricula of the services' intermediate professional military education schools, and graduates of these schools are expected to know basic information about joint organizations and command relationships, among other subjects. The second phase, JPME II, is presently offered through the JFSC or through selection and resident attendance at a senior-level college.[39] Two details in that legislation provide critical distinction to JPME II offered through JFSC, however. First, the law at that time articulated the curriculum should be "solely joint" and emphasized "multiple hands-on exercises" to prepare officers of different services to perform effectively in a "totally new environment," which would be a joint, multiservice organization. Second, it prescribed that the duration of JPME II "will not be less than 3 months."[40] These provisions established JPME II

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[37] *Promotion Policy Objectives for Joint Officers, U.S. Code 10, (2014): § 662.*

[38] Congress later added a third phase, JPME Phase III, specifically for officers selected for promotion to either Brigadier General or Rear Admiral (Lower Half).

[39] Senior-Level Colleges include the respective senior-level service colleges and also the National War College and Eisenhower School for National Security and Resource Strategy within the National Defense University. See CJCSI 1800.01E dated 29 May 2015.

[40] *National Defense Authorization Act for Fiscal Years 1990 and 1991, Public Law 101-89, (1989a): § 1123.*

offered by JFSC as the "principal course of instruction" for instilling a joint attitude and perspective among officers of different services and they were not arbitrary.[41]

Joint Acculturation as an Outcome of JPME II

It is critical to recognize that the Skelton Panel ranked the development of joint attitudes and perspectives as most important among the four components of JPME II education. This distinction makes JPME II unique and drives how it is structured and delivered—direct student interaction is indispensable.[42] The development of joint attitudes and perspectives means that joint education must effect a positive attitudinal change toward jointness in the minds of officers belonging to different service cultures. Reflecting on Wilkerson's observation, a joint attitude and perspective is the *sine qua non* of jointness and depends on the cultivation of deep trust and understanding between officers from different services and service cultures. Chairman of the Joint Chiefs of Staff General Martin Dempsey echoed this by citing trust, empowerment, and understanding as one of four attributes that joint education must develop in leaders.[43] It stands to reason that such trust and understanding are possible only when officers can overcome the biases and overgeneralizations they hold concerning members of other service components. Such biases and overgeneralizations are manifestations of the powerful yet fiercely distinct and independent cultures of the services, and they drive prejudicial attitudes and behaviors harmful or

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[41] "Principal course of instruction" means any course of instruction offered at the Joint Forces Staff College as joint professional military education as established by the FY 1992/1993 NDAA.

[42] *. U.S. Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services*: 105.

[43] General Martin E. Dempsey, *Joint Education White Paper* (Washington, DC: Joint Chiefs of Staff, [July 16, 2012]): 4.

counterproductive in the joint context. Deep and lasting trust between officers of different services is only possible after overcoming such deep-seated inter-service prejudices. Having a joint mindset is a key joint staff officer competency, and this means demonstrating an open willingness to set aside service loyalties and paradigms to better understand and integrate the expertise of other services in developing joint solutions.[44]

Each service wields a highly developed institutional arm to educate, but also culturally indoctrinate, the officers they recruit and subsequently promote. It is important to recognize that the institutional arm of each service endeavors not simply to educate good officers but "good Army, Navy, Marine Corps, and Air Force officers."[45] While powerful in its own respect—such indoctrination is responsible for the tremendous military capability possessed by each service. However, an effective and meaningful joint education experience is necessary if officers are to rise above service-oriented beliefs to embrace a more broadly unifying ethos. It is important to establish at this stage, however, that positive attitudinal change toward jointness by military officers belonging to vastly different service cultures hinges on a process termed by this research as "joint acculturation." From an etymological standpoint, we can formally define the term "acculturation" as the "cultural modification of an individual, group, or people by adapting to or borrowing traits from another culture." It is also understood as "a merging of cultures as a result of prolonged contact."[46] Moving beyond the simple dictionary definitions, Sam and Berry state that the most widely used explanation is attributed to Redfield, Linton, and Herscovits, who described acculturation as "those phenomena which result when

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[44] . *U.S. Department of Defense. "The Joint Staff Officer Project" Final Report: 84.*
[45] William A. Owens, "Making the Joint Journey," *Joint Force Quarterly* 21 (Spring 1999): 95.
[46] Merriam Webster, http://www.merriam-webster.com/dictionary/acculturation, May 27, 2016

groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups."[47] Applied within the context of adopting a joint attitude and perspective, acculturation signifies the tradeoff by a service member of some measure of their respective service culture for a measure of another. Acculturation, however, will only occur when an individual achieves a deeper understanding of a different culture and begins to develop appreciation and trust toward its members. Indeed, the act of voluntarily accepting certain values and beliefs associated with a different culture is a manifestation of this trust. It would be unsatisfactory to proceed from this point operating only on a general definition of acculturation, and so it is important to relate the base definition and the process of acculturation to the joint context. Some caveats are necessary before proceeding. While contemporary military operations routinely involve members of other U.S. government agencies as well as members of foreign militaries, this research limits the scope of consideration to a joint military context rather than the broader context of interagency or combined operations. Though it remains likely that acculturation involving the respective cultures of civilian agencies and foreign militaries is analogous to acculturation in the joint military context. It is also beyond the scope of this research to determine if a separate "joint" culture exists beyond those attributed to the individual services. While this would make an interesting (though tangential) argument, there are many critically important aspects of organizational culture present in service cultures but absent in a joint context.[48] The definition of acculturation must necessarily consider the uniquely military context of jointness whereby

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[47] D. L. Sam and J. W. Berry, "Acculturation: When Individuals and Groups of Different Cultural Backgrounds Meet," *Perspectives on Psychological Science* 5, no. 4 (2010): 473.; Robert Redfield, Ralph Linton and Melville J. Herskovits, "Memorandum for the Study of Acculturation," *American Anthropologist* 38, no. 1 (1936): 149.

[48] Among these are the ability to recruit, select, promote, and excommunicate members - See Schein, *Organizational Culture and Leadership, 3rd Edition*, 261.

officers from separate services must share a common attitude and perspective while operating interdependently toward a common military goal. Congressman Ike Skelton, who chaired the House Committee on Joint Education in 1989, described this as "the mutual understanding and rapport that develop when students from all services study in mixed seminars and share the ideas, values, and traditions of their services, when they solve joint military problems together, and when preconceived notions about the nature of and solution to problems of warfare, learned during service training and education, are challenged daily."[49] Skelton understood the value of acculturation in enabling officers to reject "approaches that always favor their own service" and to inspire "mutual trust and confidence."[50] He also understood intuitively that the process of acculturation results from activities involving members of different service cultures within a "contact" encounter. Such an encounter is essential to fostering a deeper individual understanding of different service cultures. The development of trust between officers of different services stems from their greater understanding of the others and necessarily precedes the trade-off of closely held cultural beliefs and values.[51]

The second half of this chapter examines the condition and process of acculturation in detail and from a social science perspective. Therefore, within the context of this research, the term "Joint Acculturation" is used and is defined as *the process of understanding the separate service cultures (and other organizations) resulting in joint attitudes and perspectives, common*

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[49] *. U.S. Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services: 64.*
[50] Ibid., 55
[51] This is the essence of Intergroup Contact Theory pioneered by Thomas Pettigrew and inspired by the prejudice reduction research of Gordon Allport.

beliefs, and trust, which occurs when diverse groups come into continuous direct contact.[52] The trust between officers of different services underwrites joint acculturation and this trust builds as the attitudes and behaviors stemming from service-specific prejudices are diminished. This means that within a joint education context joint acculturation is enabled by reducing the inter-service prejudices harmful to fostering a joint attitude and perspective and to the trust on which jointness is predicated.

Acculturation is What JPME II Must Accomplish

According to a 2005 RAND Corporation study of JPME, joint acculturation, as a means of developing joint officers, stands separate and distinct from the other components of joint education, experience, and training.[53] It is highlighted in countless official documents and studies, but its importance is not always acknowledged. For example, the official DoD instruction concerning its Joint Officer Management Program speaks to the latter three and is silent on the component of joint acculturation.[54] One can infer much from the answer to a question Congressman Skelton posed during the 1991 House Armed Services Committee hearing on military education: "Don't nonresident students [JPME I] lose something by not rubbing elbows with other service officers?" The response provided by the deputy commandant of the Army Command and General Staff College was, "Joint exposure takes place

[52] This definition is predicated on that by Linton, Redfield and Herscovits and is also congruent with the definition used by the JFSC.
[53] Thie et al, *Framing a Strategic Approach for Joint Officer Management*, 96.
[54] *U.S. Department of Defense. DoDI 1300.19 - DOD Joint Officer Management (JOM) Program (Washington, D.C.: Office of the Secretary of Defense, March 4, 2014).*

during the follow-on Phase II course."[55] Here, Skelton stressed the importance of joint acculturation achieved through intergroup contact in order "to arrive at a point at which jointness is a state of mind."[56] The answer he received to his question highlights the understanding that, of the two required phases, JPME II is the primary means for effecting joint acculturation in officers of different services. Subsequent studies and reports have reiterated the importance of joint acculturation achieved during JPME II as a critical dimension of joint education.[57] As such, Congress sought to create an optimum environment to foster joint acculturation and it was the intent of legislation to make the JPME II experience in-residence, multi-service, and in a culturally-neutral environment where no one service culture is predominant.[58] Having military officers of different services living and working together as a joint team during JPME II is the key aspect of the program, serving as the intergroup contact encounter to achieve a degree of acculturation impossible with seminars composed primarily of officers from the same service or in an exclusively online environment. The prescribed duration for JPME II delivered by JFSC also aims to achieve deeper acculturation than what a shorter program would provide. The statutory requirements for resident attendance to and the duration of JPME II closely correlate to the intent for the program to effect joint acculturation.[59]

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[55] *. U.S. Congress. House Armed Services Committee, Panel on Military Education (Washington, D.C., [April 17, 1991]): 3.*

[56] *. U.S. Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services: 57.*; See also *Independent Study of Joint Officer Management and Joint Professional Military Education (McLean, VA: Booz Allen Hamilton, [2003]).*

[57] The most notable of these include the 1998 DoD Inspector General review of JPME, the 2003 independent study conducted by Booz Allen Hamilton, and the 2010 House Armed Services Committee "Another Crossroads?" report.

[58] *. U.S. Congress. House of Representatives. House Armed Services Committee. Another Crossroads?: Professional Military Education Two Decades After the Goldwater-Nichols Act and the Skelton Panel (Washington, D.C., [2010b]): 10.*

[59] In-resident is understood to mean attendance at a senior-level college or the JFSC.

JPME II credit is available to officers attending the 10-week JCWS at the JFSC, though officers may also receive credit for JPME II through selection and attendance of the year-long programs offered by a senior-level college. However, there is an important distinction to make between the JPME II offered through JFSC and that offered by the other institutions. The JFSC stands apart because no other institution accredited to deliver JPME II is specifically charged by the chairman of the Joint Chiefs of Staff to develop a joint attitude and perspective in the students they graduate.[60] The chairman has statutory responsibility for managing joint education, and it is the chairman's Officer Professional Military Education Policy (OPMEP) that prescribes the mission, goals, and learning areas for all military institutions delivering JPME. Among these institutions, only the JFSC is directed specifically to cultivate the joint attitudes and perspectives essential to successful military operations. The OPMEP articulates that the mission of JFSC JPME II programs is "to instill a primary commitment to joint, interagency, intergovernmental, and multinational teamwork, attitudes, and perspectives." The policy goes on to say that "the faculty and student interaction in the fully joint environment of the JFSC campus cements professional joint attitudes and perspectives essential to future successful military operations."[61]

Such explicit language and direction regarding the development of joint attitudes and perspectives is absent in the missions and goals of the other JPME II institutions. This is not to suggest that the component of joint acculturation is totally absent in the JPME II programs of the senior-level colleges. Indeed, some measure of joint acculturation likely occurs where

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[60] *Department of Defense. Chairman, Joint Chiefs of Staff Instruction 1800.01E Officer Professional Military Education Policy (OPMEP) (Washington D.C.: Joint Chiefs of Staff, 2015b).: E-H-1.*
[61] Ibid., E-H-2.

officers of different services experience sustained and continuous contact with each other, but it is not sought as a key outcome as in the JFSC JPME II programs.[62] In fact, the only governing factors permitting these senior-level colleges to deliver JPME II are that they maintain a specific service mix among their student body and also among the faculty. Though the proportion of faculty and students of the service administering the school may not exceed 60 percent of total composition by law, the host service culture still reigns predominant.[63] Neither is the curriculum joint in its entirety, as it is with JCWS, leaning instead toward service-specific subjects. It also follows that the creation of a culturally neutral environment to foster optimal joint acculturation is unlikely in these institutions.[64] These are not insignificant considerations when the reduction of inter-service prejudice is a necessary antecedent to optimal joint acculturation. As it is, the JFSC stands alone in its articulated OPMEP mission to instill the joint attitudes and perspectives, achieving this through its inherently joint, compositionally balanced JPME II programs that rely on joint acculturation as an integral mechanism.

New Directions in Joint Education

The GNA reforms to joint education were aimed at advancing a culture of jointness, and Congressman Skelton believed long, in-residence schools were the best means of effecting joint acculturation. Since 1991, JFSC's resident JPME II program, JCWS, has stood as the principle

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[62]Thomas F. Pettigrew and Linda R. Tropp, "A Meta-Analytic Test of Intergroup Contact Theory," *Journal of Personality and Social Psychology* 90, no. 5 (2006): 766.

[63] *Joint Professional Military Education Phase II Program of Instruction, § 2155*

[64] All JPME programs are accredited by the chairman's Process for Accreditation of Joint Education (PAJE) and must meet common educational standards, which include "Develop Joint Awareness, Perspective, and Attitude." While PAJE teams examine the development of joint attitudes and perspectives within JPME programs, the definition of such within the OPMEP remains vague relative to the title of the standard. Correspondingly, the term "acculturation" appears only once in the OPMEP and is undefined; *Fred Kienle, Faculty, Joint Forces Staff College. Interview by Author. Digital Recording. Norfolk, June 27, 2016.*

means for achieving the joint acculturation of officers from the different services. However, there have been many challenges by the defense establishment to this approach in the quarter century since. Along the way, the DoD has repeatedly sought legislative relief from the GNA provisions addressing the development of joint officers and still struggles in implementing aspects of its joint officer development programs and policies. A 2002 Government Accountability Office report noted that more than 15 years after the GNA the department had yet to take a strategic approach to develop joint officers, and this reflected a significant obstacle to fully realizing the cultural change intended by the act.

Likewise, the officer management policies and systems of the services have also remained generally resistant to developing joint officers and would likely revert to something much more favorable to the service in the absence of statutory requirements for joint officer management.[65] These circumstances illustrate the conflict that sometime arises between the implicit views of the joint and service communities and the explicit objectives of reforms. Consequently, a cultural resistance to jointness remains.[66] To address this, a 2005 RAND Corporation study recommended changing the current approach to joint officer development to a more dynamic one that broadens the definitions of joint matters and joint qualifications to allow more paths for the development of joint officers. During the same period, a severe increase in overseas military commitments combined with a budgetary downturn to create additional pressures on joint education and JPME II in particular. Fiscal austerity and the imperative to expand jointness are leading toward more creative approaches to JPME II that may be less effective at achieving joint acculturation. Drivers of change such as the desire to

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[65] Thie and et al, *Framing a Strategic Approach for Joint Officer Management*, xxiii.
[66] Ibid., 8.

increase student throughput, to reduce costs, and, more recently, to expand the accessibility of joint education, have given rise to successive proposals to alter the legislated parameters of the JPME II delivered by JFSC, specifically the duration of the course and its mandated student residency.

The first of these drivers of change is the perceived need to increase student throughput in order to produce more JPME II graduates. Historically, this driver stemmed from a desire by senior military leadership to address perceived shortfalls in joint-qualified officers available for assignment to joint billets. To compensate for a shortage of 189 joint-qualified officers, one 1998 study recommended shortening the duration of JPME II at JFSC to afford more classes annually and, consequently, more graduates.[67] Closer examination suggests, however, that what was initially perceived as a problem of capacity—that JFSC was not producing a sufficient number of graduates to meet joint requirements—had more to do with the officer management policies of the different services.[68] The services are responsible for assigning officers to joint billets and for ensuring that these officers are prepared for those assignments. This means officers should report having already completed JPME II. However, the services have not been diligent in this regard. Rather than sending officers bound for joint assignments to JPME II, they often substitute more readily available officers (read, convenience) and repeatedly fail to fill their allocated spaces for JPME II. This continuing circumstance stemmed from service officer management policies that rank service assignments as more important to the likelihood of an officer receiving higher-level command. As such, joint assignments and

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[67] . *U.S. Department of Defense. Evaluation Report on Joint Professional Military Education Phase II (Report no. 98-156) (Arlington, VA: Department of Defense Inspector General, [1998]): i.*
[68] Ibid., 6-7, 46.

schooling are not seen as particularly valuable.[69] When the services do place a greater emphasis on JPME II it is usually in terms of qualifying officers for promotion and not as a method to prepare officers for joint duty assignments.[70] Another recent study observed that officers enroute to joint assignments often get bumped by more senior officers needing JCWS for the joint specialty qualification necessary for promotion.[71] The result of these service officer management policies is that many JCWS course seats are often filled by officers at the end of their joint assignment or by officers heading back to their service after graduation.[72] A 2008 study stated that, in practice, it has been more the exception instead of the rule that an officer gets to attend JPME II prior to their joint assignment.[73] The espoused solution to this problem is termed "the right officer at the right time," yet the disconnect between receiving JPME II and then heading off to a joint assignment persists.[74] This is despite concerns raised in the past by senior leaders to the joint staff that the learning curve for staff officers arriving at a combatant command is "too steep and too long"—disproportionately so from that of typical service assignments.[75]

How many JPME II graduates the JFSC should produce appears to be a different consideration and answers in the past were geared primarily to the number of billets included

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[69] Thie and et al, *Framing a Strategic Approach for Joint Officer Management*, 32.

[70] *. U.S. Congress. House of Representatives. House Armed Services Committee. Another Crossroads?: Professional Military Education Two Decades After the Goldwater-Nichols Act and the Skelton Panel: xii.*; See also Vincent C. Bowhers, "Manage or Educate: Fulfilling the Purpose of Joint Professional Military Education," *Joint Force Quarterly*, no. 67 (4th Quarter 2012).

[71] *. U.S. Department of Defense. "the Joint Staff Officer Project" Final Report: 69.*

[72] The 1998 DoD IG, 2003 BAH, and 2010 HASC studies of JPME all make this observation,

[73] Ibid., 10.

[74] *. U.S. Department of Defense. Goldwater-Nichols Working Group Recommendations (Washington D.C.: Joint Chiefs of Staff, [March 9, 2016]). U.S. Congress. House of Representatives. House Armed Services Committee. Another Crossroads?: Professional Military Education Two Decades After the Goldwater-Nichols Act and the Skelton Panel: xiv.*

[75] *. U.S. Department of Defense. "the Joint Staff Officer Project" Final Report: 25.*

in the Joint Duty Assignment List (JDAL). This list identifies the billets in in which officers gain significant experience in joint matters, and many of the billets are coded as critical joint duty assignments, meaning a joint qualified officer must fill the position. Additionally, the services must fill at least half of the JDAL billets in the rank of O5 and above with joint-qualified officers.[76] On the surface, a possible solution would be to treat this circumstance as a simple math problem, but in reality the answer remains much less clear. Joint-qualified officers serving multiple joint tours, frequent curtailment of joint tours, and the distinctly different officer assignment cycles of the services all contribute complexity that makes such a determination of capacity very difficult, at best. More recently, proposals to increase JPME II student throughput are motivated more by the desire to advance joint education to a wider population than just to officers headed to joint assignments.[77] Future operational challenges will require unprecedented levels of jointness, and this is facilitated by providing joint education earlier and to a wider audience. Pushing jointness deeper than the GNA envisioned, however, is held back by two factors: the finite number of joint assignments available and, of course, the capacity of the JFSC to produce JPME II graduates.

The desire to increase JPME II student throughput has spawned proposals within the establishment to not only shorten the length of the principle course at JFSC to accommodate more classes annually but also to expand the number of institutions accredited to deliver JPME II. In 2004, Congress granted authority for the service senior-level colleges to award JPME II credit, agreeing with the defense establishment's rationale for creating a larger pool of "JPME II

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[76] *U.S. Department of Defense. DoDI 1300.19 - DOD Joint Officer Management (JOM) Program: 15-17.*
[77] *Colonel Jeffrey Settle, Director, Joint Education Division, Joint Staff J-7. Interview by Author. Digital Recording. Norfolk, May 23, 2016.*

complete" officers from which to select general and flag officers, particularly for senior joint duty.[78] The same legislation also trimmed the mandated length of JCWS from 12 weeks to 10, thereby allowing a 33 percent increase in capacity. Such initiatives, however, reflect the concerns articulated by the Skelton Panel in 1989, which warned of organizational pressures to shorten the length of Phase II because, historically, the DoD had demonstrated little sensitivity about the length of joint schools.[79] At that time, the panel determined that a 12-week JPME II course conducted in-residence was necessary to effect the desired "socialization" or "bonding" critical for increasing inter-service understanding and developing joint attitudes and perspectives.[80] The panel adopted a 12-week model in the belief that it would acculturate more effectively than the 5.5 month course it displaced because greater social bonding and camaraderie would result in a shorter course that officers would attend away from their families. The panel also cautioned against initiatives that would implement a "diploma mill" approach to JPME II delivery, emphasizing the credit for promotion purposes rather than the education and acculturation necessary for military operational efficacy.[81]

The second historical driver for changing how JPME II is delivered is cost reduction, but it is sometimes less about the cost of sending officers to school than it is about who is funding it. The perspective of the combatant commanders is that they want joint-qualified officers to fill their joint personnel requirements and, as stated earlier, it is the responsibility of the services to prepare those officers for joint duty. Yet, the services often send officers to their

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[78] *. U.S. Congress. House of Representatives. House Armed Services Committee. Another Crossroads?: Professional Military Education Two Decades After the Goldwater-Nichols Act and the Skelton Panel: 12.*; See also FY 2005 National Defense Authorization Act.

[79] *. U.S. Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services, 111.*

[80] *Ibid., 4.*

[81] *Ibid., 110-2*

joint assignments without having received JPME II in advance, and this means it falls to the joint command to not only bear the financial cost of sending them, but to absorb the impact of the officer's extended absence during his joint tour.[82] This circumstance has become more contentious as force size and budgets become smaller while operational requirements remain high. The combatant commands are increasingly resistant to the "gapping" of a billet for an officer to attend JPME II at any point in an officer's tour, contending instead that these officers should arrive at their assignments having completed the course.[83] The problem of getting "the right officer at the right time" to JPME II remains commonplace and several studies have indicated that the services are not particularly diligent in sending the right officer to JPME II at the right time.[84] Some of this is due in large part to the surge of officers who rotate jobs during the summer, and JFSC does not have the capacity to handle such a surge. Yet, in their own right, the four services continue to struggle to balance joint requirements against their own service needs and vary in the degree of importance that they place on joint education, assignments, and promotions. This difference in emphasis indicates that service parochialisms remain alive and well.[85] Rather than drawing increased scrutiny and pressure on the officer management policies of the services, this problem has repeatedly led to proposals within the defense establishment to shorten the length of the principal course of instruction at JFSC in

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[82] The 1998 DoD Inspector General report, 2002 GAO report, 2008 Joint Staff Officer project, and 2010 House Armed Services Committee report concerning JPME II each presented this finding.

[83] *. U.S. Congress. House of Representatives. House Armed Services Committee. Another Crossroads?: Professional Military Education Two Decades After the Goldwater-Nichols Act and the Skelton Panel: 39.*

[84] Again, 1998 DoD Inspector General report, 2002 GAO report, 2008 Joint Staff Officer project, and 2010 House Armed Services Committee report concerning JPME II each presented this finding.

[85] *. U.S. Government Accountability Office. Military Personnel: Joint Officer Development Has Improved, but a Strategic Approach is Needed, GAO-03-238 (Washington, D.C., [2002]), 30-1*.

order to minimize the operational and financial impacts on the combatant commands.[86] Again, such proposals were a principle concern articulated by the Skelton panel.

Cost reduction as a driver is sometimes, however, about the price of joint education itself, and looming fiscal austerity is forcing a reconsideration of how JFSC delivers JPME II. A recent proposal for legislative change to the original GNA reforms indicated "fiscal austerity is challenging the contemporary 10-week in-residence approach for JPME II." According to an earlier version of the proposal, "the quality of rigorous JPME II may not be sustainable in-residence at extant student levels" and the chairman desires to reduce and avoid the costs associated with its delivery. The stated purpose of the reconsideration of delivery methods is to avoid costs and achieve savings through program changes that substantially reduce temporary duty requirements associated with in-resident attendance.[87] In this case the proposed change sought to repeal the mandated duration of resident JPME II delivered by JFSC. Instead it would allow the chairman to establish the appropriate length of the course, which would necessarily be shorter than 10 weeks to reap any cost savings from a reduced temporary duty requirement.

The third driver for change is the growing desire to make joint education more accessible. The innovation in communications technology has fueled the interest of senior military leadership in making joint education more reachable to officers unable or unwilling to attend JPME II in residence at JFSC.[88] Indeed, as early as 2002, Congress directed a study to

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[86] *. U.S. Department of Defense. Evaluation Report on Joint Professional Military Education Phase II (Report no. 98-156): 12.*; *. U.S. Department of Defense. Goldwater-Nichols Working Group Recommendations*

[87] *U.S. Department of Defense. Draft Legislative Change Proposal - Amendment to Residency Requirements and Content (Washington, D.C.: Joint Chiefs of Staff, 2015d): 2.*

[88] Dempsey, *Joint Education White Paper*: 5.; *Settle, Director, Joint Education Division, Joint Staff J-7. Interview by Author. Digital Recording. Norfolk, May 23, 2016*.

examine, among other things, whether distributed learning can play a role in joint education.[89] Subsequent writings by chairmen also urged a "blend of resident and non-resident delivery approaches [to] extend the benefits of JPME [II] to the largest possible number of officers" and encouraging the exploration of "alternative delivery methods to expand access outside the conventional classroom."[90] This interest has prompted proposals to deliver JPME II through blended models delivering much of the curriculum online and, therefore, requiring much less time in-residence for students. Perhaps the most prominent initiative in this regard is the course extending JPME II to officers in the reserve components. The JCWS-Hybrid course delivered by JFSC blends 37 weeks of online education with three weeks of resident attendance. Its curriculum is very similar to the JCWS in that it addresses the same OPMEP learning areas and many of the same lesson objectives, though through a variety of different delivery methodologies. Distance learning models, however, stand in stark contrast to the law that requires that JPME II must include 10 weeks of in residence attendance in order to achieve the intended degree of joint acculturation. The JCWS-Hybrid course does not completely comply with statutory requirements for the delivery of JPME II, but was recently accredited by the chairman for the delivery of JPME II.[91] Hybrid delivery models are also thought to help in addressing the other considerations of increased throughput and cost reduction, but this is not particularly clear. High quality distance learning solutions are not cheap, nor is the additional faculty necessary to accommodate greater numbers of students.

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[89] See Public Law 107–107, Fiscal Year 2002 National Defense Authorization Act.

[90] General Peter Pace, *Chairman, Joint Chiefs of Staff Vision for Joint Officer Development* (Washington, D.C.: Joint Chiefs of Staff, [2005]).: 6.

[91] See *Department of Defense. Chairman, Joint Chiefs of Staff Instruction 1800.01E Officer Professional Military Education Policy (OPMEP) Change 1 (Washington D.C.: Joint Chiefs of Staff, June 30, 2016).*; *Settle, Director, Joint Education Division, Joint Staff J-7. Interview by Author. Digital Recording. Norfolk, May 23, 2016.*

Like the concerns of the Skelton panel over the JPME cost-saving and throughput initiatives that were certain to come, it is important to note that sustained interpersonal contact occurring through in-residence delivery was an implicit assumption in the original GNA reforms concerning JPME II. This is because few, if any, non-resident delivery approaches were available at the time. Since then, several studies sought to give pause to notions of JPME II distance learning approaches. One independent study argued that JPME II should not be converted to a distance learning program because "personal interaction is a teaching vehicle that builds mutual understanding of each other's service and the trust and confidence critical to JSOs."[92] Another study observed that distance education approaches could restrict opportunity for thought and reflection by placing the burden of education on the student officer, who must concurrently perform his primary joint duty while devoting considerable time to the online program.[93] From the perspective of a student officer, the 2008 Joint Staff Officer Project concluded that in every category reviewed—by command, by grade, and by service— the option for face-to-face interaction normally associated with resident attendance was the "the top choice by a large margin."[94]

Responding to Drivers for Change

Over time, these desires for increased throughput, reduced costs, and expanded accessibility have precipitated some notable changes to JPME II as delivered by JFSC. The first of these was the creation of the Advanced Joint Professional Military Education (AJPME) course

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[92] . *Independent Study of Joint Officer Management and Joint Professional Military Education: ES-19.*
[93] . *U.S. Congress. House of Representatives. House Armed Services Committee. Another Crossroads?: Professional Military Education Two Decades After the Goldwater-Nichols Act and the Skelton Panel: 159.*
[94] . *U.S. Department of Defense. "the Joint Staff Officer Project" Final Report: 65.*

by JFSC in 2003.[95] As discussed earlier, this recently accredited JPME II course accommodates the limited availability of reserve officers to attend the JCWS program, and it employs a blended approach over 40 weeks where curriculum is delivered through both online learning and a modest amount of in-resident education. The chairman recently accredited AJPME to deliver JPME II, renaming the course as JCWS-Hybrid, and it is expected to allow active component officers to attend in the near future.[96] Another significant change to the delivery of JPME II by JFSC was the reduction of the JCWS course length from 12 weeks to 10 in 2005. The shorter course allows for more classes in a given year with the outcome being more JPME II graduates at a lower overall cost per student graduate. The same legislation allowed the individual Service War Colleges to confer JPME II credit so long as they meet certain faculty and student composition requirements.[97] In 2011, the chairman sought and received the authority for JFSC to offer JPME II on an "other than in-residence basis" with Congress allowing a pilot JPME II satellite program at a remote location. Such was deemed a "non-resident" approach and the pilot of the Non-Resident Satellite Program (NRSP) commenced the next year in Tampa, FL supporting the two combatant commands located there.[98] This initiative aimed to establish the validity of delivering JPME II at a location other than the JFSC campus and to explore the cost reduction possibilities of the approach.[99] NRSP students attend the course in person at the satellite location, just as they would if attending at the JFSC. The key difference between the

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[95] Public Law 105-261 directed the creation of a JPME II program for reserve component officers.
[96] *Settle, Director, Joint Education Division, Joint Staff J-7. Interview by Author. Digital Recording. Norfolk, May 23, 2016.*
[97] *Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Public Law 108-375, (2004): § 2156.*
[98] The FY2112 NDAA authorized the NRSP pilot program; The term "non-resident" in the context of this pilot is understood to mean not in attendance at JFSC rather than the use of a distance learning approach.
[99] Pub. L. 112–81 § 552(b); *Kenneth Pisel, Director, Non-Resident Satellite Program, Joint Forces Staff College. Interview by Author. Digital Recording. Norfolk, May 23, 2016.*

NRSP and the resident JPME II program is that NRSP students are not isolated from the competing demands of family and workplace responsibilities. As noted earlier, isolation of students from family responsibilities was an important consideration in the decision of the Skelton panel in 1989 to adopt a 12-week resident JPME II course over a much longer one. In 2015, Congress approved legislation to make the satellite program a permanent alternative to the in-resident delivery of JPME II at the JFSC. The latest initiative seeking change to the delivery of JPME II by JFSC proposes to strike the requirement for 10 weeks of "in-resident" instruction from the law and to provide the chairman the authority to set any such in-residence requirement for JPME II delivered by JFSC.[100] Such a change would purportedly allow for more flexible delivery methods while maintaining academic rigor.

Historically, proposals for change in the delivery of JPME II have acknowledged the importance of maintaining the quality of the education, and this is generally understood to mean that any alternatives must adhere to provisions for joint curriculum, joint acculturation, faculty, and students as established by law and policy.[101] The department has stated that it realizes the value of joint education and the importance of acculturating its officers in joint matters. Even the most recent and far-reaching proposal to empower the defense secretary to authorize courses to award JPME II credit regardless of delivery method rested on the understanding that any alternative must achieve joint acculturation objectives.[102] This is admirable except that many of the studies making such recommendations fall short in their

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[100] . *U.S. Department of Defense. Goldwater-Nichols Working Group Recommendations*.

[101] *Settle, Director, Joint Education Division, Joint Staff J-7. Interview by Author. Digital Recording. Norfolk, May 23, 2016.*; A recurring caveat within past proposals to modify the delivery of JPME Phase II has been the need to maintain the quality of the JPME Phase II experience and outcome. See 1998 DoD Inspector General Report, 2003 Booz Allen Hamilton study, and recent Joint Staff legislative change proposals.

[102] *U.S. Department of Defense. Draft Legislative Change Proposal - Amendment to Residency Requirements and Content: 1.*

analysis of a quantitative approach and its impact on qualitative outcomes. Rather, arguments for a shorter course or modified delivery have historically rested on mitigating the operational impacts to joint commands and the services.[103] Another argument is that officers have had greater exposure to joint operations than those at the time of the original reforms and can have their needs met by a shorter course. While appealing and nominally logical, no empirical study exists supporting the notion that officers attending JPME II possess a better mastery of joint matters than their arguably "less joint" predecessors.[104]

Achieving joint acculturation objectives means that JPME II graduates must value jointness.[105] Joint acculturation results from cognitive and affective change in the minds of officers attending a JPME II alternative. These students must overcome deeply instilled service prejudices to improve their understanding and attitudes toward officers from different services and for trust to develop between them. Absent from virtually every study and review of JPME II since 1989 is any reference to the importance of social psychology, which is inescapable when trying to understand the nature of inter-service prejudice, not to mention joint acculturation, and how it can be reduced. This strongly suggests that proponents for change have made recommendations for alternative JPME II approaches without deep and thoughtful understanding and consideration of the desired level of attitudinal change JPME II should produce in its graduates. Accordingly, proposed changes to the present method of delivery for in-resident JPME II do not adequately consider the potential operational impacts of graduates

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[103] See *U.S. Department of Defense. Evaluation Report on Joint Professional Military Education Phase II (Report no. 98-156)*

[104] See the 1998 DoD Inspector General and 2005 RAND JPME studies and also the 2016 Levine and Waldhauser memorandum.

[105] *Department of Defense. Chairman, Joint Chiefs of Staff Instruction 1800.01E Officer Professional Military Education Policy (OPMEP): E-H-3.*

possessing less affinity for a joint attitude and perspective than different delivery methods could produce. A "quantity over quality" approach could discount the acculturation component of joint education that is critically important in reshaping service-centric attitudes and prejudices of officers toward those embodying a joint attitude and perspective.

Presently, there is no instruction, regulation, or guidance that provides a measurable standard for the level of joint acculturation each alternative must achieve. The joint acculturation requirements articulated in law were written in consideration of in-residence instruction and represent only a vague indication of the level of the attitudinal change resident JPME II must achieve. It is also insufficient to suggest that adequate joint acculturation is simply a matter of policy-mandated student and faculty mixes by military departments.[106] The outcomes of various JPME II programs and their effect on inter-service prejudice and joint acculturation are not well understood, and yet proponents have succeeded in shortening the JPME II principal course of instruction, created a non-resident alternative, and advocated for a blended JPME II delivery model. This raises some important questions: How well are the different forms of JPME II delivered by JFSC serving to change officer attitudes? Are these alternatives equally effective at reducing inter-service prejudice among student officers to facilitate trust building? And, does the professional background of student officers matter in the approach? Without this knowledge it cannot be established whether the alternative approaches are contributing meaningfully to the cause of jointness.

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[106] See *Joint Professional Military Education Phase II Program of Instruction, § 2155* and Pace, *Chairman, Joint Chiefs of Staff Vision for Joint Officer Development* for these quantifications of acculturation.

Organizational Culture, the Services, and Prejudice

As the last chapter established, JPME II is the principle means by which to acculturate officers of different services away from service centrism and toward a joint perspective and attitude. Optimal joint acculturation, however, is possible only with the reduction of the biases and prejudices ensconced in the minds of officers by their respective service culture and military experience. While these remain, it will be difficult to establish the trust necessary between members of different organizational cultures for a tradeoff in cultural values and beliefs to occur. For all the studies and reports focusing on joint education and acculturation over the last three decades little is said regarding the relationship between joint acculturation and the inter-service prejudices and related biases that can hinder it.

Among different theoretical views of prejudice, this study adopts a particularly socio-cultural focus, where societal and/or cultural beliefs and attitudes serve as a basis for prejudice toward out-groups. The consideration of social science and social psychology, specifically, are unavoidable when seeking a better understanding of the nature of prejudice and, more importantly, the processes and conditions that help to reduce it. Yet, consideration for these subjects remains virtually absent in the studies and reports concerning JPME II over the last three decades. To help address this void, this section examines how organizational cultures can foster certain prejudices among their members that lead to antipathy toward others belonging to different groups. It provides a theoretical understanding of prejudice and how it may be overcome to improve the prospect for optimal joint acculturation. Through the use of Intergroup Contact Theory (ICT) it is possible to establish process and the facilitating conditions for the reduction of prejudice and then relate them to the context of JPME II and the three

delivery methods employed by JFSC. In doing so, the underlying distinctions between these delivery methods become clearer. Moreover, so do the potential implications of these distinctions for the reduction of prejudice between officers of different services and, ultimately, the degree of joint acculturation each method may achieve.

Service Cultures are Organizational Cultures

The military service cultures are organizational cultures, and as such they represent the identity and the personality of their associated organizations. By nature, organizational cultures are abstract—unseen and often subliminal—yet powerful in how they influence the activities and outcomes of an organization. Renowned psychologist Edgar Schein describes these cultures as "deep, pervasive, complex, patterned, and morally neutral."[107] While acknowledging the existence of several definitions for organizational culture, he generally describes it as a pattern of shared beliefs and assumptions, or basic values, learned by a group to solve problems of external adaptation and internal integration. These shared beliefs and assumptions are relevant and distinctive to the group and are also promulgated to new members of the organization. They are understood subconsciously and taken for granted in terms of how a particular organization views itself and its environment. Trice and Beyer reinforce this view by saying that organizational culture is fundamentally about patterning and integration—helping members make sense of their world. Humans cope with their environment by establishing order and sensibility and, as human collectives, the same applies

[107] Schein, *Organizational Culture and Leadership, 3rd Edition*, 60.

to organizations.[108] Smith directly observes that the culture of a particular organization, the services in this case, also provides its members with a sense of shared mission, which enhances cohesion and organizational stability in that substantive change will not come about necessarily with the departure or arrival of new members.[109]

Schein further describes three levels of organizational culture based on their visibility. These levels are artifacts, espoused values and beliefs, and basic values. Artifacts are the most visible, yet least decipherable, manifestation of the underlying culture. Observers will see and associate these artifacts with a particular culture or organization, but may not necessarily understand their meaning or significance. Lying below the observable artifacts of organizational culture are the espoused values and beliefs representing the cultural or organizational approach taken toward a fundamental problem or issue. Beyond these are the basic underlying values, or assumptions, of the organization, which are the least observable but most consequential aspect of organizational culture. Unless the underlying values can be identified it will be very difficult or impossible to decipher the artifacts, espoused values and norms of an organization.[110] In a similar manner, Trice and Beyer describe cultural forms—symbols, language, narratives, and practices—which are observable manifestations of organizational culture and guide members regarding how to think and act and tell them "how we do things around here."

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[108] Janice M. Beyer and Harrison M. Trice, *The Cultures of Work Organizations* (Englewood Cliffs: Prentice Hall, 1993), 4.; See also Schein, *Organizational Culture and Leadership, 3rd Edition*, 16.
[109] James M. Smith, "Service Cultures, Joint Cultures, and the U.S. Military," *Airman-Scholar* (Winter 1998): 5.
[110] Schein, *Organizational Culture and Leadership, 3rd Edition*, 59.

Organizational culture begins when the leader of an organization or group imposes a belief system, or ideology, as Trice and Beyer refer to it, on the other members.[111] This defines the roles and mission of the organization, its operation, and the system of promotion that serves to reinforce and perpetuate the culture. Continual reinforcement further inculcates the associated beliefs and values among the members and over time they become accepted as shared truths or rendered invalid and replaced by more suitable ones. A culture begins to form as members unite around the common beliefs and values that guide the organization in how to be successful in its environment.[112] Thus, leadership and culture operate in tandem with leaders creating and managing the culture of an organization and the culture itself defining who will be promoted to positions of influence.[113] As such, the culture then begins to define the characteristics and expectations of its future leaders. When an organization encounters failure or difficulty in adapting to a changing external environment its members must reexamine the validity of the underlying truths of their culture. Because they sometimes cannot be reformed from within, organizations require external help in changing their cultures. According to Smith, cultural change usually occurs after a change in the external environment such that the performance or core mission experiences are threatened with failure. Cultural transition is difficult and slow, leading organizations to protect their equities as long as possible. In the context of the military services these equities most often translate to mission and budget.[114] This self-protective behavior means that if substantive cultural change is to occur the organization's leaders must step outside of their organization's culture to reassess present

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[111] Beyer and Trice, *The Cultures of Work Organizations*, 35.
[112] Schein, *Organizational Culture and Leadership, 3rd Edition*, 16.; See also Smith, *Service Cultures, Joint Cultures, and the U.S. Military*: 16.
[113] Schein, *Organizational Culture and Leadership, 3rd Edition*, 11.
[114] Smith, *Service Cultures, Joint Cultures, and the U.S. Military*: 7.

values, beliefs, and assumptions and then impose new ones.[115] Indeed, such was the example of Chairman of the Joint Chiefs of Staff, General David Jones, who argued vociferously outside of the defense establishment for the imposition of defense reforms that ultimately became the GNA.[116]

Within the U.S. military, each service has its own powerful, distinct, and unique organizational culture that, with the exception of the Air Force, has developed and evolved for more than two centuries. For example, Mahnken and FitzSimonds describe the culture of the Air Force as emphasizing technology more than other services. The Navy culture is particularly attuned to the platforms on which they deploy, while the Army and Marine Corps focus more on the human element of combat.[117] The basic beliefs and values of these different cultures have adapted each service to be competent, if not dominant, in the physical domains in which they operate. Even further, the distinct cultures of the military services are not monolithic. Rather, they are composed internally of different branches that often have diverse goals, values, and interests. The Army, for example, includes the combat arms, combat support, and combat service support communities. The Navy culture is comprised of aviation, surface warfare and subsurface subcultures. The Air Force contains not only fighter, bomber, and transport pilots, but also space and missile communities. Like Smith, Trice and Beyer also note that organizational culture goes beyond just shared norms and beliefs to provide for structural stability. It also serves to integrate members into a coherent whole working toward a broadly

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[115] Schein, *Organizational Culture and Leadership, 3rd Edition*, 3.

[116] See "Why the Joint Chiefs of Staff Must Change," David C. Jones, 1982, where Jones highlights to members of Congress and the executive branch the inefficacy of the joint system due to the powerful cultures of the services and argues for the imposition of legislative reforms on the defense department.

[117] Thomas G. Mahnken and James R. FitzSimonds, "Revolutionary Ambivalence: Understanding Officer Attitudes Toward Transformation," *International Security* 28, no. 2 (Fall 2003): 117.; See also Smith, *Service Cultures, Joint Cultures, and the U.S. Military*: 7-10.

common purpose.[118] This is to say that while each of the service subcultures has its own norms and beliefs toward war they remain unified by the more encompassing service culture to which each belongs.[119] Just as the subcultures of the separate services unite in a way to form a singular organization, jointness as a "quasi-culture" transcends the cultures of the individual services to fuse the members and capabilities of each into a "coherent whole"—the joint force. Yet, without a cohesive system of shared joint values to transcend service interests and inspire "purple-minded" warfighters to think as a team, Fautua argues that genuine jointness will be muted by service parochialism when convenient, whether on a battlefield or in a joint staff.[120] Indeed, parochialism often generates a powerful tension between the vibrant, powerful cultures of the military services and that of jointness. These tensions occur not only in the highest tier of joint organization—the Joint Chiefs of Staff—but also engender counterpart tensions in the combatant commands and throughout the multilayered joint staff structure where joint issues are addressed. This is not a new phenomenon. As far back as 1919, Secretary of War Baker noted such when he wrote against the separation of the air components from the Navy and Army to create a third service because "to separate them makes them rival services with the whole train of evils which such rivalry creates."[121] To be sure, jointness would not be as powerful or compelling without the unique competencies and capabilities of the individual services that provide robust diversity to the joint force commander. Wilkerson states that without proficiency in one's own service there is no basis

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[118] Beyer and Trice, *The Cultures of Work Organizations*, 10.
[119] Mahnken and FitzSimonds, *Revolutionary Ambivalence: Understanding Officer Attitudes Toward Transformation*: 117.
[120] David T. Fautua, "The Paradox of Joint Culture," *Joint Force Quarterly*, no. 26 (Autumn 2000): 86.
[121] *. War Department. Annual Report of the Secretary of War (Washington, D.C.: Government Printing Office, [1919]).: 72.*

for the inter-service trust and understanding critical to jointness.[122] In reality, the respective cultures drive each service to excellence—to dominate in the domain of warfare within which they primarily operate. According to Smith, service rivalries are an outcome precipitated by the different cultures of the services, each of which has innate self-interests and a belief in the superiority of their mission and processes.[123] Each service devotes substantial resources to protect and perpetuate their culture, driven in some respects by an underlying assumption of the primacy of their particular organization relative to the other services. These differences in underlying values among the unique service cultures provide fertile ground for competition and conflict. As discussed later, such rivalry often manifests in dysfunctional and counterproductive competition between the services and has historically undermined the operational effectiveness of the joint force.

Others observe that having a long history of shared beliefs and values leads to a stronger culture because, as a set of learned behaviors, culture is only as strong as the learning history of an organization.[124] For this reason the long histories of the different services in the U.S. military have led to particularly powerful cultures. Adding to the strength of these service cultures is the closed personnel system they employ. To get to the top of the organization one must first come in at the bottom, and there are few, if any, opportunities to enter the organization mid-stream. In effect, the culture is protected from external competition. On top of this, each service also retains exclusive promotion authority to advance those who most

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[122] Wilkerson, *What Exactly is Jointness?*: 67.
[123] Smith, *Service Cultures, Joint Cultures, and the U.S. Military*: 3.
[124] Schein, *Organizational Culture and Leadership, 3rd Edition*, 83.

closely embody the values, beliefs, and behaviors of their respective culture.[125] Conversely, it is arguable that a corresponding joint culture exists, at least not strictly by the structures and definitions described by Schein and Smith.[126] The joint arena and joint commands rely on officers already indoctrinated into the cultures of their respective service because no separate joint career path yet exists. Promotion and assignment responsibilities lie exclusively with the individual services and this circumstance strongly influences the loyalties of officers to remain with their service. For this reason, Smith argues that joint experience and education remain essential until such time that a more comprehensive structure to establish and nurture joint culture exists.[127]

Service Cultures Within the Organizational Process Model

Though this study focuses primarily on contemporary theory of organizational culture to understand the reasons for dysfunctional behavior of the services in joint military operations, Allison's organizational process model provides additional explanatory power. When developed by Allison, the model derived from existing organizational theory to provide an alternative paradigm valuable to the study of foreign policy and international politics. The model helps explain an event when the relevant organizations are described and the patterned organizational behavior from which a particular action has emerged.[128] First applied to the context of the Cuban Missile Crisis, the paradigm describes how the features of organizations, rather than rational individuals, serve as the relative determinants of their behavior. The

[125] Smith, *Service Cultures, Joint Cultures, and the U.S. Military*: 16.
[126] Fautua, *The Paradox of Joint Culture*: 86.
[127] Smith, *Service Cultures, Joint Cultures, and the U.S. Military*: 16.
[128] Graham Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown and Company, 1971), 6, 78.

actions of a single person are viewed in the context of the larger organization of which he is a member, and so the model focuses on how the outputs of relevant organizations produce a particular operational outcome—whether successful or not. Through this model, actions are the outputs of the organization and these are characterized by what Allison terms "pre-established routines," which include organization goals for acceptable performance, standard operating procedures, programs, and repertoires. However, these can be described more explicitly as the organization's procedures for promotion and reward for members, recruitment and socialization to organizational norms, as well as the professional standards, expectations, and attitudes of the members of the organization.[129]

Applying this model to the context of joint military operations provides an illustrative explanation and value to this study when applied the actions of the services. The U.S. military is often viewed like a unitary actor but, like the federal government of which it is a part, it is made up of several large organizations—primarily the different services. When centrally directed to conduct joint military operations, much of the resulting success or failure of these operations rests on how they are implemented, and this involves the organizational behavior of the individual services. Dysfunctional outcomes occur as a by-product of basic organizational processes that generate competitive and often counterproductive actions when the Services interact with each other.[130] Joint military operations are only as successful as the behavior of the participating service branches allow because their organizational outputs often constrain or restrict the range of alternatives available to a decision maker.[131] In a historical context, the

[129] Ibid., 81.
[130] Ibid., 250.
[131] Ibid., 79.

model is illustrative of the unpreparedness of military forces in Hawaii in advance of the Japanese attack in 1941. For instance, Allison argues that the organizational culture of the Navy contributed to a continuance of normal procedures and routines in Pearl Harbor on December 7, despite warnings received earlier of an impending Japanese attack.[132] The model also indicates that options for action on issues between organizations are limited, meaning that organizations will default to their own way of doing business rather than adopt a joint solution between organizations. Despite repeated failures in intelligence sharing and communication between the Navy and the Army in Hawaii in the lead up to the Japanese attack, neither organization saw incentive for doing so. Even after receiving direction from Washington for full integration of these functions the actions of the Army and Navy in Hawaii remained essentially uncoordinated and sometimes in conflict with one another.[133]

Under the Organizational Process Model, this dysfunctional behavior is the output of a large organization operating according to standard patterns of behavior. The services interact with each other to address their portion of a "factored" or joint military problem because rarely does a single service represent a complete solution in the context of military conflict or operations. Primary power usually accompanies primary responsibility for a given problem factor, and the factors within a joint military context usually represent the domains of air, sea, and land. So, it is logical to expect the Navy to act authoritatively for maritime matters or the Army for land operations. It is primary power, however, that encourages parochial priorities and perceptions. Service behavior, as an output of this model, is driven by organizationally specific performance standards, standard operating procedures, programs and repertoires. The

[132] Ibid., 88.
[133] Ibid., 91-4.

latter two are commonly reflected in military drills and exercises. In addition, organizational outputs are often characterized by uncertainty avoidance, problem-directed searches for solutions to avoid atypical discomfort, and by organizational learning and change. In the last, fiscal surplus and austerity are often the catalysts promoting change by forcing organizations to adopt new behaviors when growing or acquiring new technology or by having to adapt when they must do with less. Dramatic organizational change usually occurs in extremis—when the organization is presented with catastrophic mission failure or disaster.[134]

Cultural Beliefs and Values Influence the Attitudes and Behaviors of Members

According to many authors, cultures operate on shared values, or assumptions, regarding interaction and adaptation to the external environment and also the internal integration of its members. These invoke a perspective among its members of not only what the organization exists to be, but also how it fits within the larger whole—its external environment. Assumptions of organizational mission and strategy lead to others regarding the organizational goals and also the means, internal and external, of the organization for accomplishing them. Once shared, and no longer contested, such assumptions are accepted as truth and become "non-negotiable." Many of these cultural assumptions can be regarded as so unquestionable that doing so may lead one to be seen as an outsider or deranged, which is why Schein prefers to term them "assumptions" rather than values, as others such as Trice and Beyer have done.[135] Such basic cultural assumptions can be extremely hard to change as doing so often invokes a measure of cognitive instability, and in this light it seems logical that

[134] Ibid., 67-82.
[135] Schein, *Organizational Culture and Leadership, 3rd Edition*, 16, 25.

members of a culture will look to avoid disruptions in their view or understanding of the world around them.[136] Accordingly, it may be impossible to challenge existing cultural assumptions or adopt new ones while in the presence of one's own cultural environment, surrounded by other members vigorously defending the status quo.

However, the reluctance to challenge these underlying cultural assumptions can also lead to misperception and misunderstanding of the actions of others.[137] According to Trice and Beyer, this is because strong cultures encourage ethnocentrism where the values of a particular culture are predeterminants, often subconsciously, of how members think, see, and feel, ultimately leading them to display certain attitudes toward their environment and members of other cultures.[138] These attitudes influence how other social objects are received and understood—or misunderstood—through such phenomena as selective interpretation and memory. In this case, a subject more readily draws upon and stores interpretations consistent with, and confirmatory of, the attitude they hold toward the object.[139] The discussion of attitude is important to understanding behavior as well. Together with subjective cultural norms, a member forms attitudes and intentions that in turn beget volitional behaviors.[140] Within a military context, Smith says that service cultural assumptions influence the behavior of its officers to support policies promoting its core mission, to remain indifferent to matters peripheral to its core mission, and to oppose any challenges to the core mission. Service

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[136] C. Argyris, R. Putnam and D. Smith, *Action Science: Concepts, Methods, and Skills for Research and Intervention* (San Francisco: Jossey-Bass, Inc., 1985), 396-408.
[137] Schein, *Organizational Culture and Leadership, 3rd Edition*, 32.
[138] James M. Olson and Mark P. Zanna, "Attitudes and Attitude Change," *Annual Review of Psychology* 44, no. 1 (1993): 125.; Beyer and Trice, *The Cultures of Work Organizations*, 10-1.
[139] Olson and Zanna, *Attitudes and Attitude Change*: 129-30.
[140] Icek Ajzen and Martin Fishbein, "Attitude-Behavior Relations: A Theoretical Analysis and Review of Empirical Research." *Psychological Bulletin* 84, no. 5 (1977): 888-9.

cultures compel their leaders to seek autonomy and often exclusivity in its core mission area, and this is how service cultures fundamentally threaten jointness.[141]

In describing how cultures can form, Schein also suggests how new cultures can emerge or perhaps be altered. At the individual level, this means supplanting underlying beliefs and values with different ones. This can begin with an originating event that brings people of different backgrounds together, voluntarily or otherwise, and usually at a location geographically apart from any of the organizations from which they originate. By progressing through four evolutionary stages—group formation, group building, group work, and group maturity—dissimilar participants graduate from a self-orientation to a group conceptualization and then toward the development of group norms and teamwork that lead to a perpetuating reinforcement of the shared understanding which enabled the group to be successful.[142] By the end of the second stage, group building, the group has cultivated a "functional familiarity" whereby they understand what to expect from each other and that coexistence is possible even when the members may not particularly like one another. But it is only during the third stage—group work—that the differences of members become valued rather than rejected by the other members. Schein notes that this stage also involves a strong socio-emotional, or affective, dimension.[143] This model provides consequential support to the relationship between joint acculturation and the reduction of prejudice presented later in this chapter. While such is a descriptive model for the emergence of culture, it is important to recognize that in the context of joint acculturation the focus of change is on the individual officer. The aim of JPME II is not

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[141] Smith, *Service Cultures, Joint Cultures, and the U.S. Military*: 3.
[142] Schein, *Organizational Culture and Leadership, 3rd Edition*, 70.; Gordon Willard Allport, *The Nature of Prejudice* (New York: Addison-Wesley, 1979), 261.
[143] Schein, *Organizational Culture and Leadership, 3rd Edition*, 82.

to alter basic cultures of the services. Rather, it is to modify the culture in the officer by positively altering the individual's beliefs and attitudes toward members of out-groups, which are the officers from other services. Correspondingly, joint acculturation is not indicative of assimilation or diffusion—neither to subsume one service culture into another nor to spread values and beliefs from one culture to the others. The outcome is to develop in the individual officer a better appreciation of the different service cultures and to instill a joint perspective and joint attitude.

Inter-service Prejudice and Joint Acculturation

As stated earlier, cultural beliefs, values, and personal experience influence the attitudes and behaviors of group members, and this is necessary for coping with the complexities of the larger world and range of experiences outside the organization. Allport observed, however, that rigid adherence to cultural beliefs and overgeneralizations from experience lead to prejudicial attitudes and often discriminatory behavior. In the same way, military officers, as members of organizational cultures, are subject to the same inclinations toward prejudicial attitudes and discriminatory behavior toward officers belonging to different services. In fact, the circumstances that make the service cultures especially powerful also makes their members, military officers in this case, especially inclined to harbor prejudicial attitudes that can be more deeply ingrained and more prevalent within the organization.

Before going further, it is important to discuss and define prejudice in the context of this study. Gordon Allport, whose seminal work in 1954 established the foundational understanding of prejudice in the field of social psychology, noted that any definition of

prejudice must necessarily include "an attitude of favor or disfavor and this must stem from an overgeneralization" derived from a core belief or personal experience.[144] Given the profound influence of his contribution to social psychology and prejudice-reduction research, this study adopts Allport's definition of prejudice, which he articulated as "an antipathy based upon faulty and inflexible generalization; it may be felt or expressed. It may be directed toward a group as a whole, or toward an individual because he is a member of that group."[145] Such prejudice can be either explicit or implicit, whereby the difference between the two lies in the subject's awareness of personal prejudices or biases toward other social objects.[146] Allport notes that while often harmless or benign, prejudicial attitudes often lead to discrimination, which is selectively negative behavior toward, or exclusion of, members of out-groups.[147] Undoubtedly, however, prejudicial attitudes primarily stem from two particular circumstances. The first is what Allport terms "conformity prejudice," which is where prejudicial attitudes and behaviors result from the member's perceived need to conform to cultural custom and to maintain the cultural pattern. The reluctance to challenge these cultural beliefs and assumptions can lead to misperception, misunderstanding, and overgeneralization. In fact, Allport stated that conformity to group values and beliefs represent the "single most important source of prejudice."[148] While such prejudicial attitudes can sometimes be of the "polite and harmless" order, they can also be tremendously counterproductive or destructive when members of a particular service culture demonstrate a "neurosis of conformity" where loyalty and obedience

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[144] Allport, *The Nature of Prejudice*, 13.
[145] Ibid., 10.
[146] Alex Madva, "The Hidden Mechanisms of Prejudice: Implicit Bias & Interpersonal Fluency" (PhD Dissertation, Columbia University, 2012), 2.
[147] Allport, *The Nature of Prejudice*, 576: 14-5.; John F. Dovidio and Samuel L. Gaertner, "Reducing Prejudice: Combating Intergroup Biases," *Current Directions in Psychological Science* 8, no. 4 (1999): 101-5.
[148] Allport, *The Nature of Prejudice*, 294.

eclipse rationality.[149] In the second circumstance, and perhaps more germane to this study, prejudice often stems from stereotypes that result from overgeneralizations. Generalization in itself is not inherently negative as it enables a person to cope with the larger external world beyond their personal experience and understanding. Cultural beliefs and personal experience provide a basis for members of an organization to generalize their understanding to a broader context. Humans develop their understanding of the world around them and how to interact with others by generalizing based on what they know from experience and what they believe to be true.[150] When such knowledge and beliefs are overused, however, or when a generalization is ill-informed, distortions are created that produce stereotypes. Stereotypes are inherently prejudicial and they bias individual attitudes and behaviors and distort perceptions by changing the way an individual perceives what is observed in members of other cultures. Social Identity Theory also echoes Allport's observations by positing that individuals generalize, or categorize, on the basis of ethnicity, nationality, gender, age, and occupation. Where self-esteem is a function of membership in the perceived in-group, members maintain their self-esteem by identifying with the in-group and by displaying discriminatory behavior toward out-groups.[151] Within a socio-cultural focus, Allport notes several conditions that portend higher levels of prejudice in a socio-cultural context. Among these are heterogeneity in the population, ignorance and barriers to communication, existence of rivalries and conflict, and unfavorable attitudes toward assimilation and cultural pluralism.[152] Each of these conditions seem especially salient in the context of military service and service cultures, and this adds weight to

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[149] Ibid., 286-9.
[150] Ibid., 20-27.
[151] Henri Tajfel and John C. Turner, "An Integrative Theory of Intergroup Conflict," in *The Social Psychology of Intergroup Relations*, eds. William G. Austin and Stephen Worchel (Monterey: Brooks Cole, 1979): 36.
[152] Allport, *The Nature of Prejudice*, 221-40.

the earlier notion that military officers may be especially susceptible to the development of prejudicial attitudes toward the other services and their members.

To provide necessary focus and clarity, this study uses the term inter-service prejudice when describing the prejudicial attitudes held by officers of one service toward officers of a different service. This term preserves the definition provided earlier—namely, that inter-service prejudice represents antipathy stemming from an overgeneralization and directed toward a group or an individual of that group. At the organizational level, service cultural beliefs and values provide the first source for inter-service prejudice, and most often lead to inter-service clashes over missions and resources. Smith cites these as historically contested turfs between the different services, where intergroup competition for resources, even if only perceived, can also produce negative intergroup attitudes and prejudice.[153] However, inter-service prejudice may also stem from an officer's personal experience with members of other services or from the teaching and learning within one's own service.[154]

Examples of cultural and prejudicial attitudes demonstrated by officers of one service toward another are myriad, especially in operational circumstances. Indeed, the impact of these differences and attitudes on the outcomes of military operations led to the monumental reforms under GNA. But these continued even after the passage of the reforms in 1986. In recounting Operation JUST CAUSE, the U.S. invasion of Panama in 1989, Yates describes the recalcitrance of Navy leadership in allowing the command of naval forces by anyone other than a naval officer. The invasion plan long called for the provision of a carrier battle group by the

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[153] Rupert Brown and Hanna Zagefka, "The Dynamics of Acculturation: An Intergroup Perspective," *Advances in Experimental Social Psychology* 44 (2011): 151.
[154] Allport, *The Nature of Prejudice*, 292.

U.S. Navy's Atlantic Command to the joint task force commander, an Army officer, responsible for executing the operation. However, only two months before execution, the commander of Atlantic Command successfully resisted any notion of providing such a platform under the command of an Army general. This continued despite insistence from the chairman of the Joint Chiefs of Staff that he comply. Eventually, the carrier battle group was dropped from the plan.[155] During operations Desert Shield and Desert Storm in 1990 and 1991, contrasting cultural beliefs and values led to numerous and unsettling circumstances involving the different services. According to Gordon and Trainor, the leaders of each service endeavored to "fight its own war," avoiding vigorously in some cases the harmonization of their plans with the others. This was no more apparent than in the disunity between the leaders of the Army and Marine forces involved in the operations. Army leaders, in the belief of the primacy of their service in land warfare, sought to relegate the Marines to a very limited role in the conflict, and initially did not even include a Marine officer during their planning for the ground invasion. The poor coordination resulting from the behaviors of Army and Marine Corps planners created grave operational vulnerabilities during execution of the attack that Iraqi commanders might have exploited if they had been more determined and aggressive.[156] Inter-service prejudices can be more apparent within an academic context, however. The JPME II programs of JFSC each employ a seminar exercise early in the course where officers are asked to disclose their beliefs and understanding of the members and culture of each of the other services. This exercise is

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[155] Yates, Lawrence A. *The U.S. Military Intervention in Panama: Origins, Planning, and Crisis Management, June 1987 - December 1989*. (Washington, D.C.: Center of Military History, United States Army, 2008)., 91.
[156] Michael R. Gordon and General Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston: Little, Brown and Company, 1995)., 472-3.

usually enlightening and entertaining. Almost without exception, it reveals the overly stereotypical characterizations officers hold toward the other services and their members.[157]

The apparent prevalence of prejudicial attitudes among military officers evokes an important question: What is the consequence of inter-service prejudice within a program that has joint acculturation as an intended outcome? This is no small concern where it pertains to joint education because instilling a joint attitude and perspective was deemed by the Skelton commission in 1989 as most important among the four components of JPME II. Brown and Zagefka acknowledge that little empirical research exists to adequately characterize the relationship between prejudice and acculturation in general, but argue the acculturation choices of in-group members are negatively influenced by perceived discrimination stemming from out-group member prejudices.[158] Restated in a military context, they say that where inter-prejudices are low, discriminatory behavior will be low and so officers are more likely to be accepting and tolerant of other service cultures and develop an appreciation for the distinctions between the cultures. Conversely, high levels of inter-service prejudice gravely endanger the likelihood of achieving optimal acculturation.[159] Brown and Zagefka use the terms "acculturation choices" and "acculturation preferences," and from this we can infer that acculturation is largely volitional behavior, and perhaps entirely so in the context of joint acculturation and JPME II. Officers cannot be forced to trade off tightly-held cultural beliefs and resultant attitudes any more than an Army officer can be forced to adopt aspects of Navy culture. Rather, joint acculturation must occur through persuasion by providing new

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[157] This observation is drawn from the author's teaching experience covering 41 resident JCWS seminars from 2006-2017.
[158] Brown and Zagefka, *The Dynamics of Acculturation: An Intergroup Perspective*: 141. The authors cite several studies demonstrating a relationship between acculturation and perceived prejudice.
[159] Ibid., 175.

information and a better understanding of the cultures of other services and their officers. New information and enhanced understanding challenge and work to change underlying beliefs, as well as work to correct stereotypes that lead to prejudicial attitudes and behaviors.[160]

Effective and substantive joint acculturation of officers is therefore contingent upon the reduction of prejudicial attitudes and behaviors between groups, and this is accomplished through a contact experience involving officers of different services. Therefore, it is of principal importance to reduce levels of inter-service prejudice within the contact experience in order to foster appreciable and beneficial levels of joint acculturation between officers of different services. Minimizing inter-service prejudice with the inter-service contact experience of JPME II is imperative to achieving optimal joint acculturation and for the development of trust between officers.

Discerning Between Cognitive Bias and Prejudice

The subject of prejudice deserves some discussion regarding the relationship or differentiation between cognitive biases and prejudice. Cognitive biases represent human evolutional adaptation mechanisms to allow for rapid processing of situations and events, and result from mental "shortcuts," or heuristics, rather than reliance on more orderly and detailed thinking and understanding. Theoretically, these heuristics compensate for limitations in

[160] Thomas F. Pettigrew and Linda R. Tropp, *When Groups Meet: The Dynamics of Intergroup Contact* (New York: Psychology Press, 2011), 78-9.

human mental capacity.[161] Humans rely on a repertoire of simple and fast heuristics for decision making, and sometimes these produce decisional defaults because, as mental shortcuts, they fail to consider all the information at hand. While permitting a quick study of the events and circumstances we observe in reality, reliance on a particular heuristic can produce a predictable partiality that is characterized as a cognitive bias. While often adequate to the situation, biases can sometimes lead to systematic errors in judgment and decision making.[162]

There are many forms of cognitive bias demonstrated by humans, and it is outside the scope of this study to consider most of them as they have no direct bearing on the subject of inter-service behavior. A few, however, are worthy of some discussion. Samuelson and Zeckhauser describe an effect in the context of decision making known as "status quo bias," which describes the circumstance where subjects demonstrate a tendency to remain at status quo—choosing to do nothing—because of perceptions that leaving would be more disadvantageous than staying. This creates a form of mental rigidity, and the strength of this bias increases with a decrease in subject preference for a particular alternative and with an increase in available alternatives. Individuals opt for status quo alternatives for a variety of reasons, including convenience, policy or custom, conservatism, fear, and rationalization. And there may be additional pressures for status quo decision making when subjects act in

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[161] In his book "Thinking, Fast and Slow" Kahneman discusses in detail his characters termed System 1 and System 2 thinking, which provide an illustrative description of the mental processes and heuristics producing cognitive biases.

[162] Martie G. Haselton, Daniel Nettle and Damian R. Murray, "The Evolution of Cognitive Bias," in *The Handbook of Evolutionary Psychology*, ed. David M. Buss (Hoboken: John Wiley & Sons, 2005), 726-7.; Daniel Kahneman and Amos Tversky, "Judgement Under Uncertainty: Heuristics and Biases," *Science* 185, no. 4157 (1973): 1124.

accordance with their allegiance to a particular brand or organization.[163] This is to say that the powerful nature of organizational cultures can lead members to adopt certain cognitive biases that influence the preferences and decisions by members to opt for present conditions and also for solutions that directly or indirectly favor the organization. This is not an inherently negative circumstance to the extent that in doing so inter-service cooperation and interdependency within a joint context is not compromised.

Kahneman also describes "confirmatory bias," which leads a subject to more readily adopt or favor information in circumstances where the subject judges the information as compatible with their pre-existing beliefs.[164] Likewise, the subject gives proportionally less consideration to information or possibilities viewed as contradictory or counterfactual. In the context of inter-service prejudice, confirmation bias is consequential when a service member is perceived as being particularly representative of the negative stereotypes and beliefs attributed to them by someone from another service. Negative stereotypes and beliefs become much more rigid and entrenched as a result. As discussed later in this chapter, officers possessing extreme and deeply entrenched stereotypes may be problematic to effective joint education. Another relevant cognitive bias, which this study refers to in Chapter V, is the tendency of a subject to make judgments based on their most recent or most salient experiences. This bias stems from what Kahneman and Tversky term the "availability heuristic," which is a function of the ease to which instances and experiences come to mind.[165]

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[163] William Samuelson and Richard Zeckhauser, "Status Quo Bias in Decision Making," *Journal of Risk and Uncertainty* 1, no. 1 (1988): 10.
[164] Daniel Kahneman, *Thinking, Fast and Slow*, 1st Edition ed. (New York: Farrar, Straus and Giroux, 2011), 60.
[165] Ibid.

While not unrelated, we can differentiate bias from prejudice in a few key ways. First, a bias can be either positive or negative in nature, leading to decisions and behavior that are favorable or unfavorable toward a circumstance, person or group. They represent a tendency that can sometimes, but not always, result in unfairness. Prejudice, however, almost always denotes negativity or antipathy toward social subjects, and often leads to discrimination. This is pre-judgment based on group membership and can be regarded as a more extreme form of bias. Cognitive biases also tend to be implicit in the sense that subjects are usually unaware that illogical tendencies exist in their thought process and decision making. By having an awareness of an illogical bias we might believe a subject would naturally try to correct for errors in judgments. Prejudice, on the other hand, can be explicit as well as implicit. Subjects are often very conscious of the antipathy they hold toward members of other groups, but having an awareness of one's prejudice toward others does not necessarily lead to remediation.[166] However, by their nature, cognitive bias and prejudice can both lead to discrimination.

Intergroup Contact as a Means of Reducing Prejudice

Prejudice reduction research traces back more than 60 years to the work of Williams (1947) and, in particular, Allport (1954), who formulated the original "Contact Hypothesis" that Pettigrew and Tropp subsequently developed into their Intergroup Contact Theory (ICT).[167] The

[166]Lisa Legault et al., "On the Self-Regulation of Implicit and Explicit Prejudice: A Self-Determination Theory Perspective," *Personality and Social Psychology Bulletin* 33, no. 5 (2007): 733.
[167] See Miles Hewstone and Hermann Swart, "Fifty-odd Years of Inter-Group Contact: From Hypothesis to Integrated Theory," *British Journal of Social Psychology* 50, no. 3 (2011), 374-86. and John F. Dovidio, Samuel L. Gaertner and Kerry Kawakami, "Intergroup Contact: The Past, Present, and the Future," *Group Processes & Intergroup Relations* 6, no. 1 (2003), 5-21.

hypothesis is credited as one of the most influential proclamations of the positive effects of intergroup contact and it subsequently set the direction for much of the prejudice reduction research that followed.[168] Since the publication of Allport's groundbreaking volume, "The Nature of Prejudice," the number of intergroup contact studies has grown nearly eight-fold and the research now substantially addresses the initially absent understanding of the processes involved in the prejudice-reducing effects of intergroup contact.[169] Several hundred intergroup contact studies now demonstrate the positive effects of intergroup contact and this is where burgeoning empirical research lies regarding attitudinal change and the reduction of prejudice between groups.

Central to this expanding body of knowledge are Pettigrew and Tropp, whose seminal works in 2006 and 2011 reviewed more than 500 contact studies and concluded unequivocally that close interpersonal contact between groups of different cultures reduces prejudice.[170] As a result, these two and others in the social science field have distilled a coherent and compelling understanding of the correlation between intergroup contact and the reduction of prejudice and tensions between different groups. The contact studies examined by Pettigrew and Tropp considered in-group attitudes toward a spectrum of out-group categories to include racial, ethnic, elderly, homosexual, and the disabled. As such, ICT stands as a general social psychological theory rather than specifically addressing racial and ethnic circumstances.[171] To transform Allport's hypothesis into an integrative theory, Pettigrew and Tropp describe the conditions and mediators at play in contact situations to explain the "when" and "how"

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[168] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 16-7.
[169] Hewstone and Swart, *Fifty-odd Years of Inter-Group Contact: From Hypothesis to Integrated Theory*: 375.
[170] Pettigrew and Tropp, *A Meta-Analytic Test of Intergroup Contact Theory*, 751-83; See also Hewstone and Swart, *Fifty-odd Years of Inter-Group Contact: From Hypothesis to Integrated Theory*, 374-86
[171] Pettigrew and Tropp, *A Meta-Analytic Test of Intergroup Contact Theory*: 768.

prejudice is reduced and also predict how the positive effects of contact will generalize to other groups and situations.

Facilitating Conditions as Moderators of Prejudice Reduction

To address the question of when intergroup contact reduces prejudice between members of different groups, Pettigrew and Tropp borrow on the earlier works of Williams and Allport. Williams was the first to articulate four conditions that increase the positive aspects of intergroup contact, and these included a shared status and interests among participants; a venue fostering personal intimate intergroup contact; participants who are dissimilar to the stereotypes of their group; and intergroup involvement in common activities.[172] Building upon Williams' initial observations, Allport subsequently reformulated these conditions to argue that positive effects of intergroup contact are optimized when there is (1) equal group status within the situation; (2) common goals between groups; (3) intergroup cooperation; and (4) institutional support for the contact experience in the form of authorities, laws, or customs.[173] Pettigrew, however, termed these facilitating conditions because, while they serve to optimize the positive outcomes of intergroup contact, they are not judged as essential for any reduction in prejudice to occur. In the context of this study, it is important to examine these facilitating conditions more closely to understand their application within a contact experience to achieve optimal outcomes.

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[172] Dovidio, Gaertner and Kawakami, *Intergroup Contact: The Past, Present, and the Future*: 7.

[173] These are not directly stated in the book but were distilled by Pettigrew in consultation with Allport, Pettigrew 1971; Specifically, Allport stated that prejudice may be reduced by equal status contact between dissimilar groups in the pursuit of common interests, and such reduction could be amplified if contact is institutionally sanctioned; See Allport, *The Nature of Prejudice*, 281.

With the first condition, Pettigrew and Tropp state that subjects are expected to receive equal status within the contact encounter. In practice this means the same opportunity is available for everyone to participate in group activities, submit views and opinions, make decisions, and access resources.[174] Where equal status is not established or maintained within a contact experience, intergroup prejudices may persist, or even be reinforced, and acculturation is jeopardized. Worse yet, in a circumstance of unequal status between members of different groups, it is possible that acculturation may be imposed, deliberately or unwittingly, to the benefit of one culture at the expense of another.[175] Second, common goals are also needed within the contact encounter to establish cooperation between members of both groups. This creates interdependency between members of different groups whereby each needs the other to be successful in reaching the common goal.[176] Johnson and Eagly support this by arguing that the effectiveness of attitudinal change resulting from exposure to information from others is greater where subjects had outcome-relevant involvement.[177] Third, the importance of intergroup cooperation as a facilitating condition is closely linked to having a common goal and means that members of both groups must actively work together toward a common end. In effect, this also goes to say that the encounter must remain free of intergroup competition, which could actually reinforce certain prejudices and serve as a medium to exercise discrimination.[178] Pettigrew and Tropp cite athletic competition as a prime example of where a team composed of members of different groups must work together to succeed in

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[174] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 61.
[175] Redfield, Linton and Herskovits, *Memorandum for the Study of Acculturation*, 151. See also Brown and Zagefka, *The Dynamics of Acculturation: An Intergroup Perspective*
[176] Thomas F. Pettigrew, "Intergroup Contact Theory," *Annual Review of Psychology* 49, no. 1 (1998), 65-85.
[177] Blair T. Johnson and Alice H. Eagly, "Effects of Involvement on Persuasion: A Meta-Analysis." *Psychological Bulletin* 106, no. 2 (1989), 292-3.
[178] Pettigrew, *Intergroup Contact Theory*, 65-85

reaching a common goal. Perhaps most importantly, when members of different groups work cooperatively toward a common goal it not only affords the development of friendships, but also fosters trust.[179]

Pettigrew and Tropp describe the fourth condition, institutional support, as the authoritative sanction or support to create a norm of social acceptance in the contact encounter.[180] Positive and effective command support for the contact experience is critical for members of different groups to understand that such contact is directly related to their mission, and this condition also involves institutional support in the form of a professional and well-trained cadre committed to the goal of integration (or the reduction of prejudice).[181]

Pettigrew and Tropp also appear to add a fifth condition to those articulated by Allport, whereby, for optimal intergroup contact, the experience must be of sufficient duration and intensity in the form of close interaction to enable self-disclosure between members of different groups and other friendship-developing mechanisms to work. This enhancing condition is termed friendship potential and stems from Pettigrew's earlier proposition that intergroup contact should be typified by "extensive and repeated contact across a range of social contexts, which over time would encourage greater degrees of shared experience, self-disclosure, and other kinds of friendship-building processes."[182] Put more simply, the contact experience must provide people with ample opportunity to become friends. Schmid validates this by stating that the amount and quality of intergroup contact are important considerations

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[179] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 63.
[180] Pettigrew, *Intergroup Contact Theory*, 65-85; See also Brown and Zagefka, *The Dynamics of Acculturation: An Intergroup Perspective*;
[181] Dan Landis, Richard O. Hope and Harry R. Day, *Training for Desegregation in the Military* (Indianapolis: Indiana University - Center for Applied Research, [1983])., 45-6.
[182] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 109.; Pettigrew, *Intergroup Contact Theory*: 76.

and that the number and quality of friendships that develop between members of different groups are a powerful reflection of such.[183]

Of all facilitating conditions, the need for duration and intensity is especially important because cross-group friendships are strongly associated with lower intergroup prejudice overall. It is particularly so for such affective prejudice measures as feelings of sympathy and admiration for members of the out-group. By contrast, less intimate contact with out-group members, such as that between coworkers or neighbors, yielded far smaller effects.[184] Reflecting on the findings of Pettigrew and Tropp, the limited opportunity for informal social contact could be particularly consequential to the self-disclosure among students from different services, which leads to the development of lasting friendships. This is because, through informal social contact, students begin to see each other as much more than neighbors or co-workers, and so the prejudice-reducing effects of intergroup contact yielded greater results.[185]

The emphasis by Pettigrew and Tropp on the development of friendships between members of different groups stems from recent contact literature suggesting that a structured contact experience employing both cognitive and affective components, the affective component is more consequential.[186] Their conclusion is that affective outcomes—emotions, feelings, and liking—are more likely to be positively influenced by intergroup contact than cognitively oriented outcomes—stereotypes and beliefs. This finding is supported by Olson and

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[183] Katharina et al Schmid, "Secondary Transfer Effects of Intergroup Contact: A Cross-National Comparison in Europe," *Social Psychology Quarterly* 75, no. 1 (2012)28-9.; See also Rupert et al Brown, "Intergroup Contact and Intergroup Attitudes: A Longitudinal Study," *European Journal of Social Psychology* 37, no. 4 (2007).
[184] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 107.
[185] Ibid., 107.
[186] Ibid., 94, 106.

Zanna, who argue that in a collective environment both affective and cognitive means of persuasion must be used in tandem, and that, of the two, the affective approach will be especially powerful regardless.[187] If the affective changes resulting from intergroup contact are strong enough, changes in behavior will occur.[188] Pettigrew and Tropp caution, however, that there is likely an upper limit beyond which greater self-disclosure will not or cannot be achieved and predict that with continued exposure the effects of contact—reduction in prejudice—would begin to level off with diminishing gains.[189]

It is important to state that the situational considerations just described are considered facilitating conditions within ICT, representing optimal conditions for achieving greater positive outcomes. Pettigrew and Tropp argue they are not necessary because the process by which contact produces a reduction in prejudice resembles the phenomenon of "familiarity breeding liking." However, they conclude that when incorporated within a structured contact experience these facilitating conditions substantively contribute to achieving greater positive outcomes.[190]

Mediators to Overcoming Prejudice

In addition to describing the conditions under which optimal reduction of prejudice occurs, Pettigrew and Tropp also present a conceptual model for how such a reduction takes place, though it is important to acknowledge that such a process in reality remains complex and only incompletely understood. Nevertheless, their research concerning the processes by which prejudice is reduced also suggests a correlation to the process by which new cultures are

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[187] Olson and Zanna, *Attitudes and Attitude Change*: 121.
[188] Landis, Hope and Day, *Training for Desegregation in the Military*, 12.
[189] Pettigrew and Tropp, *A Meta-Analytic Test of Intergroup Contact Theory*, 768.
[190] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 67.

formed. Within the context of ICT, they identify knowledge, anxiety, and empathy as three "mediators" of the effects of intergroup contact. The fundamental idea of the process behind prejudice reduction is that, through contact, the in-group member gains useful knowledge regarding out-group(s), and this in turn reduces anxiety within the contact situation. By having less anxiety the in-group member can develop empathy, which allows for the adoption of out-group perspectives. It is this circumstance that fosters the development of trusting and meaningful relationships between members of different groups.[191] Considered independently, they conclude that among the mediators, reducing anxiety and developing empathy exert the most powerful influence with each accounting for as much 30 percent of the contact situation's positive effects. While still bringing about a reduction in prejudice, enhancing knowledge of out-groups as a mediator exerts only minor influence relative to the other two.[192]

Perhaps more interestingly, Pettigrew and Tropp identify four additional and sequential processes for further research that may shed light on additional mediators. These processes include learning about the out-group culture, changing intergroup behavior, restructuring the intergroup relationship, and perceiving shifts in intergroup norms.[193] These additional processes were first described in earlier work by Pettigrew as a model for how prejudice is reduced between groups and are noteworthy because they appear analogous to Schein's four stages of how new culture emerges. For example, Pettigrew and Tropp's first two processes—learning about out-groups and changing intergroup behavior—describe an outcome that generally reflects the outcome of Schein's first two stages, group formation and group building,

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[191] Ibid., 77.; Hewstone and Swart, *Fifty-odd Years of Inter-Group Contact: From Hypothesis to Integrated Theory*: 376.
[192] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 79-81,107.
[193] Ibid., 86-90.

where the members of different groups establish a "functional familiarity" with each other allowing them to coexist and work together as an inclusive group. Members devote an increasing amount of effort toward common goals and less to personal issues they may hold against others in the group.[194] Pettigrew and Tropp's fourth process also appears comparable to the fourth stage of Schein's model in that continued success by the new group reinforces the intergroup relationship or culture, and such becomes slowly taken for granted as a valid perspective or way to relate to each other and to the external world.[195] While Pettigrew and Tropp describe the development of affective ties between members of different groups as a discrete procedural step, Schein's model depicts the establishment and deepening of emotional intimacy between group members as occurring across the first three stages, whereby the third stage member differences are valued.[196]

[194] Schein, *Organizational Culture and Leadership, 3rd Edition*, 77, 82.; Pettigrew, *Intergroup Contact Theory*: 70-1.
[195] Schein, *Organizational Culture and Leadership, 3rd Edition*, 83-4.
[196] Ibid., 70.

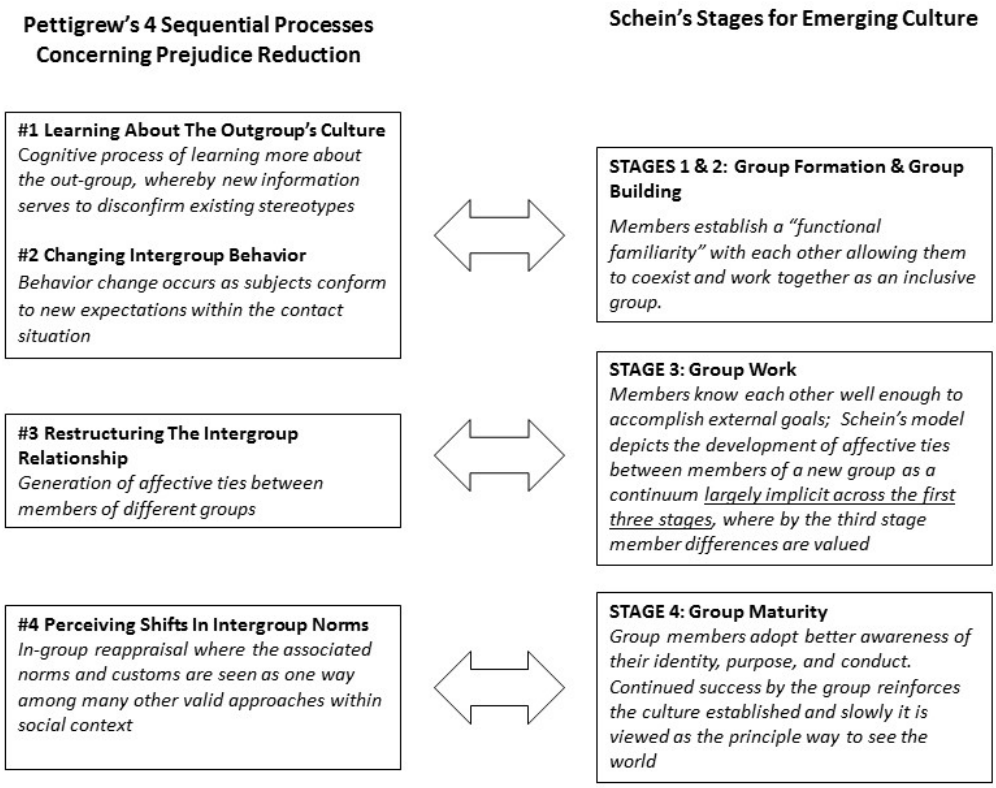

Figure 1. Comparison of Prejudice Reduction Processes and Stages for Emerging Culture

This comparison is compelling because it suggests a relationship between the reduction of prejudice and how cultures emerge or even change, and this is consequential to understanding the importance of reducing inter-service prejudice where and when optimal joint acculturation is a desired outcome. The new "joint" group, comprised of officers of different services and cultures, will not progress toward a joint "culture" in the presence of deep-seated prejudices between members of the different groups. By failing to establish affective ties between members, the joint group will remain, at best, in stage two of Schein's model—unsuccessful in achieving functional familiarity and the behavioral norms enabling the

group to consistently achieve common goals.[197] In this sense, the minimization of inter-service prejudice represents a necessary but insufficient condition for optimal joint acculturation. There is another interesting similarity that appears between prejudice reduction and joint acculturation. The emphasis Pettigrew and Tropp place on the relationship between the duration and intensity of the contact experience and reduced levels of prejudice between groups echoes a similar observation made decades earlier. Then, Redfield et al associated the intensity and duration of the contact experience with greater anxiety reduction and, subsequently, greater acculturation, adding that recognition of attendant social, economic, or political advantages afforded by acculturation contributed to the positive effects as well.[198]

In their reformulation of the contact hypothesis into an integrative theory, Pettigrew and Tropp describe how intergroup contact acts to reduce prejudice. Beginning with the five facilitating conditions of intergroup contact, the different groups proceed from a stage of initial contact, where anxieties are overcome, to one of established contact, when prejudices begin to diminish, then finally to the stage where they become a unified group where meaningful relationships form between members and prejudice is minimized.

The Differential Effects on Prejudice Reduction

Minimizing prejudice between groups requires attitudinal change, and attitudes reflect a positive or negative orientation toward an object and have affective and cognitive components. Likewise, Pettigrew and Tropp say we must consider the reduction of prejudice in those two attitudinal dimensions. Yet, historically, research has studied the effects of

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[197] Ibid., 79, 82-3.
[198] Redfield, Linton and Herskovits, *Memorandum for the Study of Acculturation*: 152.

intergroup contact within one dimension to the exclusion of the other without consideration of the complex relationship and interplay between these dimensions.[199] They conclude through their meta-analysis of contact studies that affective and cognitive components of attitude do not change in tandem and that intergroup contact seems to have the greatest positive effects within the affective attitudinal dimensions (emotions, favorability, and liking) than cognitive dimensions (beliefs, stereotypes, and judgments).[200] This suggests that while in-group members may feel more positively toward the specific out-group members participating in the contact experience, underlying stereotypes and beliefs could remain largely intact. This also suggests that affective changes may be a better indicator of how an individual may generalize their contact experience to future situations and later behavior toward out-groups. Though their research suggests that intergroup contact may produce greater positive outcomes within the affective dimension than with the cognitive, Pettigrew and Tropp are careful to acknowledge that contact may impart other more subtle but substantive cognitive changes. Further, they concede that more pronounced cognitive change could come through contact experiences involving substantial numbers of out-group members and meaningful relationships by in-group members with them.[201] Thus, intergroup contact approaches to reduce prejudice, and by extension to foster acculturation, require cognitive and affective components, and of these the affective component is much more important. A cognitive attitude focuses on how much change occurs with *what* people think of other groups, rather than how they *feel* toward other groups, which is affective attitude.

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[199] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 92-4.
[200] Ibid., 95, 98.; Allport, *The Nature of Prejudice*, 13, 268.
[201] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 102.

In his book "Thinking, Fast and Slow," Kahneman attempts to explain how biases influence human decision making by describing two systems of thinking that the mind uses in processing external information and events. While his description of these systems is notional, the interaction between these two systems—System 1 and System 2—provides a degree of support to Pettigrew and Tropp's notion of the importance of the affective realm when it comes to the reduction of prejudice. This is demonstrated in the reactive immediacy of System 1 thinking, as opposed to the deliberate and orderly process of System 2, or how the intuitive, emotional influence of the first can hijack or disrupt the rational thought process of the second.[202] Indeed, it might very well be that in the course of a contact experience, the intuitive, feeling side of a subject's System 1 thinking will experience dissonance resulting from disagreement between their immediate expectations or beliefs regarding members of other groups and what is actually observed. According to Kahneman, this "cognitive strain" on System 1 thinking invokes greater involvement by the more rational System 2 thinking in making decisions and this leads to more rational behavior. This circumstance stands in contrast to the "cognitive ease" subjects may have otherwise enjoyed outside of a contact experience where System 1 thinking alone would have sufficed.[203] It is important to understand, however, that while some similarities may be seen between System 1 and System 2 thinking as described by Kahneman and Pettigrew and Tropp's affective and cognitive domains, respectively, this study does not suggest that these concepts are analogous.

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[202] Kahneman, *Thinking, Fast and Slow*, 14-5.
[203] Ibid., 42.

Individual Differences Matter

While ICT describes the process and facilitating conditions by which prejudices toward members of other groups can be overcome, several scholars emphasize that the individual differences of participants in the contact experience influence outcomes as well, and such differences are unavoidable in even the most careful selection of participants. Indeed, stark differences in beliefs and attitudes of subjects can exist, even among individuals who have a similar cultural origin and reside within their "acculturative arena." These differences often matter.[204]

Stereotypes can limit the beneficial effects of intergroup contact, and primary among the differences in individuals is how deeply stereotypes are instilled. The effect of past experience is cumulative, and so the positive effects of intergroup contact are substantially limited with individuals who demonstrate more rigid attitudes of social dominance resulting from strongly held cultural beliefs, ideologies, or social hierarchy. The prejudices or biases of such individuals are used in a competitive fashion to reinforce a social hierarchy or to achieve dominance over a perceived out-group or a group of a lower status. Higher levels of anxiety result from more deeply ingrained prejudices, and this can lower the effectiveness of contact and its positive effects. Simply put, if a person is more anxious in the contact encounter they are less willing to participate.[205] In the context of ICT facilitating conditions, such a dominant orientation stemming from deeply instilled prejudices diminishes the perception that

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[204] Sam and Berry, *Acculturation: When Individuals and Groups of Different Cultural Backgrounds Meet*: 473.
[205] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 77-8.; Landis, Hope and Day, *Training for Desegregation in the Military*, 7.; See also Redfield, Linton and Herskovits, *Memorandum for the Study of Acculturation*.

participants in the contact experience share equal status.[206] Overcoming such deeply instilled individual differences may be difficult, regardless of the duration and intensity of the contact experience. Stereotypes more tightly held induce more cognitive dissonance when overturning them, and this results in higher levels of anxiety and mental instability. Likewise, this can occur when the difference between the expected and observed behavior of out-group members in a contact situation is substantial.[207]

While research of Pettigrew and Tropp demonstrates that intergroup contact reduces prejudice, these scholars observe that the converse also holds true: prejudice can restrict or reduce intergroup contact.[208] Individuals holding more tightly to stereotypes create another circumstance affecting the success of programs seeking to reduce prejudice through intergroup contact—highly prejudiced people will not participate voluntarily and this creates selection bias. Brown and Zagefka agree by saying that the positive effects of contact are greater among participants who hold less prejudice at the start because such individuals are likely to seek contact where others might avoid it. In this case, greater positive outcomes are gained because the participants of both groups are, from the start, more tolerant and open-minded.[209] At the same time, forcing individuals with deeply instilled prejudices to participate in an intergroup contact experience can bring about adverse or negative outcomes. Situations involving involuntary participants who feel threatened within the contact situation strongly predict negative effects as a result. Indeed, such effects often arise in the workplace environment

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[206] Allport, *The Nature of Prejudice*, 281.
[207] Ibid., 281.; Schmid, *Secondary Transfer Effects of Intergroup Contact: A Cross-National Comparison in Europe*: 33-4.; See Social Dominance Theory (Sidanius and Pratto 1999).
[208] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 85.
[209] Brown and Zagefka, *The Dynamics of Acculturation: An Intergroup Perspective*: 152.

where intergroup competition exists and in situations where intergroup conflict is present.[210] This is to say that, instead of correcting negative attitudes and beliefs, involuntary encounters could actually reinforce them.

Though possible in both voluntary and involuntary contact encounters, the participation by out-group members who largely reflect the attributes associated to them by stereotypes can also serve to more deeply instill or reinforce the prejudices held by in-group members. In effect, such individuals enable confirmation bias, where in-group members find the very characteristics, attitudes, and/or behaviors they expect in members of a particular out-group, and this serves to confirm their pre-existing beliefs and stereotypes. However, Pettigrew and Tropp temper their findings regarding the influence of selection bias in structured intergroup experiences. They do so because of the two causal paths—contact reducing prejudice and prejudice-reducing contact—the first is more strongly demonstrated than the second.[211]

Perhaps more specific to this study, ICT holds that other individual predictors are consistently associated with the scope and strength of prejudices held by individuals. These include factors relating to the individual's social context and socio-location, economic status, political abilities, personality orientation, group identification, perception of threat, and experience.[212] These predictors, which are specific to each individual, interact with the facilitating conditions of prejudice reduction to influence the outcome, positively or negatively, of intergroup contact. Regardless, when controlling for such predictors, prejudice-reducing effects of intergroup contact remain strongly demonstrated.

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[210] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 173, 178.
[211] Pettigrew and Tropp, *A Meta-Analytic Test of Intergroup Contact Theory*: 753.
[212] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 132-41.

Prejudice Reduction as a Foundation for Joint Acculturation

JPME II is the principle means for the joint acculturation of officers in the U.S. military. Yet, joint acculturation is largely volitional behavior—the tradeoff or change in cultural values and beliefs cannot easily be forced upon an officer who does not welcome a different attitude or perspective. This chapter also demonstrated that a relationship exists between joint acculturation and levels of inter-service prejudice—mainly that the minimization of inter-service prejudice within a contact experience represents a necessary but insufficient condition for optimal joint acculturation to occur. The consequence of this is that while officers will not necessarily acculturate in an environment absent of inter-service prejudice, it will be exceptionally difficult, if not impossible, for them to do so voluntarily in the presence of deep-seated prejudicial attitudes and behaviors.

JPME II cannot force joint acculturation. Rather, to enable optimal joint acculturation to occur, it must instead provide the ideal intergroup contact experience and sufficient time to disabuse officers from the harmful prejudices they harbor. This is accomplished by creating an environment characterized by greater understanding, lowered anxiety, and increased empathy between members of different groups. With sufficient duration and intensity, such an open and accepting environment will lead to the development of personal relationships, representing a particularly powerful positive outcome of intergroup contact. Prejudice reduction can also lead to greater trust. Tropp observes that the willingness of members of different groups to form deep and lasting friendships also hinges on the trust that develops between them. While a feeling of distrust is often the case between groups at the start of a contact experience, the prejudice-reducing effects of a structured contact encounter also pave the way for increased

trust between members of different groups. Such trust is characterized by a feeling of confidence and security in the intentions of others and implies an absence of threat.[213] Earlier, this chapter illustrated that trust between officers of different services is imperative to true jointness. It also demonstrated that such trust is antecedent to any volitional change or tradeoff of cultural values and beliefs resulting from intergroup contact. This makes joint acculturation a by-product not only of the reduction in inter-service prejudice but also of the increased trust established between officers of different services. The increased trust resulting from a structured JPME II contact experience enables joint acculturation to occur more broadly and deeply. JPME II is intended to serve as the intergroup contact experience by which officers of different services may gain better understanding of each other in order to diminish inter-service prejudice and to develop trust.[214]

Assessing JPME II Outcomes

Growing pressure to increase throughput, lower costs, and provide greater accessibility is leading to the delivery of JPME II in more tailored ways. Yet, doing so without considering the potential difference in their outcomes may do more harm than good to the cause of jointness. Pisel correctly observes that the "inculcation of joint attitudes and perspectives," known in other terms as joint acculturation, is what makes the JPME II programs offered by JFSC unique, and a certain measure of direct student interaction remains "indispensable"

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[213] Linda R. Tropp, "The Role of Trust in Intergroup Contact: Its Significance and Implications for Improving Relations between Groups," in *Improving Intergroup Relations: Building on the Legacy of Thomas F. Pettigrew*, ed. Ulrich Wagner and others (Malden: John Wiley & Sons, 2009)., 92-4.

[214] *. U.S. Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services, 109-10.*

toward this end.[215] At present, it remains largely unknown how well the various delivery methods for JPME II delivered by JFSC serve to reduce inter-service prejudice among students and, therefore, even less is understood regarding their impact on the joint acculturation achieved with officers from different services. This is because scant research exists regarding the efficacy of JPME II offered through JFSC in reducing inter-service prejudice to foster optimal acculturation. The singular case is the research by Poole, who investigated the impact of in-resident JPME II on the perceptions of mid-grade officers from each of the different military services, concluding that the contact experience provided by the resident method of JFSC not only incorporated the facilitating conditions of Pettigrew's earlier formulation of ICT but also resulted in statistically significant attitudinal change.[216] Though the data considered in his study largely rested on the measurement of cognitive attitudinal changes, Poole did not establish any relationship between these changes and any consequent change in the joint beliefs or perspectives (i.e. joint acculturation) which might have taken place. Ruth conducted a similar study of the change of attitude by senior officers attending the year-long Industrial College of the Armed Forces, which is an accredited JPME II institution but with a fundamentally different mission that lacks the mission task to instill joint attitudes and perspectives. While his research considered ICT and concluded that significant changes in attitude occurred, such changes were not categorically demonstrated across all services.[217] More importantly, his research specifically addressed cognitive attitudinal change and did not consider the subject of joint

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[215] Kenneth Pisel, "JPME II Available at Satellite Sites," *Joint Force Quarterly*, no. 82 (3rd Quarter 2016): 129.
[216] James Harold Poole, "Outcomes of Intergroup Contact: An Assessment of Joint Professional Military Education" (Doctoral Dissertation, University of Phoenix, 2007), 131.
[217] Alfonz D. Ruth, "A Study of Perceptions of Senior Military Officers Toward Jointness before and After Joint Professional Military Education at the Industrial College of the Armed Forces" (PhD Dissertation, Howard University, 2007), 113.

acculturation. The differences in the research approaches of Poole and Ruth also make it difficult to compare any similarities that may exist in their findings. However, these two have focused on the applicability of ICT toward understanding the outcomes of JPME II. With respect to the three delivery methods under consideration by this study—resident, satellite, and hybrid—the facilitating conditions specified by ICT provide a useful basis by which to mark significant similarities and distinctions among them. Accordingly, these will allow for the development of hypotheses regarding the impacts made on student officers attending each of the three delivery methods, which will in turn help in understanding the efficacy of the JPME II programs offered through JFSC. Chapter III discusses the three delivery methods in greater detail and, in the context of the facilitating conditions of ICT, describes the resulting hypotheses and the research approach to test them.

CHAPTER III

METHODOLOGY

"If you're not measuring things, you don't care and you don't know."
- Steve Howard

A Closer Look at the JFSC JPME II Programs

As Chapter II established, the JPME II programs offered through the JFSC are intended to be the primary means for the joint acculturation of officers belonging to different services. The previous chapter demonstrated that, given its volitional nature, optimal acculturation would be difficult, if not impossible, in the presence of inter-service prejudice within a contact experience such as the JFSC programs. Therefore, JPME II programs must minimize levels of inter-service prejudice if optimal joint acculturation is to occur. In an environment where pressures exist to create additional JPME II offerings, it is important to know how effectively the three different methods of delivery—Resident, Satellite, and Hybrid—are fulfilling the critical outcome of joint acculturation by minimizing inter-service prejudice among the students attending them. In moving forward with new and creative methods for the delivery of JPME II, it is critical to understand whether differences in outcomes exist and, if so, what these differences mean within the context of ICT. This study conducts a statistical analysis of survey data collected by the JFSC for each program to help answer the research question, Do the various JFSC JPME II course delivery methods influence self-reported perceptions of service prejudice among military officers?

The three delivery methods are first discussed in the context of the five facilitating conditions of ICT, highlighting where similarities and distinctions exist between them.

Additionally, it examines the influence of individual professional background factors that can moderate the effects of intergroup contact. These differences lead to key hypotheses regarding the outcomes expected from statistical analysis of the survey data. This chapter concludes with the detailed presentation of the method of analysis used to determine the outcome of each program and to find support for the hypotheses.

As was discussed earlier, the JFSC now employs three distinct and accredited programs for the delivery of JPME II. The first of these delivery methods is the in-resident JCWS, the second is the JCWS Non-Resident Satellite Program, and the third is the recently accredited JCWS-Hybrid. All three programs share a common OPMEP mission statement, which includes the task to "instill a joint attitude and perspective," and they have common learning areas as well.[1] As the first of these delivery methods, the JCWS program (resident method) represents the principle JPME II course of instruction, producing more than 900 graduates annually.[2] It is a 10-week resident program offered four times each year and conducted with students residing at or near JFSC for the duration of the course.[3] Resident students are primarily active component officers, who attend in person at the JFSC in Norfolk, Virginia and are organized into seminars typically numbering between 16-18 students. Service representation within each seminar is balanced, with the number of officers attending from each service divided among 13 or 14 seminars. Students are also assigned to seminars based on their rank and seniority, where those in the rank of major and junior lieutenant colonel/commander attend as part of an intermediate seminar. The more senior officers attend as part of a senior seminar.

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[1] See *Department of Defense. Chairman, Joint Chiefs of Staff Instruction 1800.01E Officer Professional Military Education Policy (OPMEP) (Washington D.C.: Joint Chiefs of Staff, 2015a)., E-H-1 to E-H-3.*

[2] *Joint Forces Staff College: Duration of Principle Course of Instruction, U.S. Code 10, (2015b): § 2156.*

[3] Typically, officers already residing in the Norfolk Area occupy approximately 10-20 percent of the seats in a given JCWS class. As such, they are in temporary duty status and are separated from their domestic demands.

Department of Defense civilians and international fellows—officers from foreign militaries—also attend the resident program, with typically one or two assigned to each seminar. Among the three delivery methods, resident seminars reflect a particularly high level of functional and experiential diversity. This is because officers in these seminars belong to various combined, joint, and service-level commands from around the world and this diversity is complemented by the perspectives of the international fellows. The resident curriculum is structured to educate students in joint matters by addressing the learning areas prescribed by the chairman through the OPMEP. It is designed using Bloom's taxonomy of learning, beginning with lesson objectives oriented on knowledge and comprehension levels in the front end of the course and moving progressively through application, synthesis, and, ultimately, evaluation levels of learning.[4] The JCWS faculty delivering the resident curriculum are comprised almost entirely of active and retired joint-qualified military officers and, of these, more than 80 percent are JQOs and almost 10 percent have terminal degrees.[5]

The second delivery method is the JCWS Non-Resident Satellite Program (satellite method), which is a single JCWS seminar conducted away from the JFSC campus, usually at the location of a combatant command headquarters. This program began as a pilot in 2013, and later became a permanent alternative to the resident program in Norfolk; it graduates approximately 72 students annually. Though conducted at various geographic locations, the satellite method follows the same basic model as JCWS in that it is 10 weeks long, offered four times per year, and executes concurrently with the resident program in Norfolk. It also has the

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[4] See David R. Krathwohl, Benjamin S. Bloom and Bertram B. Masia, *Taxonomy of Educational Objectives: The Classification of Educational Goals, Book 2 Affective Domain*, Vol. 2 (New York: Longmans, 1964).

[5] *Process for Accreditation of Joint Education (PAJE) Self-Study Report: Joint Advanced Warfighting School (JAWS) and Joint and Combined Warfighting School (JCWS). (Norfolk, VA: [March 2014]), Chapters 6, 8.*

same student prerequisites and, with some notable exceptions, the same curriculum.[6] Satellite students attend in person and are primarily active component military officers in the rank of major/lieutenant commander through colonel/captain and are usually assigned to the same joint command proximate to the location of each satellite seminar. To date, no international fellows have attended as part of a satellite seminar. Though virtually all satellite students have accumulated some measure of joint duty experience, the professional and experiential diversity within the seminar is narrower than that of typical resident seminars and student dialogue is often limited to the cultural and operational perspective of the sponsoring command. The satellite mirrors many of the same structural aspects of the resident approach, particularly in seminar size, and the content, organization, and delivery of curriculum. However, qualitative differences do exist between the satellite and the resident programs.

First and foremost, the satellite seminar is conducted away from Norfolk, and this often means satellite students have limited access to the live guest speakers, subject matter experts such as the JFSC Defense Intelligence Agency and Department of State chairs, a joint professional library, and other resources freely available to resident students. Second, the satellite program only offers two electives to its students versus the more than two dozen available in the resident program. Lastly, the satellite program does not have an intramural sports program. The faculty conducting the satellite are temporarily drawn from JCWS and return to teach in resident seminars at the conclusion of their satellite seminar. As such, they are primarily active and retired JQOs, and possess either a master's or terminal degree.

[6] Kenneth Pisel, "JPME II Available at Satellite Sites," *Joint Force Quarterly*, no. 82 (3rd Quarter 2016): 129.

The third delivery method considered by this study is the JCWS-Hybrid (hybrid method), recently accredited for the delivery of JPME II and renamed from its original title, AJPME.[7] Initiated in 2003, this program stands apart from the first two delivery methods in that it exclusively supports officers from the reserve components.[8] Also unlike the others, the hybrid method employs a combination of both online and in-resident education conducted over 40 weeks. The program executes three different classes or cohorts running concurrently, but independently, each year, producing approximately 225 graduates in 2016. The students are exclusively reserve component and National Guard officers, typically ranging in rank from major/lieutenant commander to major general/rear admiral. Like their counterparts attending the resident and satellite programs, these officers received their pre-commissioning and occupational specialty education from their respective active component service, and many have accumulated substantial active duty experience. While sharing some measure of commonality in military origin and experiences with their active component counterparts, substantive differences undoubtedly exist in the degree to which they have shared, or been subjected to, the culture-shaping mechanisms of their respective service. This is because, unlike active component officers, the military career of reserve and National Guard officers is typically secondary to the career path they follow as a private citizen. Each hybrid seminar has approximately 25 students representing the reserve component of each service as well as the

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[7] Though, with its recent accreditation, it is now authorized to accept officers from the active component beginning in 2017. The chairman recently accredited AJPME to grant JPME II credit, renaming the course JCWS-Hybrid, and has allowed attendance by active component officers. See OPMEP Change 1 dated 30 June 2016.

[8] Title 10 USC, Chapter 38, Section 666 directed a parallel effort for RC officers: “The Secretary of Defense shall establish personnel policies emphasizing education and experience in joint matters for reserve officers not on the active-duty list. Such policies shall, to the extent practicable for reserve component, be similar to the policies [for the AC]."

Army and Air National Guard. Historically, active component officers have not attended the hybrid program primarily because it was not accredited for the delivery of JPME II. With the recent accreditation of this program, officers from the active component may soon begin enrolling. International officers are not included in hybrid seminars. The curriculum employed by the program is closely based on that of the resident program, but it is not identical as a substantial portion of it is adapted for online delivery. Like the satellite program, the hybrid program differs from the resident program in some respects. First, the curriculum is adapted in some cases to facilitate delivery in a distance-learning environment, and accordingly some group-centered work has become individual effort. During the long distance-learning periods, hybrid students also have limited access to the guest speakers, subject matter experts such as the JFSC Defense Intelligence Agency and Department of State chairs, a joint professional library, and other JFSC resources freely available to resident students. Finally, students in the hybrid program neither have the opportunity to participate in electives nor to play in an intramural sports program. The hybrid program faculty also differs from those in JCWS who serve the resident and satellite programs in that they are primarily reserve component and National Guard officers. Though the level of joint-duty experience varies among the hybrid faculty, only about 30 percent were JQOs and none had terminal degrees as of the latest PAJE self-study report in 2013.[9]

[9] . *Process for Accreditation of Joint Education (PAJE) Self-Study Report: Advance Joint Professional Military Education (AJPME) (Norfolk, VA: [January 2013), Chapter 6, 3.*

	Delivery Method	Course Length	Common Curriculum	Staff Ride	Joint Faculty	Socials Events	Electives Program	Intramural Sports
RESIDENT	*In-Resident*	*10 Weeks*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
SATELLITE	*In-Resident* [1]	*10 Weeks*	*Yes*	*Yes* [1]	*Yes*	*Yes* [4]	*Yes* [5]	
HYBRID	*Online & In-resident*	*40 Weeks*	*Yes* [2]	*Yes*	*Yes* [3]	*Yes* [4]		

NOTES:
1 – Conducted at a different location
2 – Some differences may exist where adapted for online delivery
3 – Limited joint experience relative to JCWS faculty
4 – Opportunities are limited by time and/or personal matters
5 – Only two electives are offered

Table 1. Structural Similarity Between Delivery Methods

Applying the Five Facilitating Conditions of ICT

Each of these three delivery methods shares a common OPMEP mission that uniquely charges them to instill a joint attitude and perspective in their students. We may infer from this that each program should produce a comparable student outcome with respect to the level of joint acculturation they achieve. As the previous chapter explained, joint acculturation, as volitional behavior, is influenced by the degree to which inter-service prejudice is minimized within a structured contact encounter. From the standpoint of ICT, the five facilitating conditions provide a theoretical basis by which to compare and contrast the three delivery methods and to develop hypotheses relating to the impact of each delivery method on the reduction of inter-service prejudice. Applying these conditions highlights where strong similarities exist between the methods, and this seems most apparent with the second and third facilitating conditions. The second facilitating condition states that within the contact encounter common goals are needed to create interdependency between members of different groups, while the third condition specifies intergroup cooperation, which requires that

members of different groups actively cooperate toward a common end.[10] Common goals and intergroup cooperation are driven largely by curriculum, and there is a considerable degree of correlation between the curricula of the three programs. To differing degrees, the curriculum for each prescribes numerous group-centered practical exercises where each group is assigned clearly articulated outcomes they must achieve and where the service representation in each group is balanced according to the composition of the seminar. Similarity also exists between the three programs in the context of the fourth condition, institutional support, which is official sanction or support to create a norm of social or authoritative acceptance in the contact encounter.[11] This seems no more apparent in that it is the JFSC itself that executes all three, providing common leadership endorsement and institutional resources and support for each program. Perhaps more importantly in the eyes of students attending these programs, this condition is strongly supported by the accreditation of each program by the chairman to deliver JPME II, and beyond these three methods the students would have little or no opportunity to receive JPME II from other accredited institutions.[12]

Allport's facilitating conditions for the reduction of prejudice, as articulated by ICT, also provide a theoretical framework by which to establish important and perhaps consequential differences between the three delivery methods. Under these conditions, significant differences exist between the principle method of resident delivery and the alternative approaches, and this is of potential consequence to the degree to which inter-service prejudices are reduced. The first condition of equal status states that students within a contact

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[10] Thomas F. Pettigrew, "Intergroup Contact Theory," *Annual Review of Psychology* 49, no. 1 (1998): 67.
[11] Ibid., 67.; See also Rupert Brown and Hanna Zagefka, "The Dynamics of Acculturation: An Intergroup Perspective," *Advances in Experimental Social Psychology* 44 (2011), 129-84.
[12] Officers attending a Senior Level Colleges are normally selected by a competitive screening board, and successful screening normally correlates to the officer's potential for selection to Colonel/Captain.

encounter must perceive that they have equal opportunity to participate, to contribute, and to equal consideration of their opinions and perspectives. In practice, this means that the same opportunity is available for everyone to participate in group activities, submit views and opinions, make decisions, and to access resources.[13] Whenever a program fails to establish or maintain equal status within the contact experience, intergroup prejudices may persist, or even strengthen, and this jeopardizes acculturation. With the seminar environment, this means that no one person or group should be preponderant, and it is important to address disparity in rank and service representation to the fullest extent possible.

For the resident program, the joint staff governs the compositional makeup of each class through a size and composition directive. This directive provides for proportional service representation in each class and enables the creation of intermediate and senior seminars to address any disparity in rank. The hybrid program is also subject to a size and composition directive, but the availability of faculty provided by the reserve and National Guard components to the program influences, to some degree, the composition of hybrid seminars.[14] The composition of the satellite seminar, however, is determined largely by the command(s) hosting the program, which selects officers from the staff to attend. Their attendance is also subject to approval by their respective services.[15] These additional influences on the hybrid and satellite programs increases the possibility that seminars in these programs can suffer from service cultural dominance, where a preponderance of students belongs to a single service.

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[13] Thomas F. Pettigrew and Linda R. Tropp, *When Groups Meet: The Dynamics of Intergroup Contact* (New York: Psychology Press, 2011): 61.
[14] Stated by Colonel Ernest Parker, Deputy Director, JCDES, in a discussion on October 14, 2016.
[15] See Pisel, *JPME II Available at Satellite Sites*: 131.; Students are nominated by their command and approved by their service for attendance. If a satellite seminar is short of students from the air, land, or sea components, another combatant command or the services will have the opportunity to fill the slots.

The satellite and hybrid programs have neither the capacity nor the density of students to address significant differences in rank within a particular seminar. With students ranging in rank from major/lieutenant commander to colonel/captain in the satellite seminars and major/lieutenant commander to major general/rear admiral in the hybrid seminars a dominance through social status can emerge as well. This can be especially so with the satellite seminar, where the students are assigned to the same headquarters. Satellite students may be prone to maintaining formal work relationships while in the contact encounter and may even be in attendance with their rater or senior rater.[16] All this is to say that service preponderance, disparity in military rank, and the continuation of work relationships in a seminar can pose challenges to student perceptions that they hold equal status within the seminar and that their participation, contributions, and opinions carry equivalent weight and value. For these reasons, the satellite and hybrid methods appear less suited than the resident method to support a perception of equal status in the mind of every student in the contact experience.

Though comparable in many ways, significant differences also exist between the programs in the degree to which they establish and reinforce the conditions of common goals and intergroup cooperation. The curriculum and in-resident execution of the resident method appear to afford the greatest opportunity to establish and reinforce these conditions among groups of officers belonging to different services, while the satellite and hybrid methods are more limited by their structural nature. The absence of an intramural sports program in both

[16] In personal discussions on various dates, faculty members Commander Jeff Hoppe (Seminar 22) and Lieutenant Colonel Leamond Stuart (Seminar 24) stated that such was the case in their satellite seminars. On another occasion, Dr. Fred Kienle (Seminar 21) stated that students seemed to remain more formal—reluctant to resort to the use of first names and to see past rank during class activities and exercises—in the satellite environment than in the resident, presumably because of their ongoing work relationships. See Fred Kienle, Jay Sawyer and Kristi Church, *Seminar 22 After Action Report*, [2016]), Week 2, 11.

satellite and hybrid programs deprives students of an additional but important mechanism by which to establish common intergroup goals and intergroup collaboration. Pettigrew cited athletic teams as an especially effective technique for satisfying these conditions.[17] Further, the lack of electives and the reduced opportunity for intergroup collaboration in the hybrid program further limit the degree to which interdependency can be created and reinforced between officers of different services. Such interdependency is key for students to achieve better understanding of officers from different services and to establish trust. It also appears possible that the particular student composition of a seminar may influence the effectiveness of a method to establish common intergroup goals and intergroup collaboration. Though having common inter-group goals and collaboration, some satellite students cited the lack of diversity within their seminar as a hindrance to their success in achieving the goals set for them during the course.[18]

Despite each program's common support by the JFSC and JPME II accreditation, differences may also exist in the perceptions of students regarding the degree of institutional support for each program.[19] Specifically, observable and perceived differences between the satellite and resident student experience in terms of classroom resources, student diversity, curriculum, and information technology support could create an impression in the minds of satellite students that their program is not of the same quality as the resident program in Norfolk.[20] According to the post-course surveys, all four satellite seminars conducted in 2016

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[17] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 64.
[18] Kienle, Sawyer and Church, *Seminar 22 After Action Report*, Week 10: 10.
[19] This observation was made by Dr. Fred Kienle in a personal discussion on September 9, 2016 and he related this to differences in material support and proximity/accessibility of college and university leadership relative to the resident program.
[20] See After Action Reviews by Satellite Seminars, particularly Seminar 22 which provide much more fidelity;

reported the lowest confidence of all JCWS seminars with respect to support services. It is important to acknowledge, however, that the satellite program is inherently expeditionary—taking a scale version of the resident program "on the road"—and the program does not typically remain in the same location after graduating a seminar. Additionally, the limited functional, experiential, and international diversity was not lost on students attending the satellite program with many preferring greater diversity in the seminar.[21] This is not to say, however, that satellite students might rather have attended the resident program instead as post-course survey comments reflected a strong desire among this group for the convenience of receiving JPME II while remaining close to family. It is unclear whether a similar perception exists within the hybrid program, though the program remains the principle means for officers in the reserve components to receive JPME II.

Lastly, considerable differences exist between the programs under Pettigrew and Tropp's enhancing condition of friendship potential. This condition says the contact experience must be of sufficient duration and intensity, in the form of close interaction across a variety of social contexts, to enable self-disclosure between members of different groups and other friendship-developing mechanisms to work. This is because prejudices and tensions are reduced between members of different groups as greater understanding is achieved and deeper relationships are established, and so ample time must be afforded for lasting friendships to form. ICT fails to provide even a broad sense of what measures might be suitable for duration, intensity, and range of social contexts associated with the condition of friendship potential. Accordingly, this study considers total curriculum hours, the total hours of

[21] Derived from JCWS End of Course (EOC) Surveys; See also Dr. Fred Kienle, *Seminar 22 After Action Report*, Week 10: 10.

intergroup collaboration, and the relative amount of time available for informal volitional social contact respectively to distinguish the three methods.

The Resident Method

Through scheduled lesson and practical exercises, students attending the resident program experience more than 262 total curriculum hours in which they are in formal contact with the students from other services. This amounts to approximately 5.6 hours of collaborative effort and intergroup contact each day of the course.[22] Within this, the resident method provides approximately 202 hours of intergroup collaboration in the form of guided discussions, case studies, and practical exercises. Student intergroup contact within the resident program is supplemented substantially by informal student activities occurring outside of the classroom, which include intramural sports, various offsite activities, and numerous voluntary social activities organized by the student social coordinator in each seminar as well as by other students. Resident students attend primarily in a temporary duty status which geographically separates them from family and the workplace for the duration of the course, and this affords much greater opportunity for informal social contact. This is to say that the resident student experience extends well beyond the classroom and scheduled duty day, and, in turn, provides the highest relative level of time available for informal volitional social contact among the three delivery methods.

[22] . *JCWS Program Curriculum Overview Brief: Process for the Accreditation of Joint Education. (Presentation to the Joint Staff J-7 PAJE team at Joint Forces Staff College, Norfolk, VA, March 3, 2014:* Slide 19 adjusted for loss of 4 hours due to conversion from eight-week to six-week electives.

The Satellite Method

Because the satellite program curriculum is nearly identical to that of the resident program and delivers it in much the same way, the duration and intensity for the two are effectively the same, reflecting approximately the same amount of curriculum hours and hours of student intergroup collaboration. However, the satellite method is less optimal with respect to the opportunities for informal volitional social contact that occur between students outside of the classroom. According to Pisel, the primary reason for conducting the satellite seminar is to improve accessibility of JPME II by eliminating the need for students to travel to Norfolk.[23] By remaining at their home station, satellite students are not isolated from the competing demands of family and workplace responsibilities as are the students attending the resident program. Though serving the interests of personal convenience, this likely works against the friendship potential of the satellite program to reduce inter-service prejudice.[24] Not surprisingly, satellite students have sometimes found it difficult to balance concerns for meeting expectations of the program, academic and otherwise, due to family commitments.[25] The result is that student participation in informal volitional social activities after class is substantially less in satellite seminars, as compared to resident seminars, because personal and family responsibilities hinder such contact with students from other services.[26]

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[23] Pisel, *JPME II Available at Satellite Sites*: 131.

[24] Convenience was not a specific interest or priority of the Skelton committee's recommendations for Joint Education, as was demonstrated by the commission's decision to opt for a three-month course where students would be in temporary duty status instead of a longer 5.5 month course where families would accompany students. See *U.S. Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services, [1989]), 109-10.*

[25] Kienle, Sawyer and Church, *Seminar 22 After Action Report*, Week 10: 11-12.

[26] *. U.S. Department of Defense. Secretary of Defense Report to Congress: Assessment of the Pilot Program for JPME Phase II on an Other-than-in-Residence Basis (Washington, D.C.: [2014]), 17, 24.*; See also Kienle, Sawyer and Church, *Seminar 22 After Action Report*, Week 2: 11-13; Week 4: 9-11; Week 5: 13.

The Hybrid Method

From a duration standpoint, students attending the hybrid program receive approximately 250 total curriculum hours through a combination of web-based collaborative distance learning and during two "face-to-face" sessions conducted at the JFSC in travel status.[27] While this is comparable to the duration of the resident and satellite programs, it is less intensive with respect to the total hours of intergroup collaboration. According to the AJPME 2013 PAJE Self-Study Report, the latest formal source available, the course provided approximately 101 total hours of intergroup collaboration in the form of guided discussions, practical exercises, and case studies.[28] Though this report and figure predate the modification of AJPME curriculum in 2015 to more closely reflect that of JCWS, these two programs were already highly correlated. Accordingly, this study assumes the amount of intergroup collaboration did not increase substantially from any subsequent adjustments. We can attribute the lower intensity in part to the adaptation of the resident curriculum for online delivery, where some group-centered exercises and requirements have become individual efforts.[29] Also, while most of the intergroup collaborative activities in the program occur during the two face-to-face sessions, totaling approximately 139 hours, the limited duration of these

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[27] See *JFSC Academic Board Read Ahead: Realignment of Advanced Joint Professional Military Education (AJPME) Curriculum for Calendar Year 2015 Implementation (Norfolk, VA: [March 24, 2015]).*

[28] *Process for Accreditation of Joint Education (PAJE) Self-Study Report: Advance Joint Professional Military Education (AJPME), Appendix E.*

[29] *Colonel Tricia York, Director, Joint Continuing and Distance Education School, Joint Forces Staff College. Interview by Author. Digital Recording. Norfolk, June 1, 2016.*

sessions requires that many of these activities be more abbreviated than in the resident and satellite programs.[30]

This means that, although the amount of intergroup collaborative activity in hybrid remains substantial, the program on the whole employs fewer and shorter opportunities for intergroup collaboration to achieve common prescribed goals. It is also less intensive with respect to student engagement and activity when total hours and total possible workdays are considered.[31] Hybrid students "attend" for a much longer period, but devote much less time each week to meeting the requirements of the program relative to the other two. By one estimate, the average level of daily effort is less than a third that of the resident and satellite programs. This assessment of duration and intensity, however, does not consider qualitative differences between online and in-resident contact between students, which may be substantive and consequential.[32] Also unanswered is the question as to whether prejudice reduction, and in turn acculturation, can meaningfully occur in a totally non-resident format because such situations may be affectively insufficient to evoke the changes in behavior that are often the precedents to a change in attitude.[33] While acknowledging recent advances in

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[30] This conclusion stems from an analysis of the JCWS-Hybrid Roadmap and lesson instructional plans; For face-to face session hours see: http://jfsc.ndu.edu/Academics/Joint-Continuing-and-Distance-Education-School/AJPME-Overview.

[31] This was arrived at by dividing the total curriculum and research hours by the number of possible workdays for each program; JCWS/NSRP is 6.7 hours (236 hours/50 workdays) and Hybrid is 2.0 (406 hours/200 workdays)

[32] Recent studies of JPME II have been directly and indirectly cautious about the use of distance-learning approaches because of the perceived qualitative differences between distance and in-resident approaches to the professional education of military officers. Correspondingly, this study also notes that the more than forty years of intergroup contact studies informing Pettigrew and Tropp's ICT were conducted overwhelmingly in a resident format.

[33] While acknowledging the possibilities of non-resident delivery of JPME II, the 2003 BAH report concluded "affective learning is best done in resident; DL presents other challenges," and more recently the 2010 HASC Study reasserted "the value of in-residence officer PME." Further, the BAH report stated that "distance learning should not be the option of choice in an advanced, professional program designed not just to convey knowledge but to develop professional values, build bonds of trust, and stimulate critical and creative thought."

distance learning technology and approaches, the examination of qualitative differences between online and in-resident delivery methods in the reduction of inter-service prejudice remains beyond the scope of this study.

Like the satellite, opportunities for informal volitional social contact between students after class hours is also limited in the hybrid program—specifically to the three weeks of in-resident attendance while in travel status and conducted across two separate sessions. The fact that students attending the hybrid program are largely in a travel status does mean they are isolated from the distractions of family and workplace responsibilities. However, the longer duty days for students during the face-to-face sessions serve to limit the friendship potential enabled by informal volitional social contact outside of class hours.[34] Assuming that little such contact occurs between students while they are away, the hybrid program would seem to afford much less opportunity, relative to the resident program, for students to reach a point where self-disclosure can occur between officers of different services and where meaningful friendships can form.

[34] Ibid.

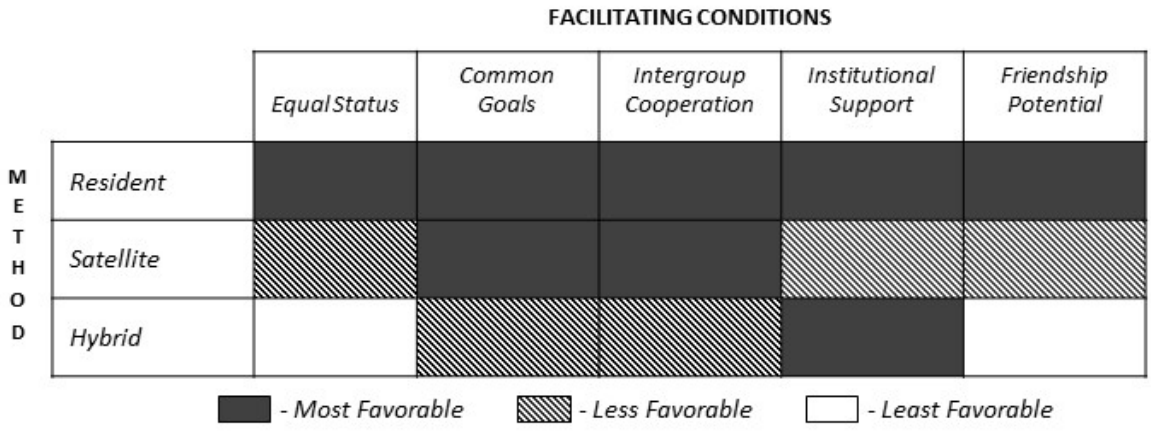

Table 2. Relative Comparison of Delivery Methods by Facilitating Conditions

Table 2 summarizes the preceding discussion of each delivery method and the degree to which each approach favors the five facilitating conditions of ICT relative to each other.

Professional Differences in the Student Populations

As the previous chapter discussed, the individual predictors of prejudice, or professional background factors, of participants in the contact experience can influence outcomes as well, and differences between subjects are unavoidable in even the most careful selection of participants. Indeed, stark differences can exist in the beliefs and attitudes of individuals, even between those having similar cultural origins, and reside within their "acculturative arena," and these differences matter.[35] Indeed, the compositional differences between the student populations of each program allow for distinctions between them on the basis of Pettigrew and Tropp's individual predictors of prejudice. Generally, this means that each group could be distinct in the degree to which they realize the positive effects of intergroup contact. We can

[35] D. L. Sam and J. W. Berry, "Acculturation: When Individuals and Groups of Different Cultural Backgrounds Meet," *Perspectives on Psychological Science* 5, no. 4 (2010): 473.

primarily characterize the resident student population as career, active component officers assigned to various commands—combined, joint, and service—and may or may not possess any joint duty experience. Likewise, the composition of the satellite student population is principally career, active component officers, but differs from the resident population in that the students in each seminar usually belong to the same joint command and nearly all have some measure of joint-duty experience. In contrast to the resident and satellite populations, the hybrid student population is comprised entirely of officers from the reserve components, and these usually possess much less active duty experience than active component officers and may or may not have any joint-duty experience. All this is to say that noteworthy differences exist in the professional backgrounds of the students attending the three programs, and these differences may be consequential to the degree to which each program reduces their inter-service prejudices and achieves positive attitudinal change. Understanding the influence of professional background factors is significant when the aim is to achieve optimal joint acculturation.

To account for these compositional differences, this study considers the influence of the several independent variables (IV) relating to ICT predictors of individual prejudices. Specifically, it examines the effect of the professional background factors of total active service, total joint experience, military rank, level of education, age, and service component on student attitudinal change as a result of attending one of the three delivery methods.[36] As predictors of

[36] Leung (1988) and Harry (1992) also associated similar factors as having a strong influence on acculturation; See Esther K. Leung, "Cultural and Acculturational Commonalities and Diversities among Asian Americans: Identification and Programming Considerations," in *Schools and the Culturally Diverse Exceptional Student: Promising Practices and Future Directions*, eds. Alba A. Ortiz and Bruce A. Ramirez (Reston: The Council for Exceptional Children, 1988), 88-9.; Also Beth Harry, "Developing Cultural Self-Awareness: The First Step in Values Clarification for Early Interventionists," *Topics in Early Childhood Special Education* 12, no. 3 (1992), 14.

individual prejudice, this study uses these factors to highlight the most prominent professional differences between the populations attending each of the delivery methods and between the resident/satellite and hybrid populations, in particular. Given that officers attending the resident and satellite programs are primarily active component, career military officers at the mid-to-late point in their professional timeline, these populations are expected to reflect a normal distribution along each of the professional background factors except for total joint experience. However, this is not expected with officers attending the hybrid program where, by nature of their status in the reserve component and National Guard, a tremendous diversity may exist across many of the factors and the distribution could be anything but typical. Generally, students attending the hybrid program are expected to possess, on average, less overall total active service time and total joint experience than students in the resident and satellite programs, while also being higher in age and in level of education, on average.

Hypotheses Toward the Reduction of Inter-service Prejudice

As stated earlier, this study seeks to answer the following research question: Do the various JFSC JPME II course delivery methods influence self-reported perceptions of service prejudice among military officers? From a treatment standpoint, the differences between the three delivery methods with respect to facilitating conditions and the condition of friendship potential leads to a corresponding hypothesis that helps us understand the effect of these programs on inter-service prejudice. Within the context of ICT, the resident method would seem to provide the greatest potential for reduction. This is because it more closely addresses equal status in the seminar room; along with the satellite program, it provides the greatest

amount of intergroup activity to establish common goals and intergroup collaboration; and it offers the greatest friendship potential of the three methods. Therefore, this study adopts the following hypothesis:

H1: *The Resident method will achieve the lowest level of self-reported inter-service prejudice among the JPME II course delivery methods.*

From a subject standpoint, the professional background factors considered by this study provide a different azimuth to follow in seeking an answer to the research question. The cultures of each service are powerful and they inculcate officer prejudices and perceptions progressively deeper from the first day of indoctrination. As officers accumulate greater amounts of active duty experience in their respective service, to include the more intensive experiences while deployed and while attending formal professional military education, these biases can become stronger and deeper. This is because the course of transmission for ethnocentrism is through teaching and learning.[37] Conversely, accumulated experience while serving with officers of other services in a joint environment serves as the direct social contact that works instead to acculturate officers to the joint values and beliefs. Hybrid students, as reserve and National Guard officers, will in most cases possess substantially less service-accumulated experience than their active component counterparts and, as such, should appear less beholden to service biases and prejudice. By the same token, they will also possess less accumulated joint experience and, in turn, demonstrate lower levels of inter-service prejudice at the start of their JPME II experience. Perhaps most importantly, all students attending the hybrid programs are volunteers, unlike many students in the resident program who attend

[37] Gordon Willard Allport, *The Nature of Prejudice* (New York: Addison-Wesley, 1979), 576, 291-2.

involuntarily. Aside from any motivation by these officers to improve their prospects for promotion, this circumstance may also reflect the self-selection condition described by Pettigrew and Tropp where people with lower levels of prejudice are more likely to engage in contact encounters with members of out-groups.[38] Despite receiving treatment through the hybrid program, which is hypothetically less optimal, this study adopts the hypothesis that predicts that hybrid students will display the greatest degree of change in inter-service prejudice than their active component counterparts as a result of having fewer and weaker pre-existing biases based on professional background factors. Resultantly, this study also adopts the following hypothesis:

H2: *Hybrid students will demonstrate the greatest degree of change in self-reported inter-service prejudice relative to resident/satellite students.*

Method of Analysis: Confidentiality, IRB Approval, and Informed Consent

This study uses de-identified archival survey data routinely collected by the JFSC Institutional Research and Assessment Division (IRAAD) and provided for analysis. Student responses are identifiable only by an IRAAD-assigned student number and by no means exist for the researcher to establish the identity of any human subject. In addition, there was no contact at any time between the researcher and the human subjects providing the data requested by IRAAD and used for this study. These conditions obviate the need for approval by an Institutional Research Board. Also, because this study used archival data previously collected by the JFSC during the execution of each program, informed consent was not applicable.

[38] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 320, 15.

Participants

As stated previously, the participants considered in this study are American military officers in the rank of major/lieutenant commander through major general. The total study sample consists of those officers—active, reserve, and National Guard—attending one of the three JPME II delivery methods offered by JFSC during calendar year 2016. As indicated previously in this chapter, compositional differences exist between the students receiving JPME II through each of the delivery methods. Because of these differences, each student group is considered a separate population by this study. The resident group represents a sample from the larger population of active component officers, the satellite group from the population of active officers assigned to the combatant commands, and the hybrid group from the population of officers belonging to the reserve components. Though the differences between these populations is largely, but not exclusively, due to professional background factors, officers belonging to the same service share a common service cultural foundation regardless of whether they are active or reserve component. From the standpoint of inter-service prejudice reduction this allows for a comparison of the analytical findings for the different populations.

Sampling Frame

This study considered all students attending each of the three delivery methods during the 2016 academic year. In selecting the sample from each group, students had to meet three criteria. First is that they had completed both pre- and post-survey responses, as these allow for a longitudinal analysis of attitudinal change for students in each of the three delivery methods. Second, they must identify as a U.S. military officer so as to exclude responses from

civilian students or international officers in the data set. Although civilian students and international officers also attend these programs, this study excludes their survey responses in order to limit the scope of consideration to a joint military context, and inter-service prejudice in particular, rather than the broader context of civilian interagency or combined operations. Third, they must have provided a response to all questions concerning the professional background factor in order to allow for a complete dataset for regression analysis. The sample sizes for the resident and hybrid programs—645 and 153 officers respectively—are large enough to provide a confidence level of 95 percent that each sample reflects their larger population. Only with the satellite program does the sample size fall short, offering less than 90 percent confidence, with sample size of approximately 57.

Measures

Presently, there is little research devoted specifically to studying the change in attitudes of military officers towards others from different branches of the military as a result of JPME II. Both Poole and Ruth argue that attendance of resident JPME II does indeed result in a statistically significant and favorable attitudinal change in military officers.[39] Though each studied attitudinal change within different resident JPME II programs, their research approaches were similar in that they measured the attitudinal change of officers through administration of pre-course and post-course surveys as this study does.

[39] See James Harold Poole, "Outcomes of Intergroup Contact: An Assessment of Joint Professional Military Education" (Doctoral Dissertation, University of Phoenix, 2007), and Alfonz D. Ruth, "A Study of Perceptions of Senior Military Officers Toward Jointness before and after Joint Professional Military Education at the Industrial College of the Armed Forces" (PhD Dissertation, Howard University, 2007)..

The data used in this study was collected by IRAAD using the JFSC Joint Acculturation Survey instrument, which offers a way of establishing self-reported changes in subject attitude as a result of attendance of one of the three JPME II delivery methods. The JFSC Acculturation Survey employs a semantic-differential scale to measure self-reported change in officer attitudes, where positive attitudinal changes are understood as the correction of underlying inter-service prejudices—specifically stereotypes and beliefs—as a result of increased understanding of officers belonging to other services and their associated service culture. The use of standardized questionnaires where subjects self-report changes in attitudes and beliefs on a bipolar evaluative scale is particularly widespread and accounts for more than 70 percent of the data collected across 515 studies analyzed by Pettigrew and Tropp in 2006.[40] Though widely employed for pragmatic reasons, they are not without criticism, particularly for their limitation on the ability of the subject to express a personal construction of the changes in perceptions and attitudes resulting from contact.[41] Methodological factors such as question wording and order can also influence such surveys.[42] Yet, according to research by Crites et al., semantic differential scales possess "good and stable psychometric properties" with respect to assessment of subject attitudes, possessing the highest values for internal consistency in both cognitive and affective dimensions among the four different scales considered.[43]

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[40] Thomas F. Pettigrew and Linda R. Tropp, "A Meta-Analytic Test of Intergroup Contact Theory," *Journal of Personality and Social Psychology* 90, no. 5 (2006): 755.; See also Oliver Christ and Ulrich Wagner, "10 Methodological Issues in the Study of Intergroup Contact," in *Advances in Intergroup Contact*, eds. Gordon Hodson and Miles Hewstone (New York: *Psychology Press*, 2013): 233; James M. Olson and Mark P. Zanna, "Attitudes and Attitude Change," *Annual Review of Psychology* 44, no. 1 (1993): 123.

[41] Christ and Wagner, *10 Methodological Issues in the Study of Intergroup Contact*: 236.; John Dixon, Kevin Durrheim and Colin Tredoux, "Beyond the Optimal Contact Strategy: A Reality Check for the Contact Hypothesis." *American Psychologist* 60, no. 7 (2005): 701-2.

[42] Olson and Zanna, *Attitudes and Attitude Change*: 124.

[43] Stephen L. Crites, Leandre R. Fabrigar and Richard E. Petty, "Measuring the Affective and Cognitive Properties of Attitudes: Conceptual and Methodological Issues," *Personality and Social Psychology Bulletin* 20, no. 6 (1994), 619-

Measuring the Dimensions of Prejudice

In the context of prejudice, ICT describes both cognitive and affective dimensions of attitude. Stereotypes, beliefs, and judgments reflect the cognitive dimension of prejudice while emotions, favorability, and liking reflect the affective dimension.[44] The JFSC Joint Acculturation Survey, however, primarily measures the cognitive dimensions of prejudice (stereotypes and beliefs) and employs semantic-differential scales to capture student responses. Correspondingly, this limits the analysis of data by this study strictly to the cognitive attitudinal dimension. For all questions, students provide their responses regarding each service using a seven-point bipolar scale, which determines the degree to which officers associate particular attributes or beliefs with the members and cultures of the other services. To assess attitudinal changes in the cognitive dimension, this study coded questions one through nine as measures of stereotypes because they assess the degree to which officers associate specific attributes to others. Each of these questions was evaluative in nature and asked students to report their attitude toward officers from other services according to nine characteristics and values such as motivation, competence, respect, and loyalty.[45] Likewise, the study coded questions 10 and 11 as measures of beliefs in that they asked officers to report the degree to which they endorse certain beliefs about the disposition of each branch of service toward jointness and to joint operations. Because the student responses ranged from “Not at all” to “Very Much,” these two questions related to the potency of student beliefs. In general, these first 11 survey questions

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34.; For original description and validity of semantic differential scales see Osgood, Suci, & Tannenbaum, the Measurement of Meaning, (1957).

[44] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 96.

[45] For a discussion of the Evaluative, Potency and Activity (EPA) dimensions of the semantic differential scale see David R. Heise, "Chapter 14: The Semantic Differential and Attitude Research," in *Attitude Measurement*, ed. Gene F. Summers (Chicago: Rand McNally, 1970).

attempt to assess changes in officer stereotypes and beliefs as aspects of the cognitive dimension of prejudice.[46] Though the survey also employed two additional questions to assess changes in favorability and emotion—aspects of the affective dimension—the use of a single question each for the measurement of the favorability and emotion dimensions would adversely impact the construct validity of this study.[47] Accordingly, the scope of analysis is necessarily limited to the cognitive dimension of prejudice.

Additionally, the survey tool collected student professional background data, which included total active service time, total joint experience, military rank, age, and service component. The National Defense University Student Management System was the source for data indicating the level of education for each student. The study used this data for analysis of professional background factors as predictors of prejudice and to assess their influence on subsequent changes in inter-service prejudice as a result of a particular treatment method. All student responses were subsequently grouped by survey and by delivery method. Appendix A includes a copy of the JFSC Joint Acculturation Survey.

Research Design

Because it was not possible to randomly assign officers from the different populations across the three treatment methods, this study employed an ex-post-facto quasi-experimental research design. Given the archival nature of the data, manipulation or influence over independent variables was not possible. The model is a three-group pre-test/post-test design consisting of three treatment groups. These groups are represented by the subjects in each of

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[46] Pettigrew and Tropp, *When Groups Meet: The Dynamics of Intergroup Contact*, 320, 96.
[47] Heise, *Chapter 14: The Semantic Differential and Attitude Research*, 239.

the three JPME II delivery methods: resident (X_1), satellite (X_2), and hybrid (X_3). This study used de-identified archival data provided by JFSC consisting of pre-course survey data (O_1) to gauge the level of inter-service prejudice present prior to treatment and a post-course survey (O_2) to measure their level of inter-service prejudice after treatment. A graphical depiction of the research design is illustrated in Figure 2.

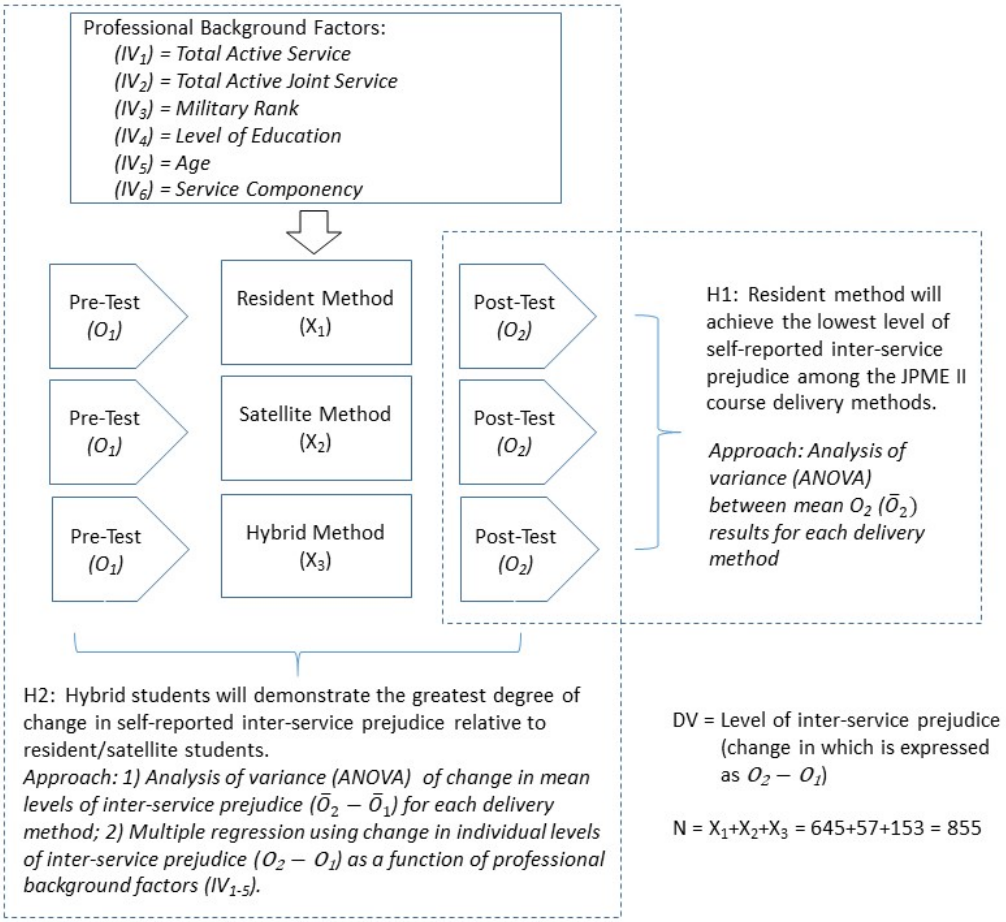

Figure 2. Research Design

The longitudinal approach, rather than cross-sectional, used by this study affords some freedom from the causal sequence problem whereby attitudinal changes must be correlated to

intergroup contact. The analysis considered data taken only at two points—pre- and post-course, and this introduces some difficulties in fully interpreting the longitudinal mediation of effects.[48] An observational approach to this study was infeasible given the simultaneous execution of delivery mechanisms and the necessary, but insufficient, condition of proximity. Neither was it appropriate to employ an experimental approach given the initial nature of the study of the different delivery methods. The study scope and consideration of three different delivery methods also limits the statistical methods appropriate for the analysis of data. A cross-lagged approach was not feasible because the data only draws from attitudinal change and not the non-experimental data, such as the quality and quantity of contact time across the three delivery methods, which would be required. Estimating the change in subject attitudes over time and with further contact is outside the scope of this study, but there is promise in the use of latent growth curve models to estimate the duration and intensity of contact required to achieve specific levels of attitudinal change.[49]

Dependent and Independent Variables

The dependent variable in this study is level of inter-service prejudice (DV) and changes are measured by the difference between pre- and post-course survey results (O_2-O_1). These results reflect the cognitive outcomes resulting from the particular treatment a student undergoes and as influenced by the professional background the student possesses at the start of treatment. As such, collection of data relies on student self-reporting of perceived changes

[48] See James P. Selig and Kristopher J. Preacher, "Mediation Models for Longitudinal Data in Developmental Research," *Research in Human Development* 6, no. 2-3 (2009); Also Hermann Swart et al, "Affective Mediators of "Intergroup Contact: A Three-Wave Longitudinal Study in South Africa." *Journal of Personality and Social Psychology* 101, no. 6 (2011): 1224.
[49] Christ and Wagner, *10 Methodological Issues in the Study of Intergroup Contact*: 247.

resulting from their respective treatment. Delivery method reflects the level of treatment of the subjects in this study, which are resident method (X_1), satellite method (X_2), and hybrid method (X_3).

This study also considers the influence of several independent variables associated with the professional background of each subject on inter-service prejudice. These factors are expected to positively or negatively influence the reduction of inter-service prejudice across all delivery methods and to highlight differences that may exist between the change and final level of inter-service prejudice achieved between the resident/satellite and hybrid populations.[4]

Total Active Service (IV_1)—This variable reflects the subject's accumulated military service while in Title 10 active-duty status, as measured in years.

Total Active Joint Experience (IV_2)—This variable reflects the accumulated time spent serving in joint operational-level headquarters while in Title 10 active-duty status as measured in months.

Rank (IV_3)—This variable considers the social status of a subject in a military context and is measured by the officer grades O3 through O8. Because rank is progressive, awarded at predictable intervals according to accumulated service and performance, it can also serve as an approximate surrogate for the subject age.

Level of Education (IV_4)—This variable considers the highest level of civilian education attained by a subject as measured by academic degree.

Age (IV_5)—This variable considers the age of the subject undergoing treatment and is measured in years.

Service Component (IV_6)—This variable indicates the particular service component to which the subject belongs.

There are additional independent variables that consider the experiential background of subjects with greater fidelity and may offer deeper insight to the reduction of inter-service prejudice in hybrid students. These include the amount of time accumulated attending formal, in-resident PME courses and also the amount of time accumulated while deployed for major military operations. Though the previous independent variables consider the duration of service component and joint experience that serve to instill or offset officer prejudices, these variables consider the effect of service component-related experience that is particularly intensive. However, these variables are not specifically considered within the context of this study due to the difficulty in distilling consistent and meaningful data from student self-reported data. Rather, they remain broadly implicit within the broader independent variable of total active service (IV_1).

Threats to Internal Validity

Selection bias represents an important risk to the internal validity of this study primarily due to the inability to use random assignment of subjects among the three delivery methods. The groups are different from the beginning with particular compositional variances between the group receiving the hybrid treatment and the other two groups receiving resident or satellite treatment. While the latter delivery methods treat primarily active component officers, the hybrid method treats reserve component and National Guard officers exclusively, and these officers possess substantively different professional backgrounds than the active component officers in the other two groups. This study does not have the latitude to randomly assign officers across the three delivery methods, though the administration of a pre-course survey helps to control for, but not totally eliminate, this bias.

To some extent, history also represents a risk to internal validity in that significant events involving the U.S. military that occur during the study window could alter the conditions of the study and influence student attitudes in a manner that makes it difficult to attribute changes due to the course delivery method or to professional background.

Maturation presents another risk. The subjects of this study are people, and time and the effects of time on the subjects of this study present some risk to the validity of the findings. This is because people can experience attitudinal changes driven by circumstances and conditions unrelated and independent of the treatment during the course of the study, and these changes can affect the findings of the study. Such circumstances could include unexpected change in follow-on duty assignment, selection for promotion or separation, or a serious domestic situation, and these can influence the particular physical and/or psychological

condition of subjects participating in the study. The longer duration of the hybrid program—40 weeks—make this approach particularly susceptible.

Testing can also threaten internal validity because the research design includes both pre-course and post-course surveys of nearly identical content and structure. Therefore, it is possible students may develop an understanding and familiarity of the purpose and format of the study. In doing so, they may apply a strategy to deliberately improve or diminish their outcome and alter the findings. The risk posed by this effect is difficult to judge, but it is mitigated somewhat by the 10-week and 40-week periods separating the administration of the pre- and post-course tests in the resident/satellite and hybrid methods, respectively.

Interaction effects between the independent variables used by this study could limit the generalizability of the main effect of each variable, meaning the interpretation of the main effect of each could be misleading or incomplete. While the interactive effects between the independent variables in this study remain unknown, they are assumed to be minimal.

The effect the treatment methods could have on groups different than their respective populations in this study is also unknown. This is to say that there could be substantive differences in outcomes if active component officers were to attend the hybrid program instead of the resident, or if reserve component officers were to attend the resident program rather than the hybrid. Of the three methods, students will experience only one treatment method and random assignment is not possible. A small number of reserve component officers often attend the resident program and this may offer some basis to assess differential effects of resident and hybrid treatment on that population, but this is outside the scope of this study. As well, the hybrid program may be open to active component officers in the future, creating the

opportunity to consider its differential effects with that population. These analyses, however, remain outside the scope of this study.

Threats to External Validity

In this study, the subjects in each treatment group represent specific subsets of the broader population of military officers in the active and reserve components as well as the National Guard. This means any results derived exclusively from one, or even two, groups cannot be generalized across the broader population of military officers without some risk to the validity of the claim. The reduction of prejudice is an inherently complex process that is not only difficult to define, but difficult to measure. This study provides an operational definition of inter-service prejudice as a basis for the research, and though this definition is broad based in its consideration of opinions in the field, it remains subject to challenge and debate. Also, measuring attitudinal changes rests on self-reporting of changes in response to survey questions, and the survey tool used in this study to measure these changes is not presently validated to assure that it indeed measures what it is said to measure. Concern over construct validity means that generalizations stemming from this study may be based on imperfect calibration and measurement represented in the operational definition and survey instrument, and this may limit the acceptability of results and subsequent findings.[50]

[50] See Krathwohl, Bloom and Masia, *Taxonomy of Educational Objectives: The Classification of Educational Goals, Book 2 Affective Domain*, 17, 61.; Krathwohl cautions that measurement of affective outcomes much beyond 2.1 - *Acquiescence in responding*—may be particularly difficult to measure within an environment where an authoritative expectation of performance and attitude exist.

Statistical Approach

The research question and corresponding statements of hypothesis guiding this research are:

Research Question: Do the various JFSC JPME II course delivery methods influence self-reported perceptions of service prejudice among military officers?

H1: Resident method will achieve the lowest level of self-reported inter-service prejudice among the JPME II course delivery methods.

H2: Hybrid students will demonstrate the greatest degree of change in self-reported inter-service prejudice relative to resident/satellite students.

By considering the pre- and post-course means for each group, the analysis of the data looks to identify statistically significant differences in the final levels and overall change in the inter-service prejudices achieved by each of the treatment methods. To test H1, the analysis considers the final levels of inter-service prejudice across the three delivery methods to determine if a difference exists between them. Specifically, the study will employ analysis of variance (ANOVA) of the mean post-treatment level of inter-service prejudice level ($\overline{O}_2$) for each group to identify if statistically significant differences exist between the three delivery methods. The analysis will consider the level of inter-service prejudice in the cognitive dimension. This is accorded by the classification of the survey questions as measuring stereotypes (Q1-Q9) and beliefs (Q10-Q11). For stereotypes and beliefs, this study employs a meta-variable that reflects the average of the post-course survey responses associated with each aspect to produce a single representative $\overline{O}_2$ measure for each. The outcome of this

analysis is to find support for the hypothesis that the resident method does or does not achieve the highest reduction in the levels of inter-service prejudice in the cognitive dimension.

In testing H2, this study considers the change in inter-service prejudice, as measured by the change from $\overline{O}_1$ to $\overline{O}_2$, for each delivery method, and will also examine the influence of subject professional background factors on the change in individual levels of inter-service prejudice. First it will employ an analysis of variance (ANOVA) of the mean change in the level of inter-service prejudice level ($\overline{O}_2 - \overline{O}_1$) for each group to identify if statistically significant differences exist between the three delivery methods. As with H1, this analysis also considers the level of inter-service prejudice exclusively in the cognitive dimension using a meta-variable reflecting the average of the pre- and post-course survey responses to produce a single representative $\overline{O}_1$ and $\overline{O}_2$ measures respectively for both stereotypes and beliefs. The outcome of this analysis is to establish whether the hybrid students do or do not demonstrate the greatest reduction in inter-service prejudice in the cognitive dimension. Such analysis of the mean change in inter-service prejudice ($\overline{O}_2 - \overline{O}_1$) for each method could prove insufficient, as it would only determine if a statistically significant difference exists between the change in means of each method. In consideration of the possibility for Type I & II errors, the level of significance (α) for rejecting the null hypotheses associated with the alternative hypotheses adopted by this study is set at 5 percent (α = 0.05).

In order to provide additional explanatory power regarding the ANOVA findings for H1 and H2, this study will also employ multiple regression to predict or estimate change in individual levels of inter-service prejudice ($O_2 – O_1$) according to the independent variables of total active service, total joint experience, military rank, level of education, age, and service

component. The outcome of this regression analysis is to identify the degree to which factors of professional background correlate to the reduction in individual levels of inter-service prejudice. In turn, this may lead to findings regarding the suitability of students with certain professional background characteristics in attending a particular delivery method.

Through the ANOVA of post-course outcomes and the differences in pre- and post-course results, as well as the multiple regression analysis of the influence of professional background factors on individual outcomes, this study aims to test the hypotheses and help answer the primary research question regarding the impact of each JPME II delivery method in the reduction of inter-service prejudice. The next chapter presents the results of this analysis.

CHAPTER IV

RESULTS

"The greatest value of a picture is when it forces us to notice what we never expected to see."
- John Tukey

To this point, much has been said regarding the history and importance of joint education, joint acculturation, inter-service prejudice, and how JPME II must reduce the antipathies of military officers toward those from other services so optimal joint acculturation can occur. As previous stated, the purpose of this study is to answer the primary research question: Do the various JFSC JPME II course delivery methods influence self-reported perceptions of service prejudice among military officers?

The answer to this question is important because of increasing pressures to offer JPME II in more tailored ways, which may undermine the explicit intent of the original GNA legislation concerning joint education requiring JPME II to instill a joint attitude and perspective in military officers. Achievement of this end necessitates that JPME II delivery alternatives first reduce the inter-service prejudices harbored by officers as a result of their personal experience and indoctrination by their respective service organizational culture. The minimization of inter-service prejudice enables optimal joint acculturation to occur in the seminar environment. To arrive at an answer, this study examines the three existing JPME II delivery methods offered by the JFSC, and the analysis of the data will test two hypotheses in particular:

H1: The Resident method will achieve the lowest level of self-reported inter-service prejudice among the JPME II course delivery methods.

H2: Hybrid students will demonstrate the greatest degree of change in self-reported inter-service prejudice relative to resident/satellite students.

The first hypothesis stems from the shorter, but more intensive, nature of the resident method relative to the hybrid approach, and the greater degree of informal, volitional social contact it affords overall. The second hypothesis states that the reserve component officers attending the hybrid program will demonstrate greater pre-to-post attitudinal change because they are believed to possess fewer, and less deeply-instilled, prejudices from the start. As reserve component officers, this difference is attributed to the lower degree of indoctrination into, and subsequent reinforcement by, their respective service culture relative to their active-component counterparts.

Development of the Data Set

Student pre- and post-course responses to the JFSC Joint Acculturation Survey, as collected by the JFSC IRAAD, provide the primary data set used for analysis. This data includes student responses from the four resident classes, four satellite seminars, and three hybrid classes executed in calendar year 2016. For each student, the data set provides their responses to 11 questions in the JFSC Joint Acculturation Survey, which attempts to gauge inter-service prejudice in the cognitive attitudinal dimension. The first nine of these questions employed a seven-point semantic differential scale using a different bipolar word pair for each, and students used each scale to indicate their attitude towards officers from each of the services. The use of bipolar word pairs aids in assessing the degree to which the subject attributes

specific stereotypes to officers of other services. An example drawn from the survey instrument is depicted in figure 3.

Along each continuum please rate your perceptions of the respective Services, as you believe their Service members demonstrate the following values.

1.

	Discouraging - 1	2	3	4	5	6	7 - Motivating
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

Figure 3. Example of Questions Oriented on Stereotypes Attributed to Members of Other Services

The final two questions also employ a similar semantic-differential scale to establish subject beliefs toward the disposition of each service organizational culture to joint operations, and an example of these questions is presented in figure 4.

Please rate your perception of the joint attributes listed below.

10. **The extent to which you believe each Service/organization values joint operations.**

	Not at all - 1	2	3	4	5	6	7 – Very much
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

Figure 4. Example of Questions Oriented on Beliefs Toward Other Service Cultures

For each of these questions, a leftmost response is considered negative and a rightmost positive. Accordingly, subject prejudice toward others is seen as increasingly lower as the subject response moves from the left to right on the seven-point scale—a higher response indicates less underlying inter-service prejudice in the context of the question posed.

The JFSC Joint Acculturation survey instrument used for data collection is predicated on a similar instrument used earlier by the college and validated in 1999. While the college has modified the instrument over time, it has largely preserved the semantic differential scales used to measure attitudinal change. IRAAD collects the data from students using Verint software hosted on a joint staff server during the first day of class for resident and satellite students and during the first week for hybrid students. Each student receives an email containing a unique link to the server where their survey response is matched with their unique student identifier provided by the University Student Management System (USMS). The server sends automated reminders until students complete their survey. IRAAD collects post-course survey data in this same way during the final week of each class, and student responses are matched to their pre-course responses using their unique student identifier. IRAAD further verifies proper pairing of pre- and post-course data by confirming the student's Gmail address. The survey also collects demographic data corresponding to the student professional background factors of active service, joint experience, age, education level, rank, and service component.[1] Before delivering the data set for use in this study, IRAAD stripped all personally identifiable data where only the unique student identifier matches pre- and post-course

[1] The initial data set included 2,191 different observations, pre- and post-course, from a total of 1,214 different students. Analysis excluded the observations collected from international officers and civilians as well as U.S. civilians attending any of the three treatment methods; additionally, there were a limited number of reserve component officers who attended the resident method, and these observations were screened to create an exclusively active component population relative to treatment method.

observations. Access to this secondary data came through formal request to and consent from the JFSC Dean of Academics.

Subsequent preparation of the data set included removal of any unmatched observations in order for each subject in the final dataset to have both pre- and post-course observations. Also excluded were the observations from both international and civilian students so the data set would comprise observations collected exclusively from U.S. military officers, active and reserve component, to maintain a strictly U.S. military service culture context and to more closely reflect the populations associated with each delivery method.[2] In this combined data set ("long" format) there were two observations for each subject. A second data set ("wide" format) was created where the pre- and post-course responses for each student were merged within a single row or record. After the preparation described above, both datasets included complete pre- and post-course survey responses from 645 resident, 57 satellite, and 153 hybrid students.

For both pre- and post-course observations, student responses to each question occupied the entire range afforded by the seven-point scale used by the instrument. Largely, subject responses fell between the range of "3" and "6" and indicated positive change in post-course responses over pre-course. A small number of subjects provided peculiar responses to the survey questions. Some responded with "7" for most or all questions in their pre-course survey suggesting, among other things, that they may harbor comparatively little inter-service prejudice. While such could plausibly be the case, this left little or no room for the survey

[2] The dataset included a small number of outlier observations (n = 10) detected by Tukey's interquartile range (IQR) approach, which identified outliers ranging above and below the 1.5*IQR. This method is not dependent on the distribution or the mean and standard deviation of the data, which are influenced by the extreme values. This study opted to retain them in the analysis because it was determined that their removal would have only a very modest effect on the overall results.

instrument to measure change as a result of treatment. Also, a small number indicated a precipitous drop in their post-course survey responses over their pre-course responses suggesting these individuals might have had a particularly negative contact experience that confirmed or even intensified their negative stereotypes and beliefs towards the others. Many post-course observations indicated a censoring or "ceiling" effect at the positive end of the survey instrument—"right censoring"—which suggests the true data point for these responses may lie beyond the scale of the survey instrument. The unknown answer is by how much would the subject have exceeded the scale. This was true for both pre-course (n = 22) and post-course (n = 67) results, with the hybrid group demonstrating the highest proportion of cases relative to sample size (11%). It remains impossible to determine the true values, if different in reality, so the analysis retained these observations to derive as much value as possible from them.

As a preliminary, the data set was analyzed to assess the reliability and internal consistency of the survey instrument in measuring a single latent construct. As stated previously, the semantic differential scale used by the survey instrument to collect student responses is a widely employed psychometric tool in attitudinal research. Analysis of student responses to the 11 survey questions measuring cognitive attitudinal change resulting from change in levels of inter-service prejudice resulted in a very high and acceptable Crohnbach's alpha ($\alpha = 0.97$).

Creation of a Composite Cognitive Index Variable

As a final step, this study created a composite variable to simplify the interpretation and assessment of the 11 different independent variables, represented by the 11 survey questions measuring the level of inter-service prejudice in the cognitive attitudinal dimension. Principal component analysis confirmed that subject responses to these survey questions loaded on a single significant component, and this supported the aggregation of subject responses to all questions into a single composite measure.[3] Rather than simply using the mean of a subject response to the survey questions, this study computed a composite factor score. The principal component analysis also indicated the degree to which each question "loaded" on the common component, and these values were used to weight subject responses ahead of establishing the mean. Rather than using common values for these weights for all treatments, the observations were weighted by the values specific to their treatment group to preserve intrinsic differences between the samples.[4] These treatment method-specific weights derived from the average of the service-specific loadings for each method to create a mean loading for each variable. This is to say the weight applied to resident student responses to question 1 equated to the mean of the loadings by Army, Navy, Air Force, and Marine Corps officers. This technique was necessary because subject responses in the data set are service-specific, and this led to service-specific loadings in the factor analysis. This approach also avoided disproportionate influence on

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[3] Though the effects of an unbalanced dataset characterized by having a very different sample size for each delivery method will be discussed later, the circumstance of having a small sample size for the satellite method (n = 54) limits the statistical power of the analyses performed later in this chapter. A posteriori power analysis using a sample size of 57 and significance level (α) of .05 indicates that analysis will, in some cases, be limited to detection of medium (P = .81) and large (P > .99) effects. Effectively, this means the risk of a Type II error is increased, where the conclusion is reached that there is no effect when in fact there was a false negative.

[4] Christine DiStefano, Min Zhu and Diana Mindrila, "Understanding and using Factor Scores: Considerations for the Applied Researcher," *Practical Assessment, Research & Evaluation* 14, no. 20 (2009): 3.

loadings by the difference in sample sizes and by any differences in service composition. Table 3 presents the calculated factor weights by method used to produce the composite factor scores.

	SURVEY QUESTIONS										
METHOD	1	2	3	4	5	6	7	8	9	10	11
Resident	*0.79*	*0.76*	*0.65*	*0.77*	*0.73*	*0.72*	*0.76*	*0.75*	*0.78*	*0.67*	*0.64*
Satellite	*0.81*	*0.73*	*0.60*	*0.70*	*0.65*	*0.76*	*0.71*	*0.72*	*0.73*	*0.45*	*0.60*
Hybrid	*0.78*	*0.74*	*0.62*	*0.71*	*0.71*	*0.65*	*0.76*	*0.74*	*0.75*	*0.66*	*0.57*

Table 3. Treatment Method-Specific Weights Used to Produce Factor Scores

After applying the method-specific weights to the subject responses for each question, an intermediate composite variable was created by taking the mean of subject responses for each service. It was necessary to create this intermediate composite variable because, again, subject responses to each question are service-specific, where students provide four responses to each survey question—one for each of the four services. Therefore, each observation yielded four intermediate composite variables—one for each service. The final composite variable used for analysis resulted from taking the mean of three of the intermediate variables— those corresponding to the three services other than the service corresponding to the subject. For instance, the final composite variable for an Army officer would be the mean of the intermediate variables corresponding to the Navy, Air Force, and Marine Corps. Using the mean score is typical practice for creating composite variables when using psychometric scales. Additionally, this non-refined approach to the generation of factor scores is thought to

be more stable across samples than refined methods.[5] The final composite variable computed for subject pre- and post-course observations is termed in this study as the cognitive index score because it reflects subject attitude in the cognitive dimension attributable to their inter-service stereotypes and beliefs.

Initial Analysis of the Data

To start, the analysis of the data included the descriptive statistics indicated in table 4, and this shows students in each group demonstrating positive change in their attitudinal disposition toward others from pre- to post-treatment. This change is indicative of a correction to, or reduction of, underlying inter-service stereotypes and beliefs held by subjects in each group.

	Resident			Satellite			Hybrid		
	Pre	*Post*	*Change*	*Pre*	*Post*	*Change*	*Pre*	*Post*	*Change*
Mean	3.97	4.26	0.29	3.48	3.81	0.33	3.91	4.35	0.44
Std Error	0.02	0.2	0.02	0.06	0.07	0.06	0.04	0.04	0.04
Std Deviation	0.57	0.62	0.58	0.43	0.53	0.46	0.51	0.5	0.51
Median	3.97	4.33	0.27	3.47	3.74	0.42	3.88	4.44	0.38
	n = 645			*n = 57*			*n = 153*		

Table 4. Descriptive Statistics of Samples for Each Method

[5] James W. Grice and Richard J. Harris, "A Comparison of Regression and Loading Weights for the Computation of Factor Scores," *Multivariate Behavioral Research* 33, no. 2 (1998), 221-247.

Figure 5 displays box plots created from subject responses for each method, pre- and post-treatment, and these provided an illustration of the differences between the group means and the variance of responses for each group.

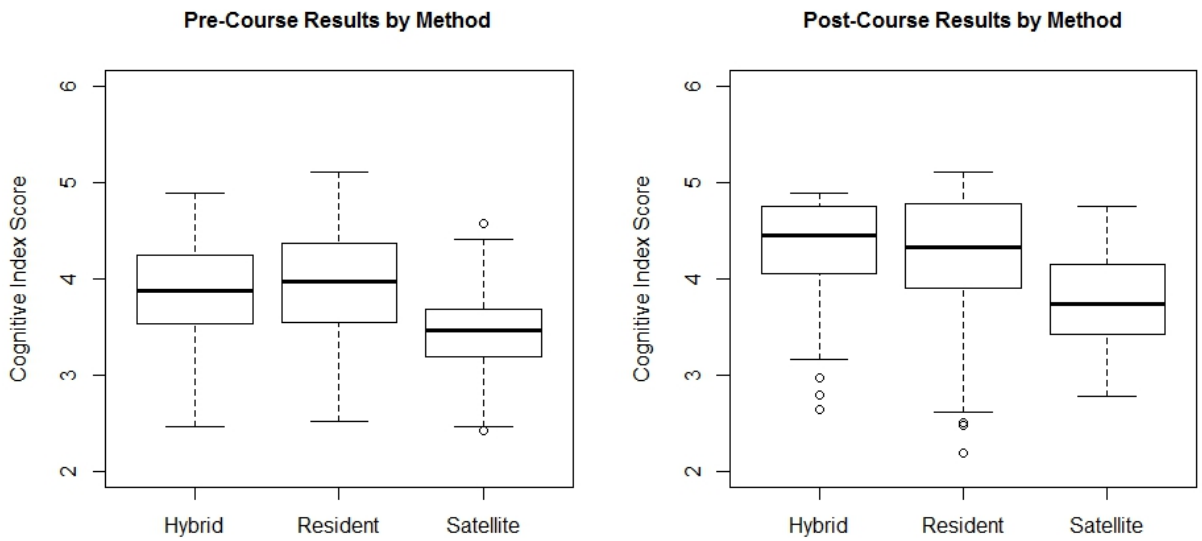

Figure 5. Student Responses Pre- and Post-Treatment for Each Method

In these plots, the “whiskers” above and below each box represent the complete range of subject responses, the box indicates the range where 50 percent of the subject responses fall, with the portions above and below representing the top and bottom quartiles respectively. The heavy line bisecting each box indicates the group mean, and the small circles beyond the whiskers indicate outlier observations.

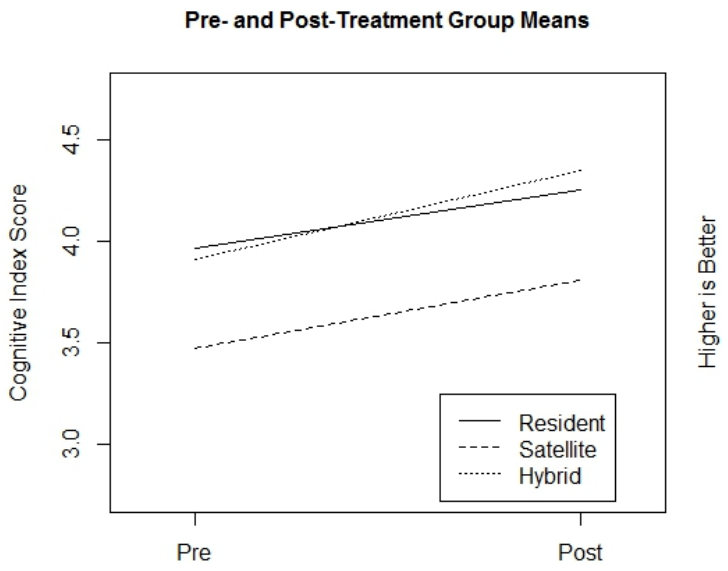

Figure 6. Group Means Pre- and Post-Treatment for Each Method

Figure 6 provides another illustration of the change in group means as a result of treatment. These plots indicate that although each treatment group begins and ends in a generally different place, the changes pre- to post-course do not appear to be extremely different. Of the three groups, subjects undergoing the hybrid method appear, on the surface, to achieve the largest positive pre- to post-treatment change ($\Delta = 0.44$) in disposition toward members of other services, followed by the satellite ($\Delta = 0.33$) and then the resident ($\Delta = 0.29$). Additionally, this initial look also suggests that subjects in the satellite method both start and finish at much lower levels than subjects in either the resident or hybrid group, and this is indicative of higher overall levels of inter-service prejudice at the beginning and at the end of treatment. Looking further into this difference, a graph of the pre- and post-course means for each of the four satellite seminars indicated little difference between them with each seminar beginning and ending at roughly the same places. One-way type III sum of squares analysis of

variance (ANOVA) indicated no statistically significant difference ($p >= 0.65$) between the four separate satellite seminars in terms of their pre- and post-course means. This is to say that none of the four satellite seminars included in the analysis appeared as an outlier to which the lower overall group means might be attributed. However, the power of this analysis with the small sample size for each seminar ($n <= 15$) is limited to detection of large effects only and at a lower threshold of statistical significance ($P = 0.83$ at $p = 0.20$). Although these results could possibly be due to the small sample size of the satellite method ($n = 57$) relative to the other two, consistency between the pre- and post-course group means of the individual satellite seminars suggests against sample size being responsible for the difference in satellite seminar performance relative to the other methods. From the standpoint of professional background factors considered by this study, the satellite subjects possessed slightly more joint experience (20.9 months) and slightly less active service (16.9 years) as a group than resident students, but only with active service was the difference statistically significant ($p < .01$).

In turn, these offer little explanation for the difference in the satellite group pre- and post-course means relative to the other two treatment groups. What seems clear, given the comparable change in group mean pre- to post-treatment, is that the efficacy of treatment is likely not the issue. Rather, the difference seems to lie in the satellite subjects. As another check, a sample of observations were drawn from the resident group that reflected similar amounts of active service and joint experience as satellite students, and the pre- and post-treatment means calculated for comparison. The means of this sample closely tracked those of the resident group and offered no further clarity regarding the differences between the satellite group means and those of the other two groups. This leads to the possibility that the observed

difference in the satellite group means from those of the other two treatment groups may be due to environmental factors. Based on available data and discussion with the teaching team members of the satellite seminars, a key difference setting the satellite subjects apart from those in both resident and hybrid programs is that they are all presently serving in a joint assignment prior to receiving JPME II and they are all at their joint command while receiving treatment. This contrasts with the resident and hybrid subjects where at least 20 percent and 40 percent of the subjects, respectively, have yet to accrue joint experience, and where they all attend in a culturally neutral location—whether in Norfolk or at home, as is the case with hybrid students.[6]

Analysis of Differences Between Delivery Methods

At this point, analysis of the data set turns to address more squarely and definitively the hypotheses proposed in the previous chapter—the results of which will help in answering the research question at the center of this study. While appearing on the surface to provide some clarity regarding the answers sought, the descriptive statistics only deliver a general characterization of the data and little substance from which to draw more important conclusions. For example, the pre- and post-treatment means of the resident and hybrid groups appear similar, but are they in fact statistically the same? And are the subjects in the satellite method truly starting and ending in a statistically different place than subjects in the resident and hybrid groups? For these questions, the analysis uses an inferential statistical to

[6] Several informal discussions with the satellite program director and the faculty members executing the satellite seminars considered by this study failed to reveal any clear reason for the difference in pre-course starting means beyond the fact the all of the subjects had already reported to their joint assignment and, in some cases, accrued substantial experience in their job prior to attending the satellite program.

determine if statistically significant differences exist between the group means of the different methods. Here, one-way type III sum of squares ANOVA is the technique of choice.[7] The selection of this method of ANOVA is intended to provide further guard against any potential influence of the unequal sample sizes on the analysis of the data, as the method does not assume equal sample sizes and factorial ANOVA is unnecessary. ANOVA has two associated assumptions of the data on which it is performed—first, that homogeneity of variance exists between the observations in each group, and, second, that the data is normally distributed. Regarding the first assumption, Christ and Wagner state that longitudinal studies should include an analysis of whether measurement invariance exists as it is a prerequisite for making comparisons of subject responses to the same question over time.[8] It is also acknowledged that extreme differences in sample size can make ANOVA more sensitive to violations of homogeneity of variance assumption, and so differences in the variance of each treatment group should be as small as possible.

Levene's test, a technique to test for equal variance, determined that, indeed, a statistically significant difference in treatment group variances for both pre- and post-course results exists ($p < 0.01$ and $p = 0.03$, respectively). However, with both pre- and post-course results, the largest group variance is not more than twice the size of the smallest group

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[7] With ANOVA, the different sample sizes between methods represent a slight concern in that the extreme differences (n = 641/54/150) will reduce the statistical power of the technique and increase the likelihood for Type II errors. The alternative of creating equal sample sizes (n = 54/54/54) from the larger resident and hybrid samples for analysis was rejected because of the difficulty of establishing one that reflected the same composition, variance, and group mean of their larger respective samples. The alternative was also rejected because the small sample from the satellite method by itself limited the statistical power of analysis to the detection of only medium and large effects. However, to guard against any possibility of errors, this study employed a non-parametric technique, Welch's ANOVA, to confirm the results produced by the ANOVA techniques employed.

[8] Oliver Christ and Ulrich Wagner, "10 Methodological Issues in the Study of Intergroup Contact," in *Advances in Intergroup Contact*, eds. Gordon Hodson and Miles Hewstone (New York: Psychology Press, 2013), 243.

variance. According to Dean and Voss, if the ratio of largest group variance to smallest group variance is less than three then the assumption of homogeneity of variance is likely satisfied.[9] However, this study acknowledges that because the largest variance is associated with the largest sample (resident) the statistical power of the analysis is reduced—ANOVA will tend to be more conservative in identifying a significant difference between group means. For the second assumption—the normal distribution of data—visual examination of the histograms charting the distribution of subject pre- and post-treatment responses for each method revealed some negative skewing in post-course data. This is attributed to the censoring/ceiling effect of the survey instrument. However, because ANOVA is considered moderately robust to violations to normality, the data were not transformed for analysis.

Returning to the data, the analysis employed one-way ANOVA to test the first hypothesis, which is:

> H1: The Resident method will achieve the lowest level of self-reported inter-service prejudice among the JPME II course delivery methods.

As a first step, ANOVA was performed on the pre-course results for the subjects in each treatment method. This is important because knowing if the groups are starting treatment from different points is helpful in understanding where they finish treatment, particularly if each group ends in a different place. In this case, there was a significant difference between the treatment groups and their pre-course means at the $p < .05$ level for the three conditions [$F(2, 852) = 21.16$, $p = 0$]. To add a measure of confidence, the analysis also employed Welch's one-way ANOVA, a non-parametric technique, to corroborate these results given that a small

[9] Angela Dean and Daniel Voss, *Design and Analysis of Experiments* (New York: Springer, 1999), 112.

difference in group variances is known to exist. This technique also clearly indicated that a significant difference exists somewhere between the group means (p = 0). To identify where the difference exists between groups, a Tukey HSD post-hoc test produced the graphic representation of the comparison of the pre-course group means shown in figure 7.

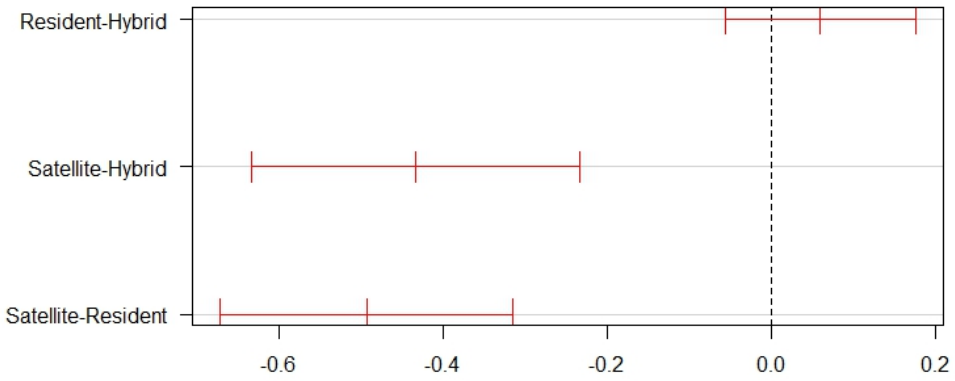

Figure 7. Differences in Pre-Course Group Means

In this graph, any "whisker" crossing the vertical dotted line at "0.0" indicates that a statistically significant difference does not exist between the pre-course means of the two corresponding treatment groups. Here, there is no difference (p = 0.46) between the starting group means for the resident and hybrid methods (M = 3.97, SD = 0.57, and M = 3.91, SD = 0.51, respectively). However, the subjects attending the satellite do indeed begin the course at a much lower and statistically significant point than the other two groups (M = 3.48, SD = 0.43, p = 0), indicating that they harbored a more negative attitude toward members of other services. This is reflective of greater levels of inter-service prejudice.

Next, and more specifically related to the first hypothesis, the analysis compared the post-course group means for each method to establish which treatment achieved the highest

reduction of inter-service prejudice. As with pre-course results, a one-way between-group ANOVA was conducted to compare the post-course results for the subjects in each treatment method. Again, there was a significant difference between post-course means of the treatment groups at the p<.05 level for the three conditions [F(2, 852) = 17.64, p = 0]. Welch's ANOVA also corroborated this result (p=0). To illustrate where the differences exist between the groups, the graph of Tukey post-hoc test results of post-course group means is shown below.

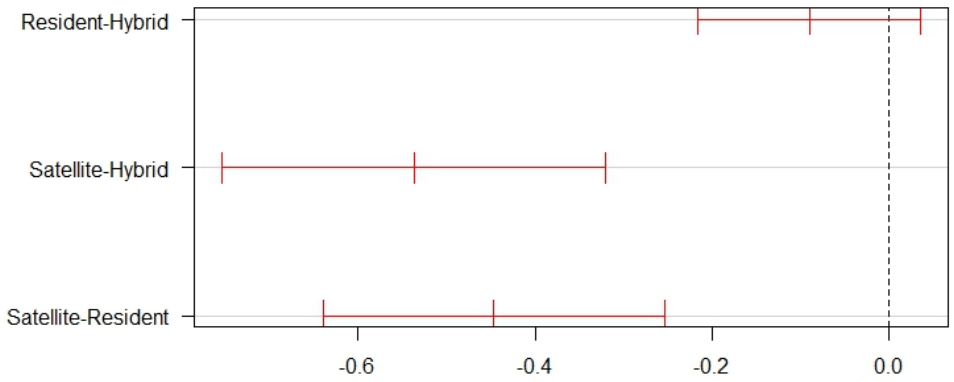

Figure 8. Differences in Post-Course Group Means

Figure 8 indicates that, as with the pre-course means, a statistically significant difference *(p = 0.21)* does not exist between resident and hybrid post-course means, (*M = 4.26, SD = 0.62* and *M = 4.35, SD = 0.5,* respectively). Also, the difference in the post-course group mean of the satellite method (M = 3.81, SD = 0.53) from the other two remains substantial and statistically significant (p = 0). Without a statistically significant difference existing between the resident and hybrid post-course group means, resident method cannot claim to achieve the lowest level of inter-service prejudice as indicated by the post-course group mean of subject cognitive index scores.

Analysis now turns to addressing the second hypothesis posed by this study, which is:

H2: Hybrid students will demonstrate the greatest degree of change in self-reported inter-service prejudice relative to resident/satellite students.

The same statistical approach applied to the first hypothesis is applied to test whether any difference exists between groups regarding attitudinal change as indicated by the difference in post-course and pre-course group means. This study expects treatment to account for much of any observed attitudinal change. However, the compositional differences distinguishing hybrid subjects from the others are postulated to incline hybrid subjects to more readily dispose of any inter-service prejudice they harbor.

Levene's test on the pre- to post-course difference (delta) scores confirmed that statistically significant differences in group variances do not exist ($p = 0.25$) and we can assume the variance between the three groups is the same. To test the second hypothesis, one-way ANOVA was applied to the dataset and indicated that a significant difference exists between the delta means of the treatment groups at the $p < .05$ level, [$F(2, 852) = 4.36$, $p = 0.013$]. Tukey post-hoc test results of group delta means show a statistically significant difference ($p < 0.009$) between the delta group means of the resident and hybrid treatments ($M = 0.29$, $SD = 0.58$ and $M = 0.44$, $SD = 0.51$, respectively), and this indicates that the hybrid subjects do demonstrate a greater degree of change than those in the resident group. Conversely, there is not a significant difference between the delta mean of the satellite treatment group ($M = .33$, $SD = 0.46$) and those of the resident and hybrid groups ($p = 0.83$ and $p = 0.47$ respectively). These results mean that while a difference seems clear between the changes achieved by the hybrid and resident groups, neither demonstrates a difference when compared to the satellite

group. The hybrid group cannot claim that its reserve component subjects achieve the greatest pre- to post-course change.

Analysis of the Influence of Professional Background Factors on Inter-service Prejudice

Chapter III discussed the potential influence of professional background factors on the attitudinal change experienced by subjects as a result of their treatment. Differences exist between the treatment groups in terms of active and joint duty experience, age, and level of education, and this is particularly so between the hybrid group and the other two. In addition, the hybrid group includes a wider range of military rank. Because of this, it is important to examine the relationship and influence these factors may have on the attitudinal change experienced by subjects as a result of treatment. Accordingly, this study employed multiple regression analysis on the dataset, but this required additional cleaning of data in advance. A review of the data revealed invalid responses for some of the survey questions intended to collect professional background data. These errors included highly improbable results for age and active duty experience (n = 13) and the associated observations were removed from the dataset. Many subjects also failed to report their level of education (n = 47) and these observations were also excluded. The remaining dataset included observations from 594 resident, 54 satellite, and 147 hybrid subjects (n = 795).

This study employed two different regression models to analyze the data. The first model used the professional background factors as a means to predict the post-treatment score of subjects while controlling for the pre-treatment score as well as class, seminar, and treatment method. This model attempted to assess the relationship and influence of the

factors on the attitudinal change experienced by subjects as a result of receiving one of the treatments—resident, satellite, and hybrid. The equation for this model is expressed as:

Cog.Post ~ ActExp + JtExp + Age + Education + Rank + Service + Cog.Pre

In this equation, Cog.Post represents the post-treatment cognitive index score, ActExp is total active service in years, JtExp is total joint experience in months, education is the highest college degree earned, and Cog.Pre is the pre-course cognitive index score. The table below summarizes the regression results for the independent variables of professional background factors and also the control variable of treatment method.[10]

	ENTIRE DATASET		**RESIDENT**		**SATELLITE**		**HYBRID**	
	Estimate	*Std Err*	*Estimate*	*Std Err*	*Estimate*	*Std Err*	*Estimate*	*Std Err*
Intercept	*1.510 ****	*0.256*	*1.163 ****	*0.351*	*0.956*	*1.245*	*2.393 ****	*0.464*
Active Service	*0.001*	*0.005*	*-0.005*	*0.009*	*0.005*	*0.036*	*0.001*	*0.005*
Joint Experience	*-0.001*	*0.001*	*-0.001*	*0.011*	*-0.006*	*0.004*	*0.002*	*0.002*
Age	*0.013 **	*0.006*	*0.018 .*	*0.009*	*0.033*	*0.031*	*0.013*	*0.010*
Education	*0.032*	*0.055*	*0.083*	*0.077*	*0.040*	*0.193*	*-0.074*	*0.085*
Rank	*-0.000*	*0.033*	*-0.015*	*0.048*	*-0.236*	*0.147*	*-0.049*	*0.058*
USN	*0.033*	*0.050*	*0.038*	*0.060*	*0.140*	*0.181*	*-0.060*	*0.105*
USAF	*0.039*	*0.044*	*-0.014*	*0.052*	*0.169*	*0.169*	*0.135*	*0.094*
USMC	*-0.051*	*0.084*	*0.046*	*0.060*	*-0.247*	*0.324*	*-0.280 .*	*0.148*
Cog.Pre	*0.543 ****	*0.034*	*0.582 ****	*0.040*	*0.645 ****	*0.151*	*0.437 ****	*0.075*
Resident	*-0.077*	*0.091*						
Satellite	*-0.244 ***	*0.017*						
Multiple R^2 =	*0.30*		*0.31*		*0.41*		*0.34*	
p =	*0*		*0*		*< 0.01*		*0*	
n =	*795*		*594*		*54*		*147*	

*Significance codes: '***' = .001 '**' = .01 '*' = .05 '.' = 0.1*

Table 5. Results of Regression Model 1

[10] Additional analysis included testing for interaction effect between the pre-course cognitive index score and the treatment method. This analysis yielded no indication of statistical significance between these scores and treatment.

The R^2, or "goodness of fit" of the model, for each sample leaves quite a bit to be desired (R^2 <= 0.41) in that less than half of the variation in the results can be explained by the independent variables considered. According to Gujarati, this is not unexpected in a cross-sectional study where there may be a high level of diversity in the cross-sectional units. What is important is that the model is correctly articulated and that regressors demonstrate statistical significance ($p <= 0.05$), which is to say that although the model is unable to account for much variation in the predicted variable, it can still articulate the relationship and influence of the independent variables on the predicted post-treatment cognitive index score where they are shown to have statistical significance.[11] Here, the pre-treatment score for each group is highly significant ($p <= 0.001$) and it also appears to exert the strongest influence on the predicted score, suggesting that where one ends up after treatment is due in large part to where they started. Of the professional background factors, however, age was the only one to show significance ($p = 0.05$) and only in the context of the entire data set. Consistent with the ANOVA findings, the model indicates with the entire data set that the satellite method is significantly ($p = 0.01$) and negatively associated with the predicted post-course score, and its influence is also relatively substantial. This is not unexpected given the significantly lower group means of the satellite sample relative to the other groups. The low R^2 indicates that most of the variation in predicted scores is unexplained by the independent variables used in the model, so it seems clear that other unknown variables are likely at play. Neither does this model specifically consider treatment as an independent variable. However, given the lack of significance and

[11] Damodar N. Gujarati, *Basic Econometrics*, 4th Edition ed. (Boston: McGraw Hill, 2003), 260.

influence in most of the independent variables, we are left to assume the change in pre- to post-treatment scores is due in large part to the treatment received.

This brings us to the second regression model, which used the same professional background factors to predict both pre- and post-course cognitive index scores for subjects while controlling for treatment as well as class and seminar. This model attempts to gauge the relationship and influence of these independent variables on subject cognitive index scores before and after receiving one of the treatments. The equation for this model is expressed as:

Cog ~ ActExp + JtExp + Age + Education + Rank + Service + Treatment

Where Cog represents cognitive index score (pre- and post-course) and treatment is the delivery of treatment—either resident, satellite, or hybrid. Table 4-4 summarizes the regression results.

	ENTIRE DATASET		**RESIDENT**		**SATELLITE**		**HYBRID**	
	Estimate	*Std Err*	*Estimate*	*Std Err*	*Estimate*	*Std Err*	*Estimate*	*Std Err*
Intercept	*3.395 ****	*0.175*	*3.444 ****	*0.252*	*4.411 ****	*0.711*	*3.308 ****	*0.464*
Active Service	*0.007 .*	*0.004*	*-0.015 **	*0.007*	*0.051 **	*0.025*	*0.001*	*0.005*
Joint Experience	*-0.001*	*0.001*	*-0.001*	*0.001*	*-0.005 .*	*0.003*	*0.000*	*0.002*
Age	*0.013 ***	*0.005*	*0.008*	*0.007*	*0.005*	*0.023*	*0.015 .*	*0.010*
Education	*0.058*	*0.044*	*0.103 .*	*0.061*	*0.046*	*0.143*	*-0.031*	*0.085*
Rank	*-0.057 **	*0.028*	*-0.059*	*0.039*	*-0.345 ***	*0.105*	*-0.040*	*0.058*
USN	*-0.044*	*0.040*	*-0.055*	*0.047*	*-0.031*	*0.134*	*0.007*	*0.105*
USAF	*-0.123 ****	*0.034*	*-0.129 ***	*0.041*	*-0.086*	*0.123*	*-0.076*	*0.094*
USMC	*-0.266 ****	*0.066*	*-0.244 ***	*0.083*	*-0.621 ***	*0.228*	*-0.268 **	*0.148*
Treatment	*0.329 ****	*0.030*	*0.297 ****	*0.034*	*0.334 ****	*0.088*	*0.508 ****	*0.075*
Multiple R^2 =	*0.15*		*0.10*		*0.25*		*0.25*	
p =	*0*		*0*		*< 0.01*		*0*	
n =	*795*		*594*		*54*		*147*	

*Significance codes: '***' = .001 '**' = .01 '*' = .05 '.' = 0.1*

Table 6. Results of Regression Model 2

Here again, it is clear that very little variation is explained (R^2 <= 0.25) by the model when applying it to each group. Yet, the relationship of several professional background factors on the predicted scores becomes more evident as well as the differences between groups. Active service time is significant within the two groups where subjects have the most—resident and satellite—though with slight influence and differing directionality for each. From the discussion in Chapter II, this result does not coincide with the expectation that greater active service time would be negatively and significantly associated with subject scores. Yet, its influence with hybrid subjects, who possess much less on average, is expectedly less than with those in the resident and satellite groups. The amount of joint experience and education possessed by subjects does not appear to play an important role in predicting subject scores. Neither does role of age seem clear as its only significant in the context of the entire data set, and its influence across the board is minimal. Rank is statistically significant only for the entire group and the satellite where it is more highly significant and negatively and disproportionately influential, exceeding even that of treatment. Across the board, however, rank is negatively associated with subject scores and, as a measure of social status within the military, this seems consistent with the theoretical view that higher social status leaves subjects less inclined to relinquish the prejudices they harbor while undergoing treatment.

In most instances, the service componency of subjects exerts a substantive, negative, and statistically significant influence on subject scores, and such is particularly evident with Marine Corps officers. This should not be surprising, as the significance and influence of service componency in the context of this model signals a greater degree of underlying prejudice towards the other services. Additionally, because the Marine Corps is the smallest service,

Marine Corps officers are grossly underrepresented in the seminar environment relative to the officers from other services, and this inequality may leave these officers especially reluctant to adopt a different attitude toward officers of other service in an intergroup contact experience.

In all four groupings, treatment shows high statistical significance ($p = 0.001$) and, with the exception of the satellite group, the largest positive influence in each. This supports what could only be assumed from the first model—that treatment matters when it comes to reducing inter-service prejudice. Resident subjects demonstrate a substantial and significant benefit from treatment, with scores primarily affected by service componency as with the other two methods. However, the hybrid group demonstrates the greatest change as a result of treatment and this may be due in part to the greater duration of the hybrid treatment (40 weeks) relative to the resident program (10 weeks). Another possibility suggested by the absence of significance in the influence by professional background factors on predicted scores is that hybrid students, on the whole, possess less deeply rooted prejudices. Hybrid students do not appear to harbor any more or any less prejudice toward other services than resident students given the similarity in pre-course group means. The greater change pre- to post-treatment may indeed be because they are less beholden to them. This would make them more susceptible to the positive effects of contact provided through their particular treatment method. If true, this would be consistent with the theoretical basis of the second hypothesis.

Satellite subjects demonstrate the second greatest effect from treatment, yet for many this benefit is offset partially or completely by the influence of rank relative to the resident and hybrid subjects. The model indicates that a subject's prejudice toward those from other services increases with rank, and there is no obvious explanation for this relationship. It seems

clear, however, that the reason has nothing to do with treatment, given that satellite subjects begin treatment at lower starting points than resident and hybrid subjects, yet demonstrate comparable change as a result of treatment. This circumstance may relate to the earlier discussion in this chapter regarding the substantially lower group means for the satellite and how environmental differences may be responsible. Rank is an inherent measure of social status in the military and no more so than in a hierarchical work place where superior-subordinate relationships are the norm. Satellite students receive treatment proximate to their workplace and, sometimes, as noted in Chapter III, with their rating superiors or rated subordinates. This is to say that, while generally conducted offsite from the work place proper, the satellite venue may not be a neutral one when it comes to rank. This possibility is supported by the absence of rank as a significant background factor in the resident and hybrid treatments, both of which have highly work-neutral environments and structure.

Summary

This analysis seeks to establish a basis for answering the principle research question concerning how the various JFSC JPME II course delivery methods influence self-reported perceptions of service prejudice among military officers, and it also aimed to test the hypotheses concerning which method achieves the highest reduction of inter-service prejudice among its subject and also which group would demonstrate the greatest change as a result of having received treatment. In the end, the results of analysis are mixed. We cannot establish statistically that a difference exists between the final levels of self-reported inter-service prejudice achieved by the resident and hybrid methods, so we cannot say with any certainty

that the resident method produced the lowest level. However, we can conclude that the satellite method, with substantially lower and statistically significant differences in both pre- and post-course group means compared to the other two methods, had the highest levels of self-reported inter-service prejudice. H2 stated the hybrid group would demonstrate the greatest pre- to post-treatment change overall, and this appears to be the case in comparison with the resident group. Yet, the satellite failed to demonstrate any difference statistically from either resident or hybrid groups. This outcome makes it difficult to argue that the hybrid group showed the greatest change in pre- to post-treatment means among the three treatment groups.

These results raise some important questions. What do these results mean in the context of the different methods and compositionally different group associated with each? Do meaningful differences really exist between the resident, satellite, and hybrid methods? And, if so, what are they and what do they mean in practice? Finally, why is there such a large and significant difference between the satellite pre- and post-course group means and those of the resident and hybrid groups? The next chapter considers the results of the statistical analysis presented here and attempts to address these questions.

CHAPTER V

SUMMARY

"Prejudice is a great time saver. You can form opinions without having to get the facts."
- E. B. White

For more than 70 years, the joint acculturation of military officers has served as the mechanism to enhance joint operational efficacy of the nation's armed forces, and since the landmark reforms under GNA, JPME II has remained the principal means by which to acculturate military officers to perform more effectively in the joint environment. Joint acculturation is characterized by a partial tradeoff of one's own cultural beliefs and values for ones transcending those of any particular service, and this leads officers from different services to adopt a joint perspective and attitude. The efficacy of JPME II to foster joint acculturation in military officers is contingent, however, on reducing the inter-service prejudices inculcated in officers by their respective service culture and also accumulated through personal and professional experience. Such prejudice toward members of other services is detrimental to the condition of jointness, and optimal joint acculturation through JPME II is predicated on the minimization of the inter-service prejudice harbored by officers through greater understanding and respect towards other service cultures. The approach of the JPME II programs offered by JFSC is to create an environment where students achieve greater understanding of, and respect for, members of different service cultures within a rigorous academic setting as intended by the Skelton Panel. This is the mechanism for minimizing, or even eliminating, inter-service prejudice among military officers. In this way, such an environment of minimal prejudice fosters greater joint acculturation as officers develop more trust in officers from different

services and become more open-minded to perspectives and beliefs beyond those of their own service.

Historically, the primary means of delivering JPME II was through in-residence attendance to the JFSC. Considerations relating to increased throughput, reduced cost, and enhanced accessibility have since led to the adoption of satellite and hybrid JPME II delivery approaches. However, the true efficacy of these methods in reducing inter-service prejudice, and consequently their effectiveness in fostering joint acculturation, was completely unknown. The purpose of this study was to assess the three JPME II delivery methods offered by the JFSC with regard to their effect on inter-service prejudice and within the context of ICT. While prejudice has both cognitive and affective dimensions, this study was limited to assessment of the cognitive outcomes only. In this sense, the research outcomes of this study fall regrettably short in assessing perhaps the most important outcome of inter-group contact and that is the development of meaningful and lasting friendships between members of different service cultures. This study was longitudinal in design, occurring over 11 months, and analyzed the performance of the populations attending each of the three delivery methods by their responses to pre-course and post-course surveys.

Summary of Findings

To establish a basis by which to answer the primary research question, the analysis tested two hypotheses related to the theoretical “strength” of each delivery method to reduce prejudice and to the proclivity of each group to dispense of service-specific stereotypes and beliefs toward others to accept a uniquely joint ethos. In addition, this study analyzed the

effect exerted by the professional background of each subject on their pre- and post-course responses. These factors included accumulated active service, joint experience, and education, as well as age, rank, and service branch. Social science theorizes that such factors are influential in maintaining, and also dispensing with, individual prejudices.

Though the analysis failed to produce clear support for either hypothesis, it does provide new insight regarding the research question and the differences existing between the delivery methods and the populations. The principle finding is that, to a varying degree, each delivery method is indeed substantially and significantly associated with improvement in subject attitude toward officers in other services. Aside from the substantially lower group means of the satellite, there does not appear to be a sizable difference in the magnitude of attitudinal change achieved by each of the three methods. A second important finding relates to the influence of professional background factors in the context of inter-service prejudice and JPME II. The effects of these factors, while substantial and statistically significant in some cases, seem largely implicit in the pre-treatment condition of subjects and they do not appear to exert influence on the outcomes of treatment.[1] This is to say that there is no interaction effect between the professional background factors and the treatment methods. Of the three treatment groups, the attitudes of hybrid subjects were less governed by the professional background factors considered by this study than the attitudes of subjects in the resident and satellite groups.

[1] The first regression model indicated that post-treatment scores are influenced primarily by the pre-treatment score and this is especially so with the satellite. The only factor to show any influence on post-treatment scores was age. This leaves us to infer that treatment is largely responsible for achieving the change in pre- to post-cognitive index scores and the influence of professional background factors largely insignificant.

Implications—Findings in the Context of ICT

The findings of this study corroborate the theoretical proposition of Pettigrew and Tropp by demonstrating that contact between members of different groups improves their attitude toward each other. This means contact in the broadest possible sense, where the facilitating conditions represent circumstances that serve to enhance the positive effects of contact. Building upon the traditional forms of prejudice—racial, ethnic, and the elderly and disabled—considered by the hundreds of studies informing ICT, this study broadens the notion of prejudice to include inter-organizational antipathy. Specifically, it examines the efficacy of JPME II In the context of prejudice between officers belonging to different services.

Each delivery method affected measurable and positive change in the cognitive attitudes of their respective group, despite significant differences existing between them in terms of the manner and degree they embody the facilitating conditions for the reduction of prejudice. In addition, the amount of cognitive attitudinal change resulting from treatment was not strikingly different across the methods. This is not to suggest, however, that differences in the facilitating conditions of intergroup contact across the delivery methods were of little or no consequence to subject outcomes. Rather, it may be evidence of the association or correlation each facilitating condition may have to attitudinal changes in either the cognitive or affective attitudinal domains. ICT does not explicitly correlate the facilitating conditions with any particular domain. There is a slight exception with the condition of friendship potential, which is not a formal condition within ICT but borrowed from earlier work by Pettigrew for use in this study. This condition is primarily, but not exclusively, associated with the affective domain. In fact, Pettigrew and Tropp were careful to acknowledge that interaction between the cognitive

and affective domains is highly complex and that you cannot easily consider one to the exclusion of the other. With this in mind, and in the context of JPME II and the results of this study, it may provide some explanatory value if some correlation were made between the facilitating conditions and a particular mental domain. That is, through a closer examination we may discern how the facilitating conditions may, or may not have, influenced attitudinal change in a particular attitudinal domain. As discussed in Chapter III, similarities and difference exist between the methods in terms of the facilitating conditions. From the standpoint of similarity, each enjoys common institutional support. But it is perhaps more interesting that they all employ similar curricula to prescribe common intergroup goals for their groups that in turn require substantial intergroup cooperation for those groups to succeed. The similar curricula are modeled primarily on taxonomy of cognitive learning objectives, and where there may be differences in the delivery of curriculum between methods, there are few differences in the cognitive learning objectives.[2] As discussed earlier, this study remains limited to analysis of outcomes in the cognitive domain—measuring and analyzing changes in the self-reported stereotypes and beliefs of subjects. With similar curriculum and cognitive learning objectives, the conditions of common intergroup goals and intergroup cooperation remain comparable across the three methods. While a limited number of exceptions exist in the hybrid program, each method has students doing the same things. So, the similarity in cognitive attitudinal change across treatment methods seems logical. Through close interaction in the seminar room and especially during myriad practical exercises, subjects in each method gain increasing

[2] Specifically, JCWS curriculum is modeled primarily, but not exclusively, on Bloom's Taxonomy of learning objectives in the cognitive domain; See Bloom, Benjamin Samuel, David R. Krathwohl, and Bertram B. Masia, *Taxonomy of educational objectives: the classification of educational goals*. New York: Longman. 1986

knowledge and awareness not only of joint matters but of each other's service culture and capabilities, and this helps in offsetting previously held convictions regarding other service components and their members. According to the measures used by this study, it should not be surprising that, when learning and interacting together through common subject matter and exercises, each group demonstrates a similar degree of positive change in cognitive attitude towards officers from other services.

However, it is the facilitating conditions of equal status and friendship potential in particular where the delivery methods exhibit greater differences, and these do not appear to have much influence in effecting cognitive attitudinal change—at least not within the scope of this study. With a greater disparity in rank and occasional preponderance by a single service, the seminar environs of the hybrid and satellite methods provide a less neutral venue in terms of equal status than the resident program. Proximity to the workplace may further detract from satellite student perceptions of equality. If this condition had substantive cognitive influence during the treatment of the respective groups, then it should manifest in a smaller change in hybrid and satellite group means pre-to-post treatment than with the resident. As it was, these changes were statistically the same, or larger in the case of the hybrid. Also, friendship potential is particularly associated with the affective domain, and so the lower friendship potential of the hybrid and satellite methods relative to the resident should not be of consequence to the cognitive outcomes considered by this study. As it was, the cognitive attitudinal changes produced by the three methods remain highly comparable.

Yet, we should not dismiss the magnitude of impact by these facilitating conditions on officer attitudes. ICT states that prejudice-reduction methods must employ both affective and

cognitive approaches, and of the two the affective is more important. It is in affective domain where the greatest change, and therefore greatest reduction, in prejudice occurs as a result of intergroup contact.[3] This means we should expect a much more pronounced change in a subject's affective attitude than is seen in their cognitive attitude. That is, as an outcome of JPME II, officers should feel much more differently and positively toward members of services than in what they think about them. Yet, the contribution each by the three delivery methods to affective attitudinal change remains unknown, and this likely represents the much larger portion of the iceberg that is underwater and unseen. Indeed, profound and consequential differences may exist between the effects of the three delivery methods on the emotions and favorability of officers toward those belonging to different services. Without knowing the degree to which each method facilitates the establishment of affective ties between students in each seminar, such a joint group will likely remain, at best, in stage two of Schein's culture model. This means the group may not achieve the functional familiarity and behavioral norms to enable members to consistently achieve common goals.[4] The group would be joint only in appearance.

Implications—The Limitations of the Organizational Process Model

Returning to Allison's organizational process model as a means for understanding organizational behavior, its value lies much more in its explanatory, rather than predictive,

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[3] Thomas F. Pettigrew and Linda R. Tropp, *When Groups Meet: The Dynamics of Intergroup Contact* (New York: Psychology Press, 2011), 95, 98.; Gordon Willard Allport, *The Nature of Prejudice* (New York: Addison-Wesley, 1979), 13, 268.; This is also supported by James M. Olson and Mark P. Zanna, "Attitudes and Attitude Change," *Annual Review of Psychology* 44, no. 1 (1993): 121.

[4] Edgar H. Schein, *Organizational Culture and Leadership, 3rd Edition* (San Francisco: John Wiley & Sons, 2004)., 79, 82-3.

power. However, some downplay the explanatory power of the model due to the lack of articulation of dependent and independent variables within a causal model.[5] In the context of this study the model offers some value in that it provides another lens by which to view the different service cultures and how their interaction in a joint context can produce less-than-optimal outcomes. Yetiv advocates an integrated approach to understanding such behavior as using many perspectives can create an exploratory tension that yields a better understanding and perspective.[6] However, the value of the model in understanding the efficacy of various JPME II delivery methods to instill in officers a joint attitude and perspective is arguable. This is because the model does not consider the impact or role of individuals, focusing instead on the organization and its competition or rivalries with others.[7] JPME II is intended to overcome powerful organizational constraints to change the individual officer. It does not aim to change the culture of the officer, but the culture in the officer so as to promote better understanding and more positive behavior when the individual works with members of other organizations in a joint context and toward a common joint goal.

Implications—Mitigating and Leveraging Cognitive Biases

From the standpoint of implicit cognitive biases, which can cripple the decision making of officers working within a joint context, JPME II offers a means to overcome or mitigate some of the more salient cultural biases that may be of consequence to joint planning and

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[5] David A. Welch, "The Organizational Process and Bureaucratic Politics Paradigms: Retrospect and Prospect," *International Security* 17, no. 2 (1992): 115.
[6] Steve A. Yetiv, *Explaining Foreign Policy: US Decision Making in the Gulf Wars*, First Edition (March 22, 2004) ed. (Baltimore: Johns Hopkins University Press, 2011), 2-3.
[7] Ibid., 136-7.

operations. The value of JPME II in instilling a joint attitude and perspective does not lie in simply getting officers to develop a more positive attitude toward those of other services. Rather, the desired outcome is for the same officers to make better judgments and decisions when operating as part of a joint team. As discussed in Chapter II, an explicit aim of JPME II is to condition officers to avoid defaulting to certain military solutions simply because they favor their own service or represent a culturally specific way of doing things. Through joint education and acculturation, officers become exposed to the capabilities and competencies of the other services and their members, and this provides a more expansive awareness and understanding of the valuable contributions other services can make. By effecting positive attitudinal change, as the findings of this study demonstrate, the JPME II delivery methods foster a new joint norm that works to overcome the effect of status quo bias. By considering the capabilities and cooperation with members from different services as the norm rather than the exception, officers demonstrate less cognitive rigidity and more willingly adopt or favor joint approaches.

We should also note that a positive JPME II experience gained by an officer in advance of his first joint assignment can also positively leverage the bias created by the availability heuristic described by Kahneman and Tversky. This heuristic operates as a function of the ease to which instances and experiences come to mind, meaning that experiences that are more salient and more recent are also more retrievable.[8] It is this implicit retrievability that influences human decision making. In this sense, the decisions and behaviors by officers with little joint experience should tend to reflect their most recent joint experience—JPME II—in

[8] Daniel Kahneman and Amos Tversky, "Judgement Under Uncertainty: Heuristics and Biases," *Science* 185, no. 4157 (1973):1127.

their subsequent joint duty assignment.[9] This may also be the case with officers already possessing considerable joint experience before attending JPME II. But these individuals will undoubtedly have accumulated many cognitively salient experiences from previous joint assignments—each processed and categorized without the depth of awareness and understanding of other service cultures that JPME II provides. It is arguable how cognitive attitudinal change produced by attendance at a JPME II program may correct or offset the salience or retrievability of those experiences and any bias to which they may contribute.

The reduction of inter-service prejudice in, and joint acculturation of, officers achieved by attendance to JPME II also relates to another bias identified by Kahneman, and this is the one created when a subject has a feeling of like or dislike toward a social object. The "affect heuristic" induces a proclivity by subjects to make favorable or unfavorable judgments with little reasoning or deliberation.[10] Through the reduction of prejudice and joint acculturation, officers achieve a better understanding and appreciation for their counterparts in the other services, and this increase in appreciation should accordingly incline them to display less bias toward their own service and more toward the others when working in a joint context. The limitations of this study prevent greater understanding of the affective realm where such emotion lies, and therein lies an extremely important question regarding the significance of JPME II in creating a "favorability bias" away from service parochialism and toward jointness. Indeed, given the importance placed by Pettigrew and Tropp on the affective domain, such a

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[9] Daniel Kahneman, *Thinking, Fast and Slow*, 1st Edition ed. (New York: Farrar, Straus and Giroux, 2011), 499, 99-100; See also Amos Tversky and Daniel Kahneman, "Availability: A Heuristic for Judging Frequency and Probability," *Cognitive Psychology* 5, no. 2 (1973): 207-232.

[10] Kahneman, *Thinking, Fast and Slow*, 6.

question asks again if there is a larger and more important distinction between the outcomes of the three delivery methods.

It remains, however, that correcting existing cognitive biases may be easier said than done. First, comparatively little is understood about debiasing than what is known of cognitive biases in general. Mustata observes that debiasing decision making remains an under-researched area of study that complicates the development of effective cognitive debiasing approaches. This circumstance is also aggravated by the absence of a common theoretical construct and inconsistent results among and between debiasing approaches.[11] Secondly, debiasing requires effort. For example, Kahneman argues that such correction is a task for System 2 thinking and this requires sufficient cause or motivation reject the "cognitive" ease afforded by System 1 thinking and to engage in this slower, more deliberate and orderly thinking process.[12] In his analysis of heuristic and debiasing research conducted by the Department of Defense, Mustata reaches a conclusion that seemingly echoes Kahneman – that biases could indeed be overcome by exercising critical thinking in advance of decisions. Techniques such as reexamination of assumptions, evaluating arguments, and consideration of potential advantages and disadvantages were seen to lead to improve decision making. Disordered or conflicting information was also seen to more often trigger the engagement of such critical – or "system 2" – thinking by military officers.[13] In a related sense, the cross-cultural understanding and appreciation afforded by structured intergroup contact results in what others call "perspective-taking", which is when a member of one group entertains the perspective of another belonging

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[11] Mustata, Marinel-Adi. "Debiasing Judgements and Decisions in the Military." In *International Scientific Conference "Strategies XXI"*, vol. 3. (2017): 265.
[12] Kahneman, *Thinking, Fast and Slow*, 155.
[13] Mustata, "Debiasing Judgements and Decisions in the Military.", 266.

to a different group. Recent studies by Galinsky and Moskowitz strongly support the argument that such perspective-taking inhibits the effect of social cognitive biases by diminishing the effect of stereotypes and by reducing their accessibility.[14]

Yet, little is known about the effectiveness of debiasing approaches over time. While there is support for arguments that debiasing is possible, achieving and lasting and meaningful outcome such as that for prejudice reduction strategies will not likely come quickly or easily. In this regard, the elimination of cognitive bias and the reduction of harmful inter-service prejudice share some commonality in their respective approaches. Where Pettigrew and Tropp highlight the importance of greater duration and intensity in contact approaches to achieve greater and more lasting positive attitudinal change, such also seems to be the case with disabusing military officers of the cognitive biases they may harbor. Mustata acknowledges that there is "no easy solution" to debiasing.

Implications—Findings in the Context of JPME II

The findings suggest some similarity between the effectiveness and outcomes of the resident and hybrid delivery methods in the cognitive attitudinal domain. It would be facile, however, to conclude on this basis alone that no difference exists between the outcomes of the two methods because their efficacy in achieving substantive and positive affective attitudinal change is unknown. The difference between the two methods in this regard could be considerable. Further, a clear explanation for the apparent similarity in cognitive outcomes is

[14] Galinsky, Adam D., and Gordon B. Moskowitz. "Perspective-Taking: Decreasing Stereotype Expression, Stereotype Accessibility, and In-group Favoritism." Journal of Personality and Social Psychology 78, no. 4 (2000): 708, 722.

difficult. We cannot be certain as to whether the greater pre- to post-treatment change of the hybrid group relative to the resident is the result of the treatment or the type of student, or both. This is because the similarities could be the result of the compositional differences between the resident and hybrid groups, whereby hybrid students are less beholden to service-cultural stereotypes and beliefs than their active component counterparts in the resident program. Adding to this notion is that, as pointed out in Chapter III, an inherent bias exists among the hybrid group in that these students are all volunteers for treatment whereas resident students are often involuntary participants, directed instead by their service or command to attend treatment and often at a personally inopportune time. This creates the condition of selection bias, where less-prejudiced officers more willingly volunteer for contact with members from other services than those harboring greater and deeper prejudice. In effect, we should expect that a group composed of eager volunteers to demonstrate greater attitudinal change because they tend to harbor fewer and less deeply seated prejudices, especially within a seminar of like-minded officers from other services. It remains a possibility that these compositional differences interact with the specific treatment methods as well.

This study acknowledged in an earlier chapter the limitation to inarguably attribute attitudinal changes to either method or student—that the inability to randomly assign students from each population to the different treatment methods creates a second form of selection bias that obscures our understanding of the true effects of each treatment. However, if the seemingly comparable performance by the resident and hybrid programs is indeed due to cultural and experiential differences between the two groups, then it remains possible that where one method is effective with one type of student it may be quite unsuitable for the

other. The results could be substantially different in terms of residual levels of inter-service prejudice and, consequently, to the degree of joint acculturation achieved. Only through careful study of the efficacy of the hybrid program with active component officers and the efficacy of the resident program with officers from the reserve components will our understanding become clearer. Given the intent of legislation and the desired outcomes of the JPME II programs offered by JFSC, it would be inappropriate to consider these programs equally effective and interchangeable until we can accumulate the requisite knowledge and understanding of the effectiveness of these methods in the affective attitudinal domain and with different populations.

Another surprising finding is the distinction between the pre- and post-treatment means of the satellite method and those of the resident program, which it so closely resembles in terms of format and student population. In both cases, the satellite group means are lower than those of the resident group. Not only are the differences statistically significant and substantial, but they are also consistent across all four satellite seminars—each conducted at a different location, joint command, and timeframe as well as with a different faculty team. As well, the professional background factor of rank matters among satellite subjects while remaining unimportant among the resident and hybrid groups. Given the strength and significance of this independent variable, it suggests a possible, if not partial, explanation for why satellite subjects start and finish treatment at much lower, and more prejudicial points, than those in the resident and hybrid groups. While rank does not appear to influence the effect of treatment—the pre- to post-course change is consistent with that of the resident

group—its influence could be a manifestation of satellite students preserving work relationships and attitudes while in the seminar environment.

However, it remains difficult to establish why the factor of rank is consequential to the cognitive index scores of satellite students. The clearest distinguishing aspects of the satellite group from the resident group, which it closely resembles, are that students of the satellite method are both *in* their joint assignment prior to treatment and *at* their joint command while receiving treatment. From the standpoint of ICT, the workplace is not a neutral intergroup contact venue because it is hierarchical in nature, organized to accomplish military missions rather than to foster the cross-cultural understanding that leads to a reduction in inter-service prejudice. In this sense, rather than alleviating inter-service prejudice harbored by officers, the work environment may actually serve to instill additional prejudices and reinforce pre-existing ones. To be clear, satellite seminars are conducted away from the specific workplaces of the students, but, by design, satellite locations remain geographically proximate to the commands they serve. Additionally, Chapter III noted that satellite students could be prone to continue formal work relationships while in attendance. This may provide some explanation regarding the consistently lower cognitive index scores of satellite students relative to those attending the resident and hybrid programs, which maintain highly work-neutral environments. It also strongly suggests that one doesn't necessarily adopt a joint attitude and perspective strictly through on-the-job training, especially given the higher average level of joint experience among satellite subjects. Such officers are exposed to an environment of inherently unequal status without the understanding of other service cultures provided by JPME II that might otherwise serve as a coping mechanism.

Another possibility that may help in clarifying the substantially lower pre- and post-treatment satellite group means is that, like the hybrid group, a selection bias exists among satellite students as well. It remains unknown how the commands served by the satellite program selected the officers who would attend, but Chapter III highlighted that student convenience is a central consideration for conducting a satellite method—to eliminate the need for attending the resident method in Norfolk, where the student would endure family separation. Selection bias results if more deeply prejudiced officers take advantage of the opportunity provided by the satellite method to avoid the more immersive and less-homogeneous intergroup experience provided by the resident program. Additionally, if officers opt to attend the satellite method purely for reasons of convenience then it is arguable they are also less invested or committed as students to the objective of treatment, which is attitudinal change.

In comparison to the resident method, which is the principle means of delivering JPME II to active component officers, the satellite approach produced much lower results in the cognitive attitudinal domain. If these differences stem from the accessibility considerations of location and timing, it may very well be that the satellite method is incapable of producing cognitive outcomes comparable to the resident or hybrid programs. This is because accessibility is the basis for satellite delivery of JPME II, as the method is predicated on providing JPME II to officers at their home station and while they are serving in their joint assignment.

An important question regarding the lower group means of the satellite method is how meaningful is this difference in practice. The answer lies outside the scope of this study, but

the higher levels of prejudice at post-treatment are very likely indicative of lower degrees of joint acculturation among satellite subjects. Without an objective standard for the joint acculturation or attitudinal outcomes of JPME II programs there is no clear metric by which to say the satellite method is successful. Further, it is not very hard to see how higher levels of inter-service prejudice in the joint workplace would harm operational efficacy rather than help it. And, as seen in the historical examples in Chapter II, the consequences of greater inter-service prejudice and lower joint acculturation in an operational setting can be severe.

It is important at this point to devote some discussion to relate these findings back to the departmental considerations driving changes in the delivery of JPME II by the JFSC, which are the desires to increase student throughput, to reduce costs, and to make it more accessible to officers. As currently executed, neither the recently accredited hybrid program nor the satellite program reflect a substantial increase in the number of active component officers receiving JPME II through the JFSC on an annual basis. This is because the hybrid program presently delivers JPME II exclusively to officers in the reserve components, and the nature of serving in the reserve components means that many of these graduates are unable or unwilling to readily fulfill a full-time joint duty assignment. Even if active component officers are admitted to the hybrid program in the future, it is difficult to see how this could amount to a substantive increase without offsetting the number of reserve component officers attending or without additional investment to increase the capacity of the program. Neither does the satellite program contribute additional student throughput because these graduates are offset by a like reduction in the number of graduates of the resident program. Under the current arrangement and joint education policies, any increase in capacity of the satellite program to

produce graduates comes at the expense of capacity in the resident program. It is difficult to see how to increase the throughput of these active-component JPME II programs without additional investment to increase their capacity or by reducing the requirements and in turn the quality of the programs.

This study did not explicitly consider cost in the analysis of the outcomes of the three delivery methods. Yet, two observations seem appropriate and stem from discussion of distance-learning approaches in Chapter II and the findings in Chapter IV. First, it is unknown whether the distance-learning approach in the hybrid program represents a fiscal cost-savings over attendance to the resident program, though it remains possible, if not likely. What seems much clearer is that an additional and possible substantial "cost" may be incurred by the active-component officer attending the program. Chapter II cited a 2010 Congressional report articulating concern over notions of active component officers completing JPME II though a lengthy distance-learning program in addition to fulfilling the responsibilities of their primary duty assignment. Though some active component officers will undoubtedly prefer a distance-learning approach for receiving JPME II, compelling attendance to such a long program without consideration of an officer's professional circumstances and personal preferences could prove counterproductive to reaching the desired attitudinal outcome. In the case of the satellite program, Pisel states that the approach represents cost transference more than cost avoidance.[15] While the satellite program could indeed cost less, it also appears to produce less from the standpoint of the cognitive attitudinal outcomes reported by the students. As stated earlier, students attending the satellite program start and end at a lower point than students

[15] Kenneth Pisel, *Director, Non-Resident Satellite Program, Joint Forces Staff College. Interview by Author. Digital Recording. Norfolk, May 23, 2016.*

attending the resident and hybrid programs. It remains beyond the scope of this study to suggest whether any actual tradeoff between cost and outcome is acceptable.

From the standpoint of accessibility, the hybrid and satellite programs can unquestionably increase the accessibility of JPME II for active component officers who may have personal or professional circumstances prohibiting or complicating attendance of the resident program. We should consider this advantage not purely on its own merit, however, but hand-in-hand with any potential disadvantages each program poses with respect to achieving desired attitudinal outcomes. The convenience of receiving JPME II while remaining proximate to family and the workplace was not a particularly important consideration by Skelton when conceiving what JPME II should be and what it must accomplish in furthering the aims of the GNA reforms.

Pragmatic Considerations for the Joint Staff

In light of the extensive review by this study of the history and course of JPME II since the GNA, it seems appropriate to provide some considerations stemming from this review regarding the present and future of this particularly key phase of joint education. Now, more than 30 years since the original reforms, the importance of jointness and associated gains made in and by the force appear widely acknowledged within the department. Yet, the nature of jointness is often misunderstood—it is an ongoing journey and not a destination as some have implied or stated in the past.[16] Secretary Mattis keenly observed that "jointness is not a natural state," meaning that the service parochialism will slowly and ultimately erode any gains in

[16] . *U.S. Department of Defense. Goldwater-Nichols Working Group Recommendations* (Washington D.C.: Joint Chiefs of Staff, [March 9, 2016]): 3.

jointness without continual external pressure driving the services to be interdependent.[17] Claims that the services now understand and value jointness more than ever as a result of protracted military operations since 2001 are particularly beguiling, and suggest a diminished need to continue applying this pressure. However, such assertions ring hollow without the empirical data and formal analyses to support notions that officers today command a better grasp of joint matters than their predecessors, much less that they now feel much more positively toward those from other services.[18] As long as members of service promotion boards continue to clone themselves through the selections they make, there is the imperative to cultivate joint perspectives and attitudes in the minds of military officers.

The department faces certain fiscal austerity for the foreseeable future and, while under tremendous pressure to do more with less, the joint staff must continue, if not increase, the emphasis on high-quality JPME II programs by improving their effectiveness and capacity. The first and most important step to improving the effectiveness of JPME II is to seek better assurance that officers attend JPME II in advance of their initial joint assignment and avoid situations where they must acquire the requisite service cultural awareness and appreciation through on-the-job training. The need to prepare officers for joint duty is discussed throughout the report by the Skelton panel, and the first common educational standard in the Chairman's OPMEP for all JPME programs highlights the need to "prepare graduates to operate in a joint,

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[17] U.S. Joint Forces Command, *Command Briefing* (Norfolk, VA, June 18, 2010, [2010]).

[18] The 1998 DoD IG Review of JPME II report made the assertion of "Joint Maturation" resulting from participation in previous joint operations as a basis for a recommendation to shorten the length of JPME II. AFSC refuted this claim with empirical data demonstrating that officers attending JPME II had not mastered broad knowledge of joint matters. *U.S. Department of Defense. Evaluation Report on Joint Professional Military Education Phase II (Report no. 98-156)* (Arlington, VA: Department of Defense Inspector General, [1998]).: 11, 48.

interagency, intergovernmental, and multinational environment."[19] Yet, fewer than 40 percent of the students attending the resident program are bound for, or serving in the first year of, their first joint assignment.[20] Given that many officers, if not most, receive only a single joint assignment during their career, delivering JPME II to them at the end of their joint assignment or afterwards is akin to giving a physician his medical education only after he has already started or has finished his practice. Not only must there be increased focus and pressure for officers to receive JPME II in advance of joint duty, the joint staff must correspondingly invest in, rather than divest from, the capacity of effective JPME II programs to accommodate greater throughput.[21]

Plausibly, "flexible and tailorable approaches" for delivering JPME II may help to address "right student, right time" concerns, but only insofar as they enable students to achieve the goals or expectations regarding the social psychological outcomes unique to JPME II. In light of the findings of this study, the department should carefully and comprehensively review effectiveness of the satellite program as an approach for delivering JPME II. Foremost among the objectives of the Skelton panel for JPME II was to foster in the minds of officers the cross-cultural awareness and appreciation critical to jointness—an outcome distinct to social psychology. Yet, situational constraints appear to limit the effectiveness of the satellite program to much lower cognitive attitudinal outcomes among the officers attending. Notwithstanding is that the principle concern of the Skelton panel was not the personal

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[19] See the Skelton Report; Also, *Department of Defense. Chairman, Joint Chiefs of Staff Instruction 1800.01E Officer Professional Military Education Policy (OPMEP)* (Washington D.C.: Joint Chiefs of Staff, 2015), E-1.

[20] *Process for Accreditation of Joint Education (PAJE) Self-Study Report: Joint Advanced Warfighting School (JAWS) and Joint and Combined Warfighting School (JCWS).* (Norfolk, VA, [March 2014]).

[21] Due to faculty manpower cuts, the size and composition of JCWS classes by 2019 will have decreased from 255 students to 198 – a reduction in throughput of 22%.

convenience of the officers to receive JPME II, but rather the effectiveness of the education. Likewise, proposals for attendance by active component officers to the hybrid program represent another matter for careful and deliberate consideration. Given the compositional differences between these populations and the reservations expressed by several studies regarding distance education approaches for active component officers, shoe-horning active component officers into a distance learning program may do more harm than good. The joint staff should take a "go slow" approach and carefully study the cognitive and affective attitudinal performance of active component officers attending the hybrid program as this should logically compare to the performance of the active component officers attending the resident program.

Finally, the joint staff must remain vigilant in avoiding pressures for "diploma-mill" approaches to JPME II, of which the Skelton panel warned.[22] Rather than to create a deeper pool of truly joint-minded warriors, many decisions in the past to accredit a growing number of institutions to deliver JPME II were motivated by desires to increase the number of joint-qualified officers on the books, to provide a greater pool of officers from which the services could promote, or to protect particular programs from the chopping block. Jointness and joint acculturation have sometimes taken a back seat. Reflecting back to the explicit and paramount intent of the Skelton panel when they created JPME II, the cornerstone for any JPME II program is the inculcation of greater understanding and appreciation for the cultures of the services and especially their members in the minds of their students. Doing this to a degree that is

[22] *U.S. Congress. House of Representatives. Report of the Panel on Military Education of the One Hundredth Congress of the Committee on Armed Services*, [1989]).: 112.

meaningful in the increasingly complex joint operational environment will take time and resources—it cannot be accomplished quickly or cheaply.

Limitations of this Study

Certain limitations do exist regarding the findings of this study, and first among these is their generalization—we cannot be certain of the implications of the findings for other JPME II-accredited programs outside of JFSC because these programs employ different methods. Each differs in OPMEP mission statement and objectives, lesson content, instructional approach, duration, and student population. Compositional differences in the treatment groups presented a limitation that was difficult to overcome as random assignment of subjects among three delivery methods was not possible. The result of this is that the effects of treatment cannot be clearly attributed to the particular delivery employed or to the type of student attending it. The comparatively small sample size of the satellite group also represents a limitation not only from the standpoint of statistical analysis, but also in terms of its true representation of the population it reflects. A much larger and balanced sample size would improve the confidence in the findings of this study and could conceivably deliver substantially different results. Limitations were also present in the survey instrument in that it only measured cognitive attitudinal outcomes, leaving the affective dimension of prejudice unassessed. In this regard, the findings of this study are incomplete with respect to the reduction of inter-service prejudice achieved by each JPME II delivery method, and subsequent evaluations of the comparability and effectiveness of the resident, hybrid, and satellite methods should be circumspect.

Recommendations and Areas for Further Research

This study described the close and inversely proportional relationship existing between joint acculturation and inter-service prejudice, where achieving the optimal level of the former requires the minimization of the latter within a JPME II contact experience. But simply minimizing inter-service prejudice by itself does not assure optimal acculturation. At best, measuring the reduction of prejudice provides only a very indirect indication of the joint acculturation that may be occurring as a result of attending the JPME II methods. Again, this represents a valuable area worthy of further research and would require the development of an assessment instrument specifically designed to measure the shift in officer beliefs and values from service-centrism toward a joint perspective. Yet, it would be insufficient to simply develop an instrument that can measure joint acculturation because measurement for its own sake is of little value. The measure must apply to an objective outcome for joint acculturation if the measure is intended to be meaningful. However, no standard—objective or subjective—exists regarding the level of joint acculturation that JPME II graduates should reach as a result of attending one of the JPME II delivery methods. The definition and implementation of such a joint acculturation objective is a necessary first step for any determination regarding the length or duration of any particular JFSC JPME II delivery method. This is because the achievement of a joint acculturation objective that is both meaningful and lasting will unquestionably take time and emphasis.[23]

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[23] Consider the lack of specificity in the JCWS Student Outcome with respect to Joint Attitudes and Perspective. This points to the acculturation that must occur during JPME II and this is essential to creating truly joint-minded officers. Without such specificity, the Student Outcome statement, which represents what the course is supposed to achieve, is characterized only by cognitive-aspect education and implies that such can be effectively achieved by any delivery means, including approaches comprised entirely of distance learning.

Additionally, the limitations of the JFSC Joint Acculturation Survey instrument effectively confined the scope of this study to the cognitive dimension of prejudice, and so the impact of the various JFSC JPME II delivery methods in the affective attitudinal domain remains unknown. Yet, this domain is where Pettigrew and Tropp argue the greatest change occurs as a result of intergroup contact. Success in this domain is characterized by the development of meaningful and lasting professional relationships between members of different groups—the officers from the different services in the context of this study. Likewise, the development of joint attitudes and perspectives, identified in Chapter II as the most important aspect of JPME II, also hinge on affective attitudinal change. This means that the full impact, and perhaps the most substantial and valuable contribution by each of the JPME II programs offered by JFSC, remains unknown. It is a particularly important area for further research and would require the development of a new survey tool that can measure the affective attitudinal change experienced by officers attending any of the JPME II delivery methods.

Finally, to better resolve the question of whether the type of student matters within the various JPME II methods employed by the JFSC, additional research should focus on the cognitive and affective performance of active component officers within the distance-learning structure of the hybrid method. As mentioned earlier in this chapter, it would be simplistic to assume the resident and hybrid methods are comparable solely on the basis of pre- and post-treatment group means because the interaction between method and subject is complex. Placing active component officers holding more deeply instilled prejudices into a longer but much less intensive program may deliver disappointing or unacceptable results. This may be especially so if active component officers receiving hybrid treatment remain entrenched in a

highly service-centric environment during the distance-learning portions of the program. This is notwithstanding the undesirable implications discussed in Chapter II that a distance learning approach may carry for active component officers serving in demanding assignments. In short, it would be simplistic to assume that the hybrid approach is a universally effective method for delivering JPME II.

Final Thoughts

There are two contributions by this study that are considered the most valuable. First is that this study represents one of very few, if any, works explicitly linking the field of social psychology to the importance and understanding of jointness and joint acculturation. Within the hundreds of reports, studies, and articles on jointness and joint professional military education produced since 1989, any consideration of the psychology involved in the mental transformation that is joint acculturation remains virtually absent. Consequently, this means a broad understanding of joint acculturation within the defense establishment and the JPME II approaches developed to achieve it have been under-informed. The consideration and understanding of human psychology is indispensable when seeking to instill the joint attitudes and perspectives that comprise jointness.

A second contribution considered especially important is the clarification of the relationship between the process of cultural change, which is joint acculturation, and that of reducing prejudice between members of different groups, which is inter-service prejudice. Indeed, the reality of inter-service prejudice has been around for a long time, but hidden within euphemisms such as inter-service rivalry and service parochialism. Inter-service prejudice is an

anathema to a joint perspective and attitude, and its minimization is a necessary antecedent to the joint acculturation of officers belonging to different service cultures. JPME II approaches, long thought to cause joint acculturation, can only set the conditions for optimal acculturation to occur, and these must do this by minimizing the inter-service prejudices harbored by the officers attending them.

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APPENDIX A

JFSC JOINT ACCULTURATION SURVEY

Joint Acculturation Survey (Post)

Please complete the below survey in its entirety. It is estimated to take approximately 30 minutes. The survey is designed to assess your perceptions of the US military Services and other organizations.

"Acculturation" is defined as the process of understanding the separate Service cultures (and other organizations) resulting in joint attitudes and perspectives, common beliefs, and trust, which occurs when diverse groups come into continuous direct contact. Acculturation occurs during activities involving members of Services, agencies, and/or countries other than one's own.

General Service Values

Along each continuum please rate your perceptions of the respective Services, as you believe their Service members demonstrate the following values.

1.

	Discouraging - 1	2	3	4	5	6	7 - Motivating
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍

U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

2.

	Subdued - 1	2	3	4	5	6	7 - Enthusiastic
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

3.

	Callous - 1	2	3	4	5	6	7 - Empathetic
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

4.

	Less Skilled - 1	2	3	4	5	6	7 - Competent
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

5.

	Abrupt - 1	2	3	4	5	6	7 - Respectful
U.S. Army	❍	❍	❍	❍	❍	❍	❍

U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

6.

	Timid - 1	2	3	4	5	6	7 - Bold
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

7.

	Unfaithful - 1	2	3	4	5	6	7 - Loyal
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

8.

	Egocentric - 1	2	3	4	5	6	7 - Selfless
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

9.

	Dishonorable - 1	2	3	4	5	6	7 - Principled
U.S. Army	❍	❍	❍	❍	❍	❍	❍

U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍

page break

"Acculturation" is defined as the process of understanding the separate Service cultures (and other organizations) resulting in joint attitudes and perspectives, common beliefs, and trust, which occurs when diverse groups come into continuous direct contact. Acculturation occurs during activities involving members of Services, agencies, and/or countries other than one's own.

Joint Attributes

Please rate your perception of the joint attributes listed below.

10. **The extent to which you believe each Service/organization values joint operations.**

	Not at all - 1	2	3	4	5	6	7 – Very much
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍
U.S. Government Agencies	❍	❍	❍	❍	❍	❍	❍
Non-Governmental Organizations	❍	❍	❍	❍	❍	❍	❍
Multinational Partners	❍	❍	❍	❍	❍	❍	❍

11. **The extent to which you believe each Service/organization is able to contribute to joint operations.**

	Not at all - 1	2	3	4	5	6	7 – Very much

U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍
U.S. Government Agencies	❍	❍	❍	❍	❍	❍	❍
Non-Governmental Organizations	❍	❍	❍	❍	❍	❍	❍
Multinational Partners	❍	❍	❍	❍	❍	❍	❍

12. **Your ability to work with each Service/organization.**

	Not at all - 1	2	3	4	5	6	7 – Very much
U.S. Army	❍	❍	❍	❍	❍	❍	❍
U.S. Navy	❍	❍	❍	❍	❍	❍	❍
U.S. Air Force	❍	❍	❍	❍	❍	❍	❍
U.S. Marine Corps	❍	❍	❍	❍	❍	❍	❍
U.S. Government Agencies	❍	❍	❍	❍	❍	❍	❍
Non-Governmental Organizations	❍	❍	❍	❍	❍	❍	❍
Multinational Partners	❍	❍	❍	❍	❍	❍	❍

13. **Your ability to substantially and effectively contribute to a joint team.**

	Not at all - 1	2	3	4	5	6	7 - Very much
Prior to attending this class	❍	❍	❍	❍	❍	❍	❍
Upon completion of this class	❍	❍	❍	❍	❍	❍	❍

"Acculturation" is defined as the process of understanding the separate Service cultures (and other organizations) resulting in joint attitudes and perspectives, common beliefs, and trust, which occurs when diverse groups come into continuous direct contact. Acculturation occurs during activities

involving members of Services, agencies, and/or countries other than one's own.

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14. **Please answer the following acculturation questions.**

	Strongly Disagree - 1	2	3	4 - Strongly Agree
As a result of my JFSC attendance, my perceptions of other Services, agencies, and/or countries changed.	❍	❍	❍	❍
Acculturation at JFSC contributed to my professional growth and development during the program.	❍	❍	❍	❍
My seminar faculty encouraged or facilitated acculturation.	❍	❍	❍	❍
My seminar worked well together.	❍	❍	❍	❍

15. **Please select the acculturation activities you participated in <u>outside</u> of the classroom while enrolled at JFSC. Check all that apply.**

❑ Professional discourse with faculty that enhanced my appreciation of other Services and/or understanding of the joint force

❑ Professional discourse with other students that enhanced my appreciation of other Services and/or understanding of the joint force

❑ Living in on-campus housing with other students

❑ Required softball/volleyball

❑ Non-mandatory group sports/exercise

❑ Non-mandatory social events

❑ Non-mandatory offsite learning activities (e.g., ship/museum visits)

❑ Study sessions with other students

16. **On average, how often did you participate in acculturation activities <u>outside</u> of the classroom?**

❍ Never

❍ A few times during the class

❍ Once a week

❍ A few times a week

❍ Every day

17. **Total <u>years</u> of military service while in active duty status (Title 10)**

18. **Total <u>months</u> served in active duty status at a unified or sub-unified command, Joint Task Force, or other joint operational headquarters (e.g., USCENTCOM, USFK, JTF-HOA)**

19. **Age in <u>years</u>**

20. **If you have any additional comments regarding your acculturation experience while enrolled at JFSC, please provide them below.**

_____
_____
_____

HIDDEN (pre-populated on back end, students will not see)

School –HIDDEN (pre-populated on back end)

- ❍ JAWS
- ❍ JCWS
- ❍ AJPME

Seminar –HIDDEN (pre-populated on back end)

- ❍ 1
- ❍ 2
- ❍ 3
- ❍ 4
- ❍ 5
- ❍ 6
- ❍ 7
- ❍ 8
- ❍ 9
- ❍ 10
- ❍ 11
- ❍ 12
- ❍ 13
- ❍ 14
- ❍ 15
- ❍ Tampa
- ❍ NORTHCOM
- ❍ TRANSCOM
- ❍ AFRICOM
- ❍ EUCOM
- ❍ PACOM
- ❍ SOUTHCOM
- ❍ STRATCOM

Service –HIDDEN (pre-populated on back end)

- ❍ U.S. Air Force
- ❍ U.S. Army
- ❍ U.S. Coast Guard
- ❍ U.S. Marine Corps

- ❍ U.S. Navy
- ❍ DoD Civilian
- ❍ Non-DoD Civilian
- ❍ International Officer
- ❍ International Civilian

Affiliation –HIDDEN (pre-populated on back end)

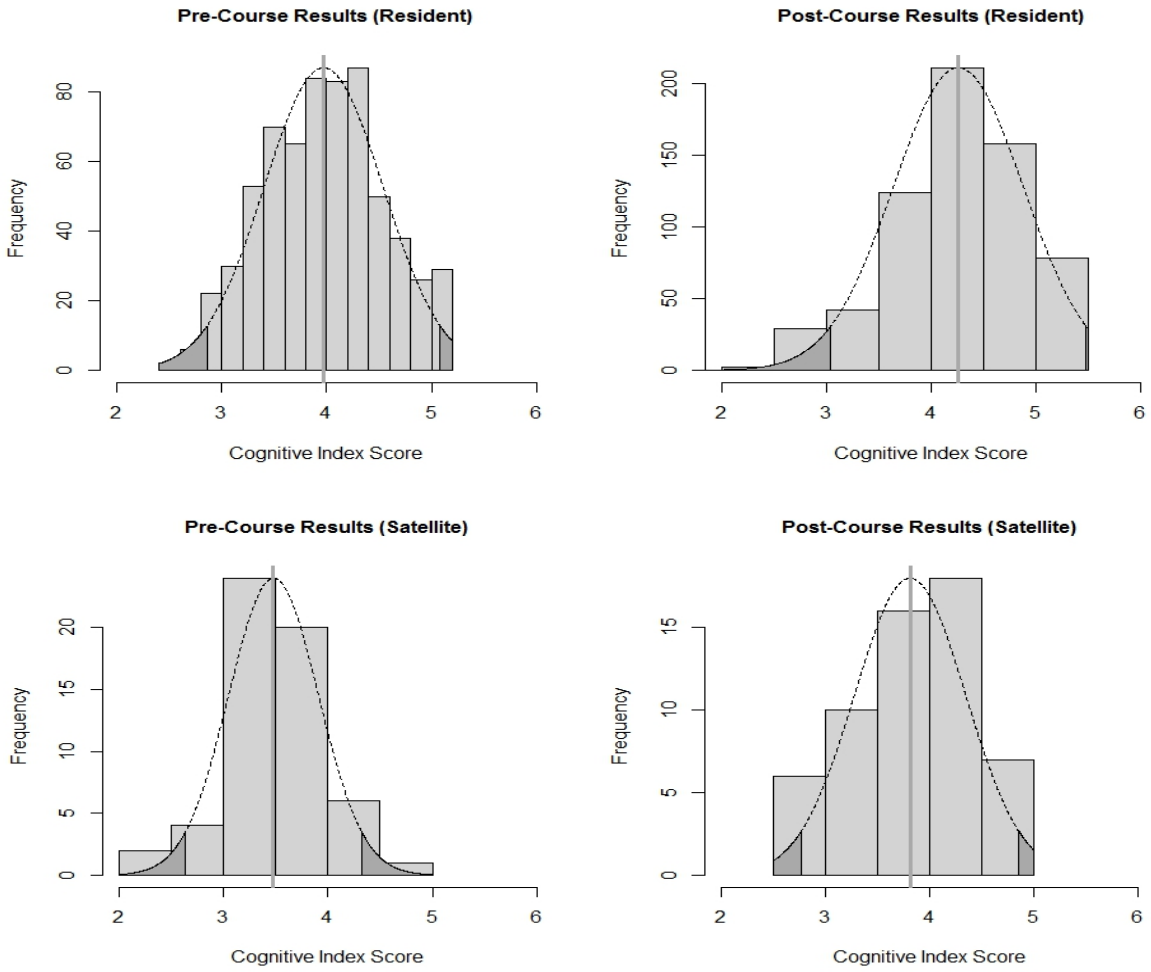
- ❍ Active
- ❍ Guard
- ❍ Reserve
- ❍ Civilian
- ❍ International

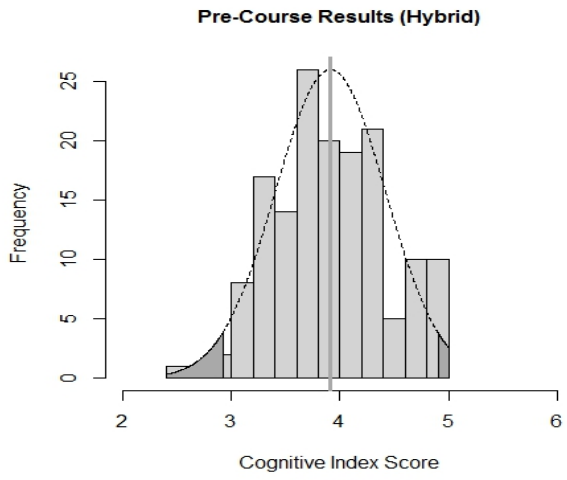
Grade (or equivalent grade) –HIDDEN (pre-populated on back end)

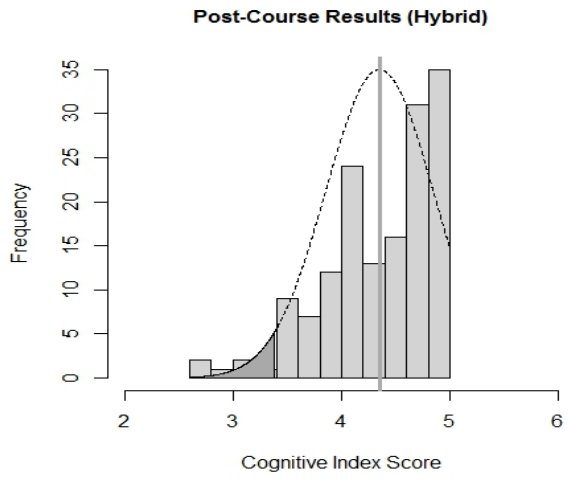
- ❍ O-3
- ❍ O-4
- ❍ O-5
- ❍ O-6
- ❍ O-7
- ❍ O-8
- ❍ GS-13
- ❍ GS-14
- ❍ GS-15
- ❍ Other: _____

APPENDIX B

PRE- AND POST-TREATMENT HISTOGRAMS BY METHOD




Pre-Course Results (Hybrid)
Frequency
0
5
10
15
20
25
2
3
4
5
6
Cognitive Index Score


Post-Course Results (Hybrid)
Frequency
0
5
10
15
20
25
30
35
2
3
4
5
6
Cognitive Index Score

APPENDIX C

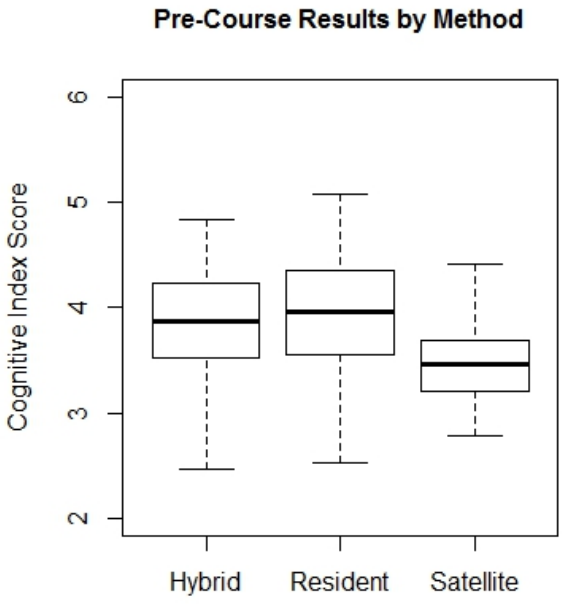
COMPUTATION OF METHOD-SPECIFIC FACTOR WEIGHTS

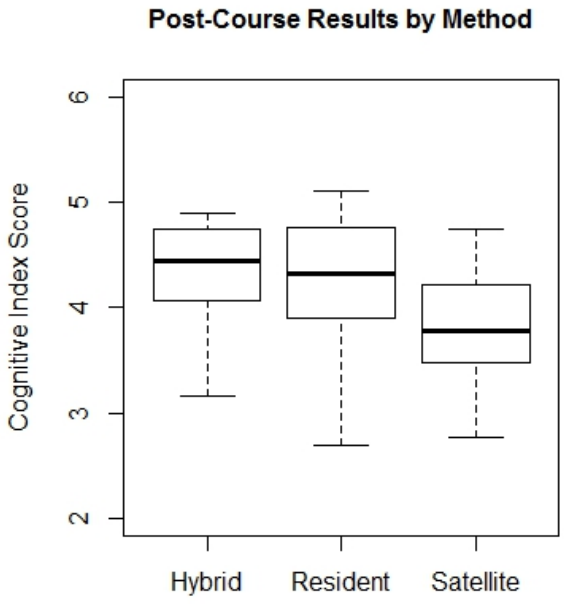
	JOINT ACCULTURATION SURVEY QUESTIONS										
	#1	**#2**	**#3**	**#4**	**#5**	**#6**	**#7**	**#8**	**#9**	**#10**	**#11**
RESIDENT *(n = 645)*											
USA	*0.79*	*0.75*	*0.71*	*0.8*	*0.79*	*0.71*	*0.77*	*0.74*	*0.79*	*0.68*	*0.63*
USN	*0.83*	*0.81*	*0.73*	*0.8*	*0.77*	*0.77*	*0.76*	*0.8*	*0.78*	*0.73*	*0.62*
USAF	*0.81*	*0.8*	*0.6*	*0.73*	*0.73*	*0.75*	*0.77*	*0.77*	*0.78*	*0.7*	*0.66*
USMC	*0.71*	*0.68*	*0.56*	*0.75*	*0.64*	*0.65*	*0.72*	*0.67*	*0.76*	*0.58*	*0.63*
AVERAGE	**0.79**	**0.76**	**0.65**	**0.77**	**0.73**	**0.72**	**0.76**	**0.75**	**0.78**	**0.67**	**0.64**
SATELLITE (*n = 57*)											
USA	*0.79*	*0.65*	*0.64*	*0.79*	*0.7*	*0.66*	*0.7*	*0.73*	*0.72*	*0.55*	*0.65*
USN	*0.83*	*0.8*	*0.72*	*0.61*	*0.75*	*0.73*	*0.68*	*0.76*	*0.68*	*0.59*	*0.57*
USAF	*0.86*	*0.81*	*0.64*	*0.73*	*0.58*	*0.86*	*0.72*	*0.77*	*0.74*	*0.44*	*0.58*
USMC	*0.75*	*0.67*	*0.38*	*0.66*	*0.56*	*0.79*	*0.73*	*0.62*	*0.77*	*0.2*	*0.61*
AVERAGE	**0.81**	**0.73**	**0.60**	**0.70**	**0.65**	**0.76**	**0.71**	**0.72**	**0.73**	**0.45**	**0.60**
HYBRID (*n = 153*)											
USA	*0.81*	*0.81*	*0.73*	*0.81*	*0.75*	*0.64*	*0.78*	*0.75*	*0.76*	*0.67*	*0.56*
USN	*0.82*	*0.8*	*0.7*	*0.67*	*0.76*	*0.71*	*0.79*	*0.78*	*0.76*	*0.69*	*0.55*
USAF	*0.8*	*0.75*	*0.47*	*0.66*	*0.75*	*0.68*	*0.78*	*0.77*	*0.76*	*0.68*	*0.64*
USMC	*0.69*	*0.61*	*0.59*	*0.71*	*0.58*	*0.56*	*0.7*	*0.67*	*0.72*	*0.6*	*0.54*
AVERAGE	**0.78**	**0.74**	**0.62**	**0.71**	**0.71**	**0.65**	**0.76**	**0.74**	**0.75**	**0.66**	**0.57**

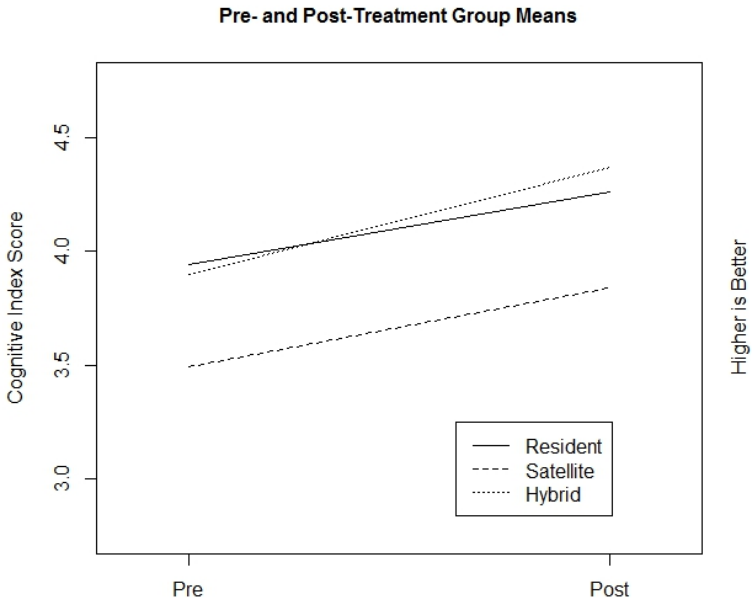
APPENDIX D

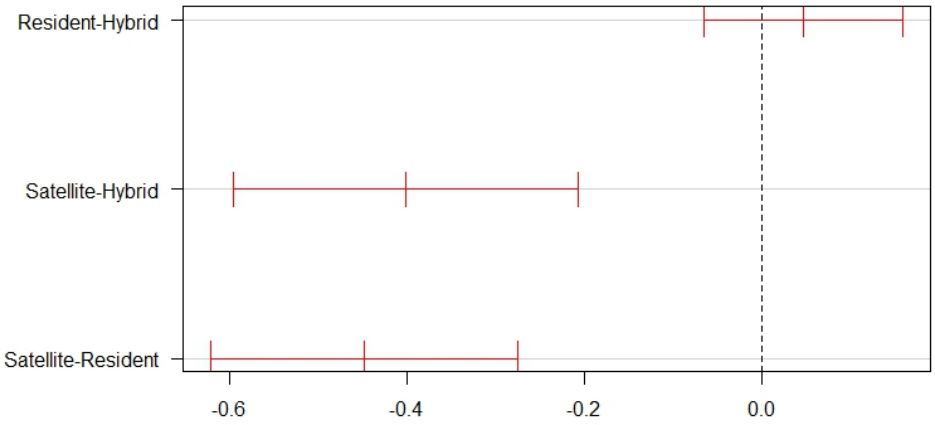
STATISTICAL ANALYSIS WITH EXCLUSION OF OUTLIER OBSERVATIONS

Resident n = 622, Satellite n= 54, Hybrid n = 146

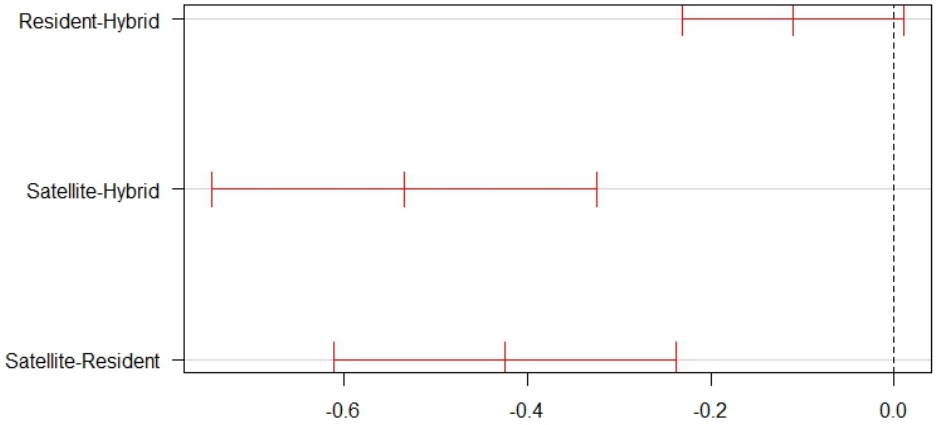




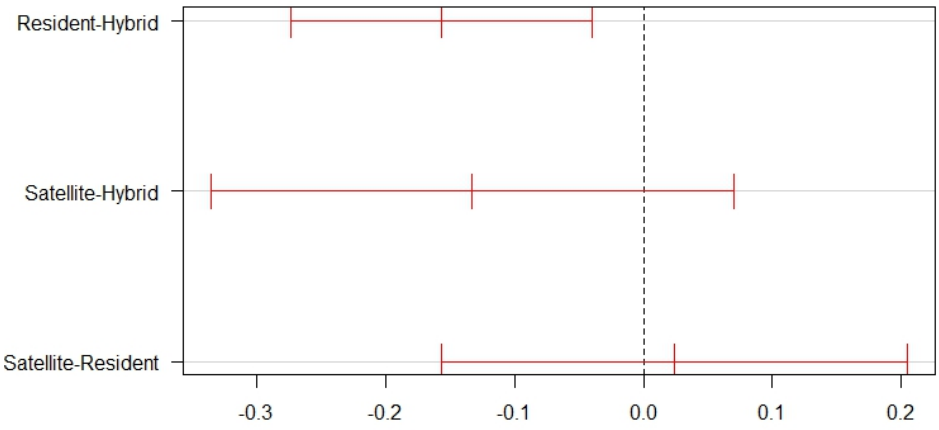




ANOVA Results - Differences in Pre-Course Group Means



ANOVA Results - Differences in Pre-Course Group Means



ANOVA Results - Differences in Pre-Course Group Means

	ENTIRE DATASET		RESIDENT		SATELLITE		HYBRID	
	Estimate	*Std Err*	*Estimate*	*Std Err*	*Estimate*	*Std Err*	*Estimate*	*Std Err*
Intercept	*1.614 ****	*0.252*	*1.133 ****	*0.343*	*1.222*	*1.300*	*2.880 ****	*0.474*
Active Service	*0.003*	*0.005*	*-0.007*	*0.009*	*0.022*	*0.039*	*0.004*	*0.006*
Joint Experience	*-0.001*	*0.001*	*-0.001*	*0.001*	*-0.006*	*0.004*	*0.001*	*0.003*
Age	*0.012 **	*0.006*	*0.020 **	*0.009*	*0.024*	*0.032*	*0.009*	*0.010*
Education	*0.060*	*0.054*	*0.087*	*0.074*	*0.019*	*0.210*	*-0.033*	*0.088*
Rank	*-0.003*	*0.032*	*-0.002*	*0.046*	*-0.281*	*0.147*	*-0.049*	*0.059*
USN	*0.001*	*0.049*	*0.011*	*0.058*	*0.174*	*0.191*	*-0.105*	*0.102*
USAF	*0.023*	*0.042*	*-0.011*	*0.051*	*0.183*	*0.174*	*0.041*	*0.092*
USMC	*-0.054*	*0.085*	*0.010*	*0.103*	*-0.304*	*0.392*	*-0.298 .*	*0.159*
Cog.Pre	*0.523 ****	*0.035*	*0.560 ****	*0.040*	*0.666 ****	*0.183*	*0.354 ****	*0.078*
Resident	*-0.100 .*	*0.061*						
Satellite	*-0.275 ***	*0.089*						
Multiple R^2 =	*0.29*		*0.31*		*0.38*		*0.28*	
p =	*0*		*0*		*0.02*		*< 0.001*	
n =	*764*		*573*		*51*		*140*	

*Significance codes: ' *** ' = .001 ' ** ' = .01 ' * ' = .05 ' . ' = 0.1*

Regression Results – Predicting Post-Course Cognitive Index Scores

	ENTIRE DATASET		RESIDENT		SATELLITE		HYBRID	
	Estimate	*Std Err*	*Estimate*	*Std Err*	*Estimate*	*Std Err*	*Estimate*	*Std Err*
Intercept	*3.438 ****	*0.168*	*3.432 ****	*0.242*	*3.771 ****	*0.703*	*3.619 ****	*0.287*
Active Service	*0.006*	*0.004*	*-0.010*	*0.007*	*0.043 .*	*0.025*	*0.003*	*0.004*
Joint Experience	*-0.001*	*0.001*	*-0.001*	*0.001*	*-0.006 **	*0.003*	*0.001*	*0.002*
Age	*0.014 ***	*0.004*	*0.011*	*0.007*	*0.005*	*0.022*	*0.015 .*	*0.007*
Education	*0.051*	*0.043*	*0.071*	*0.058*	*0.171*	*0.140*	*-0.022*	*0.067*
Rank	*-0.069 **	*0.027*	*-0.058*	*0.037*	*-0.313 ***	*0.102*	*-0.080 .*	*0.046*
USN	*-0.074 .*	*0.038*	*-0.076 .*	*0.046*	*-0.102*	*0.127*	*-0.052*	*0.078*
USAF	*-0.112 ****	*0.033*	*-0.106 ***	*0.040*	*-0.073*	*0.115*	*-0.146 **	*0.069*
USMC	*-0.268 ****	*0.066*	*-0.281 ****	*0.080*	*-0.206*	*0.263*	*-0.288 **	*0.122*
Treatment	*0.357 ****	*0.028*	*0.328 ****	*0.033*	*0.343 ****	*0.085*	*0.543 ****	*0.087*
Multiple R^2 =	*0.18*		*0.12*		*0.26*		*0.31*	
p =	*0*		*0*		*< 0.01*		*0*	
n =	*764*		*573*		*51*		*140*	

*Significance codes: ' *** ' = .001 ' ** ' = .01 ' * ' = .05 ' . ' = 0.1*

Regression Results – Predicting Cognitive Index Scores Pre- and Post-Treatment

VITA

CHARLES MARK DAVIS
Graduate Program for International Studies
7045 Batten Arts & Letters, Norfolk, VA 23529

PROFESSIONAL SUMMARY

Experienced educator and career military officer possessing knowledge and expertise in graduate-level leader education in Strategic and Operational-level planning, as well as coordinating Joint, Multinational, and Interagency operations; Also possessing secondary knowledge in planning, implementation, and operation of Department of Defense communications systems and networks.

EXPERIENCE

Civilian (2010 – Present)
Serving as Assistant Professor in the Joint and Combined Warfighting School (JCWS) of the Joint Forces Staff College; Responsible for educating career military officers and national security leaders in National Strategy and joint, multinational and interagency planning and warfighting.

- Educated more than 800 military officers and civilians on joint and combined matters across more than 40 seminars.
- Conducted extensive JFSC outreach activity including activities supporting US Strategic Command, US Joint Forces Command, and NATO.
- Key member supporting US Central Command US-Pakistan Senior Officer program.

Military (1986-2010)
Career Army Officer with over 24 years of in-depth experience in the communications field, serving virtually every level of military command; Held positions of responsibility ranging from Platoon Leader up to Division Chief and Deputy Director in joint military organizations; Managed organizations numbering over 580 personnel and budgets exceeding $3M annually.

- Planned and executed communications operations for several operational-level exercises sponsored by U.S. Pacific Command and U.S. Northern Command.
- Collaborated with local and state governments as well as federal agencies and commercial service providers to address Critical Infrastructure Protection activities.
- Conducted the delivery of advanced Command and Control systems to the highest US military commanders in Europe, Iraq, and Afghanistan.

EDUCATION

Master of Science Degree, Business Organizational Management, University of La Verne, La Verne, California 2002. *Graduated Magna Cum Laude.*

Bachelor of Science Degree, Electronics Engineering Technology, DeVry Institute of Technology, Columbus, Ohio 1986. *Graduated Cum Laude.*