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MASTER OF MILITARY STUDIES

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Relevance of Tuckman's Group Dynamics in Contemporary Military:
The Total-Group Setting

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MASTER OF MILITARY STUDIES

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Executive Summary

Title: Relevance of Tuckman's Group Dynamics in Contemporary Military: The Total-Group Setting

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Thesis: Widely used in the US military as group dynamics training tool is Bruce Tuckman and Mary Ann Jensen's 1977 five stage model. Tuckman and Jensen's model has a linear control system structure, has a homogenous group structure, and does not account for mission (task) diversity; therefore, it is not a useful model for the US military, which needs a more relevant model to train forces to work collectively.

Discussion: Over the last fifty years there have been hundreds of team building, team dynamic models developed. The dynamic nature of human interaction makes developing group dynamic models a difficult task, yet through the years one model has remained at the forefront, the Tuckman-Jensen (1977) five stage model. The linear nature of the Tuckman and Jensen model makes the application to a high-tempo, kinetic, and truly dynamic military environment outdated. Yet very few studies have researched not only how the Tuckman and Jensen model applies but what model should be used in its place. Meanwhile, the Tuckman and Jensen model are taught at Air Force, Marine, and Army PME programs.

Conclusion:. Heterogeneous military teams work multiple places with different group dynamics throughout their careers, and how do you study group dynamics while members are actively engaged in the field under hostile conditions? These diverse teams conducting non-linear operations juggle multiple mission taskings across a broad spectrum of requirements. A new model is needed to represent the *total-group setting* that is the US military environment.

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Preface

For years I have been intrigued with leadership. What does it really mean? I have seen a variety of leaders throughout my days in the civilian world, military and political as we all have. I have had training, seminars, lectures and read many books about what leadership is, and even though I've agreed with pieces, largely I have felt that we are missing something, and I wanted to pursue that missing knowledge and plan to with a PhD in Organization Leadership soon. One thing I have learned is that leadership is not just about the leader, but the followers, the team they lead. I have also learned that leadership is about sacrifice and that we as leaders, as people bring our entire lives of experiences, traumas, childhood, rights and wrongs with us to lead and influence others.

I call the experiences we bring with us our Psychological Neural Net (PN2) which is developed over time based on interacting with people, with the world. So what better way to understand how to be a better leader than to learn how the group that I lead think? To know how they think, I must know why they think the way they do. I have been exposed to the Bruce Tuckman model of group dynamics throughout my career and have always felt something was missing. My analytical, engineering mind thinks in non-linearities, and the Tuckman model is very linear. So, I begin here, with group dynamics, and the military leading to a further study of team dynamics and leadership.

I wouldn't be here if it weren't for the tremendous support and faith the US Air Force has put in me by sending me to Marine Command and Staff College. More so, the support my children have for me in enduring me being gone for the year as this is the toughest part of this journey. Finally, I must thank Dr. Rebeca Johnson for believing in me to support my vision for this thesis as my mentor and trusted advisor.

Abstract

The US military trains its respective riflemen, soldiers, sailors, and airmen to handle almost any scenario laid before them--from office work to combat to leadership. In every environment each of these riflemen, soldiers, sailors, and airmen operate within a team, a group of individuals made up of all races, religions, services, organizations, and countries. Part of their training involves learning how to work within teams or groups. To do this, many institutions within the military's professional military education use Bruce Tuckman and Mary Ann Jensen's five stage group dynamic model. The military uses this aging model to train leaders how to interact within a group, and how to guide subordinates through the five stages.

Tuckman and Jensen's model is structured in a linear, flat format, was researched only within four group settings, and is homogeneous. The flat structure of the Tuckman and Jensen model is not suitable for training in the quantum and dynamic 21st Century US military heterogeneous environment. This paper shows how the Tuckman-Jensen (1977) is not the best model to train both military and industry professionals group dynamics and offers an alternative solution.

Introduction

Tuckman (1965) analyzed research studies of group dynamics up to the time of his publishing and identified four representative group settings that allowed him to bundle like characteristics such as group size, composition, duration of group life, etc.¹ The first, *group-therapy setting*, is a group of individuals who need assistance with personal problems. These groups consist of 5 to 15 members, led by a single therapist from three months or more. The second group, *human relations training-group (T-group) setting*, is where individuals are more interactive with each other, consists of 15 to 30 members, led by a corporate executive or trainer from three weeks to six months.² These two groups are similar in the subjective manner as to which data is collected; they differ in the group tasks, composition and in duration together.³

The third setting, *laboratory-task setting*, are groups that have come together to study group phenomena may or may not have leaders, small in member numbers with short durations. The final group setting, *natural-group setting*, are brought together to complete a professional or social function, a task. Their existence depends on doing a “job” led by a hierarchal structure of “appointed or emergent leadership”.⁴ Of the four group settings, the *natural-group setting*, most accurately resembles the military structure. None of these group settings represent the total nature of the military team setting, although pieces of each group setting have relevance.

¹ Bruce W. Tuckman, Developmental Sequence in Small Groups, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 384, 1965.
http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Dynamics/Tuckman_1965_Developmental_sequence_in_small_groups.pdf

² Ibid, 384-385

³ Bruce W. Tuckman, Developmental Sequence in Small Groups, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 385, 1965.
http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Dynamics/Tuckman_1965_Developmental_sequence_in_small_groups.pdf

⁴ Ibid, 385

The Tuckman and Jensen (1977)⁵ model does not accurately represent the full dynamic of the military team, though it is a foundation for developing a model that does. The military team has a dynamic though hierarchal structure, must handle several group-settings throughout the day, week, year sometimes simultaneously. The group settings that were researched and attributed to the creation of the model had a finite environment not the 24/7 environment military members work within. The application of Tuckman and Jensen (1977) has been worldwide and offers a strong foundation for studying group dynamics, however, much like in other industries the model needs adjusting to better represent the applicable group dynamic. This paper serves to offer a suggestion to the US Military that further research and analysis is required to develop a more applicable team dynamic model to utilize when training military forces how to lead groups or teams and how to use group dynamics to train forces to work in a joint environment.

The military leader based in hierarchal leadership and rank structure, utilizing situational leadership techniques to develop team cohesion must be able to move the group in an infinite number of directions avoid the nature of team taskings or the time needed for members to develop through stages as a group. The original focus of Tuckman and Jensen's (1977)⁶ research was that of group and work settings in an era where the workforce was largely white male dominated, not culturally diverse, and the nature of coalition operations were minimalistic at best. The operation or tasking a military team must accomplish isn't always tangible and can fluctuate throughout the mission based on the type of warfare and enemy faced, status of team members changing frequently and across career fields, and political and diplomatic decision makers outside the military structure changing the desired results.

⁵ Mary Ann C. Jensen. Stages of Small-Group Development – Revisited, Western Illinois University, http://faculty.wiu.edu/P-Schlag/articles/Stages_of_Small_Group_Development.pdf

⁶ Mary Ann C. Jensen. Stages of Small-Group Development – Revisited, Western Illinois University, http://faculty.wiu.edu/P-Schlag/articles/Stages_of_Small_Group_Development.pdf

THE TUCKMAN AND JENSEN (TJ) MODEL

The military has utilized Tuckman and Jensen's model in both officer and enlisted military professional military education (PME), and largely without modification to teach future leaders how to develop teams to accomplish mission sets or tasks, and as a tool to develop a joint mindset when working with other service branches, coalition partners, allies, and across the ranks. The purpose of the model, according to the Marine Corps University, "provides the foundation for this lesson [Group Dynamics]...the model is a simple five stage framework that explains the basics of group dynamics... [Tuckman's model] introduces key group dynamics and team building concepts that will be reiterated and reinforced throughout the entire Leadership curriculum... providing students with concepts that they can apply real-time during team planning exercises, practical applications, and other small group activities."⁷ Clearly, a large amount of trust is put into Tuckman-Jensen (1977) model.

The Tuckman and Jensen (1977) model is organized in a flat, linear structure comprised of four limited group settings, researching homogeneous groups of people who were in the group for very limited time frames. Bruce Tuckman wasn't the first to attempt to develop a working model of group or team dynamics. In fact, his work, done in 1965 was an analysis of current literature of twenty-six studies which he categorized into four group settings; *group-therapy setting*, *human relations training-group setting (T-Group)*, *laboratory-group setting*, and *natural-group setting*. Tuckman excelled in his categorization of each system by setting the independent variables for evaluation into two components; interpersonal versus task orientation, which distinguished the groups between "group structure" and "task activity". From here, he

⁷ Kelley, CDR S. A. 9 Aug 2018, Group Dynamics, Marine Corps University, Command and Staff College, <https://usmc.usalearning.net/mod/resource/view.php?id=131517>.

evaluated each of the settings and devised a recommended new categorization of group dynamics, his famous *forming, storming, norming and performing*.⁸

In the *forming* stage, group members are highly dependent on the formal leader of the group and try to establish boundaries with fellow members and understand the team's purpose. The *storming* phase is heavily based in the emotional realm, where members position themselves against other team members to establish hierarchy. This causes resistance towards members, the leader and task requirements. The *norming* stage is where the team moves together, makes group decisions, establishes and accepts roles, relies less on the leader for direction and shares personal vulnerabilities. The final stage, *performing* is when the structure of the team is no longer an issue and all energy is focused on completing the task.⁹ An article Alan Chapman had pulled from www.businessballs.com, later published on the Virginia Commonwealth University's webpage argues this is where the leader moves on to another team.¹⁰ It is unclear in the Tuckman's (1965) publication or the models he reviewed that this was the case; however, with Tuckman and Jensen adding *adjourning* to the model one could see the inference.

Tuckman (1965) admits his model is not complete with the data present at the time. Transition time between stages is not considered in his original publication and there are independent variables (group composition, specific group tasks, etc.) not disclosed in the studies that he reviewed¹¹. His model today is used widely amongst the business world, therapeutic

⁸ Bruce W. Tuckman, Developmental Sequence in Small Groups, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 384-395, 1965.
http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Dynamics/Tuckman_1965_Developmental_sequence_in_small_groups.pdf

⁹ Ibid 396

¹⁰ Virginia Commonwealth University, Tuckman forming storming norming performing model : Bruce Tuckman's 1965 Forming Storming Norming Performing team-development model,
<http://www.people.vcu.edu/~albest/woodbadge/SR917/Planning/CDDC/Team%20Building%20Ideas/Tuckman%20Form%20Storm%20Norm%20Perform.pdf>

¹¹ Bruce W. Tuckman, Developmental Sequence in Small Groups, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 398, 1965.

groups, medical, and countless other industries in maintaining group cohesiveness. Dr. Denise Bonewright reviewed studies that evaluated Tuckman and Jensen's five stage model across four decades following his original model. Bonewright showed the industries previously mentioned utilizing over 250 different models or group development, 16% mentioned Tuckman's model. The studies and usage largely centered around Human Resource Development, and business and office settings to include female dominant nursing programs. Tuckman's (1965) work seemed to spawn a revolution and birth of group dynamic study.¹²

Where does the military fit into this scheme of group development? As mentioned previously, Tuckman (1965) diversified the studies into four settings, of which one, *natural-group setting* resembles to the military structure. For the purpose of this analysis the *natural-group setting* will be the only setting evaluated. In his review of literature, he notes that very few studies cover the natural-group setting, yet contends that "any group, regardless of setting, must address itself to the successful completion of a task."¹³

Tuckman (1965) broke down his review of each setting into four stages:

- *Stage 1: Group Structure: Testing and Dependence, Task Activity: Orientation.*
- *Stage 2: Group Structure: Intragroup Hostility, Task Activity: emotional response to task demands.*
- *Stage 3: Group Structure: Development of Group Cohesion, Task Activity: Expression of Opinions.*

http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Dynamics/Tuckman_1965_Developmental_sequence_in_small_groups.pdf

¹² Denise A. Bonebright, 40 Years of storming: a historical review of Tuckman's model of small group development, Human Resource Development International, Vol 13, No. 1, 2010, 111-119.

https://www.academia.edu/4261494/Review_of_tuckmans_model

¹³ Ibid, 385

- *Stage 4: Group Structure: Functional Role-relatedness, Task Activity: Emergence of Solution.*¹⁴

In Stage 1 members identify with a sense of tradition and were dependent on serving in roles prior to becoming a member of the group, which gave them a sense of a hierarchal structure where a single leader is expected. Of note, members tend to have a pre-conceived (conceptualizing) notion of the group and the decision to join is not taken lightly. In this step task activity of orientation is given by the leader defining what to do and how. Members in Stage 2 begin to struggle against leadership as they try to determine their place in the hierarchal structure. One could argue that this struggle doesn't happen in the military where a strong hierarchal structure is well established; however, this stage could be perceived occurring during initial, or basic training as part of the *storming* phase integrating into the military culture. Task activity in this Stage involves an emotional response to task, and with sometimes the extreme conditions and possible life taking activities required of the military group this can be a strenuous adaptation.

Stage 3 group structure becomes heavy on interpersonal dependence where members rely on each other on a personal level and are even interdependent¹⁵. This would be the case where, in many cases within the military one member must trust their life to another. The task activity centers around evaluations but unlike the therapy group where discussions are done with one another¹⁶, the realm of evaluations in the military construct would be on performance feedback. The final stage reveals the well-oiled-machine, where members can perform either individually

¹⁴ Ibid, 393-395

¹⁵ Bruce W. Tuckman, Developmental Sequence in Small Groups, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 394, 1965.
http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Dynamics/Tuckman_1965_Developmental_sequence_in_small_groups.pdf

¹⁶ Ibid, 394

or as a whole, and task completion is primary. A finding of note was that task completion in this stage was independent of the sex of the members.¹⁷ Based on the male dominated workforce in the 1950's and 60's it would be difficult to surmise that gender diversity in these groups was represented .leading to the conclusion that the groups were very homogeneous in nature, and as the diversity of these groups was not discussed in the research, they are presumed homogeneous.

In all four group-settings, throughout each stage that Tuckman and Jensen explored, the structure of group development is laid out in a linear fashion, moving from one stage to the next as a group dependent of individual progress or potential regression. Tuckman describes this as a child developing from infancy into the rebellious *terrible twos* and maturing through childhood further emphasized by his description of his proposed new stages where the *group* moves from one stage to the next seemingly dependent on individuals coalescing prior to maturing to the next stage.¹⁸ This step by holistic step from one stage of development to another is equivocal to that of a linear function where for every 'X' variable there is one 'Y'; "of, relating to, or based or depending on sequential development."¹⁹

Tuckman points out some irregularities in the studies that he originates his hypothesis on, "cannot be substantiated with available data". He points out the studies do not address independent variables, time dependency or rate of development but that they still lay a foundation for developing a model.²⁰ The term foundation is loosely used as a model without a complete foundation is no more than a house of cards waiting for the table that it is set upon gets bumped by a passerby. An independent variable as used in scientific studies is a variable,

¹⁷ Ibid, 394-395

¹⁸ Ibid, 396-397

¹⁹ Merriam-Webster Online Dictionary, s.v. "linear," accessed April 15, 2019, <https://www.merriam-webster.com/dictionary/linear>.

²⁰ Bruce W. Tuckman, Developmental Sequence in Small Groups, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 398, 1965.

something within the group that can be held constant and the experiments observed for effect, then changed to another value and once again observed. As Tuckman pointed out these studies did not identify any independent variables indicating it becomes difficult then to set a baseline which to compare one group to another for comparison to changes and consistencies.

As Tuckman points out, the studies do not address the time the group spends at each stage of development, and as pointed out without independent variables one cannot compare each group setting to another to determine if development through the stages is congruent. This is an important piece for developing a model to study yet is missing here. Tuckman states “the articles reviewed do not deal with rate of temporal change...”²¹ It’s interesting that he chose the term rate of temporal change, or temporal logic which is commonly used in science to indicate a variable that changes at different intervals of time but relies heavily on propositional variables, variables that can be either true or false.²² Tuckman mentioning rate of temporal change indicates he understood the dynamic of a group setting that is inherently not linear. So, the question remains, why is a model that is built on an incomplete foundation, a house of cards that is taught and represented as a linear progression of group development, used so heavily in industry and the military as a training tool for leaders? Is it systematically feasible to utilize a linear model in non-linear and constantly dynamic environments, i.e. the *total-group setting*, or the military?

The United States Military is probably one of the greatest “sports” teams in the world, except at the end of the day there is no trophy to be handed out, just lives on the line. Teamwork and working in a rhythmic unison to a symphony, and perpetually changing of orders in faraway lands, seas and airs [deployed locations] while in combat settings is essential to the harmony that

²¹ Idib, 398

²² <https://www.igi-global.com/dictionary/spatio-temporal-object-modeling/29686>

is their calling. The common glue in all that the military does and one of the things that makes it unique is the constant training they endure. It's more than training how to use a rifle, or to be physically fit; it's about harmony, about teamwork, trust and relationships. The military has some of the best training for what they do, and with lives on the line and the importance of being a harmonious team, why wouldn't that include team or what Bruce Tuckman would reference as Group Dynamics? With the nature of Joint and partner nation military operations, the US military needs a more relevant way to train their forces to work collectively. Widely used in the US military as group dynamics training tool is Bruce Tuckman and Mary Ann Jensen's 1977 five stage model. Tuckman and Jensen's model has a linear control system structure, has a homogenous group structure, and does not account for mission (task) diversity; therefore, it is not a useful model for the US military, which needs a more relevant model to train forces to work collectively.

The Military's Use of Group Dynamics

During the author's career as an Air Force Officer he has attended various leadership, teambuilding, and educational training programs to include PME where the use of Tuckman and Jensen's model was taught. Amongst those were Air and Space Basic Course (ASBC), Squadron Officer School (SOS), and now Marine Command and Staff College. Through his experience as a Commander, he's been aware of the teaching of Tuckman and Jensen's model in enlisted programs as well, such as Airman Leadership School (ALS). Finally, the US Army also teaches Tuckman and Jensen's model (at a minimum) in General Command Staff College²³. The military is using Tuckman and Jensen's model to train Staff level officers coming out of these schools to

²³ Jr, Emmett Perry, Dennis F. Karney, and Daniel G. Spencer. 2013. "Team Establishment of Self-Managed Work Teams: A Model from the Field." *Team Performance Management* 19 (1-2). <https://search-proquest-com.lomc.idm.oclc.org/docview/1559645924?accountid=14746>

be leaders amongst a group setting, teaching stages of group development in working teams, and used as training in leadership in the profession of arms.

As previously mentioned, industry has over 250 group development models that are based on a variety of models tailored to fit the respective environment; of which only 16% mention Tuckman and Jensen's model as a basis. In America (2017 data) there are over 160.3 million people whom hold full time employment (over 35 hours per week), and less than 1.3 million US active duty Department of Defense personnel.²⁴ Together that's 161.6 million people working making the military 0.8% of the workforce. Assuming the other 160.3 million of the workforce represent the data set using 250 different models of group dynamics, then 16% whom mentioned Tuckman leaves 25.6 million people within industry that have been exposed to training based on Tuckman and Jensen's model compared to the 1.3 million US military.

Throughout the Active duty and Reserve career of this author, the use of Tuckman and Jensen's model has been used for training multiple times and levels of career progression with applications both as a follower and a leader. There have been several attempts to gain specific curriculum within the military schools or universities to identify how and when the use of Tuckman and Jensen's model is being used for training; however, schools have been reluctant to share this information. In speaking with various members of the enlisted and officer corps across several service branches Tuckman and Jensen's model has been and is still being used as a form of training members group dynamics. Based on the experience of the author and his interactions with other service members it is assumed that all US military at some point in their career are exposed to training involving Tuckman and Jensen's group dynamic model. The purpose of this paper is to entice a future study into developing a new model and recommend that further

²⁴ Statistics Portal, "Civilian labor force in the United States from 1990 to 2018 (in millions)", accessed April 16, 2019, <https://www.statista.com/statistics/191750/civilian-labor-force-in-the-us-since-1990/>

research go into verifying the specific programs within the military where Tuckman and Jensen's model is being used, and if not what model and why.

The five stage (*forming, storming, norming, performing and adjourning*) Tuckman and Jensen model has been used in various levels of both officer and enlisted professional military education (PME) programs within the Air Force, Army and Marines Corps. It is used as one of the foundations to teaching members how to operate within a group, how to develop within these five stages, and how to develop as a leader within groups using the model as a guide. When used in a junior enlisted setting, Tuckman and Jensen's model is taught with the purpose of developing team members to work together, to overcome personal differences and perform as a unified team to complete a task. As a senior enlisted and as an officer the use of Tuckman and Jensen's model is centered around leading teams or groups and how to develop your team through the stages of development. Either way it is emphasized that the Tuckman and Jensen model is a cornerstone to training members how to function as or lead teams. Industry has developed new ways in which to teach group dynamics, some based off Tuckman and Jensen, but the military who uses the model for leadership training is behind the curve.

The features of military group dynamics (multiple group-settings, combat environment, civil-military relations, and a diverse cultural environment) do not coincide with the features the linear (progressing from one phase to the next) Tuckman and Jensen model. The military environment is ever changing and consists of different groups within the overall group of a branch of service. There are personalists that work in a customer service office all day who may never see combat. There are engineers that work both in an office setting and out in the field on a construction site or the runway, and who may or may not see combat. There are special operations groups, soldiers, infantry that train, plan and fight in combat situations. Each of these

working environments consist of different group dynamics, some of which can be represented by the *group-settings* proposed in Tuckman and Jensen's model, but some unique to the military. For example, working in an office setting or being in a class room at tech-school (T-Group setting), compared to being in the field in combat.

A specific military training environment where Tuckman and Jensen's model is taught for leading and developing teams is within Command and Staff College, a PME program training junior Field Grade Officers (FGO) into becoming staff officers and commanders. Within this program Tuckman and Jensen's model is taught as part of the Leadership in the Profession of Arms I curriculum, which is taught at the forefront of this 11-month long full time in-resident program. Less than a month into the program, a lesson on Group Dynamics is introduced consisting of required readings and a four hour block of discussing the readings and doing a practical application where the class (consisting of 13 members) are split into three teams each having to complete a task with a limited supply of materials, then comparing how each team functioned in the process of completing the task; "students will conduct a 'problem solving' exercise which is designed to explore group dynamics...Tuckman's 'Stages' model provides the foundation for this lesson", as outlined in the lesson card.²⁵

The curriculum doesn't just look at Tuckman and Jensen's model, models introduced by Forsyth, "Hackman's 'Six Misperceptions' and Lencioni's 'Five Dysfunctions'" are used to "consider how these concepts integrate and interact with Tuckman's model and other group dynamic concepts introduced in the Forsyth reading."²⁶ It is clear that the works of Tuckman and

²⁵ Kelley, CDR S. A. 9 Aug 2018, *Group Dynamics*, Marine Corps University, Command and Staff College, <https://usmc.usalearning.net/mod/resource/view.php?id=131517>.

²⁶ Ibid, 1.

Jensen are considered the model to which to compare against, the foundation to group dynamic training within this program;

This lesson introduces key group dynamics and team building concepts that will be reiterated and reinforced throughout the entire Leadership curriculum particularly during lessons on Organizational Culture (2102), Organizational Change (2103) and the Chancellorsville and Gettysburg Staff rides (2105 and 2209). Additionally, this lesson supports the other departments, especially Warfighting, by providing students with concepts that they can apply real-time during team planning exercises, practical applications, and other small group activities.²⁷

Besides group dynamics, or team building this lesson is designed to develop leadership skills, “At this point in your career you have worked within and successfully led groups; this lesson provides an opportunity to build upon your experience and further develop the leadership skills and knowledge required to successfully lead diverse teams throughout the remainder of your career.”²⁸ This statement indicates the Tuckman and Jensen model applies to diverse groups and is a building block for developing leadership skills that will allow military leaders to lead diverse teams in whatever environment comes within their careers. As discussed, the military environment can be anywhere from a typical office setting to the most austere conditions of combat, all which members and leaders need to operate as a team within a hierarchal structure. Is the Command and Staff College indicating the Tuckman and Jensen model is a foundation for leading teams into combat; a foundation for leadership development in leading teams when Tuckman himself indicated the research was incomplete and unsubstantiated?

The five stage (*forming, storming, norming, performing and adjourning*) Tuckman and Jensen model has been used in various levels of both officer and enlisted professional military education (PME) programs within the Air Force, Army and Marines Corps. It is used as one of the foundations to teaching members how to operate within a group, how to develop within these

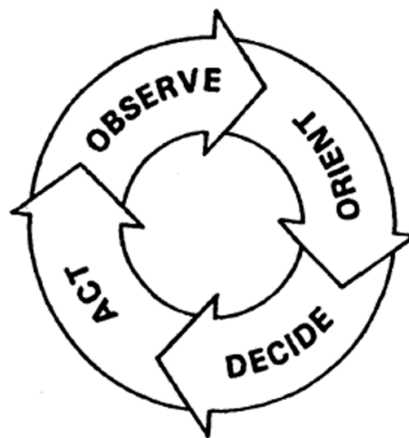
²⁷ Ibid, 3.

²⁸ Ibid, 1.

five stages, and how to develop as a leader within groups using the model as a guide For the use of defending our nation, the military should not use a model that is incomplete without adjusting it to fit the applicable environment like 250 other industry models have.

TJ Model's Inadequacy for Military

The military's use of Tuckman and Jensen's model is not all that surprising; it is a structured model that is easy to follow and shows a linear transition from one stage to the next much like the Marines famed Command and Control Observe, Orient, Decide and Act (OODA) loop²⁹ (Figure 1). Comparatively, to the Tuckman and Jensen's model, the OODA loop is depicted in a linear progression moving from one stage to the next regardless of the situation. And, like the Tuckman and Jensen model, the OODA loop is non-linear moving from stage to stage with control system loops intermixed transitioning back and forth between stages as needed, and not in a linear progression (Figure 2).³⁰



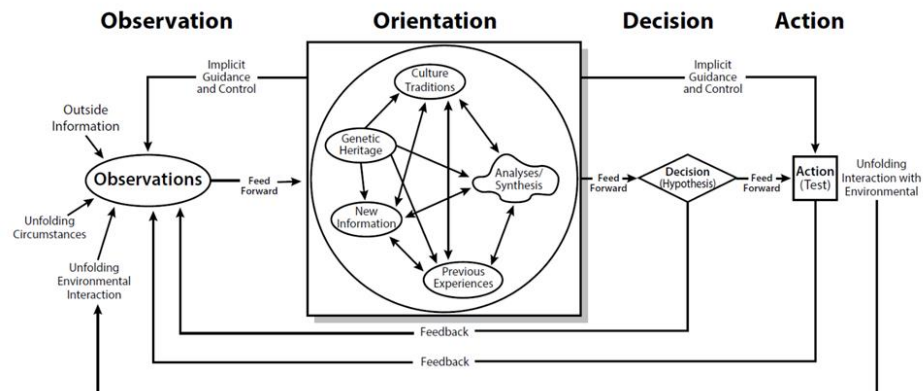
**Figure 1: The Command and Control process:
The OODA Loop³¹**

²⁹ Headquarters US Marine Corps, *Command and Control*. MCDP-6. Washington, D.C.: Headquarters US Marine Corps, 4 Oct 1996, 64

³⁰ Wilde, Major Jacob. 2261-19 #14, John Boyd and the OODA Loop. PowerPoint presentation, Marine Corps University, Quantico, VA, April 2, 2019

³¹ Headquarters US Marine Corps, *Command and Control*. MCDP-6. (Washington, D.C.: Headquarters US Marine Corps, 4 Oct 1996), 64

Figure 2: The Real OODA Loop³²



The military has always had a strong hierarchal leadership and rank structure; some would argue it's a unique structure warranted by the nature of how it needs to operate. But the military didn't invent this structure; the evolution of leadership has always had an emergence of hierarchal leadership. Anthropological studies on the evolution of leadership have indicated that hierarchal leadership has existed in ancient societies where individuals who use creativity, ingenuity and perseverance have risen to a position of power, or in other words decision making authority. This analysis of several studies also revealed that people, less the few aspiring leaders gravitate to a position of follower under a hierarchal leader where lower level leaders emerge to control specific groups.³³ This would be equivocal to the military's hierarchal officer leaders and their supporting non-commissioned officers (NCOs).

Expectations of leadership and individual or group response to leadership has changed through the generations from Baby Boomers through Generation-X and now into Generation-Y or commonly referred to as millennials, that influence affects how members transition through

³²Major Jacob Wilde. 2261-19 #14, *John Boyd and the OODA Loop*. (Marine Corps University, Quantico, VA, April 2, 2019), PowerPoint presentation.

³³ Jelmer W. Eerkens, John Kantner, and Kevin J. Vaughn. *The Evolution of Leadership*. The School for Advanced Research. https://sarweb.org/media/files/sar_press_evolution_of_leadership_chapter_1.pdf

stages of group development.³⁴ The military leader based in hierarchal leadership and rank structure must develop working teams, be able to move groups in an infinite number of directions avoid of group dynamic stage transition time dependency, changes in group setting or environment, and the nature of team tasking(s).³⁵ Military leadership and team dynamics are complex; Tuckman (1965) analyzed group development as linear, progressive, organizationally structured and task dependent.³⁶ The use of Tuckman and Jensen's model is inadequate for the military due to its flat, linear structure, the homogeneous nature of the research groups utilized in its development, and the mission task orientation of the military.

Linear Structure

A linear progression is from one stage to another in a sequential manner like going up or down a staircase; one step at a time, one leads to the next sequentially providing a vector to an endpoint. Tuckman and Jensen's model is built in the same manner beginning with *forming* and ending with *adjourning* where the group as a whole transitions from one stage to the next. Tuckman emphasizes throughout his hypothesis that the group transitions not individuals.³⁷ We know that people are all different and leaders have different leadership styles and by default followers have different followership styles and ways they relate. Leader-Member Exchange (LMX) theory postulates that leaders discriminate among their members based on interpersonal relationships that form, by bias and by performance of team members. This would indicate that members of the team or group may not be in the same stage simultaneously, nor may they ever

³⁴ Mariel Tishma. Leading Across the Generations, Chief Learning Officer, Leadership Development.

<https://www.clomedia.com/2018/05/17/leading-across-generations/>

³⁵ Swain, Richard M., Albert C. Pierce. The Armed Forces Officer. Washington, D.C.: National Defense University Press, 2017. Chpt 2, 3, 5, 10.

³⁶ Bruce W. Tuckman, Developmental Sequence in Small Groups, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 1965.

http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Dynamics/Tuckman_1965_Developmental_sequence_in_small_groups.pdf

³⁷ Ibid

be. Figure 3 is an alternative representation of the LMX Theory (which is depicted as a binary model where subordinates are either in or out of the leaders [favored] group)³⁸ showing the non-linear relationship of working relationships, the in-groups/out-groups, the organization, and the influence brought in by childhood, culture etc. of the PN2. With all these relationships affecting the positioning of members of a group compared to that of the leader, then it would be assumed that the group could not progress through stages in unison since not everyone belonged to the same “in” group.

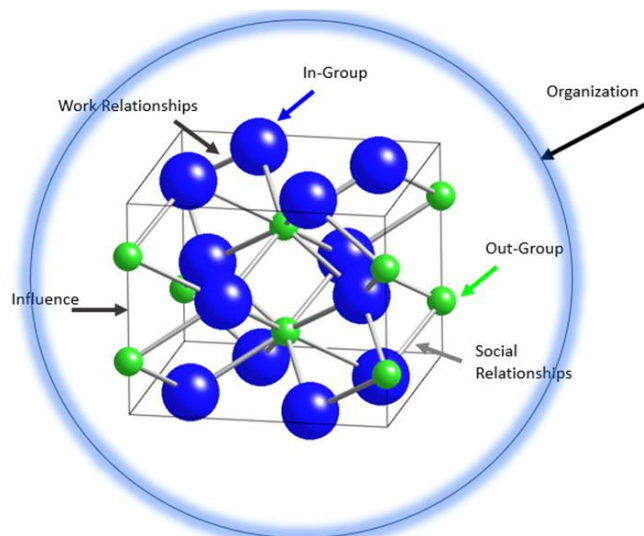


Figure 3: Alternative Leader-Member Exchange (LMX) Theory Model

A study done at the US Army’s Command and General Staff College (CGSC) indicated that members operating at different stages of development independent of the group stage. Members decided to avoid storming and focus on completing the task, at over ten years of service their experience taught them the task was more important and they dealt with *storming* individually and not as part of the intrapersonal group.³⁹ At this level of their careers (12-15 years) there was

³⁸ Fairhurst, Gail T. “Discursive Leadership: In conversation with leadership psychology.”, *Chapter 6: Narrative Logics*, Sage Publications, 2007, 119

³⁹ Jr, Emmett Perry, Dennis F. Karney, and Daniel G. Spencer. 2013. "Team Establishment of Self-Managed Work Teams: A Model from the Field." *Team Performance Management* 19 (1-2): 96. <https://search-proquest-com.lomc.idm.oclc.org/docview/1559645924?accountid=14746>

an immediate sense of trust to do the tasks assigned and to a level of group satisfaction. One could argue this would be a trait in the *norming* stage of Tuckman (1965) model. It's clear the environment prior to joining the team plays a significant role in the dynamics of the current team, in this case trust was pre-established on credentials and a sense of self-management was expected based on the maturity one would have at this stage of their careers as a military officer. This dynamic would again indicate a non-linear movement of a group dynamic model.

The indication that members of a group can be individually at one stage while the group is progressing to another happens in science as well; it's called the Superposition Principle. The Superposition Principle states that in a system (in this case group) is in all possible states (or in this case stages) simultaneously until measured. Once measured it then falls into a basic state and therefore destroying the previous configuration.⁴⁰ Group dynamics can be described much the same way: individuals operating according to their own experiences, thoughts, cultural bias, etc acting as the system. Once measured, i.e. conforming, or in Tuckman's case *norming* the individual has conceded previous bias, experiences to a new dynamic with the group and destroying the previous version of themselves where they take what they have learned, the interpersonal relationships they have formed and use that in their next group; the *adjourning* phase. This would hold true for if the group influences the individual, but what if the individual influences the group and gets the group to change?⁴¹

Imagine the individual member is a single point (particle) in a defined space, and the space around that particle to include everything that makes up that space is in the form of a wave. Light acts in a similar fashion both as a particle and as a wave. The individual (particle)

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http://physics.gmu.edu/~dmaria/590%20Web%20Page/public_html/qm_topics/superposition/superposition.html

⁴¹ Donelson R. Forsyth. Group Dynamics, 6th Edition (2014), Belmont, CA: Woodsworth Cengage Learning, 21, <https://scholarship.richmond.edu/cgi/viewcontent.cgi?article=1004&context=bookshelf>

and the space (group or team) occupy the same space at the same time. The individual who based on everything they bring with them from childhood, life experiences, culture, etc., is occupying their comfort zone, or stage of development. Independent of the particle is the wave, or group that has developed into a stage of its own. They both are contributing to the groups goal but behave in unique forms within the same space. This can be described using the Quantum Superposition Principle, “the ability of a quantum system to be in multiple states at the same time until it is measured”⁴²; where a particle observed (in this case functioning member of a group) behaves as a particle working with the system, when not observed (individual bias, childhood, etc.) it behaves counter to the system. This theory applied to group dynamics would indicate that group dynamics is a non-linear system. Apart from applying Quantum mechanics to group dynamics, the linear structure of the Tuckman and Jensen model does not adequately reflect the military’s team within teams culture, the civilian-military relationships and changes to the group’s personnel or taskings, nor does it address time spent at each stage of development.

Team within Teams

Ask someone to describe what a Marine is. Ask them what they picture in their mind. Whatever they picture is based upon a perception of that branch of service either validated by service in that branch or social perceptions without service in that branch. Would these people have the same image if they were asked the same about an Airman? A soldier? A Sailor? Everyone serving in each branch lives a life according to the culture of the branch they serve in, a culture that is twenty-four hours a day, seven days a week for the life of the service commitment and to some like the US Marines whose motto is *once a Marine, always a Marine*;

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http://physics.gmu.edu/~dmaria/590%20Web%20Page/public_html/qm_topics/superposition/superposition.html, posted to alternate site by Margaret Rouse at <https://what-is.techtarget.com/definition/superposition>.

that culture never ends, even after retirement. While each service member has a job to do and that is incorporated in a team, they also are a member of another group, the tradition and culture of their service branch. Tuckman and Jensen did not consider this group identity duality, nor was the research available in the studies they reviewed in developing their model. This *identity* each service member has conflicts with the use of the linear Tuckman and Jensen model used by so many military PME programs.

More recent studies have shown that the *adjourning* phase of Tuckman and Jensen is an important factor in the military group and team context. Dr. Joann Keyton (1993) postulated that the conclusion of a project conducted by a team didn't necessarily terminate the relationship or values associated with being a member of that team and would have a significant influence on the next team they joined.⁴³ Members stated they had a strong desire to keep connected to the previous team rather than form with the new one... "When an organizational work group concludes its business, its members do not go away. Rather, group members fold back into the organizational context to eventually become members in other groups."⁴⁴

In a review of the application of Tuckman and Jensen's model to the Australian Defense Force it was determined that defense forces could be split between two group settings, a training setting and an operational one. This study concluded that in a training environment the application of the linear Tuckman (1965) four stages (*forming, storming, norming, performing*) was supported. However, in an operational environment Tuckman (1965) failed to represent the team and group dichotomy. The study further examined the role of the reinforcement of behavioral and standards expectations by leaders within and outside the group. Many of these

⁴³ Keyton, J. (1993). *Group Termination: Completing the Study of Group Development*. Small Group Research, 24(1), 84-100. <https://journals.sagepub.com/>

⁴⁴ Ibid, 85

behavioral and standards disciplinary actions are handled at the group level by “codes of conduct, and disciplinary processes” simultaneously by direct chain of command.⁴⁵ The duality of serving in the military as part of a strong tradition associated with each branch of service and serving in a specific job code and training are not supported in the Tuckman and Jensen model, and it is recommended that further research is needed to explore this dichotomy.

Military groups who depend on others for their lives create this sense of reliability over long periods of time, they form a specific *Group Cohesion*: “the solidarity or unity of a group resulting from the development of strong and mutual interpersonal bonds among members and group-level forces that unify the group, such as shared commitment to group goals and esprit de corps”.⁴⁶ This bond that is formed provides a sense of dependence on one another that is beyond the smaller team they are currently assigned; for instance, the bond of being a Marine simultaneously shared a being a member of a Battalion. Group cohesion, interdependence, interaction, goals and structure are five characteristics of a group.⁴⁷ The military embodies multiple of these characteristics of a group and with prolonged time spent together create a stronger bond. The four group-settings in Tuckman and Jensen’s model were all singular in the sense the group identity was strictly within the group, nor interaction amongst members outside the group, nor was there a bond or sense of belonging outside the group.

These five characteristics form an identity which align into two types of groups, social and primary. A *primary group* is “a small, long-term group characterized by frequent interaction, solidarity, and high levels of interdependence among members that substantially influences the

⁴⁵ Ray Hingst, *The Influence of The Military Posting Cycle on Group Formation and Team Development in the Australian Defence Force*, Australian Defence Force Academy, 2012, University of Southern Queensland, https://eprints.usq.edu.au/21597/3/Hingst_IFSAM_2012_PV.pdf

⁴⁶ Ibid, 10

⁴⁷ Ibid, 11

attitudes, values, and social outcomes of its members”, the Marines for example.⁴⁸ A *social group* is a “relatively small number of individuals who interact with one another over an extended period of time”⁴⁹ and allow members to move from one group to another easily, the Battalion, or Platoon they are assigned. The military group is comprised of both the *primary* and *social* groups as being part of the culture of a branch of service and a team member according to their job function. This dichotomy doesn’t end with a sense of belonging or bond to multiple groups at once like a Marine has with being a US Marine and being a member of their Platoon, but a military member has a dual relationship with leadership. The military takes direction from, derives mission from civilian and political leaders.

Civil-Military Relations

Does an individual derive a sense of self from the group, or is it the other way around? That’s a question that has been debated within academia in order determine how best to analyze group dynamics, from the individual influence on the group or the group influence on the individual?⁵⁰ The group dynamic according to Tuckman (1965) is that individuals *storm* to overcome trust issues and establish social relationships to move into a *norming* stage where the group begins to move in unity towards task activity. Once again, the *total-group setting*, holds a unique duality in that the groups take on the form of the individual characteristics of its members and become “group-minded”. There is an agreed upon perception that members who belonged to a group minded team were thought to have “less-minded individuals. Conversely members who came from non-group minded teams were thought to have “minds of their own”.⁵¹ In the *total-group setting* members can be seen as group-minded especially in training and during tactical

⁴⁸ Ibid, 11

⁴⁹ Ibid, 12

⁵⁰ Ibid, 20-21

⁵¹ Ibid, 21

applications, but in the strategic and operational applications the individual becomes more important to the group dynamic. Part of this argument refers to groups that are the totality of the pieces that belong to it, a formula that will be expanded upon in the recommendations at the end of this paper.

The unique relationship the military has with the civilian world creates another dimension that Tuckman (1965) didn't account for. A relationship established by the Constitution of the United States gives civilians authority over the military.⁵² This argument grants democratically elected civilian leaders authority over men and women who serve in uniform and who were not elected by the will of the people. Even Clausewitz agreed; "Subordinating the political point of view to the military would be absurd, for it is policy that creates war. Policy is the guiding intelligence, and war only the instrument, not vice versa. No other possibility exists, then, than to subordinate the military point of view to the political".⁵³ Agreement to the construct is not the issue here, but rather does the construct affect the group dynamic for the military and not defined in Tuckman and Jensen model? Yes.

Richard Betts postulated that the civil-military relationship is a difference between control and expertise. Civil control and decision making, which may lack experience conducted with input from the military professional. The expertise in matters military reside with the military, the expertise in politics and diplomacy reside with civil. Military cannot make decisions overriding political or diplomatic matters; however, civil can override military matters. "The relationship requires that the two sets of actors divide their roles even as it becomes increasingly

⁵² Richard M. Swain, Albert C. Pierce. *The Armed Forces Officer*, National Defense University Press, Washington, D.C. 2017, 161-171

⁵³ Richard M. Swain, Albert C. Pierce. *The Armed Forces Officer*, National Defense University Press, Washington, D.C. 2017, 99-100

difficult in practice to differentiate between political and military judgements⁵⁴”. This “asymmetric” relationship can put a strain on the military team dynamic, and is most certainly non-linear in nature, again, not befitting the Tuckman and Jensen model. Historian Russel Weigley traces this asymmetry back to the colonial days where soldiers and civilians have “always represented two different cultures”.⁵⁵ Cultural differences are not the only diversity affecting the military group dynamic.

Changes to group members, taskings, or time in each stage

The Tuckman (1965) model does not consider time at each stage, or for transition through the stages, and assumes transition happens linearly from one stage to the next. It also assumes there is a single task for the group to accomplish and that the requirements for the task do not change. In Stage 1 of the *natural-group setting*⁵⁶, team members are dependent upon hierarchal leadership like in the military. This offers a good foundation for the military team construct, but the remaining stages do not correlate with today’s contemporary military group dynamic. Stage 2, known as *Storming* deals with intragroup conflict where members resist giving up control to the group and leadership especially with feelings of individual rights.⁵⁷ Within the military a team member does not necessarily have the autonomy to resist the hierarchy, orders are followed unless unlawful, immoral or unethical. However, members do resist leadership or orders given based on a variety of reasons to include moral conflicts, political or societal beliefs but are met with strict discipline ranging from being written up to discharge from service. Still, it

⁵⁴ Ibid, 102-104

⁵⁵ Ibid, 100-101

⁵⁶ Bruce W. Tuckman, Developmental Sequence in Small Groups, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 393-394, 1965.
http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Dynamics/Tuckman_1965_Developmental_sequence_in_small_groups.pdf

⁵⁷ Ibid, 394

is the responsibility of the leader to develop subordinates who adhere to the standards of conduct of the military profession, follow and uphold the law of combat, and if necessary, enforce discipline.⁵⁸

In Tuckman's (1965) model the resistance to submit control is not enforced, it becomes simply a barrier that takes time to overcome in the overall process of Storming. Within the military there are consequences for such resistance from non-judicial punishment to court martial, incarceration, and discharge; and the tasks ordered if lawful, moral and ethical must be carried out even if the member disagrees. This emotional response to task as Tuckman outlines in the *natural-group setting* is classified as impersonal and non-threatening.⁵⁹ Not always the case for a military member, and even though not all military members are in combat situations, the support they provide can have life and death outcomes. Therefore, since the military member can be punished for storming (interrupts stage transition time or removal them from the group) and in combat situations the time for "emotional response to task" is personal life-threatening; stage 2, *Storming*, does not apply as currently described by Tuckman and Jensen.

The pace at which a military member must operate, either in an office or on the battle field can fluctuate greatly though service members quite often operate at a high tempo. Since Tuckman (1965) does not address the time it takes to move from one stage to the next, it is hard to articulate how time dependency relates to the group setting.⁶⁰ There is a distinction in Stage 3 where members have developed a group identity, that of a cohesive unit. Regardless of the group setting this doesn't happen in an instant; each member transitions to this new norm at their own

⁵⁸ Martin L. Cook, *Moral Foundations of Military Service*, US Army War College Quarterly, Spring 2000, 13.

⁵⁹ Ibid, 394-395

⁶⁰ Bruce W. Tuckman, *Developmental Sequence in Small Groups*, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 394, 1965.
http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Dynamics/Tuckman_1965_Developmental_sequence_in_small_groups.pdf

pace. Within a military unit, as discussed previously becoming a cohesive unit in a combat setting is critical and the members are trained as such. In an office or training setting within the military the hierarchal structure of the unit closely relates to the *T-group setting*.⁶¹ Besides Tuckman's (1965) model's linearity not addressing time transition between stages, it does not address a team operating within multiple *group-settings*, nor does it address if that group setting changes.

Changes in Group Setting

The four group-settings that Tuckman (1965) analyzed dealt with settings that didn't change, and the members of each setting only met for limited periods of time, indicating that each member went home or had a life outside the group. When Tuckman and Jensen introduced *adjourning* in 1977 they admitted that their model did not address changes of members during the group's life-cycle, "A second problem with this study was the introduction of new members into the group prior to the final stage, which made identification of the four stages and the characteristic behaviors pertinent to each difficult."⁶² The context of the military environment has five unique characteristics⁶³ that remove it from the Tuckman (1965) model for group dynamics. First, the military leader maintains authority over the individual members outside the work group-setting as part of another uncategorized group-setting of military tradition of standards and legal binding that of the Uniform Code of Military Justice (UCMJ).

⁶¹ Ibid, 392

⁶² Mary Ann C. Jensen. Stages of Small-Group Development – Revisited, Western Illinois University, 2, http://faculty.wiu.edu/P-Schlag/articles/Stages_of_Small_Group_Development.pdf

⁶³ Kark, Ronit & Karazi- Presler, Tair & Tubi, Sarit. (2016). *Paradox and Challenges in Military Leadership*, https://www.researchgate.net/profile/Tair_Karazi_Presler/publication/301613401_Paradox_and_Challenges_in_Military_Leadership/links/59ed7c65a6fdccef8b0dcdbd2/Paradox-and-Challenges-in-Military-Leadership.pdf?origin=publication_detail

This group-setting for the sake of this paper will be referred to as *total-group setting*. Another characteristic besides the rank structure is the size of the group, typically larger than other group-settings where one command decision impacts many members. A third characteristic is the rapidly changing environment that members operate in to include integrating social, technological and cultural factors. Fourth, decisions that impact the group many times come from outside the group and from civilian leaders and is subject to civilian rule and societal demands. Fifth, the tasks involve threats from enemies and are generally life and death situations. These threats come from multiple type of regimes from peer competitors (Russia, China), rogue regimes (North Korea, Iran) and international crime or terrorist organizations.⁶⁴ Within a short period of time the *total-group* may deal with one or more of these threats across the globe in changing environments and the nature of the taskings required upon members during the work-group setting and as the leadership evolves.

Nature of Tasking(s)

The nature of the taskings are an essential distinction between the *total-group setting* and the proposed Tuckman (1965) model. The *total-group setting* is not linear in the number of settings involved, changing environment, changing task requirements and leadership evolution. Military leaders must communicate in one-dimensional manner and yet lead in very complex situations.⁶⁵ The characteristics of the nature of task separates the *total-group setting* from that of Tuckman (1965) model. First, the military leader has subordinate leaders, NCOs that execute mission, training, and enforcement of standards and are a part of the team they lead. Second, due to the civilian leadership within the military and the tax payer influence there is a tremendous

⁶⁴ The White House, *The National Security Strategy of the United States of America* (Washington, DC, 2017), <https://www.whitehouse.gov/wp-content/uploads/2017/12/NSS-Final-12-18-2017-0905-2.pdf>

⁶⁵ Ibid, 172

amount of public scrutiny on the team members that other group settings often do not deal with. A third characteristic is that military leaders, specifically officers, move from one assignment to another every 2-3 years.⁶⁶ Part of this transition includes grooming other team members to replace themselves as leaders; something that will be addressed later in this paper. Tuckman and Jensen included a fifth step of adjourning that addresses when team members move on from the group, and potentially join another. Tuckman and Jensen admit the 1965 model was lacking data on what happens to the group dynamic if members join or leave the team prior to task completion;⁶⁷ something that is frequent in the military.

Besides the nature of the group dynamic and leadership roles differing from the original 1965 model, Tuckman assumes task completion happens. Many tasks assigned to the military and its members do not have a completion date or even capability as the overall task may be political or diplomatic. US Army General Odierno stated “...there is no predetermined solution to conflicts, military leaders must quickly adapt themselves to the situation they face.”⁶⁸ This applies to the entire team.

Each stage of group dynamic as defined by Tuckman requires time for the team to develop and grow into the next stage. Military decisions and actions are time dependent and on moving through stages is not always an option. Changing group settings and living within multiple group settings like a *total-group setting* make for a unique and unaccounted group dynamic. The nature of task within the military directly affect lives both on the battlefield and in

⁶⁶ Kark, Ronit & Karazi- Presler, Tair & Tubi, Sarit. (2016). *Paradox and Challenges in Military Leadership*, https://www.researchgate.net/profile/Tair_Karazi_Presler/publication/301613401_Paradox_and_Challenges_in_Military_Leadership/links/59ed7c65a6fdcccf8b0dcdbd2/Paradox-and-Challenges-in-Military-Leadership.pdf?origin=publication_detail

⁶⁷ Mary Ann C. Jensen. Stages of Small-Group Development – Revisited, Western Illinois University, http://faculty.wiu.edu/P-Schlag/articles/Stages_of_Small_Group_Development.pdf

⁶⁸ Ibid, 169

the office. Members bring home with them the realities of that effect. Leaders moving frequently, NCOs within the hierarchal structure, frequent changing team members and that task completion may never happen make the military group dynamic outside the application of Tuckman's model.

Both Tuckman's (1965) model and later the re-evaluation he and Jensen conducted, that resulted with an additional fifth stage, were simply reviews of literature of current studies. The four group-settings reviewed by Tuckman (1965) (*therapy, training, laboratory, and natural*) were not culturally diverse as they represented a highly male dominated workforce of the 1950s and 60s. Of course, the term diverse has certain connotations, and it's important to establish what diversity is addressed in this paper. There can be an unlimited number of differences attributed to personal interactions that give a perception that another is different than oneself. Diversity research has largely focused on specific areas; age, gender, ethnicity, and educational background to name the most publicly recognized. This can be broken down further into two main scopes of practice; a *social category* where differences are visible such as age, sex and ethnicity, and an *informational category* where differences are less visible such as educational background.⁶⁹

Social categories aren't just about diversity, but rather relationships. Being part of a group is not just about task orientation or social categories rather visible or not; D.R. Forsyth, PhD, categorizes another identity associated with the "actual, imagined, or implied presence of other human beings" as a *membership* defined as "The state of belonging to, or being included

⁶⁹ Daan van Knippenberg, Carsten K. W. De Dreu, Astrid C. Homan. Work Group Diversity and Group Performance: An Integrative Model and Research Agenda, Journal of Applied Psychology, Vol 89, No. 6, 1008-1022, 2004, <http://web.mit.edu/cortiz/www/Diversity/PDFs/van%20Knippenberg%20et%20al%202004.pdf>

in, a social group; also, the collective body of all members of a group”.⁷⁰ Being a military member is more than just belonging to a social group, or a work group determined by the job code of the member. Each military member also belongs to what becomes an ingrained and traditional *membership* to their branch of service (Air Force, Army, Marine, Navy, and Coast Guard) simultaneously within their work group setting.

What about members of the outside group? With Tuckman (1965) creating a model that was linear in nature and suited for many group settings it lacked the non-linear view of the impact leaders and/or decisions outside the team had on the members and the group dynamic. The unique structure of the military has military leadership aligned in a chain of command to include NCOs within the group as well as outside with influence over the group. These same teams also have civilian and joint (other US branches) members of the team that are not held to the same standards as military members and can hold leadership positions over military members within the team. This would be a micro-level view of influence; however, from a macro-level view, high ranking civilians hold leadership positions to include the top ranked position of Commander and Chief, the President of the United States (POTUS). From micro to macro, tactical to strategic the military has a unique structure and task activity that influences the group dynamic. The joint and cultural make-up of today’s military fall outside the linear application of the Tuckman and Jensen model due to the unique team within team membership military members have within each branch, the outside leadership and influence imposed on groups operating in the operational art environment, and the diversity within the military group that wasn’t represented in the original studies.

Homogeneous vs. Heterogeneous

⁷⁰ Donelson R. Forsyth. Group Dynamics, 6th Edition (2014), Chapter 1, Belmont, CA: Woodsworth Cengage Learning. <https://scholarship.richmond.edu/cgi/viewcontent.cgi?article=1004&context=bookshelf>

The original focus of Tuckman and Jensen's⁷¹ research was that of group and work settings in an era where the workforce was largely white male dominated, not culturally diverse, and the nature of coalition operations were minimalistic at best. Today's military is not representative of a homogeneous group, rather heterogeneous and is not well represented by Tuckman and Jensen's model due to the heterogeneous makeup of the contemporary military compared to industry, cultural influences of working with partner nations and non-government organizations, and diversity.

Homogeneous and Heterogenous Nature

To understand how the contemporary military compares to industry and the effect of other cultures on group dynamics we first need to understand what is meant by homogeneous vs. heterogeneous groups. Homogeneous is "of the same or a similar kind or nature...of uniform structure or composition throughout"⁷², meaning people of same race, gender, background, etc. Tuckman and Jensen reviewed research from the 1950s and 60s where the workforce was largely white male dominated, a homogeneous group of individuals. Their breakdown into the four group-settings (*group-therapy*, *training-group*, *natural-group*, and *laboratory-group*) further amplifies this homogeneous data set. The *therapy-group* setting individuals were facing trauma that through shared experiences, similar, homogeneous experiences could heal from. The *training-group* setting were people of similar educational or experience background all learning the same topic with the same goal of passing the course. The *laboratory-group* setting were people of same education level working in a lab performing similar tasks to achieve a shared

⁷¹ Mary Ann C. Jensen. Stages of Small-Group Development – Revisited, Western Illinois University, http://faculty.wiu.edu/P-Schlag/articles/Stages_of_Small_Group_Development.pdf

⁷² Merriam-Webster Online Dictionary, s.v. "homogeneous," April 15, 2019, <https://www.merriam-webster.com/dictionary/homogeneous>.

result. The *natural-group* setting, which most closely represents the military was of strong hierarchal structure with no information on member demographics.

Heterogeneous is “consisting of dissimilar or diverse ingredients or constituents,”⁷³ meaning a group made up of people from different cultures, backgrounds, age, education, and seniority. According to 2017 data as seen in Table 1, the US military has a more diverse ethnic demographic indicating the military is a more heterogeneous representation than industry. The demographics of the country in 1965 for ages 18-44 were 11% African-American, 1% “other”, and 88% Caucasian⁷⁴, and will be discussed further referring to diversity of the US military later in this paper; however, for now it merely proves the demographics represented in Tuckman and Jensen’s original hypothesis are not comparable to today’s contemporary military and were homogeneous rather than today’s heterogeneous.

Table 1: 2017 Status of Employment

	Military ⁷⁵		Industry ⁷⁶	
	Men (%)	Women (%)	Men (%)	Women (%)
White	69.65	53.05	53.09	46.91
Black	17.02	29.78	5.70	6.42
Alaska Native, American Indian	1.26	1.47	0.56	0.49
Asian	4.27	4.82	3.25	2.91

⁷³ Merriam-Webster Online Dictionary, s.v. “heterogeneous,” April 15, 2019, <https://www.merriam-webster.com/dictionary/heterogeneous>

⁷⁴ The United States Census Bureau, *Resident Population plus Armed Forces Overseas--Estimates by Age, Sex, and Race: July 1, 1965*. <https://www.census.gov/data/>

⁷⁵ Statistics Portal, “Distribution of active-duty enlisted women and men in the U.S. Military in 2017, by race and ethnicity”, April 16, 2019, <https://www.statista.com/statistics/214869/share-of-active-duty-enlisted-women-and-men-in-the-us-military/>

⁷⁶ <https://www.bls.gov/opub/reports/race-and-ethnicity/2017/home.htm>

Pacific Islander, Hawaiian	1.17	1.64	0.20	0.18
Two or more	3.08	4.65	0.98	0.94
Unknown	3.53	4.59	N/A	N/A
Hispanic	16.75	19.57	9.70	7.22

There are pros and cons to working in homogeneous or heterogeneous groups.

Homogeneous groups tend to have people of similar thinking, and language with fewer communication barriers to overcome allowing them to quickly come together to work towards a common goal or task and potentially shorten the time in conflict (*storming*). Personality conflicts can be just as present in either homo- or heterogeneous groups but homogeneous groups can develop a group think mentality and not be as open to creativity and innovation. Where heterogeneous groups can have members with specific and different expertise that foster roles to develop within the group such as engineer, mechanic, or leader; allowing a variety of knowledge and experience that the group can benefit from and focus to completing a task. Conversely, communication, language barriers in culture and jargon can be hindered and an obstacle to overcome.⁷⁷

Cultural Influence

The US military is global; they train, are based, and deploy all over the world outside of the Continental borders of the United States. Today's military interact with other cultures and people as part of their mission all over the world. General Mattis said in a forward in the collaborative book, *Operational Culture for the Warfighter: Principles and Applications*,

⁷⁷ <https://bizfluent.com/info-8357494-homogeneous-vs-heterogeneous-teams.html>

“Fundamental to our adaptation to today’s conflict will be the intelligent initiative of all Marines when the enemy hides among innocent people. This demands a keen understanding of culture... Culturally savvy Marines are a threat to our enemies.”⁷⁸ The book goes on further to speak about the importance of working with people not just military but other organizations, cultures, and governments: “The quality of our relationships with people, in and out of uniform, is of paramount importance in determining mission success.”⁷⁹ Clausewitz, considered one of the most strategic thinkers in warfare knew that culture and non-government organizations were just as an important aspect to warfare as the battles themselves in his *Trinity* of people, the army and government. He may not have spelled out culture but his tactics to adjusting to the way people lived, where they were from, their demographics indicates he understood culture was key.⁸⁰

Diversity

The term diverse has certain connotations, and it’s important to establish what diversity is addressed in this paper. There can be an unlimited number of differences attributed to personal interactions that give a perception that another is different than oneself. Diversity research has largely focused on specific areas; age, gender, ethnicity, and educational background to name the most publicly recognized. This can be broken down further into two main scopes of practice; a *social category* where differences are visible such as age, sex and ethnicity, and an *informational category* where differences are less visible such as educational background.⁸¹

⁷⁸Holmes-Eber, Paula, Barak A. Salmoni. 2008. “Operational Culture for the Warfighter: Principles and Applications”, <https://www.clausewitz.com/bibl/MCU-OpCultureForTheWarfighter.pdf>, vii-viii

⁷⁹ Ibid, 2

⁸⁰ Ibid, 5-6

⁸¹ Daan van Knippenberg, Carsten K. W. De Dreu, Astrid C. Homan. Work Group Diversity and Group Performance: An Integrative Model and Research Agenda, *Journal of Applied Psychology*, Vol 89, No. 6, 1008-1022, 2004, <http://web.mit.edu/cortiz/www/Diversity/PDFs/van%20Knippenberg%20et%20al%202004.pdf>

Social categories aren't just about diversity, but rather relationships. Being part of a group is not just about task orientation or social categories rather visible or not; D.R. Forsyth, PhD, categorizes another identity associated with the "actual, imagined, or implied presence of other human beings" as a *membership* defined as "The state of belonging to, or being included in, a social group; also, the collective body of all members of a group".⁸² Being a military member is more than just belonging to a social group, or a work group determined by the job code of the member. Each military member also belongs to what becomes an ingrained and traditional *membership* to their branch of service (Air Force, Army, Marine, Navy, and Coast Guard) simultaneously within their work group setting.

What about members of the outside group? With Tuckman (1965) creating a model that was linear in nature and suited for many group settings it lacked the non-linear view of the impact leaders and/or decisions outside the team had on the members and the group dynamic. The unique structure of the military has military leadership aligned in a chain of command to include NCOs within the group as well as outside with influence over the group. These same teams also have civilian and joint (other US branches) members of the team that are not held to the same standards as military members and can hold leadership positions over military members within the team. This would be a micro-level view of influence; however, from a macro-level view high ranking civilian hold leadership positions to include the top ranked position of Commander and Chief, the President of the United States (POTUS). From micro to macro, tactical to strategic the military has a unique structure and task activity that influences the group dynamic. The joint and cultural make-up of today's military fall outside the linear application of the Tuckman and Jensen model due to the unique team within team membership military

⁸² Donelson R. Forsyth. Group Dynamics, 6th Edition (2014), Chapter 1, Belmont, CA: Woodsworth Cengage Learning. <https://scholarship.richmond.edu/cgi/viewcontent.cgi?article=1004&context=bookshelf>

members have within each branch, the outside leadership and influence imposed on groups operating in the operational art environment, and the diversity within the military group that wasn't represented in the original studies.

As noted previously diversity can mean an infinite number of factors, and for this paper it will be the social category diversity, specifically gender and ethnicity. There is some debate whether having diverse groups affects team performance or not. The US military has been predominantly male throughout its history. In 2015 15% of active duty military were female, 4% greater than in 1990. The Air Force had the most gender diverse force at 19%, Navy at 18%, Army at 14% and Marines at 8%. The military has also become more ethnically diverse making up 40% of the active duty force in 2015 up from 25% in 1990. African-Americans made up 17%, Hispanic 12%, Asian 4% and remaining were 7%. The US population is 44% minority in the age group 18-44 (the equivocal average military age).⁸³ These numbers indicate that the US military is a good representation of the cultural ethnic diversity in the rest of the US. However, for context, in 1965 the ethnical diversity of the country for ages 18-44 were 11% African-American, 1% “other”, and 88% Caucasian.⁸⁴ Keep in mind these numbers represent the entirety of the population not the working force as mentioned in Table 1.

The common thought is that diversity increases innovation and creativity in the workplace. Studies have shown that having a more diverse group increases performance, but it also increases task conflict, interpersonal relationships. Remember that Tuckman (1965) looked at the group dynamic from an interpersonal and group structure viewpoint. What the studies do

⁸³ Kim Parker, Anthony Cilluffo and Renee Stepler. *6 facts about the U.S. military and its changing demographics*, April 13, 2017, Pew Research Center. <http://www.pewresearch.org/fact-tank/2017/04/13/6-facts-about-the-u-s-military-and-its-changing-demographics/>

⁸⁴ The United States Census Bureau, *Resident Population plus Armed Forces Overseas--Estimates by Age, Sex, and Race: July 1, 1965*. <https://www.census.gov/data/>

not show is which category of diversity is the dependent variable driving the data, and in this case it can't be concluded that either ethnicity or gender has a direct connection to group performance.⁸⁵ One indication using the Categorization-Elaboration Model (CEM) is that diversity assisted with a broader exchange of information, and this exchange, or elaboration did show signs of improved group performance. Problem solving and group performance also increased with task complexity in groups where elaboration was high.⁸⁶ Military units depend on strong and frequent communication, elaboration and information exchange. From strategic to tactical levels task complexity can be high.

The US military enforces accountability as a character trait, and the military's purpose is to train to meet demands of force. The CEM research showed that motivation and accountability were a factor in group performance in diverse groups, even more so when the technical skills or ability of the members are high.⁸⁷ The rigorous training the military goes through creates team members that are highly skilled and able. One diversity attribute of interest for further discussion and what this paper would propose as part of follow up research is the impact of personality of a diverse group on dynamics.⁸⁸

The study of group dynamics is just that, dynamic. Whether one looks at it as an adjective or a noun, the word dynamic involves change and progress. Tuckman and Jensen developed a model that involved a group growing through five stages of development (change) in a linear vector from joining the group, moving through discourse and eventually becoming harmonious

⁸⁵ Daan van Knippenberg, Carsten K. W. De Dreu, Astrid C. Homan. Work Group Diversity and Group Performance: An Integrative Model and Research Agenda, *Journal of Applied Psychology*, Vol 89, No. 6, 1008-1009, 2004, <http://web.mit.edu/cortiz/www/Diversity/PDFs/van%20Knippenberg%20et%20al%202004.pdf>.

⁸⁶ Daan van Knippenberg, Carsten K. W. De Dreu, Astrid C. Homan. Work Group Diversity and Group Performance: An Integrative Model and Research Agenda, *Journal of Applied Psychology*, Vol 89, No. 6, 1010-1011, 2004, <http://web.mit.edu/cortiz/www/Diversity/PDFs/van%20Knippenberg%20et%20al%202004.pdf>

⁸⁷ Ibid, 1012

⁸⁸ Ibid, 1018

and then moving onto the next group (progress). However, the non-linear nature of the military group is far more dynamic in nature than Tuckman and Jensen model covered and the diverse nature of the military community help to make it non-linear.

A former General, Clausewitz; a recent general, Mattis separated by hundreds of years understood the importance of culture and diversity in the training of military forces and strategic warfare. It would make logical sense that if culture and diversity were so important then training in a culturally diverse setting would best prepare forces for dealing with the diversity they will encounter throughout their career with teammates, non-government organizations like the United Nations, foreign partner nations, and even the enemy. So why does the military base group dynamic training on a model that was homogeneous and not culturally, ethnically, or gender diverse? General Mattis apparently believes that cultural training and understanding are an important part of the mission success.

Mission Task Orientation

A military member deals with change on a regular basis, even though the general public may view them as robotic and binary to following orders and sticking to a very rigorous regimen. In many cases this is true, but military members face constant change in their careers, and in their daily jobs. The mission, that dictates tasks to support has an orientation that deals with multiple tasks across various missions, requires training in both conventional (regular) or irregular warfare, and can draw conclusions from a study from a Command and Staff College PME that addresses trust, self-management and maturity, and professionalism and the battle rhythm.

Multiple Missions/Tasks

Tuckman and Jensen's research are void of the specific nature of the task the group had to accomplish or if there was more than one task the group was working at a time; interpretation

of their work would indicate that there was only one task at a time. The addition of *adjourning* in the model in 1977 was to address the concern members had with the group's life-cycle ending, which would indicate the task was completed and the group moved onto something else or another group to complete another task.⁸⁹

The US military operates on multiple levels; tactical, operational and strategic⁹⁰ creating multiple taskings for teams, sometimes simultaneously. The orientation of the tasks for completing a military mission are another area where the Tuckman and Jensen model does not adequately represent the military team having multiple tasks within a mission, and the challenging conventional and irregular warfare environment they must operate within. According to Joint Publications:

Military operation is a set of actions intended to accomplish a task or mission. Military operations are often categorized by their focus. Examples include stability activities; defense support to civil authorities; foreign humanitarian assistance (FHA); recovery; noncombatant evacuation operation (NEO); peace operations (PO); countering weapons of mass destruction; chemical, biological, radiological, and nuclear response; foreign internal defense (FID); counterdrug (CD) operations; combating terrorism; counterinsurgency (COIN); homeland defense (HD); and mass atrocities response.⁹¹

With the range of potential missions and tasks, it's evident a team will encounter several different taskings within their existence as a group and sometimes simultaneously. For example, a team conducting humanitarian efforts while having to maintain security. As the military is but one of the Instruments of National Power, US leaders use the military in a variety of ways, tasks,

⁸⁹ Mary Ann C. Jensen. Stages of Small-Group Development – Revisited, Western Illinois University, http://faculty.wiu.edu/P-Schlag/articles/Stages_of_Small_Group_Development.pdf

⁹⁰ JP 3-0, I-12, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_0ch1.pdf?ver=2018-11-27-160457-910

⁹¹ Ibid, xviii

missions, and operations that vary in purpose, scale, risk and combat intensity” necessary to achieve national objectives.⁹²

The Joint publication further emphasizes that Joint Warfare is Team Warfare, and that working in joint (diverse) teams is an advantage over adversaries in “any operational environment”.⁹³ Joint forces operate under an umbrella of *unified action* where from a broader perspective is working in harmony, coordinated efforts and working multiple efforts simultaneously with government and non-government organizations.⁹⁴ To further complicate the environment, Joint Publication 3-0 states that mission orders can be implicitly specified with task orders or implied from an order.⁹⁵

Having to work within multiple environments, with multiple organizations, and with orders that leave a level of interpretation it’s clear the mission task orientation is complex and does not represent a linear approach like the structure of Tuckman and Jensen’s model. Joint Publication 3-0 further supports the non-linear nature of the military environment: “In nonlinear operations, forces orient on objectives without geographic reference to adjacent forces. Nonlinear operations typically focus on creating specific effects on multiple decisive points. Nonlinear operations emphasize simultaneous operations along multiple LOOs.”⁹⁶

Traditional vs Irregular Warfare

The terms of traditional or irregular warfare can have different connotations depending on your background, so let’s define them within the context of Joint Operations. JP-1 defines *traditional warfare* as

⁹² JP 3-0, x, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_0ch1.pdf?ver=2018-11-27-160457-910

⁹³ Ibid, I-2

⁹⁴ Ibid, I-8

⁹⁵ Ibid, I-14

⁹⁶ Ibid, xix

A violent struggle for domination between nation-states or coalitions and alliances of nation-states [and] typically involves force-on-force military operations in which adversaries employ a variety of conventional forces and special operations forces (SOF) against each other in all physical domains as well as the information environment (which includes cyberspace).⁹⁷

And irregular warfare as

A violent struggle among state and non-state actors for legitimacy and influence over the relevant population(s). In IW, a less powerful adversary seeks to disrupt or negate the military capabilities and advantages of a more powerful military force, which usually serves that nation's established government.⁹⁸

Either form of warfare, the US military must train and prepare for is violent; granted not all members of the armed services face warfare head-on, some fight it from behind a desk or in an office setting. No matter the job, each job contributes to the overall military mission. The group-settings utilized in Tuckman and Jensen's model were geared more towards the blue- and white-collar industries that were far from violent, or committed to supporting violent acts. The therapy-group setting may share some of this dynamic in that the individuals in this group-setting were dealing with traumatic events; the degree of trauma nor if violent or not was not indicated.⁹⁹

However, the regular working force does not operate in such conditions, if they were it would be considered a hostile working environment, which according to law is not permitted. Any action or behavior that isolates or discriminates against a class of people such as age, race or religion is considered part of a hostile work environment, both military and civilian adhere to this. Part of a hostile work environment is when the terms and conditions of the employment

⁹⁷ JP-1, x, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp1_ch1.pdf

⁹⁸ Ibid, x

⁹⁹ Bruce W. Tuckman, Developmental Sequence in Small Groups, Naval Medical Research Institute, Psychological Bulletin, Vol 63, No. 6, 384-399, 1965, http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Dynamics/Tuckman_1965_Developmental_sequence_in_small_groups.pdf

changes. Many times, an employee's expectations of terms and conditions is spelled out in a position document.¹⁰⁰ For the military, any member regardless of rank or job code can be switched to another job, or geographic location and not considered hostile work environment to include being deployed to a war zone.

The military operating in multiple environments from office, classroom, or battlefield the nature of the mission taskings are complex, dynamic, sometimes only implied, and can be non-linear. Whether traditional or irregular, warfare is waged on all levels and in many ways with multiple objectives operating simultaneously from humanitarian to direct fire. Such an environment is not linear in nature and therefore cannot be represented by a linear group dynamic model training forces, and leaders how to work as a unified team. A new model that can represent the unique group-setting environment of the US military needs to be developed.

Model from the field

Part of the reason for this paper was to spawn future studies in group dynamics in what I call the *total-group setting* represented in the military way of life, continuous flux of job taskings, and cultural environment. One such study¹⁰¹ conducted at the US Army's Command and General Staff College (CGSC) located in Fort Leavenworth, Kansas shows how the Tuckman and Jensen model is applicable to one piece of the military environment in a PME setting, which can be represented by the *T-Group setting*.

¹⁰⁰ <https://www.thebalancecareers.com/what-makes-a-work-environment-hostile-1919363>

¹⁰¹ Jr, Emmett Perry, Dennis F. Karney, and Daniel G. Spencer. 2013. "Team Establishment of Self-Managed Work Teams: A Model from the Field." *Team Performance Management* 19 (1-2): 87-90. <https://search-proquest-com.lomc.idm.oclc.org/docview/1559645924?accountid=14746>

The study involved 64 teams consisting of 1,142 mid-career (11-13 yrs.) officers attending PME for approximately a year¹⁰², these officers are from all branches of the US armed services (active duty and reserve corps) and include international officers. Several of the members come to CGSC from field assignment, deployments, high-tempo working environments and covering a variety of career fields. Myriad team member backgrounds but all members are career peers.¹⁰³

One of the 64 teams (Phase 1) was used as an interactive foundation set for study, the other 63 (Phase 2) were used to “compare and contrast” through discourse of the team members, data that was analyzed in a computer program to establish patterns. The Phase 1 team was interviewed daily on interactions, feelings and perceptions of course content and team dynamics. The study was reported using four phases (*assessing, organizing, norming, and performing*) closely related to Tuckman (1965) stages; but as one student reported, “We never really experienced the “form, storm, norm, perform” stages...”¹⁰⁴ For the purpose of this section we will analyze the study in terms of trust (assessing), self-management and maturity (organizing), and professionalism and battle-rhythm (performing and norming).

Trust

As each member arrived, they were formed into teams consisting of about 18 people with the team group leader established as the highest-ranking Army officer. The first few days were administrative in nature allowing members to become accustomed to the new environment. Teams quickly began to self-organize and perform tasks, most within the first two weeks.

¹⁰² Jr, Emmett Perry, Dennis F. Karney, and Daniel G. Spencer. 2013. "Team Establishment of Self-Managed Work Teams: A Model from the Field." *Team Performance Management* 19 (1-2): 87-90.. <https://search-proquest-com.lomc.idm.oclc.org/docview/1559645924?accountid=14746>

¹⁰³ Ibid, 90

¹⁰⁴ Ibid, 94

Members quickly began to assess their situation according to “self, others and the context (school and program)”.¹⁰⁵ Members from the joint services originally felt a hint of apprehension; “What have I gotten myself into?” causing them to wonder where they fit in.¹⁰⁶ It didn’t take long, sometimes the first team gathering to learn they are equal peers and the teams developed ways to structure their teams according to the individual skills of its members. Commonly using their branches of service as identifiers, they formed roles that benefitted the team and established expectations of themselves and how they could contribute.

The *forming* stage developed in less than two-weeks in most cases, and the *storming* stage was skipped all together by most teams as each member was a mid-career officer and peers had the expectation that each one would do their part without supervision. Members decided to avoid storming and focus on completing the task, at over ten years of service their experience taught them the task was more important and they dealt with *storming* individually and not as part of the intrapersonal group.¹⁰⁷ At this level of their careers there was an immediate sense of trust to do the tasks assigned and to a level of group satisfaction. One could argue this would be a trait in the *norming* stage of Tuckman (1965) model. It’s clear the environment prior to joining the team plays a significant role in the dynamics of the current team, in this case trust was pre-established on credentials and a sense of self-management was expected based on the maturity one would have at this stage of their careers as a military officer. This dynamic would again indicate a non-linear movement of a group dynamic model.

Self-management and Maturity

¹⁰⁵ Ibid, 95

¹⁰⁶ Ibid, 96

¹⁰⁷ Jr, Emmett Perry, Dennis F. Karney, and Daniel G. Spencer. 2013. "Team Establishment of Self-Managed Work Teams: A Model from the Field." *Team Performance Management* 19 (1-2): 96. <https://search-proquest-com.lomc.idm.oclc.org/docview/1559645924?accountid=14746>

Since there is no jockeying for position, and most members have assumed a leadership role prior to coming to CGSC, the level of self-management was high. The teams were given tasks, and practical exercises to complete and very little to no direction was needed by team members; they simply went straight to task. Each team had a senior officer faculty member overseeing the training; however, individual members were expected to lead the team in certain taskings/exercises. Without direction every member at some point stepped up and took the lead.

This group structure differs from Tuckman (1965) *natural-group setting* that originally was stated was the foundation for this study; in the fact that a natural-group setting has a strong hierarchal group structure. In this case, there is no single leader in the group, that responsibility is shared without resistance. The faculty, military advisor acts more in a mentor role rather than a hierarchal leader. This wouldn't be able to exist if it weren't for the maturity of the members which was developed by over 10 years of military training. The data in study identified two trends regarding the *organizing* phase; a quick, natural process of establishing norms, and there was no incentive to attempt to improve or reevaluate team processes.¹⁰⁸

The academic, mentor led peer environment is meant to train these officers in working as staff officers, to become planners for their respective branches of service. This will require them to work in a similar joint setting with other US service branches where group cohesion, interdependence, interaction, goals and structure are important. As Perry, Karney and Spencer concluded in their study, skipping stages can lead to underperformance¹⁰⁹ and shows a relevance between the PME group dynamic and the expectations of future mission planners showing that

¹⁰⁸ Jr, Emmett Perry, Dennis F. Karney, and Daniel G. Spencer. 2013. "Team Establishment of Self-Managed Work Teams: A Model from the Field." *Team Performance Management* 19 (1-2): 98-99. <https://search-proquest-com.lomc.idm.oclc.org/docview/1559645924?accountid=14746>

¹⁰⁹ Ibid, 102

the military needs a different group dynamic model to teach apart from Tuckman and Jensen's model.

Professionalism and Battle-rhythm

In Tuckman (1965) model, the *performing* stage was the final stage and took a group developing as a unit from a stage of *norming*. Within the first two weeks of CGSC the teams were already performing. Granted they weren't necessarily performing at the same level individually, but they were as a team. Personal relationships were established based on the team's desire to work on team building almost immediately. In Tuckman's (1965) model, the groups had to learn to trust one another before sharing personal information and feelings. Students stated it was that as military officers "the level of professionalism permeates all we do".¹¹⁰

The quality of product produced from each "professional" was not equal. Members were willing to produce lower level work and contribute no more than they had to it what was called "checking the block". Different members performing at different rates adds to the non-linearity of the environment; however, the team was able to move forward and still complete tasks according to standards. The battle-rhythm was maintained even when members were not performing at the same rate. Arguably with professionals at this stage of their career, *storming* was internalized rather than brought into the group dynamic. This psychological behavior could be due to the professionalism at this point of the career to accept the disagreement and realize that moving forward was more important. Professionalism and expectations due to reputation as a mid-career officer was a dynamic or variable that would be of interest to track but wasn't as part of Perry, Karney and Spencer's study. They believed that even though members skipped

¹¹⁰ Ibid, 99

over *storming*, having that stage would be more beneficial to group cohesion than avoiding the conflict.¹¹¹

The study of self-managed work teams at the US Army's Command and General Staff College directly supported this paper showing how Tuckman (1965) model does not translate to the military environment at least in the context of a mid-level officer career PME program. Through experiences prior to attending CGSC, military training, the maturity, professionalism and inherent trust in fellow mid-level career officer members were able to move quickly through stages of group development and skip stages in contrast to Tuckman (1965). This study is a good catalyst for future studies involving other group demographics within the military such as enlisted and officer members at various stages of career. Cultural diversity in the groups was not discussed as part of the study, nor was the impact if any at this level.

Recommendations

To further research and develop a new model for military application, the *total-group setting* is recommended as a starting point. Defining this group setting further in a more contextual format to the military total life involvement setting which includes training, living according to the UCMJ, 24/7 service, branch specific traditions, and the mind-set of enlisted compared to officer as a start. Studies much like *Team Establishment of Self-Managed Work Teams: A Model from the Field* should be conducted at all levels of PME for both enlisted and officer. In this setting there are comparisons to group-settings initially proposed by Tuckman

¹¹¹ Jr, Emmett Perry, Dennis F. Karney, and Daniel G. Spencer. 2013. "Team Establishment of Self-Managed Work Teams: A Model from the Field." *Team Performance Management* 19 (1-2): 100-102. <https://search-proquest-com.lomc.idm.oclc.org/docview/1559645924?accountid=14746>

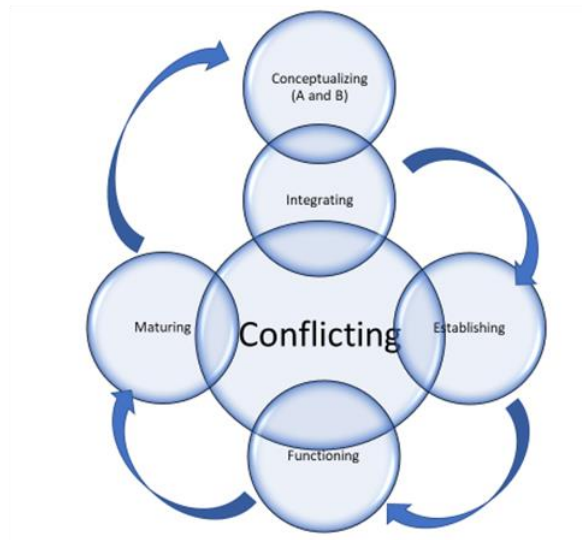
(1965) and can be used as a baseline. This setting would be a starting point to establish baseline behaviors when members aren't in combat related situations. From there, it is recommended determining what common *group-settings* exist throughout the various career fields in the military and begin studies for each group-setting. Next, studies should be conducted for groups deployed or in the field facing combat. Finally, it is recommended that studies be conducted for military member home life as their careers carry over and influence their social and family norms as well.

Another recommended aspect to explore made apparent in the *self-managed* study is the experience an individual brings into the group, either for the first time or after *adjourning* from a previous group. Recommend a person's childhood, their social environment, their moral compass, and experience; Psychological Neural Net (PN2) become an interest of research in establishing what this author would call a pre-stage of *conceptualizing*. The PN2 is developed of neural pathways that are formed by our childhood, the ethical and moral values we learn and possess from childhood to adult, and the social atmosphere we grew up in that drive expectations and pre-conceived categorizations. Figure 4 shows a recommend adjustment to Tuckman and Jensen's model incorporating this pre-stage broken into two components where A is PN2, and B is what gets brought from the previous group dynamic. This recommended interpretation incorporates what a person brings into the group and the influence it has on the group and the individual before and after the group. It also shows that a *storming* phase is perpetual, it happens at various stages and not in a linear manner. Moving from stage to stage doesn't have to be 100% as a unit, individuals can occupy more than one stage and still contribute to the task activity and support group structure.

Dr. Forsyth spoke of a behavioral interaction (B) that is a function of personal characteristics (P) and environmental factors (E). He calls this formula $B = f(P, E)$ the Law of Interactions¹¹². I would postulate that the new model recommendation in Figure 4 along with the relevance of PN2 would create a formula $B = \sum_0^g f(P, E) + G$ where (B) is behavior, (g) is the point at joining the group, and $G = f(I, i)$. Where (G), the new Group is a function of the individual represented by PN2, and (i) is the influence by the new group. This new formula is the sum of a person's character and their environment from the time of birth until they join a group. Once they leave that group and join another, the inclusion of (G) becomes relevant to what that individual brings to the group dynamic.

The research into Tuckman and Jensen's model has led to four conclusions that should be considered for future military group dynamic model development. One, the social and psychological baggage a person brings into the group has a direct result of group dynamics. Two, the traditions and expectations associated with each branch of service create a duality of group identity that has a direct effect on group dynamics both in the workplace and at home. Thirdly, the multiple group-settings a member sees in their career sometimes simultaneously creates an, other than linear progression through stages of development within a group. Finally, the military should develop their own group dynamic model based on extensive research into the unique characteristics of the military environment in the office, on the job site, in the field (fleet, etc.) and at home that incorporates military traditions, social norms, training, and combat.

¹¹² Donelson R. Forsyth. Group Dynamics, 6th Edition (2014), Belmont, CA: Woodsworth Cengage Learning, 21, <https://scholarship.richmond.edu/cgi/viewcontent.cgi?article=1004&context=bookshelf>



A – Psychological Neural Net (PN2)

B- Critical thinking; applying what was learned from previous group

**Figure 4: The Iannucci Model
Recommended Variation to Tuckman and Jensen’s Model**

Figure 4 is a recommended adjustment to Tuckman and Jensen’s model that centers around a non-linear approach to moving through stages of group development; this is not recommended strictly for military, but rather a recommended approach to modernizing Tuckman and Jensen’s model. Stage 1, *Conceptualizing* has two parts (A and B), one that represents all the social norms, bias, culture and pre-conceptions brought in by the individual from childhood, life, etc. Part B is for when a member has completed a task with one group and moves to another, bringing with them all that they have learned from the former group. Stage 2, *Integrating*, is when members take all that represent themselves and compare to the other members of the group determining where they fit in, self-defining roles within the construct of the group structure and task(s).

Stage 3, *Conflicting*, is about the group jockeying for position, fighting against social norms, establishing social relationships and working out how to integrate task assignments into

this realm of discord. The conflicting bubble is larger than the others as it is the stage where most of the group's time will be spent. It also overlaps every other stage except conceptualizing because groups will transition back and forth between stages as disagreements happen, mission changes, task changes, group members changing, etc. This does not indicate that the group isn't completing tasks or functioning, but conflict in a group is part of the growth of that group. Stage 4, *Establishing*, is when the group establishes norms as to which the group can function amidst conflict, where social intrapersonal relationships are formed.

Stage 5, *Functioning*, is where the group has established rules, follows them and put energy toward task completion, social intrapersonal relationships do not hinder the group functionality. Stage 6, *Maturing*, is more of a process rather than a stage. It's where the group knows the task completion is near and the group structure (members, leader) may be breaking up. Members leaving, leadership changing can leave anxiety within the group and affect the normalcy they have come to adopt in intrapersonal relationships and teamwork associated with the task(s). This process of maturing through team cohesion changes leads to the lessons learned from the group that members take to the next group. The arrows on the outside of the model indicate that transition from stages does not have to go through *conflicting* as we saw in the example of the US Army General Staff College where seasoned professionals chose to skip conflicting within the group and focus on task completion. This model is not meant to move in a linear vector from one stage to the next, it is designed to indicate that group dynamics is non-linear in nature and groups move through these phases at different times and at different intervals as needed according to the working environment and task requirements.

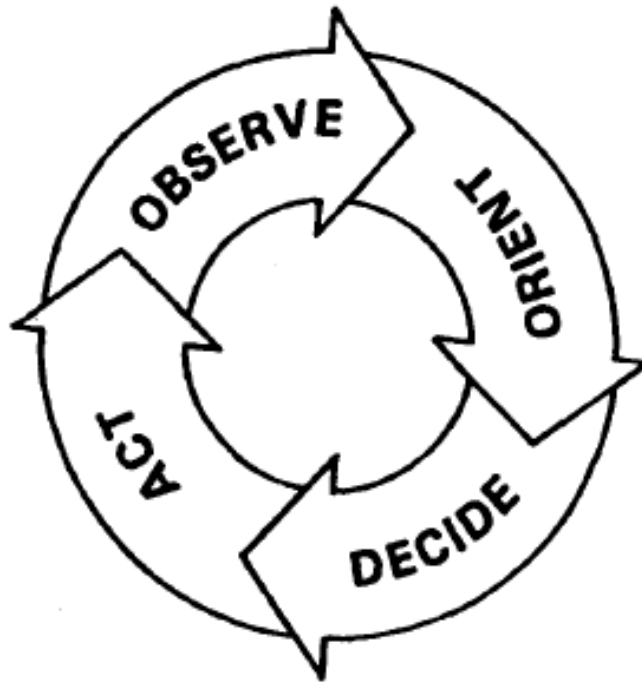
Conclusion

Over the last fifty years there have been hundreds of team building, team dynamic models developed. The dynamic nature of human interaction makes developing group dynamic models a difficult task, yet through the years one model has remained at the forefront, Bruce Tuckman's four stage original 1965 model and the addition of a fifth stage in 1977 in conjunction with Mary Ann Jensen. The linear nature of the Tuckman and Jensen model make the application to a high-tempo, kinetic, and truly dynamic military environment outdated. Yet, very few studies have researched not only how the Tuckman and Jensen model applies but what model should be used in place. Meanwhile, the Tuckman and Jensen model is taught at Air Force, Marine, and Army PME programs.

If developing a new model, what team building exercise could truly represent what a modern heterogeneous military force will face in the course of their careers? Members work multiple places with different group dynamics throughout their careers, and how do you study group dynamics while members are actively engaged in the field under hostile conditions? These diverse teams conducting non-linear operations juggle multiple mission taskings across a broad spectrum of requirements. With this environment, why does the military specifically choose Tuckman and Jensen's model, especially at various levels of an officer and enlisted member's career? The proposed approach to developing a military *total-group setting* study will create a baseline for further studies not the unique nature of the military work environment. The proposed change to Tuckman and Jensen's model (Figure 4) broadens the applicable use of the model to multiple environments which should not be used in a vacuum but should be adjusted to fit the environment as to which it is used.

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Appendix A: Figures



**Figure 1: The Command and Control process:
The OODA Loop¹¹⁴**

¹¹³ Headquarters US Marine Corps, *Command and Control*. MCDP-6. (Washington, D.C.: Headquarters US Marine Corps, 4 Oct 1996), 64

¹¹⁴ Headquarters US Marine Corps, *Command and Control*. MCDP-6. (Washington, D.C.: Headquarters US Marine Corps, 4 Oct 1996), 64

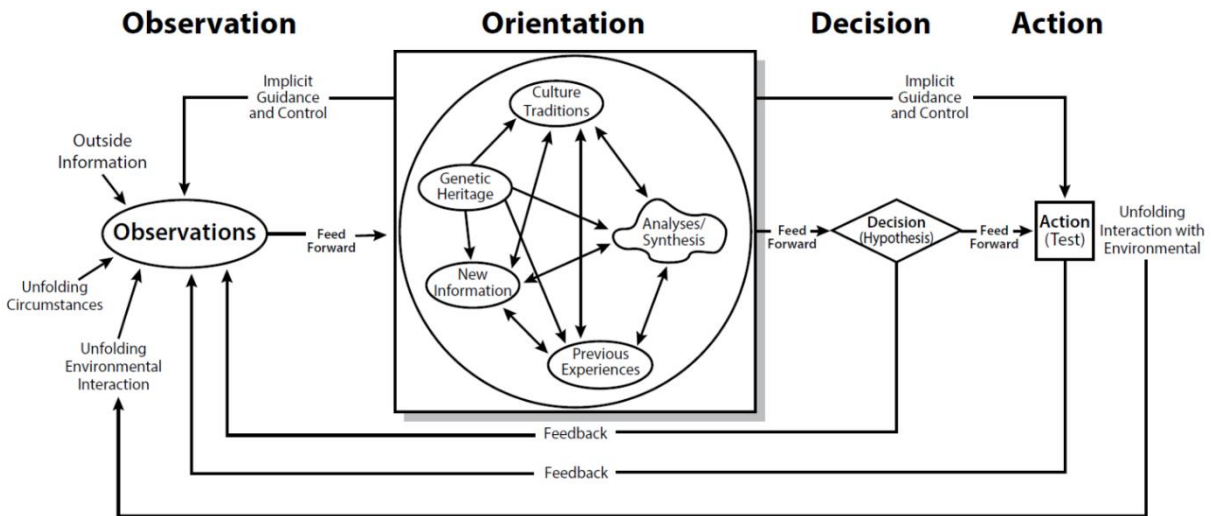


Figure 2: The Real OODA Loop¹¹⁵

¹¹⁵Major Jacob Wilde. 2261-19 #14, *John Boyd and the OODA Loop*. (Marine Corps University, Quantico, VA, April 2, 2019), PowerPoint presentation.

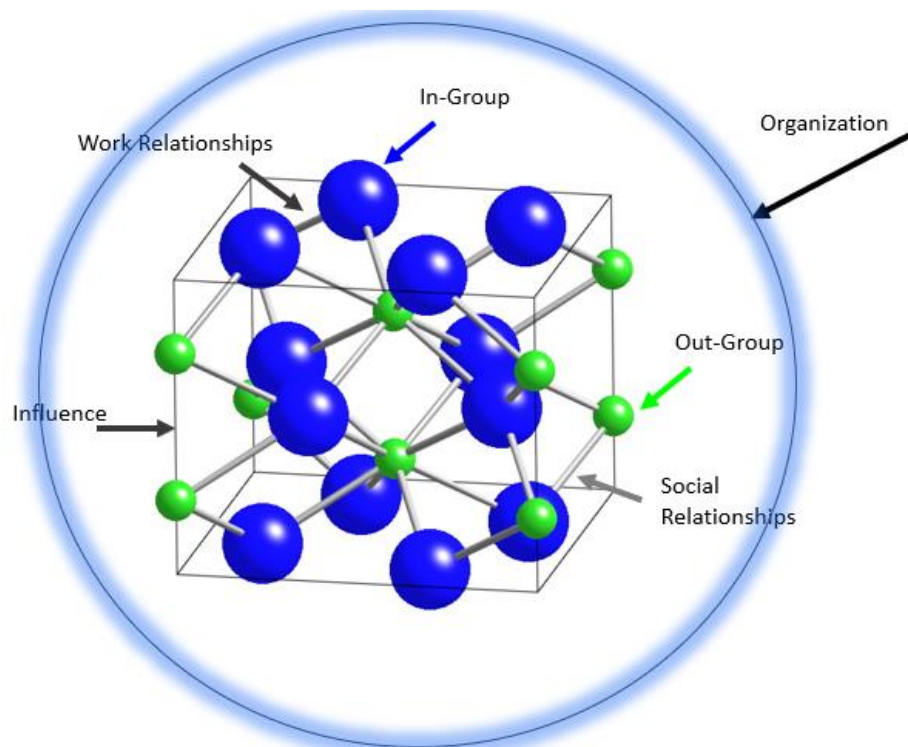


Figure 3: Alternative Leader-Member Exchange (LMX) Theory Model



A – Psychological Neural Net (PN2)

B- Critical thinking; applying what was learned from previous group

Figure 4: The Iannucci Model
Recommended Variation to Tuckman and Jensen's Model

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ⁱ The term Civilian male labor force is used by the U.S. Bureau of Labor Statistics (BLS) to describe the subset of Americans who have jobs or are seeking a job, are at least 16 years old, are not serving in the military and are not institutionalized. In other words, all Americans who are eligible to work in the everyday U.S. economy