Leadership, Innovation and Strategy Development in Military Hard Structures: Bringing Chaos to Order

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Disclaimer: *The views expressed in this document are mine and are not necessarily the views of my supervisory team, examiners or Middlesex University.*

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Glossary

AAA: Anti-Aircraft Artillery
ACSC: Air Command and Staff College
ACTS: Air Corps Tactical School
AI: Artificial Intelligence
ALS: Airman Leadership School
AFA: Air Force Association
AFB: Air Force Base
AFDP: Air Force Doctrine Publication
AU: Air University (see figure)
AUiX: Air University Innovation Accelerator
AWC: Air War College
CAP: Civil Air Patrol
CLC: Chief's Leadership Course
CPI: Certified Professional Innovator
CSAF: Chief of Staff of the United States Air Force
CVF: Competing Values Framework
DIB: Defense Innovation Board
DIU: Defense Innovation Unit (a.k.a DIUx)
d.School: The Hasson Plattner Institute of Design at Stanford (design school)
ENTJ: Extrovert, Intuitive, Thinking, Judging (MBTI Archetype)
F-35" "Lightening II" stealth multi-role fighter aircraft used by the US and allied nations
F/A-18: "Super Hornet" A twin engined fighter aircraft flown by the US Navy and Marines
FRLM: Full Range Leadership Model
GWOT: Global War on Terror
KC-10A: "Extender" Large, wide-body, three-engined air-refueling tanker, deployed 1981
KC-135R: "Stratotanker" mid-size four-engine air-refueling tanker, deployed 1956
LbD: Leaders by Design
LC: Leadership and Command Course
LD: Leader Development Course (ACSC)
LDC: Leader Development Course for Squadron Command
LIS: Leadership, Innovation, Strategy
iDC: Innovators by Design
iRTF: Innovation Research Task Force
ISFP: Introvert, Sensor, Feeling, Perceiving (MBTI Architype)
MBTI: Myers-Briggs Type Indicator
NATO: North Atlantic Treaty Organization
NCOA: Non-Commissioned Officer Academy
NSC: National Security Council
NSIN: National Security Innovation Network
OODA: Observe, Orient, Decide, Act
OTS: Officer Training School
PM: Project Mercury
PW: Public Work
PWA: Public Works Administration
ROTC: Reserve Officer Training School

RTF: Research Task Force
SAASS: School of Advanced Air and Space Studies
SAM: Surface to Air Missile
SbD: Strategists by Design
SECAF: Secretary of the United States Air Force
SNCOA: Senior Non-Commissioned Officer School
SOS: Squadron Officer School
TD: Transdisciplinary
TM: Truth and Method, Gadamer
USAF: United States Air Force
USSF: United States Space Force
WPA: Works Program Administration

Air University Structure

Wright Patterson AFB, Dayton Ohio — Air Force Institute of Technology

Maxwell Air Force Base, Montgomery Alabama — Air War College; School of Advanced Air & Space Studies; Air Command and Staff College

LeMay Center for Doctrine Development and Education

Holm Center — OTS, ROTC, JROTC, CAP

Barnes Center — ALS, NCOA, SNCOA, CLC

Eaker Center For Leadership Development

AIR UNIVERSITY

Edwards AFB, California — Air Force Test Pilot School

Squadron Officer School

International Officers School

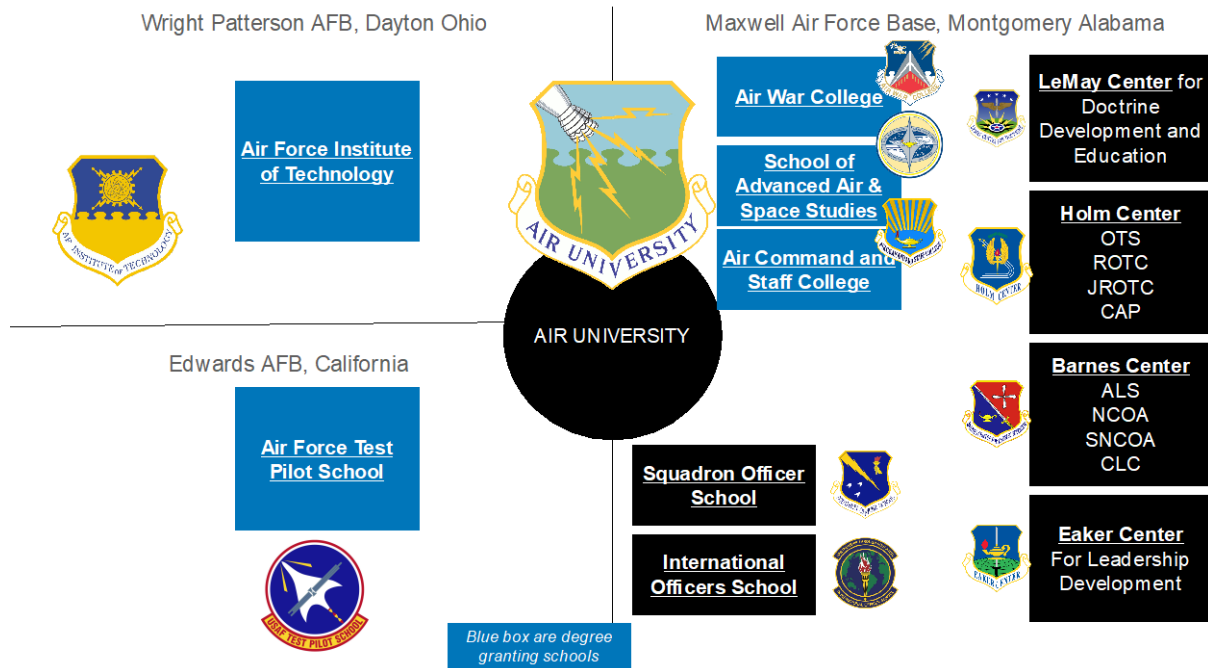*Blue box are degree granting schools*

Illustration above is a simple sketch of Air University and the schools and centers within. The narrative below focuses on officer education, other schools and centers are beyond the scope of the research.

Air War College grants a master's degree in strategic studies. War College offers a 10-month in residence program for roughly the top 15% in a particular year group of Lieutenant Colonels and Colonels with an annual student body of approximately 245 to include US and international officers, civilians, and other government agencies. The college also offers on online program for those not selected to attend in residence

School of Advanced Air and Space Studies grants a Master of Philosophy in military strategy. SAASS is a highly selective 10-month in residence program with 38 Majors from all services and allied nations. The does not offer an online program

Air Command and Staff College grants a Master of Military Operational Art and Science. Staff College offers a 10-month in residence program for roughly the top 18% in a particular year group of Majors with an annual student body of approximately 500 to include US and international officers, civilians, and other government agencies. The college also offers on online program for those not selected to attend in residence

Squadron Officers School is a 6 to 8-week course focused on leadership and joint warfighting for USAF Captains. All Active Duty Captains must attend SOS in residence. The course is offered several times a year with approximately 600 students per course.

International Officers School prepares international students and their families for Air University programs to include War College, Staff College, and Squadron Officers School.

Holm Center houses many of the USAF's accessions programs to include 145 ROTC detachments at universities across the US. The Center is also home to the Officer Training School, Civil Air Patrol, and Junior ROTC.

Air Force Institute of Technology is home of the Graduate School of Engineering and Management, The School of Systems and Logistics, The Civil Engineering School, The School of Strategic Force Studies, and Civilian Institution Programs.

Air Force Test Pilot School awards a Master of Flight Test Engineering to graduates

The LeMay Center is responsible for developing and assessing AF doctrine. The center is also home of the USAF Wargaming Center, AU's Intelligence Office, and Joint War Planning Education.

The Eaker Center focuses on professional continuing education and technical training. The center is home for the First Sergeant Academy, Civilian Leadership Development School, Defense Financial Management and Comptroller School, Force Support Professional Development School. Commanders' Professional Development School. Leader Development Course for Squadron Command, and the Chaplain Corps College.

Abstract

This thesis is a critical engagement with the development of leadership for officers in the United States Air Force (USAF) at the USAF's Air University (AU) through specially designed graduate level education courses in leadership and innovation. These programs have been in regular demand and requests for their dissemination to various other parts of the military are frequent. They are also the seed bed for a number of change initiatives and graduates are to be found at the highest level of decision making. This responsibility to anticipate the future and contribute to supporting officers to lead in increasing complexity, requires me to be constantly questioning myself, my own leadership, my ideas and the ideas of others to inform the design and ongoing evolution of these programs. This evolution is nudged not only from questioning but from the input of students, faculty, and staff in a collaborative endeavor. The context is leadership in, what I refer to as, a 'hard structure', one that is heavily regulated and bureaucratized with non-negotiable expectations of its members in service to the protection of systems of security, from economy and law enforcement to trade and civil liberties. In the context of this particular hard structure of the military, the mandate to safeguard a nation's institutions and alliances can also be a mandate to kill on small and large scales, if ordered to, in the interests of national and international security. This critique has brought into greater awareness the ambiguities, contradictions, and paradoxes faced by military leadership; it questions whether existing formulaic models are relevant to practice in field conditions and tracks my search for concepts as translational devices to negotiate opposing tensions and to see the possibilities in 'the middle way'. I collaborate with students, peers, and literature to enable leadership and innovation education to shift from a monoperspective to a multi-perspective lens and from leadership as some form of mono-discipline to a multidisciplinary one. I explore the relevance of approaches and concepts including transdisciplinary perspectives as complementary ways to approach leadership for the future. While innovation is part of the leadership portfolio, I arrive at the need to introduce strategy into that portfolio and have set in motion an initiative to integrate all three into a Master's program that stretches not only the skills of young officers but their imagination. I can now articulate more clearly the concepts, ideas and distilled experience that informs the content and the delivery of the leadership and innovation programs– a transparency of my own understanding including (i) context is pivotal (ii) once leaders understand and are comfortable with their 'being' they will be confident to seek cognitive diversity to complement any perceived or actual 'weaknesses' in themselves (iii) this in turn results in strong, cohesive teams where individuals can feel less inhibited in expressing and comprehending their strengths and can strive to help each other flourish with an understanding that leaders can only be as great as the teams they create.

Introduction: Purpose, Organizing Frame and approach to Critique

Out of my extensive public works over a number of years (Appendix A) I have chosen two, created within the last ten years, that mean a great deal to me and offer me the opportunity to critique my own input into developing the future leadership of the US Air Force (USAF), a task that cannot be taken lightly by myself or by anyone else.

Purpose

I would like to clarify at the outset the motivation and context for undertaking this type of doctorate which seeks to extract practitioner insights to contribute to practitioner knowledge from existing works and from experiential learning. I view myself, and I am viewed by others in my sector, as an innovative practitioner in developing officers in new ways that adds practitioner and real-life experiences to the academic and operational literature that the students have been exposed to in the various Masters and trainings they have undertaken prior to coming into these courses. Myself and my team have also undertaken more than one Masters and continue to engage with ongoing development formally and informally. The vast amount of literature available to officer training is divided and subdivided into specialist areas such as special forces, peace keeping, stability operations, technologies, strategy terrorism. It is my role to lead a team to support officers from all specializations to develop their attributes as officers not as specialists in particular areas. The officers who take our particular courses do so as an intentioned elective to explore in more depth the realities of the field conditions which the military literature is either too specific or too general to apply to all circumstances. The element that is common across all situations of command is the quality of the officer. These courses are designed to encourage the officers to gain leadership of themselves as a key attribute in managing command in complex and volatile situations as well as in civil society engagement and this also requires the confidence to innovate in response to crisis situations and innovate in times of peace or when working with civil society. The focus on practice has caused the LbD and ibD programs to be adapted and offered in a number of other military units and entities and aspects of the courses repurposed for funded innovation projects. They have secured funding on a regular basis to be continued and expanded. Their value to the military is in no doubt. It was and remains my aim to enhance officers' responses to real situations whether in battle, strategy, tactics, communications or civil society. It is generally recognized by outsiders and insiders, as mentioned in the work, that more of the same is not the answer to the new field conditions of a global world. This doctorate, critiquing my own practice and the outputs I have created, was my opportunity to be free to go beyond the common military theoretical and model driven literature to see what I could gain from expanded literature and ideas that will support this much needed but neglected area of military training and development of officers. The Appendices on both the works include our use of expanded literature ourselves to focus on the practice of leadership and the practice of innovating.

To emphasize the value of this to practice, in one leadership essay (Appendix D) a student, who is a major, writes that the LbD course "helped add to my "palate" of colors towards my

leadership art …Everything learned has helped me to become a better and *real* leader rather than search for being the *right* leader." For the practice of innovating see the innovation project by a group of officers on Exceptional Family Membership Program (EFMP) (Appendix E).

I have learned a considerable amount through this doctoral process which has ignited insights, surfaced new possibilities and given me increased perspectives on my own leadership and innovation practice which I am feeding into the development of Strategists by Design (Chapter 4).

Organizing Frame

I have organized the critique in the following way. Each chapter is supported by Appendices.

This **Introduction** provides firstly a navigation of expectation and secondly a rationale for my choice of approach to exploring these outputs of my professional life which matter so much to me and to my country's increasingly complex role in a complex world.

Chapter 1 Context

Using facts, descriptions and metaphoric conceptualizations I present the context in which these selected works came into being. This context is multilayered in terms of (i) time, timing and local and global events (ii) the situation of practice which is the US military (iii) myself as part of the context in which I use my agential identity to bring about change in service to my sector and particularly to younger serving officers. It will become apparent that I am not a compliance type of individual, rather a positive disruptor. Throughout this chapter questions arise from myself and from many of our students. I have put these questions in italics.

Chapter 2 Public Work 1 Leaders by Design (LbD), developed 2014, 13 to 15-week program, 3 hours each, with approximately 200 graduates.

I introduce LbD and begin a rationale for and a critique of what constitutes the content and activities of this program and how events continually feed into the scenarios created to facilitate young officers to become leaders of themselves first before they can lead others. In drawing on my own experiences of leadership in the US Air Force and my own training experiences, I ask questions of myself and colleagues as well as the students about what we are doing, how we are doing it and why we are doing it in the way we are. This includes commenting on samples of existing leadership models favored by the military. I summarize the new insights I have gained through standing back from my outputs and critiquing them afresh in new contexts and with new information (insight tables in Appendixes N and O).

Chapter 3 Public Works 2: Innovators by Design (ibD), developed 2016, 13 to 15-week program (we have also run a 30-week version), 3 hours each, with approximately 100 graduates.

I look at the emergence of this second program, its purpose, aims and objectives. I explore the understanding of innovation for different people and in different contexts. My focus is on the context of a military for peacetime and for war. Important aspects of the *Innovators by Design* link to *Leaders by Design* examining individual and team innovation and whether cognitive diversity has a more important role to play in future thinking, innovation thinking and development.

Chapter 4 Public Works 3 (Prospective): Strategists by Design (SbD), origin date TBD, 13 to 15-week program, 3 hours each, with 0 graduates

This is the formulation stage of a new program *Strategists by Design* which I have thought about for a long time. The critique of the first two programs has given me both the time and insights to make this a reality. I have already started to operationalize the early stages and present here the rationale for the direction it will take. What is emerging is a new training architecture for futuring officer leadership which combines leadership, innovation and strategy, and philosophy. Its focus will continue to be on practice such as exploring the gaps between the practice of 'strategy' leadership and the existing military literature and the role of expanded literature to bridge the gaps.

Chapter 5 Insight-ing

Here I present how new insights have given greater shape to future projects. I see insights as looking inside deeply at something to stimulate the emergence of something new - new ideas, new syntheses, a new way of seeing, new possibilities we did not know existed because we could not see, a form of inciting insights. I begin to open up, for example, the possibilities presented by the discourse which has been emerging over that last three decades or so on transdisciplinarity as both a way of conceptualizing our existence and, through that, a way of working collaboratively between, across and beyond the existing boundaries that inhibit our potential for radical creativity and expanded horizons.

Reflection and Journaling

At the end of each chapter, and at points within the chapters, I reflect on a selection of issues drawing from my journaling through the whole process. I am almost a compulsive note taker and journaler, a habit formed during my early days in the military when I was required to record facts and verifiable accounts of actions, but I also had a need to understand my own role, what

I was being told to obey or the right way to do something, and to question my own questioning of things. Chapter 4, the Strategy program in the making, is drawn from my notes, mapping and discussions and constitutes my critical and operational thinking process to bring it to reality. Lower font and italics indicate reflection pieces.

Critical Framing: Insights on leadership in a hard structure

Due to the nature and responsibility of my role in leadership I have undertaken to approach this critique through an 'analytical' autoethnographic lens (Anderson, 2004, Duncan, 2004, Chang, 2008). Autoethnography positions the reflexive agency of the researcher (auto) as part of the particular context or culture that subscribes to certain practices and behaviors (ethno) of which the researcher is themselves a member. The findings of such an interrogation are then written up as insights that have emerged from that reflexive relationship between the member and the culture (graphy).

According to Ellis (2004), autoethnography is 'research, writing, and method that connect the autobiographical and personal to the cultural and social. This form usually features concrete action, emotion, embodiment, self- consciousness, and introspection' (p. xix). Cautionary notes of critics of the emotion and embodiment elements of this approach, which is considered evocative autoethnography, include falling into tendencies for self-absorption or as unique to that person and to their own situation and not to wider understanding of the human condition. Hayano (1979, 113-120), who, according to Stahlke Wall (2016, 1-9), coined the term, used it as a transparent way of researching one's own 'culture' or situatedness. Since then there has been a prolific amount of autoethnographic papers and research ranging from highly subjective, to evocative, to analytical. Traditionally ethnographers researched ethnic groups/societies other than their own and very different from their own. Traditional ethnography included keeping extensive field notes of the cultural practices, conversations and interactions not only between the members but also those which took place with the ethnographer. These field notes often contained accounts of their own lived experiences of being with these groups for periods of time ranging from months to years, and questions it raised for them, even if their formal research papers and book publications mostly did not include those more personal records. For many ethnographers their later reflections were on questioning the practices and rituals of their own cultures, their hegemony, and their accepted notions of how one responds to being human. America has been home to some of the most prominent anthropologists of the twentieth century including Margaret Mead, Clifford Geertz, Franz Boas, and Ruth Benedict. Mead herself was the ethnographer at the first Salzburg Seminar, a US initiative for post conflict reconciliation and future strategy, shortly after the close of World War II (Russon & Ryback, 2003 97-114). The Salzburg conferences continue to this day annually and are focused on developing young leadership.

The lens used for this critique combines aspects of each of these autoethographic approaches. Regarding analytical autoethnography Denzin (2006, 419-428) summarizes Anderson's advocacy of 'analytic' autoethnography as an approach that uses reflexivity to improve

theoretical understandings of broader social phenomena (2006, 375) and Stahlke Wall (2016) highlights autoethnography contributions that combine the personal with the social in deepening understanding of the relationship between person and system.

I subscribe to this aspect of autoethnography that insights can contribute to furthering theoretical/conceptual understanding of a phenomenon or indeed a construct. In this case that phenomenon is 'leadership'. It is a cultural practice that is as old as humans. Tribes of 'experts' have formed to talk about it, write about it, preach about it and formulate it, but it still evades our grasp.

I am a member of the culture within which I am exploring my own expertise and that of my group. I approach this with reflexivity, that is, how I shape the field conditions and how they shape me. I include 'field notes' at times. I never go anywhere without a notebook. This is my opportunity to move back and reflect on the rituals of my culture with regards to leadership and how I grapple with the status quo. It also tracks my progress, my 'wayfaring', as Tim Ingold, the contemporary British anthropologist, puts it (2011), as I go outside my traditional cultural practices and beliefs to find other ways of looking at this phenomenon of leadership and interconnecting them to see if our take on it and our facilitating it can be improved to meet new field conditions.

This critique is not about the carrying out of primary research using autoethnography but an engagement in a retrospective through this lens of analytical autoethnography with a focus on one particular practice and that is leadership. The autoethnographic lens keeps me aware of: balancing the personal and the professional; using my critiqued experiences to contribute to wider issues in my 'culture'; the purpose for which I chose to engage in this work which is about preparing our young officers not only for the complexity internal to the cultures but for the increasing complexity and interconnectedness of the wider culture – a super ecology - in which the US military is one ecology in the system but with the ability to exert considerable influence on the whole superorganism as well as to be vulnerable to the powers of other ecologies.

I reflect on historical contextual factors and what has emerged from over 10 years of developing leadership in officers through shared experiences, specialist and expanded literature and the use of conceptual frames: from formulaic to creative and imaginative, and from ancient to modern. I have undergone several leadership trainings myself over the years and held a number of senior leadership roles. It is essential for me to critique my designs of such important programs and what informs them. A responsibility for the future of officers, in a complex geopolitical environment subject to sudden change, is not a task to be taken lightly. I focus on insights which have emerged while designing and delivering these programs and new insights that arise from critiquing them from a position of standing back. I pay particular attention to that dynamic movement between 'thing' and context.

I believe part of me has always been an autoethnographer. I have always taken field notes, journaled and used my notes to reflect and to express my more inhibited states of frustration, consternation and deep questioning inhibited by the hard structures that have high

expectations of compliance. I do a lot of 'working out' in my journals, a way of sense making which usually involves drawings, mappings, and depictions of thought trails. Some of these end up as training devices on my programs and in the many other activities in which I am involved both across the military and in civil society engagements. At the end of each chapter, I include some of these reflections and notes which give voice to what we are often too inhibited to speak out loud, or need to work out first before we do. There are occasions when they are to be found within the Chapters. Intensive exposure to military literature and leadership programs in Air University and other platforms, even if often formulaic and transmitted, can provide the existing knowledge on which decisions are made in the air force, However, the   programs discussed in this work, are designed to help young officers to externalize both their creativity and their frustration, to encourage them to dare to imagine and to ask questions of themselves and others to better work with the array of paradoxes and contradictions which arise in the field and with the cognitive diversity which is now being positively recognized; to practice good leadership.

I start the critique with the multilayered contexts in which the works were instigated and continue to operate.

Chapter 1 Context

Introduction

I have spent the last thirty-three years in leadership positions in the US Air Force as an officer, retiring as a colonel in 2016, and staying with the USAF as a civilian professor. In those active duty years, I served as a pilot, a planner, a strategist, a staff officer, a student, and a five-time commander. I have also served under several leaders in times of conflict and of peace. I now work at the USAF's Air University in various roles fundamentally focused on developing leaders and innovation. I am tasked by the Air Force with the responsibility of preparing officers for leadership in a rapidly changing world, technologically and geopolitically. My selected Public Works relate to some of what I have accomplished so far and what I have yet to achieve.

The context of these works for me is leadership itself: my own, leadership in general and futuring leadership which, by definition, requires certain anticipatory skills. Being a combat pilot not only provides the theory of anticipation but the gaps between theory and practice. Being regularly faced with certain situations, theory and compliance to the procedures and codes is very much put to the test particularly in a hard structure like the military. Therefore, I begin this critique of my works with the context of leadership because that is simply the context from which they emerged.

My concept of the 'greater good[1]' leader arises out of a multilayered contextual examination: a national context; an operational level context, an institutional level context, and a personal context (*Figure 1.2*). The value of exploring my own outputs is, not least, an examination of my own agency by contextualizing my works through a process of standing back and critically reflecting deeply on the what, why and how of their existence and finding out how an expanded discourse can help make explicit the professional knowledge and experience I have accumulated in the course of creating them for a contemporary audience.

I begin this contextual examination at the national level. America is a powerful, yet very young nation, and growing up in, what I experience as an American, an 'adolescent nation' shaped an interesting dualism in me. From my observations as an American, America is increasingly a tribal nation. This is seen in US political and media culture at both the national and international level. America is divided between what Snyder (2019) labels the *politics of inevitability* and the *politics of eternity (see figure 1.1)*. The politics of inevitability is a sense that the future is just

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[1]Greater Good Leadership is a term used in leadership literature as in Dan Ebener's 2021 book: Leadership for the Greater Good: A textbook for Leaders, at the time (1996) I believed to term to be original to me and my thinking

more of the present, that the laws of progress are known, that there are no alternatives, and therefore nothing really to be done (Snyder, 2018). On the other end of the spectrum are those who believe in the politics of eternity. They tend toward an inevitability that promises a better future for everyone, eternity places one nation at the center of a cyclical story of victimhood. Time is no longer a line into the future, but a circle that endlessly returns the same threats from the past (Snyder, 2018). Those swayed by inevitability see every fact as a blip that does not alter the overall story of progress; those who shift to eternity classify every new event as just one more instance of a timeless threat (Snyder, 2018). Growing up in this American culture and seeking

| Politics of Inevitability | The sense that the future is just more of the present, that the laws of progress are known, that there are no alternatives, and therefore nothing really to be done. In the American capitalist version of this story, nature brought the market, which brought democracy, which brought happiness. In the European version, history brought the nation, which learned from the war that peace was good, and hence chose cooperation and prosperity. (Timothy Snyder, The Road to Unfreedom: Russia, Europe, America (New York: Tim Duggan, 2018), 7.) |
| Politics of Eternity | The collapse of the politics of inevitability ushers in another experience of time: *the politics of eternity* [emphasis original]."The idea that time is "a circle that endlessly returns to the same threats from the past … (that posits) that government cannot aid society as a whole, but can only guard against threats." Eternity places one nation at the center of a cyclical story of victimhood. (Timothy Snyder, The Road to Unfreedom: Russia, Europe, America (New York: Tim Duggan, 2018), 8.) |
| Politics of Responsibility | The attempt to create a political system that makes sense over the course of one life, where there is enough equality that young people think the system is not stacked against them and that they can grow up without resentment. The goal is a mature person able to process the things going on around him or her to figure out what's actually true or what's not. Responsibility fundamentally involves caring what is true and what is not. (https://www.chicagotribune.com/entertainment/books/ct-books-road-to-unfreedom-timothy-snyder-20180403-story.html) |

https://inference-review.com/article/inevitability-and-eternity

Figure 1.1 Politics of Eternity, Inevitability, Responsibility

 the correct answer can lead one to believe it is both; the binary is just too simplistic. At the operational level I have been deeply acculturated into the US Military's rigid, hierarchical structure and rules-based culture (hard structure). Perhaps I was already primed to obey through years of Catholic schooling yet at the same time, after all my experiences, I find myself always questioning the rules.

The institutional culture is embodied in Air University's origin story of deep strategic thinking, innovation and creativity as imagined by airpower's early 'rogues and rebels'. The founding culture of the university is one I readily identify with, yet over the years, the school has grown comfortable with a status-quo existence. In this work I closely examine these influences through my own personal context, constantly pushing between the rigid world of conformity and Maslow's concept of self-actualization or becoming the best version of myself through creating new and vibrant organizations, brands, and curricula which cause consternation or positive disruption in the hard structure.

As this critique progresses my notion of the 'greater good' leader will become clearer as one who understands the dualisms, dichotomies, and paradoxes in each of the above contexts. This leader may prefer a rules-based hierarchical culture over a more free-flowing flat organization yet understands the power and the place for both. This dualistic and paradoxical examination

is what is demanded of a leader who holds the benefit of the organization and its members over the benefit for oneself.

Figure 1.2 Context
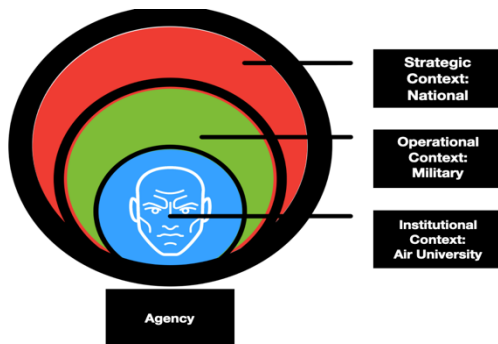
The Context of Emergence

The National Level Influences: America

I was born in the mid-1960s. Having grown up in America and lived through several national level liminal events in my early childhood such as the Vietnam War, the Civil Rights movement, the Cold War, and 9/11, I am part of, even a product of, this national culture and experience. America is currently considered the most powerful nation on the planet [2]. While being powerful, it is also the youngest nation in the top 10 most powerful. There are many papers and studies that have been written by American politicians, commentators and academics about America as a young nation and its identity crisis (Gaddis, 2018, Allison, 2017, Friedman, 2020, Brose, 2020). In conceptualizing my country as being in its adolescent years of nationhood, I can extend that metaphor to speculate on reasons for its behavior especially in response to outside influences. America, like many young people is perhaps still suffering from an identity crisis in that liminal period of transition from adolescence to adulthood. Erikson notes "In the social jungle of human [national] existence, there is no feeling of being alive without a sense of identity." Such identity crises can manifest as tribalism as a young person seeks to belong to a group other than the family. Power, youth, and tribalism play to national culture and an individual sense of being. In this paradoxical, dualistic thinking there is tension in the US with one side focused on almost an entitlement to liberty. It tends to privilege the individual with an overall positive outlook towards the world. Social psychologists point out how individual group loyalties influence and shape collective behaviors (Druckman, 1994, 38). This behavior can lead to a shadow; a focus on the individual can lead to a lack of national cohesion and a dilution of unity. The other side focuses on a collective voice and a strong sense of nationalism to protect American values with strong cohesion and national identity. This could be seen as the American Janus, Janus being the Roman god of beginnings, gates, transitions, time, duality, binaries and polarities. In the American case one side has a strategy of negotiation, persuasion, concession, the other a strategy of being battle ready and willing to engage and, like the Roman god, the switch in identity can be sudden, unnerving and capricious. One vision is world peace in an interconnected world, the other vision is a great America focused on preservation. As leaders considering this Janus, it is really not one face or the other, but both.

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[2] U.S. News and World Report, in partnership with BAV Group and the Wharton School of the University of Pennsylvania, surveyed over 20,000 people from four regions around the world. Respondents were asked to associate five attributes: military alliances, international alliances, political influence, economic influence, and leadership. According to the 2018 survey, the United States is the world's most powerful country. The United States has the world's largest economy, with a GDP of $19.4 trillion and the largest military budget of $610 billion. The US defense spending is higher than the next seven largest defense spenders: World Population Review

Scholar, Robert Kagan (2021) of the Brookings Institute notes that America has an outstanding capacity for global power, but a question which sits with me personally is America's perception of its place and role in the world. There is a 'Yin and Yang' or taijitu (Kim, 2001, 14-15) at play here as well, a concept I will explore in more depth later. Kagan (2021) notes that the US has met the challenges of Nazism, Japanese imperialism, Soviet communism and even radical Islamist terrorism, yet the US has never really regarded this global activism as normal. Even in the era of the Internet, long-range missiles, and an interdependent global economy, many Americans retain the psychology of a people living apart on a vast continent, untouched by the world's turmoil (ibid). In times of emergency, the US can be persuaded to support extraordinary exertions in far-off places. It seems some Americans regard these as exceptional responses to exceptional circumstances. They do not see themselves as the primary defender of a certain kind of world order; they have never embraced that global role (ibid). On the other hand, there are others who believe the US must assist in the role of global leader. *Is it possible both sides are correct?* If the answer is yes, then how can we create or improve a relational dialogue between both sides.

The United States of America is still trying to find its way in the world and in describing America as displaying many of the characteristics of the adolescent as a nation, myself and other writers do not intend this t to be derogatory but rather as a way to try and understand its identity emergence. America, as a nation, is not even 250 years old. According to Erikson[3] (1958, 1963) on the development of individuals, personality is in a predetermined order through eight stages of psychosocial development[4], from infancy to adulthood. During each stage, a person experiences a psychosocial crisis which could have a positive or negative outcome for personality development (McLeod, 2018). The analogy can work for nation states as well.

Adolescents are amazing in a unique way, and every human is an adolescent before becoming a mature adult, a period which is usually referred to as liminal, a developmental state, a rite of passage, that has many obstacles, hazards, wrong turnings but also enlightenment and revealing of courage, resilience and destiny through the struggles to emerge as a valuable member of society. (Turner, 1960). World War I laid waste to Europe, but not the US. America and Europe experienced the Great Depression, yet the US recovered faster. For centuries, the world was divided among several competing colonial powers. No one country had hope of becoming the sole global 'superpower' in such a system (Fisher, 2015). WWI was the beginning of the end of the colonial era which accelerated after World War II, coinciding with the new Cold War. World War II ravaged Europe and Asia. America paid dearly with 400,000 military

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[3] Erick Erikson, the German psychologist and psychoanalyst known for his theory on psychological development

[4] Trust vs. Mistrust, Autonomy vs. Shame, Initiative vs. Guilt, Industry vs. Inferiority, Identity vs. Role Confusion, Intimacy vs. Isolation, Generativity vs. Stagnation, Ego Integrity vs. Despair

personnel dead. The death toll was huge for America but contextualized it was fewer deaths than other allies. Nonetheless it was a shock to a young nation.

The US emerged from the WWII far more powerful by virtue of other countries colonial decline. In 1944 William T.R. Fox coined the phrase 'superpower' citing America, Britain and the Soviet Union as the three superpowers; superpower defined as those nations which had the responsibility and power to achieve peace. In order to achieve global peace 'superpower' became defined by super weapons capacity.   By 1971, the US and the USSR settled into a stalemate and by 1989, one power remained standing with the fall of the Berlin Wall. All of these liminal events happening in close order to a relatively young nation forced the US to wrestle with its basic identity, virtues and values and the kind of leadership it needed, for whom and for what.

On deployment to Afghanistan, I worked with an Australian Air Vice-Marshall with whom I had many interesting conversations, but one has remained with me. I asked him what failure in Afghanistan would look like. His response was telling when considering Kagan's thoughts above: "failure is an America that refuses to engage on the world-stage." The Air Vice Marshall may have been prescient, yet it remains to be seen how America will act on the world stage after the retreat from Afghanistan. My question, and one which comes up in our leadership development programs, is *does America desire to remain at home in seclusion or does the nation see itself as a potential global 'greater good' leader*?

The other part of the equation of US identity, in my conceptualization of it, is American tribalism. The contentious 2020 Republican and Democrat presidential campaign laid bare deep divisions in America. Strict loyalty to a foundational identity (political party, race, religion, clan, or region) has become an organizing principle within the country (Martinovich, Iyengar, 2017 and see figure 1.2 US political polarization). Perhaps it is a nostalgic view that Ronald Reagan and Tip O'Neill or Bill Clinton and Newt Gingrich could debate ideas openly and come to compromises that could benefit the country as a whole. This current polarization is complex, and scholars debate the exact factors that contribute to it. Research tends to suggest four main contributing factors to polarization's rise. i) increased political activism which pushes each party further to the left or right (Layman et al, 2006, 83-110). ii) Election polices to include campaign finance reforms and gerrymandering (Layman et al, 2006, 83-110). iii) In-Group Bias where psychological factors play a role in reinforcing partisanship (Iyegar et al, 2019, 129-146). 4) media bubbles in which Americans are exposed to partisan news in their social media feeds and often have very few social media friends on the other end of the political spectrum (Iyegar et al, 2019, 129-146).
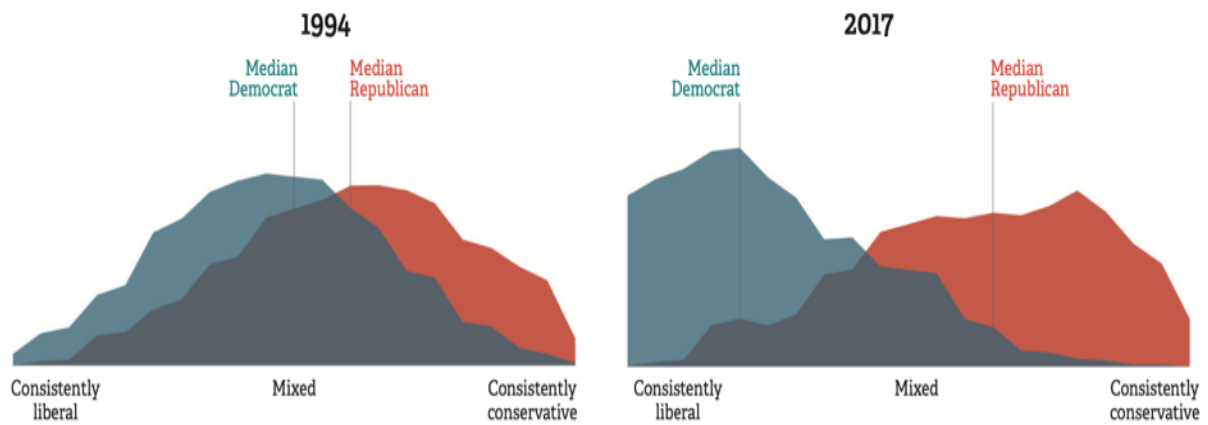
Source: "Political Polarization, 1994-2017." Pew Research Center, Washington, D.C. October 20, 2017, https://www.people-press.org/interactives/political-polarization-1994-2017/.

Figure 1.3: Political Polarization 1996-2007

From my perspective I would suggest that as national and international issues gain in complexity, the country requires greater agility in cognitive diversity, richer ideas, more skilled leaders, and more unleashed creativity to strategize a vision for the future, not less. It is not easy to work in this world of polarities but with the appropriate mindset for the contextual circumstances, I suggest it can be done through reconceptualizing leadership and other inherited notions. I have contemplated and operationalized a number of these re-conceptualizations such as the notion of the 'greater good leader' in my own leadership, the leadership of others and when designing and updating leadership programs for future leaders. I find other conceptualizations of binaries, polarities, and dualisms necessary but feel the need to go deeper and perhaps beyond these polarities. The ancient concept of the taijitu (Yin and Yang) serves as an interesting model.

Yin and Yang Dualism: The politics of inevitability vs Eternity or Realism vs Liberalism

Take for example the ancient dualism in the Tao Te Ching, in which Lao Tzu says the Tao is the balanced flow of the universe. As will be explained in Public Works PW1 and PW2, the most inspiring leaders understand or embody the balance of this dualism, between Yin and Yang, even if different terms are used to describe it. For example, leading thinkers like the renowned anthropologist Claude Levi-Strauss uses the concept of the Savage Mind vs the Engineer Mind, the psychoanalyst and author Carl

Figure 1.4: Taijitu(Yin/Yang)

Jung's anima and animus[5] are examples, and Isaiah Berlin offers us the fox and the hedgehog which I will be discussing in a later chapter.   Whether such concepts can help America reconcile the opposing forces, in what many see as its identity crisis, and inform new ways of examining and achieving the kind of leadership the future needs, is to my mind worth considering and supporting.

For 250 years the US seems to have preferred a limited international role which is a product of US history, experience, and the stories/myths the nation tells itself and others tell of it (Kagan, 2021). Some great powers such as China, Russia, Iran seek to recapture past glories or the politics of eternity, yet it seems to me, as an American, that the US yearns to recapture an age of innocence and the limited ambitions of the country's youth. This is the adolescent becoming a young adult, wrestling with lost childhood and an uncertainty of what the grown-up nations are expected to do. This raises a range of key questions which are not trivial but are behind some very serious decision making not least in defining party policies and competing for the support of the people. *Does the nation engage on the world stage or not or can America embrace the Yin of liberalism and the Yang of the realist and achieve harmony through a strategic vision?*

As the result of victories in two World Wars, a Cold War, and a short time as a sole superpower, America debated its global position while being thrust into a new position. It was *sui generis*, unique. The US had wealth and relative invulnerability making it capable of fighting major wars and making peace possible in Europe, Asia, and parts of the Middle East. At the same time, it made America question the necessity, desirability, and even morality of intervention (Kagan, 2021). America is secure, self-sufficient but is almost haunted by the question *does it need to be involved in conflicts thousands of miles away—further, does it have the right?* The question of identity then, *who are we?* plays an interesting role in the context of the American psyche and therefore the kind of leadership it thinks it wants, which may not be what it needs.

Returning to the adolescence concept, adolescents are "neither here nor there." This liminal space is one of transition between the known and the unknown. America has enjoyed the luxury of being both isolationist at times and at other times 'global hero', in the vernacular of popular culture enjoyed and used by many members of the military. Global interconnectedness is bringing an end to that era. At the threshold of adulthood, the US must decide what response they give to the question —*what do I want to be when I grow up*. The decision will indicate what kind of leader the US needs and hopefully that will be, for a start, leadership of the 'greater good': a prioritization of the public good over personal ambitions and aggrandizement.   To borrow from contemporary manifestations of such concepts underneath which is existential angst, perhaps America needs to be a 'Clark Kent and Superman'—the popular metaphor of the ultimate in dualism which demands leadership,

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[5] Jung described the animus as the unconscious masculine side of a woman, and the anima as the unconscious feminine side of a man, each transcending the personal psyche

creativity, and innovation simultaneously and at an unprecedented level, and being powerful and caring for the individual and the group at the same time, resolving paradoxes of the human condition and being human with human fallibilities. Living this dualism is a day to day struggle in the US Military. It is something I have dealt with in context at the operational level and with which I am now engaged and explore with young officers facing the future as leaders.

The Operational Level influences: The US Military

As a member of Generation X, I grew up in the 1980's. Unlike earlier decades, the advances in diverse media beyond print, and their availability, brought into every home in great detail and with substantial patriotic rhetoric, the growing distance between ways of seeing and acting in, and on the world, and America's confusion about its role. I decided to join the military in 1984 as a cadet at The Military College of South Carolina, known as The Citadel. The military and the school served as dominant symbols of the times. President Ronald Reagan (1981-1989) was building up the US military to confront the USSR. As a young man interested in adventure, fast aircraft, and travel, the military was a wonderful opportunity to have access to what thrilled me. I left my home in the San Francisco Bay Area for Charleston, South Carolina to begin a journey that was to fundamentally alter the way I viewed life and widen my perspectives. I saw America in a way that I could never have seen it from the inside only.

At the time there was substantial effort to trigger a resurgence in how both the American public and institutions viewed the military, not only as a force, but as a symbol. After Vietnam, there had been a sense of shame in the military, followed by the 1980 Operation Eagle Claw, a failure to rescue American hostages in Iran[6]. The American military was at its lowest point in decades. Reagan was determined to change that inside and outside America. Symbols were everywhere, and none more present to a young American male than at the box office. Movies with Arnold Schwarzenegger in "Commando", Richard Gere in "Officer and a Gentleman", "The Lords of Discipline"[7], Louis Gossett Jr in "Iron Eagle", and of course Tom Cruise in "Top Gun". They all created a pull for me to learn to fly and do what I could to ensure American victory in the Cold War. The USSR was the enemy, there was no doubt.

However, the military portrayed by Hollywood was not the reality. There would be no tower flyby as showcased in Top Gun. There were rules, and rules were usually established for good reason. Follow the rules or someone gets hurt or, in the worst case, dies. The military is excellent at creating professionals; professionals in the strictest sense as conforming to

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[6] **Operation Eagle Claw** was a United States Armed Forces operation ordered by U.S. President Jimmy Carter to attempt to end the Iran hostage crisis by rescuing 52 embassy staff held captive at the Embassy of the United States, Tehran on 24 April 1980. As the U.S. forces prepared to withdraw from *Desert One,* one of the remaining helicopters crashed into a transport aircraft that contained both servicemen and jet fuel. The resulting fire destroyed both aircraft and killed eight servicemen.

[7] Pat Conroy's book and movie about The Citadel

standards of skill, competence, and character. The military prides itself on strict standards of education and training. In addition, military professionals are subject to strict codes of conduct, enshrining rigorous ethical and moral obligations. Of course, there are those who break rules for individual gain or for motivations of anger, frustration, or personality structure. The military is well aware of the consequences of such behaviors on lives and on trust in the military. There are often severe repercussions for such individuals not least public shaming.

The military is the epitome of a rules-based, process-oriented, control culture, a veritable 'hard structure'. Hierarchy, procedures, explicit and implicit sanctions, direct what military people do. Leaders are focused on and proud of efficiency-based coordination and organization. Keeping the organization functioning smoothly is crucial. Formal rules and policies keep the organization cohesive and strong together. The long-term goals are stability and results, paired with an efficient execution of tasks. Reliable delivery, continuous planning, and low cost define success. Personnel management's mission is to guarantee work and predictability.

This highly structured culture is ingrained in military personnel from the start of their careers. Cadets learn about the history of the service, military customs and courtesies, proper wearing of the uniform, military bearing, military values and ethics, and other information that is seen as critical to success, including how to listen to and follow orders and how to function within the military chain of command. Initial training teaches discipline, focus, and control. Focus is important to mission success, and the services teach young recruits how to focus in challenging situations: situations where they will suffer from lack of sleep, be physically exhausted, or under unaccustomed and extreme stress. Learning to stay focused, in control, and disciplined in all situations are skills used throughout a military career as members are faced with uncertain and often dangerous situations.

The military context is simply one of discipline, order, rules, regulations (Yang), balanced against risk, innovation, and creativity (Yin). However, a stagnant military that simply follows rules is not a successful one and neither is a military that cannot follow processes and orders. As such, I understood the dichotomy or dualism I faced. I have always had a healthy acceptance of risk and in many cases enjoy a life of discipline, but I have always wrestled with the idea of rules. Rules should serve a purpose, rules should have an intention, but rules for the sake of a rule has always been an issue for me. To use the Yin Yang concept here the military's Yang dimension is control, rules and standards and its Yin, which can be overwhelmed by the Yang, is creativity, innovation and a tolerance for ambiguity, both are required to win wars from the metaphoric to the real.

Rules exist to make things assessable and repeatable in crisis. When the military faces crisis, such as a combat environment, rules and the discipline to follow rules are a key component in saving lives and achieving victory. The military is a bureaucracy to ensure things are repeatable, have processes to ensure rules and doctrine are followed, and then to measure

how closely rules were followed. The military is constantly concerned about precision in compliance to rule. However, I have been in combat and there are times when the rules hamper tactical and strategic thinking, stifle creativity, and make a highly effective force less effective.

My years of experience and constant reflection in and on every action I take, or have taken, tell me that this strict adherence to rules is necessary and not adhering routinely is dangerous to everyone, not just to the individual concerned. In my conceptualization of Yin and Yang as mentioned earlier, there is a dualism of control (order) and creativity (chaos). But there is a space in between at the intersection and for me, it is that space that needs attention and not least to how it relates to developing leadership for the future.

Literature on effective leadership variously cites principles in terms of number, as few as three and usually up to seven. A quick Google search on seven principles of leadership returns, about 167,000,000 results including i) belief in purpose, ii) taking full responsibility, iii) forgiveness, iv) humility, v) optimistic and realistic, vi) values others' opinions, confidence in your own, and vii) self-acceptance. Some lists mention the existence of ambiguity, paradox, and contradictions (see items v and vi) but they do not immerse themselves in what leadership can do to engage with these states. This is what motivates me at this stage of my career within the context of a rapidly changing world with less and less time to adapt leaving an increasing gap between realities of compliance structures and the realities of the field conditions that compel thinkers and practitioners to seek to bridge the gap. Examples include Heisenberg for whom it is intuitive thinking.

> Only the intuitive thinking can pass over the abyss that exists between the concepts system already known as the new concepts system: the formal deduction is helpless on throwing a bridging over this abyss. (Heisenberg, as quoted in Nicolescu, 2004, 124)

and Eastern philosophy that has produced the concept of Yin and Yang. Yin and Yang philosophy is best known for the negative principle (Yin) and the positive (Yang), but Lao Tzu offers a third principle to which I am drawn, that of fluidity, the alternating between two states that prevents stasis (Butler-Bowdon, Lao Tzu, 2012, 89). Trust is the cohesive force of Lao Tzu's third principle, that immaterial vitality that makes the other two harmonious.

I would suggest that the military requires leaders who can be trusted and, over two world wars and smaller wars since, it has been shown repeatedly that a military member is more likely to trust his/her fellow service member than trust a hierarchy of those whom they are supposed to trust and obey. The trust is in the network of relationships versus the hierarchy or hard structure (Ferguson, 2018, pg21). It is the relationships of the in between that come to matter, for example, in a crisis. During the initial days of The Global War on Terror (GWOT) we faced surface to air missiles (SAMS) and anti-aircraft artillery (AAA). I had several crews write letters

to family in case they might not make it home. This was due to a lack of trust in the planners located hundreds of miles away: those individuals that could not be seen, only spoken to on a radio or phone; planners we were forced to trust with our lives, trust that they would plan missions that would prioritize the safety of crews and aircraft. This trust could only be tested over time through crews becoming familiar with the airspace, the threat and environment and returning to base safely. Trust is partly based on reliability (Hussein, et al, 2019, 1238), and every safe mission reinforced the reliability and therefore trust in the planners. Only then would the "death" letters cease.

In crisis situations leadership must demonstrate trustworthiness through being highly trained professionals who have the capacity to flex all of their thinking, education and training to what will achieve the minimum loss and the maximum benefit. It takes insight and courage. It is the proverbial Yin and Yang. I have been at the war table, the conference table, the board table and I would propose that we need individuals who respect and follow rules, yet at the same time are comfortable with ambiguity and will push boundaries when the field conditions do not respond to conference table plans. This is the concept of agency and structure. The ultimate question I have faced throughout my career is *how far can one push personal and professional agency until the structure strikes back?*

This is embedded in my notion of the 'greater good' leader on which I go into more detail later on. Such a leader knows the rules and structure, respects, but is not overridden by bureaucracy, and has courage to modify the rules when needed and to push the boundaries of accepted 'wisdoms'. They are seen to put others before themselves which makes them trustworthy. Examples of pushing the boundaries of the hierarchy are seen in the history of Air University and the Institutional context in the following section.

The Institutional Context: Air University: *Proficimus More Irretenti*—"*We Make Progress Unhindered by Custom*"

Orville and Wilbur Wright established the first U.S. civilian flying school in Montgomery, Alabama in 1910. By the 1920s, Montgomery became an important link in the growing system of aerial mail service (Ennels, 1998). It was in the early 1930s when the Army Air Corps Tactical School moved to Maxwell Field and Montgomery became the country's intellectual center for airpower education. Its motto above declared its intention to be less than traditional (Ennels, 1998).

The Air Corps Tactical School (ACTS) was the predecessor to Air University. It was a military professional development school for the United States Army Air Service/Air Corps, the first in the world. Instruction at the school was suspended in 1940, anticipating the American entry into World War II, and dissolved shortly after the war (Boyne, 2003). ACTS was replaced in 1942 by the Army Air Force School of Applied Tactics and re-designated as: Army Air Forces School

in 1945. In 1946 it became Air University just prior to the establishment of the US Air Force in September 1947 (Ennels Sr, et al, 2018).

ACTS was the birthplace of the Army Air Forces new, high-risk and speculative, doctrine of daylight precision bombing in short, a campaign of daylight attacks against a potential enemy's industrial infrastructure, using bombers heavily armed for self-defense. These bombers could defeat an enemy even though its army and navy remained intact. The idea and the minds behind it were revolutionary and the concepts went on to stimulate an entirely new way of thinking about warfare.

Rogues and Rebels

Brigadier General William "Billy" Lendrum Mitchell, the ultimate rogue, is regarded by many as the father of the United States Air Force. Mitchell was and still is considered a controversial leader. His legacy is almost an anti-hero spirit in today's USAF. Mitchell was court-martialed for insubordination in 1925 and resigned in February 1926 for his views on airpower and his attempts to prove his theories on airpower's effect and impact for his own time and future conflicts (Ott, 2006).

Mitchell conducted a series of tests resulting in the sinking of the *Ostfriesland*, a captured Imperial German Navy battleship. However, the sinking was accomplished by violating rules agreed upon by Army and Navy (Correll, 2021). Several other battleships were sunk subsequently—the argument over rules of engagement seemed of little significance in light of the success. Mitchell was guided by his convictions that warfare was changing and, in order to compete, America had to "accelerate change or lose."[8]

Mitchell's 'antics' dominated airpower thinking in the 1920s just as the Air Corps Tactics School was established and had started developing curricula. Around the time of his court-martial it was decided that the facilities at Langley could no longer support the school and the Army began looking for new facilities.   In 1931, it was decided that the new location would be Maxwell Army Depot, Montgomery AL.

Considering the turmoil caused by Mitchell, the idea of moving ACTS as far from the centers of power in Washington DC became advantageous to both the Department of the Navy and the War Department. Placing the 'rabble rousers' in a place like Montgomery, on a base that was built as part of the Works Program Administration (WPA) and the Public Works Administration (PWA)[9] appeared to be a way to ensure their ideas were not heard.

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[8] General CQ Brown's slogan for his tenure as Chief of Staff of the USAF, August 2020
[9] Jobs programs created by The New Deal during the depression

Acolytes of Billy Mitchell, many of whom flew in WWI together, dominated the school's faculty. These leaders developed a new theory of warfare invoking the superiority of the long-range bomber as dominant over all other types of aircraft. While the theory was based on tenets of strategic airpower developed by Mitchell, Hugh Trenchard, and Giulio Douhet, it rejected the concept of terror-bombing of civil populations as a means of destroying the morale and coercing the will of an enemy state (Griffith, 1999 42).

Following World War II there was a hard drive for a new professional development for air commanders, the same as it was after World War I, yet on a much larger scale. The expectation of a divorce from the Army and becoming a separate service resulted in planning for a service-wide educational system, which centered around a new entity—the Air University (AU). AU was officially established in 1946 and became the professional center of education for Air Force officers, and "fell heir to the purpose and tradition of the old Tactical School" (Finney, 1998, 84).

Today Air University remains the professional military education system of the United States Air Force. It can award Master and terminal degrees. It is home to a myriad of schools and colleges. (see figure on pg 7)[10] What started as ACTS with 60 students and 24 faculty in a small corner at Langley Field is now a massive university system with over 350,000 students each year and a physical footprint touching every state in the US and several overseas areas as well.

Context matters—ACTS and Air University emerged from deep drives for change, from creativity, imagination, innovation and daring to be different. However, over the years the university has lost much of that edge. The Yin of risk, innovation, and creativity have been subsumed by the Yang of control, order, hierarchy, and bureaucracy. Many at the school believe deeply in airpower, innovation, ideas, strategy, and leadership, but there are as many who treat the institution like many other universities—simply a hierarchical, bureaucratic system devoted to the status quo. Today Airmen attend Air University as a steppingstone to higher rank—a rung on the perpetual ladder to a successful military career and many miss the opportunity that is presented to them—a chance to learn, think, create, write, and imagine. The fault is a systemic spread across the administration, the faculty, and the students. There is indeed a group (of which I am a member) that continues to strive for influence at the highest levels of the USAF, the Department of Defense, the halls of Congress and the White House, but as is the case with any small group attempting big change, it is daunting, frustrating, exhausting, and in some cases dangerous to one's career. One falls back on the development of one's own agency in collaboration with others intent on the same thing, to bring about different mindsets and cultural shifts through inspiring the aspiring young officers who come

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[10] The Air Force Institute of Technology, the Air War College, the Air Command and Staff College, the School of Advanced Air and Space Studies, the Squadron Officer School, all officer accessions programs (minus the US Air Force Academy), all enlisted education programs, the USAF Doctrine and wargaming center, and several other entities are located within Air University (see diagram pg 7)

through the doors. The next section gives me the opportunity to critique and understand my agency in context so that I can facilitate an interest in officers to become leaders of themselves first before they can effectively lead others.

Personal Agency in Context: The Tactical Level influences
"*If you know the enemy and know yourself, you need not fear the result of a hundred battles.*
— Sun Tzu, The Art of War (Chapter 3.18).

I would say… *If you know yourself, know your team, and create organizations where people flourish, you need not fear the result of a hundred battles.*

I subscribe to the notion that it is important to know oneself. Everyone brings something unique to every leadership opportunity and none of us are the same. When I want to describe myself and what I seek for myself and others, I turn to the word flourishing, probably a good translation of Aristotle's concept of 'eudaemonia'. Eudaemonia is usually translated as happiness, but it is more than that, eudaemonia is literally good spirit. Aristotle used it as the term for the highest human good. It is the aim of practical and political philosophy and ethics. A 'greater good' leader is responsible for facilitating others toward eudaemonia. Flourishing looks different for each person and may also depend on context. Comprehending the context is predicated on an awareness of how we are uniquely positioned personally, socially, culturally geographically, as humans in the world that influences the way we do things, the way we think and act, the way we conceptualize reality and interact with it.

Out of this highly complex diversity of positionalities emerges contradictions or paradoxes as inherent in humans and in the structures, practices and symbols they create (Smith et al, 2017). Lao Tzu and Confucius described the world as a mystical interplay of interdependent contradictions (Chen, 2002; Li, 2014). I have in many ways been shaped by contradictions and, in my current role, I see my purpose is in part to harness contradictions for learning. Perhaps one of the most intense paradoxes is to be born an individual and at the same time be a member of a group.

Cameron and Quinn (1988) note "Paradox" consists of contradictory yet interrelated elements—elements that seem logical in isolation but absurd and irrational when appearing simultaneously (Lewis, 2000). It is in exploring these paradoxes that 'greater good' leaders move beyond oversimplified and polarized notions to recognize the complexity, diversity, and the ambiguity of organizational life. Increasing technological change, global competition, and workforce diversity reveal and intensify paradox. Leaders are asked to increase efficiency and foster creativity, build individualistic teams, and think globally while acting locally (Lewis, 2000 760). I see this daily in the USAF, but as leaders, innovators, and strategists. No one said the job would be easy. Without rules it would not be able to be done at all.

Coming from a Californian high school experience of street racing, surfing, and spending a night in jail, the rules of the military were difficult to digest. I had, however, spent an early decade of my life in Catholic schooling, so I was familiar with rules and how to bend the rules towards my particular end state of choice. The rules needed to be understood first if one was to successfully bend them for one's better end state. The idea was not about breaking them. The paradoxes leaders face in helping team members flourish, requires living in what the Greeks called a state of 'aporia'[11].

For me what guides bending and at times breaking rules is a moral compass or direction. It is possible to break rules and do so morally and ethically. However, it is increasingly difficult to define morality or virtue today. In a world of shifting morality, changing ethics and inverted values, the binary of the 'good guys' and the 'bad guys' is no longer as clear-cut as it seemed in my childhood. In fact, one person's demon dictator is another's radical savior. People are asking difficult questions. '*Did I judge someone or a situation too soon? Too late? In fact, who am I to judge at all?*' We are no longer following like sheep. We are having to throw off the thick woolly coats of complacency and ignorance, and decide what we believe and who we believe in. I have long held that in order to stay relevant at the strategic level, leaders live in this 'gray' at the tactical level and translate to the people they lead in the situation in 'black and white'.

Writing the above surfaced several questions which perhaps need more explanation to myself: *why ever would I have joined the military, much less stayed 28 years on active duty, and continued my military affiliation as a professor for over half a decade at the Staff College and taken on a new role in the innovation arena at the Air University?* It seems to me, the best ideas, the greatest innovations have come from individuals working outside their comfort zone, challenging the practice of cultures in which they were professionally developed and culturally embedded. For me, the greatest insights derive from grappling with intricate, interwoven and often irrational contradictions. Personally, having constant pressure on how one leads, how one innovates, how one strategizes, how one thinks and lives, enhances our lives—and I believe that friction creates energy. It is not easy and can indeed be frustrating. There are nights without sleep, concerns about job security, concerns about promotions; but this goes back to the transdisciplinary nature of this work, its complexity—*why do we do what we do in the way we do it?* This is about challenging dualism: there is safety in certainty but there is also stasis and atrophy. *What is our existential reason for living, our philosophy of leading, how do we work with others and how do we work with ourselves?* I ask myself (and my students) such questions every day because I am responsible for developing future leaders and many times I do not know the answers to my own questions nor to those asked by students who are looking to lead the military of tomorrow.

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[11] In philosophy, an aporia is a philosophical puzzle or a seemingly insoluble impasse in an inquiry, often arising as a result of equally plausible yet inconsistent premises (i.e. a paradox).

I fully understand some might find my position subversive. I may be labeled a rebel, rogue, or even an anti-hero, but this is only in light of the context of the military culture as illustrated above. I prefer to see myself as a creative—a creative with a competitive inclination.   I am always looking for ways to improve, to enhance, to make things more creative, but what inhibits this for myself and others is the bureaucracy or hierarchy which is entrenched in repeatability even though the world around it has shifted. Individuals become too concerned with the quick wins to take a deeply strategic look and not only understand that the landscape has shifted, but the proverbial game has substantially changed. It is not chess; it is a strange 'mash-up' more reflective of contemporary depictions in popular culture such as video games like "Animal Crossing" and "Call of Duty Modern Warfare"—not simply plays or moves on a board but across multiple systems networked around the globe. I would suggest it is a complexity we, as the military and as human beings, need to learn to navigate more skillfully and to do that we need to not only know now but anticipate exactly what skills and attributes are required.

Summary

Global complexity has increased. As America transitions from adolescent to adult nation, the leadership required to face the threats of the 1970s and 80s has changed in a significant way not dissimilar to the adolescent growing into adulthood, when once a 'fist to cuffs' resolved a situation, the US can no longer out-produce or out-fight every peer competitor, whether that be in trade, resources, technology, or military dominance. This is no longer the world of chess, but a world of complex video games played across multiple platforms in both Chronos (Yang) and Kairos time (Yin)[12]. Greater good leaders understand the US must carefully consider what leadership looks like in this new complex environment and carefully contemplate America's identity and role in a new world and this cannot be done in isolation.

Operationally, the US military is a control culture and a bureaucracy for excellent reasons, not least because bureaucracy enforces standards and offers stability. Yet, as the world's pace of change increases exponentially, the military culture needs to recognize that the very thing created to protect it can become the very thing that endangers it. It can become so hardened that our adaptive capacities become seriously compromised. Shifting notions of leadership is an important step in reducing redundant systems and outmoded thinking so that creativity and innovation can breathe energy into this enormous superorganism competing with other superorganisms.

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[12] The ancient Greeks had two words for time: chronos (χρόνος) and kairos. The former refers to chronological or sequential time, while the latter signifies a proper or opportune time for action. While chronos is quantitative, kairos has a qualitative, fluid nature. Kairos also means weather in Modern Greek.

The Air University was founded to "Make Progress Unhindered by Custom." Large organizations, like Air University, can take small risks in the service of disseminating energy for change through the creative and innovative education of officers to be stronger leaders. That creativity brings in new concepts, the recovery of old concepts for a new age, expanded literature, debate, thinking outside the box and very importantly not a disinterested acceptance of paradoxes and contradictions. This also brings an exciting challenge of engaging with leaders as they are an active part of the complexity of life and between the spaces of difference the horizon of possibilities is expanded.

It is no surprise then that my first selected Public Work is a course, Leaders by Design, which was developed with the objective of educating leaders on how to think about leadership practice in new and dynamic ways. There were a number of other public works I could have chosen but I chose this because it is live, ever changing, creative and dynamic and this doctoral program is helping me to challenge my own inputs to keep me creative and dynamic. This Leadership program along with the Innovation and the prospective Strategy programs, mean the most to me in this period of shifting global and national dynamics and when the future is arriving at an unprecedented speed and our responses need to be agile and creative in influencing its trajectory.

Before moving to chapter 2, I have drawn the following reflection from my notes relating to the context and to my choice of lens through which to go exploring the terrain which is so familiar to me and learning how to look at it as if it is strange.

Reflections on Context

Context is simply unescapable. I am the adolescent America, I am the rules bound US Military, I am the bureaucratic Air University, and I am also the Californian street racer, surfer, punk rocker. I knew it was important for me to understand and wrestle with how all these contexts and identities exist together and function. Further how does this contextual landscape allow me to deconstruct and critique my public works.

After researching, thinking, and discussing with others, I made the decision to approach this with an autoethnographic lens on my experience in the hard structure of the US Military and its impact on the leadership, innovation, and strategy concerns that have always surrounded me. I wanted to understand better how these experiences in the military filled me with a desire to have greater impact on the quality of leadership, which led me to a career position in which I saw an opportunity to craft courses with potential to influence future generations of leaders in the military.

I am a lifelong journaler, I have data, notes, and lived experiences that I have often tried to make meaning of through writing things down or mapping them or drawing them. I am a lifelong learner with three masters degrees and numerous qualifications and trainings. I remember for my first graduate degree, I had to attend three universities. I began at California State San Bernardino in National Security Policy, moved to the Citadel for Ancient History, and finally graduated from The American Military University with a degree heavily focused on the history of airpower. Another degree from the USAF's Air Command and Staff College and one from the USAF's School of Advanced Air and Space Studies focused on national security strategy and policy. But transmission learning has never been enough for me. I bring

command experience to the research having served as a commander for five different organizations. Operationally I am qualified in five different aircraft with combat and humanitarian experience as well as serving on military staffs, planning, and strategy positions at the highest levels. I seek knowledge of the experiences of others, I enjoy the lively and thoughtful company of others. My curiosity gets me into trouble sometimes by asking the awkward questions mostly when I ask senior command.

Everyone has a story, everyone has a context. As I began this voyage of exploration of my own practice and work I asked myself why anyone should believe me and make choices or be influenced by what I have to say. I do not think people should believe me because I am an Air university professor or a former colonel or commander who has been on countless missions and tested in live combat and sat at the table of numerous innovative projects and advise on humanitarian partnerships and civil society initiatives. My qualifications do not make my story better or worse, but for me without my practice experiences they do not offer a level of validity I seek I think I need to convince people of the validity of what I may say and write because I am transparent about my thought processes and the what, the why and the how of what I do and the decisions I make and that includes subjecting myself to an examination of my own works within the context of a hard structure. I was looking for an approach that would give me a framework within which I could contextualize my perspectives intellectually through expanded literature and experientially through long and successful command and a reputation for challenging routine thinking and initiatives. Expanded literature has worked well on the programs. In my role I am accountable for the influence I have on others. Autoethnography, in a sense looked tailor made for me.

Autoethnography like many schools of thought is debated (Anderson, 2006; Denzin, 2006; Ellis & Bochner, 2006). Of course, this parallels with how leadership and innovation education is debated. They are healthy debates which can help to refine our ontologies and epistemologies and avoid getting stuck in paradigms of replication. Autoethnographic researchers "distinguish themselves from one another by separating evocative from analytic autoethnography. Analytic autoethnographers focus on developing theoretical explanations of broader social phenomena, whereas evocative autoethnographers focus on narrative presentations to open up conversations and evoke emotional responses" (Ellingson & Ellis, 2008, p. 445). Personally, I love creative storytelling (Bochner & Ellis, 2016), yet I recognize the need to establish credentials as a researcher through analytic work (Anderson, 2006). In examining the context of my leadership experiences, I am attempting to offer a layered account, embodying context and my learning in a way that does not separate my agency from the culture I have shaped and which has shaped me, who I have become/am becoming as a leader and professor, as a researcher, and as a writer (Rogers-Shaw, 2020, p. 10). The expanse of autoethnography has given me the space to use the techniques of analytic autoethnography, while touching on the evocative, to explore the meanings of narratives as they reflect the sociocultural context of my journey.

Evocative autoethnography appeals to me because I want my research and experience accessible and emotional rather than depersonalized (Rogers-Shaw, 2020). Never completely neutral (Ellis et al., 2011), my research is based on my personal experiences and context, just as other scholars bring their own theoretical backgrounds to their work, I bring my scholarship of my education and training and my complex practice. Further, I acknowledge this through autoethnography. By including techniques of analytic autoethnography rather than just evocative autoethnography I use my researcher experience to examine how my stories fit within my cultural context and discourse on leadership, looking at the self before examining others. Autoethnographers all along the continuum focus on "visibility of self, strong reflexivity, engagement, vulnerability, and open-endedness" (Bochner & Ellis, 2016, 211), but researchers must decide for themselves how to meet the demands of both systematic, scientific study and good storytelling (Bochner & Ellis, 2016; Rogers-Shaw, 2020). Layered accounts provide a way to balance the pull of both sides.

My end goal is to facilitate individuals to learn from their contexts and we can begin through providing the conditions for their stories to be told safely, and appreciatively received, in order to enable future leaders to lead, innovate, and strategize much better than I ever have and to do that through an autoethnographic approach in order to accelerate the learning of others.

To the academic reader I want to say I am not an outsider to my own culture. I am aware of where the skeletons are, I can be honest about our successes and failings, and I am not prone to believing everything I am told the way an outsider might be. I also care. An outsider (academic or consultant) may see examination of the military as an objective exercise delivering solutions with no accountability and not having to live with the consequences. I have lived with what I am researching, and I know only too well the consequences of advice or theorizing at a distance and when it does not resonate or work. I am the combatant and commander sitting in those lecture halls listening to formulas.

Myself and the colleagues I have invited to participate in these initiatives, the popularity and appeal of the courses, which are electives, for officers who have been through all the formal leadership and innovation training, speak loudly about the gaps we are addressing.

As Ellis says, "I ...invite readers to enter [my] world and to use what they learn there to reflect on, understand, and cope with their own lives" (Ellis, 2004, 46, as cited in Ellis et al., 2011). Through autoethnography, I attempt to evoke empathy and contribute to understanding. I can only hope that this thesis assists even a few. I know it has accelerated my own learning, articulated implicit knowledge and encouraged insights to emerge because even writing this first chapter I see familiar things differently and in some cases as if for the first time.

Chapter 2 Public Work 1: Leaders by Design (LbD)

Field Notes: *Leadership in Hard Structures*
(Italics below indicate personal thoughts and/or notes in real time)

I hung up the satellite phone after telling my wife I loved her, looked at my crew with a slight head nod and we walked to the jet. It was dark, humid, and oddly silent outside as we walked side by side—four of us—really not knowing what we were about to fly into. We had a newspaper clipping of the Twin Towers taped on the cockpit door—it helped us remember why we were here. With all checklists complete and engines running on the massive, 593,000lb KC-10A Extender I looked at the crew and simply said—"it's payback time." There were no other words—we were all trained, we were all exceptional at our job, we all thought we knew what we were getting into—cleared for take-off we climbed into the dark middle eastern sky. Not a person on the crew was pondering—is this transactional or transformational leadership and we all sure knew it was not Laissez-faire.

That was night one of the Global War on Terror (GWOT)—permanently etched in my mind. We were the first KC-10 launched on night one, our flight plan, diplomatic clearances, receivers, air refueling tracks, enemy threat, and capability, along with the duration of our sortie were all in question. We faced ambiguity, contradiction, and even paradox on a several levels. We flew that first night as well as a myriad of missions over the years in a war that seemed to never end. My crew eventually received a medal for heroism a few days later when we flew our crippled, emergency aircraft over Kandahar in broad daylight to rescue several US Marine F/A-18s that were dangerously low on fuel. Many imagine a scenario such as this in military training, a rescue mission and everyone contemplates what would they do. Indeed, it is what we train for—combat operations, yet there is ambiguity, contradiction, and paradox in combat and I keep asking myself do we really prepare our people well to understand these concepts and what to expect from their leaders when one is faced with such difficult decisions between what one should do (orders, protocols) and what is the right thing to do (save others). Every leader in this hierarchical, bureaucratic, hard organization lives in a very ordered world that requires a daily dance with order and potential chaos. They face ambiguity, contradiction, and paradox and must make decisions, quickly. The question is are officers being adequately prepared through current training and education? How might leaders better prepare themselves for these field conditions where theory and procedures cannot always resolve what is in front of us in practice. The price of a wrong decision can be very high indeed.

Figure 2.1: USAF KC-10 Extender (Tanker)

These are among the experiences and the questions that motivated me to create this public work. Noting how many times ambiguity, contradiction and paradox were on my mind over a number of years, these had to be part of course.

Leaders by Design (LbD) (2014 – present)

> We live in a world that confounds simple analysis. It is a place in which things change and turn messy, where chance and causation are fused, and where truth and knowledge are empirical, perceptual or just faked. It is a world of many realities that is difficult to live in, and one where our own destructive history has led us to control rather than reflect, appreciate, love or be humble. Academic disciplinary – based knowledge is fragmented, specialized, linear and scientific …Many argue for new ways of envisioning knowledge and knowledge creation practices, attributing the lack of any solution to our most and fundamental problem, that of respect for our cosmos, to the structuring of knowledge into powerful silos and hierarchies (Gibbs and Beavis, 2020, 9)

Out of a number of what can be described as my public works, this is the first one I selected because, for me, it is the most immediate, in that I need to be constantly examining this important task. It is the first leader development course offered at Air University focused on soft skills. Leaders by Design (LbD)[13] is an elective course offered at the Air Command and Staff College. I designed and developed it and then involved colleagues for its delivery alongside me. The design included the flexibility for the course to evolve through (i) colleague and student feedback (ii) changing contextual factors and (iii) advances in our own thinking. The elective is currently in its ninth year and continues to be among the most popular offered at the college. The program reaches leaders outside of ACSC to include graduates of the Air War College, the Officer Training School, the Squadron Officer School. Several smaller offerings of the program reach the USAF's enlisted population as well. Students from all over the world and all branches of the military have participated in Leaders by Design.

LbD is a unique opportunity for leaders to examine themselves, their beliefs, their strengths, and their weaknesses in depth. Therefore it is unique. In the end, individuals are engaging in a deeper awareness and understanding of their own behaviors and responses and what informs those. Each person has an individual way of processing information, their own way of thinking, their own fantasy, desire, appetite and lack (Lacan, 2007). These are prerequisites of insight into how to lead others across an array of contexts and situations. Attention to context is essential as are their role and perceived limitations in the context/situation. Participants produce a substantial statement which demonstrates their own leadership style and philosophy at the end of the course[14].

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[13] Please see Appendix B for full course syllabus
[14] See Appendices C and D for sample

In the past, some leaders have led well and others disastrously, without having insight or perhaps without even thinking self-knowledge was necessary; that is self-knowledge as it pertains to what informs decisions, actions, and behaviors. I would suggest, for an unprecedented rapidly changing interconnected world, future leadership training needs to be informed by knowledge derived from insights. In my experience, co-running the programs, these retrospections and insights surface adaptive capacities, agilities, strengths, and challenges, suited to context as well as how they complement or compete against other leader types. Through such insights, leaders introspectively understand themselves, thus self-affirming their skills while recognizing others can complement their lack in order to successfully lead in ambiguity, contradiction and paradox. Members of the cohort are both challengers to each other's ideas but also mirrors to each other that can confirm the authenticity or catch the dissonance between what one thinks one is and what one actually is; between what one says and what one does. This helps each student to develop congruence between the outer and inner self.

Leaders in the services do not often have time for such critical reflection, therefore a key pedagogic principle is allocating time for it. Critical reflection can surface their individual skills, passions, drives, lack, fantasies, and their own realities (Lacan, 2007) rather than the rote memory learning of a discipline or subject which has formulas and rules.

The course covers thirty hours of instruction, over a 13-week period, ranging from Jungian typology to Stoic and Eastern philosophies, innovation, and creativity. This expanded literature, and concepts drawn from a range of disciplines and knowledge domains, enable each leader not only to have an internal understanding of their own being but to start to articulate it and consciously express it in the world in a positive way. Consciously and responsibly leading or responsibly conscious leading is the intended outcome. No person is an island. The course helps them to integrate both their own skills set and experiential learning, so that they can harness that combination in whatever situation they may find themselves.

It may seem straight forward as I write it but it takes long hours, collaboration, readings, attending conferences and gatherings, and critical reflection to distill all that is available into key principles and these are constantly revisited. New ways are devised to surface them such as scenarios and challenges while all the time discussing what the students themselves bring into the space. Techniques range from analyzing Aristotle's and Machiavelli's notions of leadership to those stimulated by popular culture. An example of the latter is outlined below.

I have a deep love of comics, science fiction, and superheroes, and in a class of military leaders there is almost a requirement for some sort of metaphorical banter. In a metaphorical sense LbD uncovers a leader's 'super-power'. When I first became familiar with Jungian typology through tools like Myers Briggs Typology Index (MBTI), The Big Five, and 5 Voices (Cockram & Kubicek, 2017/graphic see Appendix J) it dawned on me that my own fantasy, which became a

desire, was to create teams of superheroes not unlike the DC and Marvel comic stories of The Justice League or The Avengers which are contemporary hero stories, iterations of enduring narratives across time and cultures. In these stories each team member has a unique skill or power that together creates a collective coherence of the team (Campbell, 2008). Each member and their power are identified by a unique costume and name. Superman possesses super strength, speed, and durability. Aquaman possesses superhuman strength, the ability to breath underwater, and the capacity to communicate telepathically with sea creatures. Zatanna can perform magic. Batman does not possess any true superpower. He does possess genius-level intellect, he is a peerless martial artist, and his wealth affords him a vast arsenal of weaponry and equipment using his acumen to generate and increase his income which supports his 'charity' or pro bono work.

Leaders by Design cannot grant 'superpowers', but from feedback and submissions it is evident that the course helps leaders discover their, as yet, untapped or underutilized powers ranging from empathy, strategic insight, creativity, analytical thinking skills, to their ability to connect with people. Of course, each of these strengths has a corresponding downside and the course encourages students to explore those shadows (Jung, 1952) as a route to deeper insight. In the end the goal is to lead from a position of individual strength and build teams of consciousness and complementarity to support the meeting of our rapidly changing current and future challenges. The concept may be sound, and I may sound enthusiastic as to its impact, but it meets resistance in the military for several reasons stemming from culture, tradition, and bureaucratic inertia. For many in the military academic arena, leadership is simply not a discipline, or it is a discipline filled with ambiguity, contradiction, and paradox. They prefer the safety of how it has always been done. The unique 'transdisciplinary' approach to leadership education that we deliver challenges leadership education of the past. In the past the military strongly relied on a models-based approach; LbD offers a raising consciousness approach.

The next section explores a conceptual, non-model approach focused on ambiguity, contradictions, and paradoxes that has emerged through designing and delivering this program. It is an example of how I go about challenging existing ideas and checking my own ideas to ensure that the program is not idiosyncratic but has merit in literature and can reduce the gap between theory and practice and between what we think we can know through looking outside the box and broadening the horizon of possibilities.

Leaders and Ambiguity, Contradiction, Paradox

All models are wrong, but some are useful
George Box[15]

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[15] Box, G. E. P. (1976), "Science and statistics" (PDF), Journal of the American Statistical Association, **71** (356): 791–799

On Ambiguity

> The concept of leadership has an ambiguous status in organizational practice, as it does in organizational theory. In practice, management appears to be of two minds about the exercise of leadership. Many jobs are so specified in content and method that within very broad limits differences among individuals become irrelevant, and acts of leadership are regarded as gratuitous at best, and at worst insubordinate — Daniel Katz[16]

The USAF is a highly technical service. As such, a typical officer will spend between two to six years mastering one's craft. In my case, pilot training is one year, then follow-on training for a specific weapon system (aircraft) maybe be as long as a year and a half. This is all prior to arriving at an operational flying squadron. Pilots then face an upgrade process at their local unit and, as it was in my case, it may take two to three years to become an aircraft commander and lead an aircrew on operational missions. Further, it may be five or six years into a career before a pilot, who is first and foremost an officer, takes on a leadership role outside the cockpit. This raises the question *are piloting skills valued over leadership skills?* As Katz ponders above, *is the career of a military officer so specified that differences among leaders are irrelevant and 'acts of leadership' are gratuitous and possibly perceived as insubordinate?* This refers to cultures in which compliance is tantamount so *why is leadership needed other than in a hierarchical sense which is leadership of compliance?* Any deviation will then be considered insubordination. Hard structures like the military are vulnerable to such cultures. In pilot training many officers can work on piloting skills and leadership at the same time, but the ambiguity lies in what the organization prioritizes in terms of values in its culture. If compliance is dominant, to the extent that Katz is indicating, then it does not matter if pilots are promoted based on how well they perform in the cockpit, but, in my experience, technical excellence in the cockpit does not necessarily correlate to excellence as a leader and commander.

The USAF obviously desires both—technical expertise and leadership excellence and this takes a great deal of time and cognitive agility. Air Force Doctrine clarifies "[s]ound doctrine, good leadership, effective organization, moral values, and realistic training can reduce the effects of uncertainty, unpredictability, and unreliability present in war" (Air Force Doctrine Publication 1, 2021, 1). LbD and the methods utilized in the course attempt to accelerate the leadership learning process with the course focusing on individual discovery versus examining general models.

Being a technical service, it is no surprise that the USAF relies heavily on models. As a young officer, I attended the Squadron Officer's School (SOS). This was the first time I actually attended a course heavily focused on leadership. Much of the leadership education was based on the Full Range Leadership Model (FRLM) (see diagram 2.1). I found the model interesting,

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[16] Katz, The Social Psychology of Organizations (1966) pg 300

and, on paper, it made sense. The language was new, and it was clear leaders were to aspire to be "transformational" in their leadership style. The model, however, was a paper model, not a human one and I honestly struggled to see myself in the model. How could I be transformational and how would I know if I had achieved a level of transformativity? It was not a model about me as a leader. At this point in my career, I was beginning to gain a few personal insights that seemed to differentiate me from others. I was curious about a myriad of things. I began to see I had a love of learning; I had endurance where I seemed to stick with problems longer than some of my peers; further I had a love of healthy competition. It was not clear from the model how these perceived traits might assist or hinder my transformational quest.
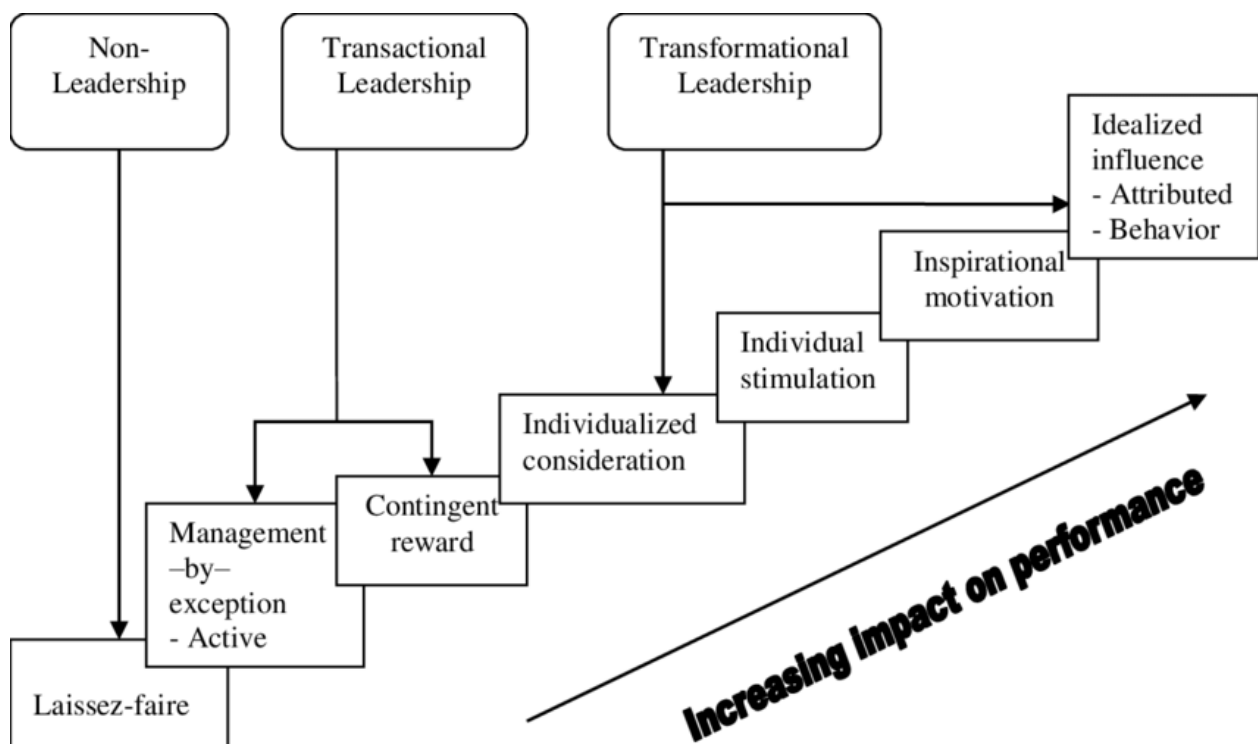

Figure 2.2: Full Range Leadership Model

I was an aircraft commander at the time. I led a crew of eight airmen flying special operation missions. We faced several interesting scenarios together from aircraft emergencies, to joint special operations exercises, sitting alert together, flying several "real-world" missions, but I cannot think of a time, during the 'heat of battle' that I pondered the model I learned at SOS. Further, the model did not seem to assist with the ambiguities junior officers faced. As a young leader, I was curious about myself, and my skillsets *was I actually different from my peers or were we all just cogs in the USAF machine?* It seemed to me a more human centric model was appropriate and required.

By the time of my retirement from the active-duty Air Force, I had commanded five different organizations. In hindsight, the Full Range Leadership Model was never something I ever pondered nor internalized. Leaders find themselves in the grind of day-to-day operations,

paperwork, handling discipline issues and of course many times deploying in combat or humanitarian operations. The Air Force spent a great deal of time teaching the FRLM model and many academics believe like Avolio that the FRLM model is the "most researched model in the leadership literature—and the most validated—and has been proven to be an accurate guide for developing exemplary leadership in diverse cultures, organizations, and leadership positions." (Avolio, 2010)

In leadership literature, there is a plethora of ambiguity such as the disjointedness between a model formulated *in vitro* (and how it translates to "real-world" leadership) and principles that emerge *in vivo* (from practice situations that leaders face every day), the ambiguities they face every day and are expected to resolve. *Why is more value given to the former and less on the latter?* The Stanford Encyclopedia of Philosophy notes, "ambiguity has been the source of much frustration, bemusement, and amusement for philosophers, lexicographers, linguists, cognitive scientists, literary theorists and critics, authors, poets, orators and pretty much every other being who uses language regularly to communicate" (Sennet, 2021). Ambiguity is the norm in any complex, hierarchical organization and members seek clarity at best and recognition and transparency of the issues at least. There are individuals who thrive in ambiguous environments and ambiguity can function as a "womb of creativity" (Deepak Chopra, 1994); there are also those who are generally uncomfortable with it, preferring clarity of focus/goal and action. The absence of such can lead to frustration and a sense of anxiety in the context of a hard/hierarchical structured organization tasked with considerable responsibilities in which lack of clarity can lead to a loss of lives. One of LbD's goals is helping leaders understand their own comfort level in relation to ambiguity. As leaders begin to know themselves and lead themselves, they can then begin to lead themselves to lead their teams. More simply, when a leader is able to manage his or her response to ambiguity, they are able to empathize with the concerns and fears of others and inspire them having conquered that fear in themselves. Of course, it is impossible to give clarity about everything, but no clarity is simply not an option.

> Leaders must push decisions to the lowest competent, capable level using doctrine as a foundation for sound choices. -General C.Q. Brown, Chief of Staff, USAF[17]

The words above from the most recent Air Force Doctrine, Publication-1 (AFDP-1), are those of the Chief of Staff. It is a bold statement, but it is a statement full of ambiguity. Intuitively Airmen understand the intent, yet which 'decisions' are being referred to, how is 'competency' and 'lowest level' defined, how would a leader determine said competency, and which 'doctrine' is the foundation—all doctrine? For leaders, ambiguity exists on three levels: 1) ambiguity surrounding one's personal technical competence with questions such as *I am trained to obey, but can I really accomplish this mission, am I talented enough*. 2) ambiguity in the situation such as —*am I doing the right thing*, this can be ethical, moral, or even political—

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[17] Air Force Doctrine Publication 1, USAF, 10 March 2021, pg 2

as in *are we on the right side* of an issue. 3) Ambiguity in one's own leadership competence, which resonates with General Brown's statement (Kolzow, 2014).

The third of those is of utmost importance to LbD. LbD assists leaders in understanding that we all lead in different ways. Transformational leadership is wonderful, but it might not be a leader's particular forte. LbD helps leaders lead from their strengths and understand their unique weaknesses. Finally, the course allows leaders to be confident and courageous in seeking others to bring their "superpowers" to bear in complementing #1 and #2 above.

The proposition is the learning outcomes above support leaders to lead their teams with improved clarity about purpose and strategic direction, and alignment with purpose, thus providing direction through the 'chaos' of ambiguity and having enough self-awareness to give a more considered response to ambiguity such as delegating to others who are particularly competent in a certain field situation instead of attempting to manage everything themselves in which the scale of the responsibility outweighs their ability to see their own limitations[18].

Ultimately, leaders experience the world and then try to make sense of it. As odd as it sounds, leadership is an imagined context. Models like FRLM are an attempt to help people to organize, conceptualize and amorphize the process of leadership. Models capture observations but with severe limitations such as *this is how we make sense of leadership*, versus *this is how to do leadership.* There are thousands of such models. FRLM is good at making sense of observations of leadership, but cannot, in and of itself, be steps to a magical formula of leadership. Models have merit, but only in making sense of a complex concept. Hence, LbD is not about models but understanding the individual and ultimately allowing the students time to journey into who they are as leaders.

On Contradictions

> Everything about me is a contradiction, and so is everything about everybody else. We are made out of oppositions; we live between two poles. There's a philistine and an aesthete in all of us, and a murderer and a saint. You don't reconcile the poles. You just recognize them. —Orson Welles[19]

Leaders in large hard structures with expanded bureaucracy face contradictions of all sorts. Welles has an excellent point. Leaders often struggle to reconcile the poles versus living between them. Late one summer, a hurricane made landfall on the US Coast. I was in command of a unit building strategy, plans, and command and control of mobility assets for just such an operation. Think, if you will, planning relief supplies, transport aircraft, airfield opening, and personnel. Our airmen all watched the storm's approach and pondered possible bases to open, plans, and areas to operate from. The commander called a meeting to ensure

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[18] Learning outcome are at Appendix C
[19] Orson Wells, *A Touch of Evil*, 1958

all units were ready to deploy. As we went around the room checking with the squadron commanders, all answered in the affirmative—except one. He explained that he needed to finish his Air War College exams in order to be considered for early promotion to colonel. The silence in the room was stunning, the commander stared intensely at the Squadron Commander and moved to the next— "John, are you ready[20]?" John's squadron immediately replaced the other squadron and deployed to open the runway at an effected Air Force Base bringing relief to thousands of Americans.

The contradiction to everyone present was the commander who deployed and opened the runway was promoted 'on-time' to colonel yet never commanded again. The commander who stayed behind to finish his exams was not only promoted early, but also commanded as a colonel. The bureaucracy only acknowledges blocks of items accomplished, not the opportunities missed in order to accomplish those things. Not only did the commander miss the opportunity to deploy—his squadron missed the opportunity to learn, to experience, to perform the mission they signed up for. The question is which commander was correct? The one that took care of himself at the expense of his squadron or the one that deployed. The commander who stayed home was not interested in creating an organization where his people flourished, yet the hard structure apparently rewarded him for it. *What is the organization telling its members? How do leaders exist between these two poles?*

There are a number of contradictions in the story above. *Should a leader be decisive or not?* Few would say a leader should be indecisive. A leader needs to make tough decisions—in the Wing Commander's case, he made the decision to deploy another squadron, but *what about making an example of the commander who stayed behind?* The Wing Commander never explained his decision. These are incredibly tough things to do, especially in the moment of a crisis like a hurricane ravaging the American Gulf Coast, but if decisions are not explained the leader only feeds the contradiction. In order to counter this, the Wing Commander might have offered a correction to the non-deployer, he could have made him go. Of course, this would mean taking the opportunity from someone who wanted to go. He could have addressed the issue on the squadron commander's annual performance report, he could have counseled the commander, but in the end, doing nothing allowed the underperforming commander to be promoted early and command again. The follow-on command did not go well according to several sources and the unit suffered under this person's leadership, but again addressing this early would have prevented these future issues as well. Contradiction not addressed, which in this case was between commitment to process and commitment to the greater good, undermine trust in leadership. Not explaining created a gap and humans do not like gaps and start to fill it with their own meaning making and speculation which erodes trust.

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[20] Name changed for identity protection

It is important for the leader to recognize that a decision looks like one thing when it is another thing and if he/she is in a position to explain then they should, thereby taking the charge out of the contradiction. *Should a leader not only listen but have an empathic imagination in that he/she can recognize that the decision needs explaining for the benefit of everyone?*

In the Field Notes scenario in the opening of this chapter (and discussed in the next chapter), while being very decisive and flying an emergency aircraft into an enemy threat to rescue Marines, I consider one of my biggest mistakes was never asking the crew if we should fly into danger. Pondering this years later, I cannot help but see it as a failure in my leadership. I made the decision; I even keyed the radio to tell the command-and-control aircraft we were doing it before I even mentioned it to the crew on the aircraft. As I descended and turned the aircraft to intercept the F/A-18s, the crew was silent and staring at me. The engineer asked, "we are doing what?" Then again, had the crew said no, I would have still rescued the Marines, but I hope I would have explained the decision. Perhaps this is also a contradiction.

There is an inherent contradiction between listening and being empathic, looking for consensus of the group and taking decisive action on behalf of the group without consultation. This is the microcosm of democracy versus autocracy. The role of the context, of the situation and the structure are relevant. The problem, the contradiction is: *does being a listening, empathetic leader mean one has to take the time away from quick decisive action. And does taking decisive action without consensus mean the leader is not listening?* If we pursue consensus, even achieving it, it can mean losing time and fuel and any element of surprise, or possibly allowing a missile lock with no time to maneuver. Wavering in between is also dangerous. — I would say it is not so binary as this; it is much more complex

And here is the insight about leaders in hierarchical structures whose purpose is to safeguard at all costs: leaders situatedness[21] is in the binaries that such contexts contain. They are asked to be visible, yet invisible; to be strong (hard skills) but show 'understanding/empathy (soft skills); to take risks, but to act prudently in doing so; to win but not to win at all costs   A leader needs to shout very quietly and great leadership is like soft steel or dry water (Rhen, 2017).

Leaders by Design is an attempt to address these contradictions, yet at the same time, not answer them. It is an attempt to facilitate leaders into a space of not resolving, not knowing, of becoming comfortable with the uncomfortable but also learning from them.

Know Yourself:
        The curious paradox is that when I accept myself just as I am, then I can change*.*

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[21] Situatedness is a theoretical position that posits that the mind is ontologically and functionally intertwined within environmental, social, and cultural factors. As such, psychological functions are best understood as constituted by the close coupling between the agent and the environment. (Adams, F., & Aizawa, K. 2008. *The bounds of cognition*. Oxford, UK: Blackwell).

Carl Rogers[22]

As I began to research and create LbD, I thought long and hard about my own leadership. I needed to explore who I was as a leader. I had taken leadership assessments in the past and felt I understood those fairly well. What I was missing was not so much what the assessment said about me, but what it did not say.

The results did not directly say I lacked empathy, but it mentioned nothing about it. Without empathy, I lacked the understanding, I lacked the comprehension that not everybody processed data nor had the same world view as I did. I failed to understand the importance of cognitive diversity or perhaps the tests used failed to understand the value of cognitive diversity.

At this time, I recalled a meeting when my new commander informed me, I was inheriting command of the worst squadron in his organization; the unit was dysfunctional, they did not understand their mission, they did not want to deploy and I had the worst secretary and good luck. The preceding commander was removed prior to completing a full command tour of 24 months—he served approximately 13 of the 24 months as commander. I was never informed why he did not complete his tour, but there was a sense in the squadron that he was fired. Further my boss did tell me he believed I could "fix" the unit but not how he came to that conclusion. Of course, at the time, I had no idea what that meant or if I could.

A unit that experiences the relieving of a commander is in crisis and in pain. I inherited a highly cognitively diverse team with a deep desire to serve in the USAF and to excel as a squadron. That was my desire and aspiration as well, but I had to be open to adjusting how I thought in light of thinking of others and how I communicated, or I would not be able to lead well. My concern quickly became the health of the organization and the people in the unit. I had to find a way to restore their faith in their ability.

A Jungian /Myers Briggs lens

In leadership literature empathy is typically ranked as one of the top traits (Perina, 2022). If empathy is important to leadership, I understood I could not simply ignore this lack. According to Jung, thinking is "that psychological function which, in accordance with its own laws, brings given presentations into conceptual connection."(Jung, 1972) In contrast, Jung defined feeling as "primarily a process that takes place between the ego and a given content, a process, moreover, that imparts to the content a definite value in the sense of acceptance or rejection […] Unlike thinking, in that it does not aim at establishing an intellectual connection but is solely concerned with the setting up of a subjective criterion of acceptance or rejection." (Jung, 1972)

As a leader thinking is my dominant trait, but 'I feel' feeling is equally important. In the USAF we debate a great deal about priority: mission or people. The answer typically depends on whether the leader answering is a thinking or a feeling archetype. The thinker will focus on mission and the feeler on people. Over years of leading, I have come to understand it is simply not so binary. The model is helpful, but when a model requires a binary response, we simply

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[22] Rogers, Carl, 1995. On Becoming A Person: A Therapist's View of Psychotherapy,

think in binary terms. As George Box mentioned in his words above, the model is wrong yet useful.

 LbD is a movement toward de-binary-ing the way leaders think.

The Yin and Yang of the answer is really…yes/and or both. In my thinking typology an organization does not require people if there is no mission. A feeler might say without people, the mission will never be accomplished. Hence, we begin to see a leadership dualism and recall Lao Tzu words "All things bear the Yin and embrace the Yang. Immaterial vitality, the third principle (chi) makes them harmonious." (Lao Tzu, Butler-Bowdon, 2012, 89) As a new commander, I sought the harmony only I did not know it at the time. This was the beginning of thinking of leadership in non-binary terms.
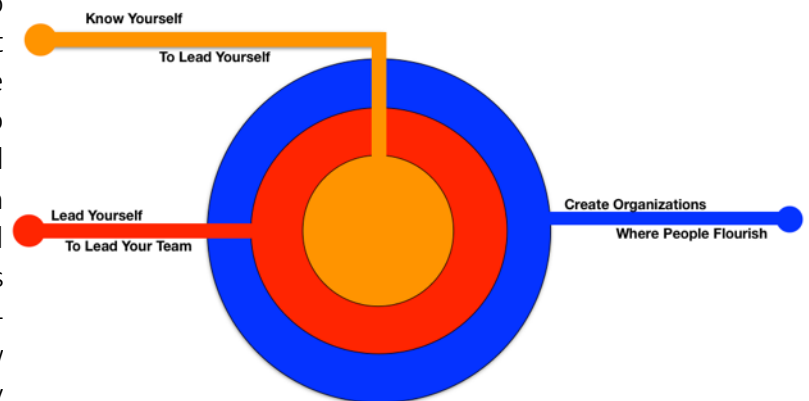

Figure 2.3: Know Yourself to Lead Yourself, Lead Yourself to Lead Your Team, Create Organizations Where People Flourish: Modified from Kubicek and Cockram, 2016, 5 Voices

Carl Jung, Myers, and Briggs' work is simply a starting point for LbD. The students spend time familiarizing themselves with their typology and utilize archetypes. In class students discuss, debate, and analyze their findings; many agree about one third will disagree. The course focuses not simply on type, but also opposites and the importance of scale between archetypes. If a student tests as an ENTJ, they should seek to understand their opposite type (ISFP). This is the beginning of de-binary-ing and understanding the infinite between the two poles, or the Middle Way (discussed below). The personal power leader will usually find their opposite archetype difficult to understand and connect with. The greater good leader sees their opposite as complementary to the team—a person that can check the leader for blind spots. In a sense the ISFP is the Yin to the ENTJ Yang and the leader is responsible for ensuring harmony. As such we have hours in the course designated as 'Kryptonite'. In Kryptonite the students grapple with their opposite typology and why certain typologies cause struggles to build stronger, more dynamic, and cognitively diverse teams.

On paradox

By "paradox" one usually means a statement claiming something which goes beyond (or even against) 'common opinion' (what is usually believed or hel")." (Cantini, et al, 2017). The paradox here is knowing oneself, understanding the value of one's skills and yet knowing one needs to change. As Carl Rogers mentioned above, "when I accept myself just as I am, then I can change." The greater good leader (Wilson & McCalman, 2016, 3) understands the paradox and the dualisms and is comfortable leading in and with the tension, knowing that in the tension is

where energy is found and the best solutions for the organization, people and the organization are generated.

Leaders by Design is the course I wish I had had prior to the events above, be it combat operations, squadron command, or a myriad of other situations. A commander typically serves a 24-month tour (I was fortunate to serve 30 in squadron command), but several months of that time is spent learning the organization, the members, and learning how one might lead. LbD is designed to assist in accelerating the learning to lead process. We use examples and case studies to dialogue with and debate which contribute to that acceleration of learning. I present one such example below which surfaces nuances which I was not aware of until we made it alive in the classroom.

The participants begin to notice and articulate not only the merits of the protagonists but in doing so reveal something important to themselves about themselves and others laying the groundwork for the value of cognitive diversity not the primacy of one over the other.

The Challenge: Machiavelli or Aristotle

In dealing with ambiguity, contradiction, and paradox, the question I was attempting to address in LbD was simply *"how might one lead?"* Note the question is not how should a person lead, or the eight steps on how you can lead, but how **might** one lead? *Greater good or personal power?* The question is deliberately binary as the course attempts to explore a Middle Way of leadership.

The question is really one of desire, desire as in a state of mind that is commonly associated with a number of different effects: a person with a desire tends to act in certain ways, feel in certain ways, and think in certain ways (Schroeder, 2020). *What does the leader desire?* a) the power that comes with a leadership position or b) creating an organization and a team that will long outlast their time in the organization? Desire is important. The greater good leader has not only the desire, but the drive to create systems, processes, and leaders who not only endure but evolve. In my professional experience, once a personal power leader leaves the unit, things quickly revert to status quo or worse, but when the greater good leader departs, the people have a belief in themselves and the organization. In the Katrina story above it was clear one commander was only focused on himself, his personal power and early promotion. The key is comprehending both sides of the dichotomy even though a leader may prefer one, they cannot completely discount the other.

In pondering the quintessential personal power leader, my mind initially landed on Niccolò di Bernardo dei Machiavelli. Machiavellianism is defined as the political theory that any means can be used if it is necessary to maintain [personal] power. On the other side, the greater good leader must concern themselves with the flourishing of the people entrusted to them, so consider Aristotle's virtuous leader. Aristotle developed the philosophy of eudaemonia or human flourishing. *Who would serve as a better leader: Machiavelli or Aristotle and how might personality influence the answer?*

I chose these two as an illustration of the complexity of ambiguity, contradiction, and paradox in leadership and by juxtapositioning these two different types the dualism is at first explicit

and then through discussion becomes less so. This becomes evident as we proceed through the discussion which these examples evoke. The following attempts to capture the 'see-sawing' that happens during the discussions which turn into debates then begin to surface and distill the key challenges to good leadership and to their own.

The Debates (The Heart and The Head)
(*Note:* Words in bold are examples of debating points which emerged)

In the "**Nichomachean Ethics**", Aristotle investigates the "magnanimous", or great-souled man who is by definition what current discourses refer to as **the greater good leader**, as the superior representative of goodness. Centuries later, Niccolò Machiavelli counters Aristotle's examination of greatness with his counsel for leaders in "**The Prince**" with the famed line "it is much safer to be feared than loved because … fear preserves you by a dread of punishment which never fails" (Machiavelli, Butler-Bowdon 2010 125, Helmick, 2014).

Ambiguity: Aristotle, based on his view of human life as ordered according to a hierarchy of 'goods', proposes that the truly great [greater good] man is **one who has achieved the pinnacle of virtue**. Machiavelli, in contrast, argues that the existence of evil men naturally prevents the happiness of such a greater good Aristotelian man. **The truly great man must adopt virtue or vice as the situation or context demands to achieve his desired ends**. (Helmick, 2014)

By the late [1]6th century "Machiavellianism" became a popular word describing the art of being deceptive to get ahead. Further, Machiavellianism is more recently a psychological term referring to a personality trait in which a person is so focused on their own interests they will manipulate, deceive, and exploit others to achieve their goals. It is one of the traits in the so called the 'Dark Triad', the other two being narcissism and psychopathy. (Jacobson, 2015) Note, this somewhat evil observation is based purely on a very particular reading of Machiavelli's notorious book "The Prince" which espoused views that strong leaders should be harsh with their subjects and enemies, and that glory and survival justified any means, even ones that were considered immoral and brutal. In reading **Machiavelli, just as in leadership, context matters here as well.**

Contradiction (or what the context demands): Aristotle distinguishes the magnanimous man's apparent slowness as a steady resolve, not as apathy or lethargy. When an occasion worthy of his greatness arises, he will indeed act, and he acts with brisk and cheerful readiness. Otherwise, the leader does not waste his efforts. **The magnanimous man's sustained pace contrasts sharply with the ceaseless activity of Machiavelli's Prince**. (Helmick, 2014)

Machiavelli promotes a great man who cultivates readiness, rather than unconcern, on the grounds that a leader can only survive by living according to reality rather than by ideals. The magnanimous man might enjoy a peaceful life, but Machiavelli's leader must immerse himself in the art of war to survive, even in peacetime. **Aristotle contemplates theoretical extremes in order to arrive at an understanding of goodness and virtue, Machiavelli consults experience, history, and myth for the purpose of offering practical advice to leaders.** (Helmick, 2014)

Machiavelli extols spending time on hunts and pondering strategy as a leader will lose their position if s/he cannot **adapt to unpredictable and ambiguous circumstances**. Machiavelli's leader appears untiring, almost frenetic, and single-minded in the determination to master military tactics. S/He constantly exercises their mind and body to maintain superiority over others. Whereas the Aristotelian magnanimous leader is necessarily good, the Machiavellian leader considers goodness as yet another resource at a leader's disposal. Machiavelli understands goodness as a dichotomy between the extremes of virtue and vice. **The realities of life prohibit leaders from being thoroughly virtuous, so the prince should "be so prudent" as to choose between virtue and vice as the situation and context demands.** (Helmick, 2014)
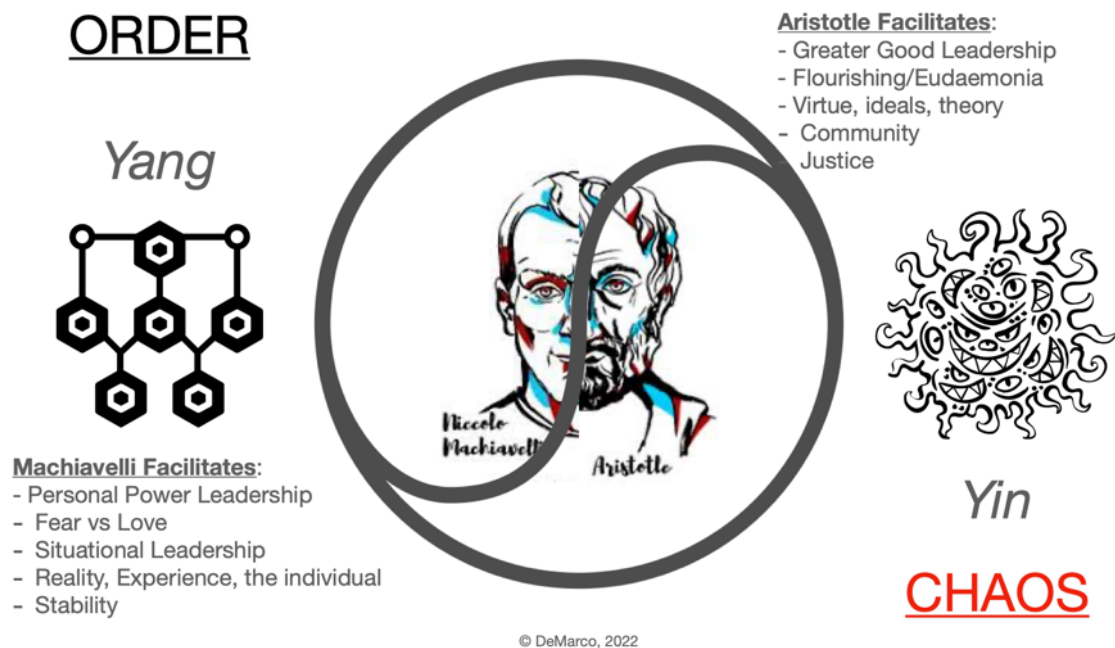

Figure 2.4: Order and Chaos: Machiavelli and Aristotle

The duality should be clear. In Eastern philosophy this 'duality' is captured by the concepts of Yin and Yang or Taiji. The Yin resonates with Aristotle's ideal leader, one of virtue. The Yang is Machiavelli's insistence on dealing with harsh reality—there is no ideal leader, ideal state or society (see Figure 2.4). Aristotle believes the ideal can serve as a model and leaders should strive to attain the highest levels. Machiavelli simply doubts the feasibility of such ideals and models, and leaders should lean on practical methodology as opposed to an ideal model. Machiavelli believes this methodology is something a leader can control and experiment with.

For Machiavelli, leaders **do not follow prescriptive instructions on what they should do but act according to their own interests.** In *The Prince*, Machiavelli states "There is such a gap between how people actually live and how they ought to live that anyone who declines to behave as people do … is schooling himself for catastrophe."(Machiavelli, Butler-Bowdon, 2010, 51) Machiavelli bases his ideas on the premise that leaders in nature are selfish and wicked and the state of nature is basically a state of war.

In contrast, **Aristotle states "a human being is by nature a political animal"** (1253a2-3), meaning an animal with a propensity to develop and live in complex communities. Aristotle

states "a human being is more of a political animal than a bee" (1253a8-9) as humans are equipped for life in a community that is "more quintessentially political" than a beehive—think of a household, a military unit, a city-state. (Politics xlviii). Aristotle believes humans exist in these communities due to rational speech which "is for making clear what is beneficial or harmful, and hence also what is just or unjust…and it is communing in these that makes…a city-state" (1253a16-17). **To Aristotle man thrives in his rationality most fully in making laws and traditions, which means sacrifice of one's own interests [personal power] to help others.** In a community individuals must care for others and sometimes even lay down their own rights for the good of the community.

Machiavelli lived in a time of constant political unrest. During his lifetime the Florentine leadership changed almost 10 times. Machiavelli wanted a stable, unified Italy, not a collection of city-states constantly quarreling with each other. What **Machiavelli realized was that a ruler might have an incredible strategy, a 10-year plan concluding with a complete utopia for his kingdom, but if the kingdom lacks stability, utopia is impossible.**

To Machiavelli if a nation was unstable the prosperity it might achieve was irrelevant; the instability undermined the entire entity. Therefore, the chief concern of the leader is stability of the organization, and no matter what one must to do to achieve stability, it simply must be done. Machiavelli therefore believed that even if a leader had to operate outside the confines of morality to achieve stability, that end justified the means**. In Machiavelli's mind, murder, deception, warmongering, were all part of the potential strategy to achieve the stability goal or the greater good of a stable nation.**

Aristotle believed the city-state was the highest kind of community and was aimed at the highest or greater good. He believed every community aimed for some good. In Book III, Chapter nine he claims: "households and families live well as community whose end is a complete and self-sufficient life" (1280b33-4) and "the city-state must be concerned with virtue." (1280b6-7). Aristotle continues "happiness [eudaimonia, flourishing] is the best thing, however, and it is some sort of activation or complete exercise of virtue" (1328a36-7). Happiness here is eudaemonia (flourishing) and is regarded by Aristotle as "final and self-sufficient, and is the end of action" (N.Ethics1097b20-1) and politics is the science of the good for man to achieve eudaimonia "the greatest and best good is the end of science or craft that has the most authority of all of them, and this is the science of statesmanship: but the political good is justice, and justice is the common benefit" (1282b14-17). For Aristotle politics is the science to attain flourishing for the majority, which is opposite to the violent rule Machiavelli sees as required at times. **Aristotle sees politics as striving for justice which is the sole measure of a leader and government, rather than the acquisition of power as Machiavelli views it, yet both are striving for a flourishing or stable organization or state.**

There is a great deal of ambiguity, contradiction, and paradox contained in the Aristotle/Machiavelli dualism. In answer to the question to our students who the better leader was, understandably the results are mixed. It depends… Obviously breaking the law is a non-starter for military leaders, of course it does occur, but few step into command believing illegal action is a path toward success. Machiavelli does appear like a strong possibly dictatorial leader to work for, but one can see a time and place for the Florentine's views. In Machiavelli's writings a number of contradictions appear not least his advocating that a leader or prince

should not be bound by the conventional idea of morality and on the other hand he thinks a republic is the best thing for states on which to model themselves.

Some scholars see *The Prince* as a satire; Machiavelli's work was designed to enlighten people on how 'leaders' actually act so that the ruled might overthrow them and create a republic. The common understanding is that Machiavelli is simply observing two different stages in the development of a state or organization: First, a nation is founded on bloodshed and immorality and the goal of the state must be to maintain stability whatever the cost. Then, through the creation of institutions of control the state can eventually transform into a more ideal form of government, namely a republic. Machiavelli's *The Prince* can be thought of as how initial leaders can best maintain stability and implement those institutions of control so that the state survives long past his death (West, 2014). But leaders need to remember that without stability first, the republic never exists. He addresses the contradiction in the way people typically think about leaders here:

> How laudable it is for a prince to keep good faith and live with integrity, and not with astuteness, everyone knows. Still the experience of our times shows those princes to have done great things who have had little regard for good faith and have been able by astuteness to confuse men's brains, and who have ultimately overcome those who have made loyalty their foundation. You must know, then, that there are two methods of fighting, the one by law, the other by force: the first method is that of men, the second of beasts; but as the first method is often insufficient, one must have recourse to the second. It is therefore necessary to know well how to use both the beast and the man. – Niccolò Machiavelli, The Prince[23]

This is an inherent paradox in leadership to be both beast and man—Machiavelli and Aristotle, Yin and Yang. Amy Zegart notes this in her piece "George Washington Was a Master of Deception." It is worth remembering that deception played a pivotal role in America's birth. The US as a shining city on the hill owes much to the dark arts. George Washington, Benjamin Franklin, and the American Founding Fathers are remembered today as virtuous creators of a bold new democracy. But they were also cunning manipulators of their information environment, a side of the founding story that has often been neglected by history. (Zegart, 2018)

Washington's military strategy was to outsmart and outlast the enemy, not outfight him. He used intelligence to avoid more battles than he fought, and to trick the British into standing down when standing up could have meant the end of the Continental Army (Zegart, 2018). Interestingly most people would not put Machiavelli and George Washington together but there is a time and a place for a deeper understanding of the Aristotelian/Machiavellian paradox and I think in the military that is now.

The Middle Way:
> Without friction there's no heat
> Without heat there's no fire

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[23] Machiavelli, Butler-Bowdon, 2010, 130

Without fire there's no desire —Oingo Boingo "*Sweat*"[24]

The middle way means different things to different people. In terms of LbD, the concept relates to what lies between binaries that need to be engaged with as binary solutions are rarely the answer. However, there can also be the perception, especially in hard structures like the military, that it 'smells' of compromise, weakness, vulnerability. The Oxford dictionary's definition of the middle way is a policy or course of action which avoids extremes. It is my view that the middle way is far from being a simple compromise between existing polarities; it is more like the path to wisdom. It is not a simple "yes" or "no" with a compromise "maybe." As Machiavelli states, "It is therefore necessary to know well how to use both the beast and the man." Leaders know there are times at extremes to be the beast or the man but seeking a Hegelian synthesis between thesis and anti-thesis[25] serves leaders and organizations best. This is not to avoid conflict as conflict and friction are unavoidable, this is about ensuring the optimal response to a given situation. This is really about objectivity. Many tend to think of objectivity as absolute, but when leaders gain a critical perspective on that absolute objectivity, they realize that it is a sham, a childish illusion. How can we believe that there is one right theory when there are many competing theories, all available to us on Wikipedia? (Ellis, 2015, 14)

The Machiavellian approach to leadership has a place as does an Aristotelian one. When a Machiavellian leader type combines the Florentine's style with Aristotelian virtues such as courage, wisdom, justice, and temperance, the leadership style advanced by Machiavelli is optimal for pursuing noble aims and making a positive difference in the world. This Middle Way is a concept that greater objectivity is found by avoiding both positive and negative extremes and coalescing the two towards a greater good—a form of bricolage (Strauss, 1962, 24)[26].

In short practicing Aristotelian virtues may sometimes require a Machiavellian attitude. Not all virtues make virtuous leaders, particularly if virtues are not complemented with realism. Leaders have to act as virtuosi in the context of complex and dynamic relational systems constituted by power relations (Clegg et al., 2006). Hence a middle way of leadership.

I find the following examples of relating to the middle way useful in my own grappling with what it is and what it is not and its relationship to context so that I can better explain to our students. The first is the Buddhist notion of the Middle Way which is one of the earliest examples of the concept: The Middle Way is that between indulgence and asceticism. The second example is US President Dwight D Eisenhower's Middle Way: "practical working basis between extremists" arrived at through patient and temperate negotiation. The Buddhist

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[24] Lyrics from the band's 1983 album, Good for Your Soul, A&M Records

[25] Hegel's Thesis-Antithesis-Synthesis Model: A dialectic method of historical and philosophical progress that postulates (1) a beginning proposition called a thesis, (2) a negation of that thesis called the antithesis, and (3) **a synthesis whereby the two conflicting ideas are reconciled to form a new proposition**. (Schnitker & Emmons, 2013)

[26] Claude Lévi-Strauss invoked the concept of bricolage to refer to the process that leads to the creation of mythical thought, which "*expresses itself by means of a heterogeneous repertoire which, even if extensive, is nevertheless limited. It has to use this repertoire, however, whatever the task in hand because it has nothing else at its disposal*" Mythical thought, according to Lévi-Strauss, attempts to re-use available materials in order to solve new problems (Strauss, 1962, 24)

Middle Way is philosophical, whereas Eisenhower's is practical and based on realism. The point then is seeking the best possible solution using diverse cognitive thinking in order to advance the organizations and its purpose, in my case US National Security.

The Buddhist Middle Way: The Middle Way begins with the story of the historical Buddha who started out with a life of privilege, the son of a king. Buddha abandoned that life and studied with ascetics who trained to physical and mental extremes beyond an individual's perceived limitations. This mastery of the body and mind led to enlightenment. Buddha's insight about this Middle Way (or Middle Path) is neither dwelling in indulgence nor stuck in ascetic extremes.

The 'Middle' way does not necessarily moderate or is compromising in any conventional sense. Rather it is 'middle' because it avoids either positive or negative absolute claims. In terms of the continual development of LbD and other programs. The Buddha's teachings provide both inspiration and practicality.

President Eisenhower's Middle Way: Eisenhower's Middle Way gives insight into his handling of Democrats to his left and conservatives to his right. It became his personal and political philosophy. He believed that certain time-honored American traditions needed to be compromised in order to preserve the foundation upon which they rested. While Eisenhower shared conservatives' beliefs in limited government, free enterprise and individual initiative, he believed that occasionally, government had to infringe on these virtues in order to preserve the liberty that made them possible. Eisenhower's popularity assured him re-election and high approval ratings throughout his eight years in office. (Wagner, 1999 7)

Interestingly Eisenhower was initially remembered as a 'do-nothing' president. Eisenhower appears to have been more Aristotelian than Machiavellian and his Middle Way appeared to others as slow and passive. Over the last five decades, this view of Eisenhower has changed greatly. A poll of prominent historians in 1962 placed Eisenhower 22nd among Presidents, a barely average chief executive. Two decades later, his ranking had moved up to 11th, and by 1994, he was placed 8th, the same position he held in a C-SPAN poll of presidential historians in 2009. Among Presidents who held office in the last 75 years, he ranked behind only Franklin D. Roosevelt and Harry S. Truman. (Pach, Jr, 2022)

Eisenhower did not lead the country into war, although he might have chosen to do so in Indochina in 1954. He negotiated an armistice in the Korean War only six months after taking office. For the rest of his presidency, peace prevailed, even if at times Cold War tensions were high. It has perhaps taken us too long to catch up with his wisdom.

Summary

Leaders by Design is about emancipating leaders. The intent is to free leaders to be themselves and to free them from a dominant industrial age culture. The speed of change, the amount of data available, and the dynamic environment in which we operate as leaders demands multiple lenses and a diversity of thought in order to attempt to solve the problems of our day.

The most important insight in a decade of thinking and teaching the course, is student interaction and provoking the interactions. The faculty introduce the provocations to spur the thinking and the debate. These conversations reveal more than anything we could really develop in the course. In the initial days of the course the students begin to push on the ideas and develop a trust to go deeper in conversations. The officers gain a sort of confidence in their agency and their situatedness. Once this is established, trust begins to take over and the interactions go to a much deeper level and student on student learning occurs and articulation of thought and feeling are improved.

At the time of writing this, LbD completed its ninth year. This year I have brought in our college fellows to run the course. This was motivated by an important insight for me. I have a sense that I may have exhausted many of my original ideas and look toward to our young instructors and recent students bringing in new ideas and concepts to the program. This keeps the ideas fresh as well as further spreading the idea of course ownership. The more people feel a sense of ownership the longer the program can endure.

After the initial three years of experience designing and delivering LbD it became the motivation for a sister course on innovation, Innovators by Design (ibD). In my opinion the best and most respected leaders have considerable knowledge of leadership theory and concepts combined with an understanding and grasp of creativity and innovation. Thus, began a prototype for the second Public Work—Innovators by Design.

Reflections on Leadership

Since my time in high school, I struggled with how one leads. As a leader I wanted to be liked, but I also knew there were times when the mission might dictate decisions that would not be popular. I could not process Machiavelli's concept of being feared, yet his words do make sense. I spent years reading literature and examining models but could not find the one model that fitted the context of military leadership in practice, nor could I truly see myself in any of these frequently cited models with claims they were appropriate to the military. The military is a highly complex institution. I had been led and had led. I began to understand the kind of leader I would like to aspire to be and the kind I did not wish to be but defining the what and why and how to get there were often elusive.
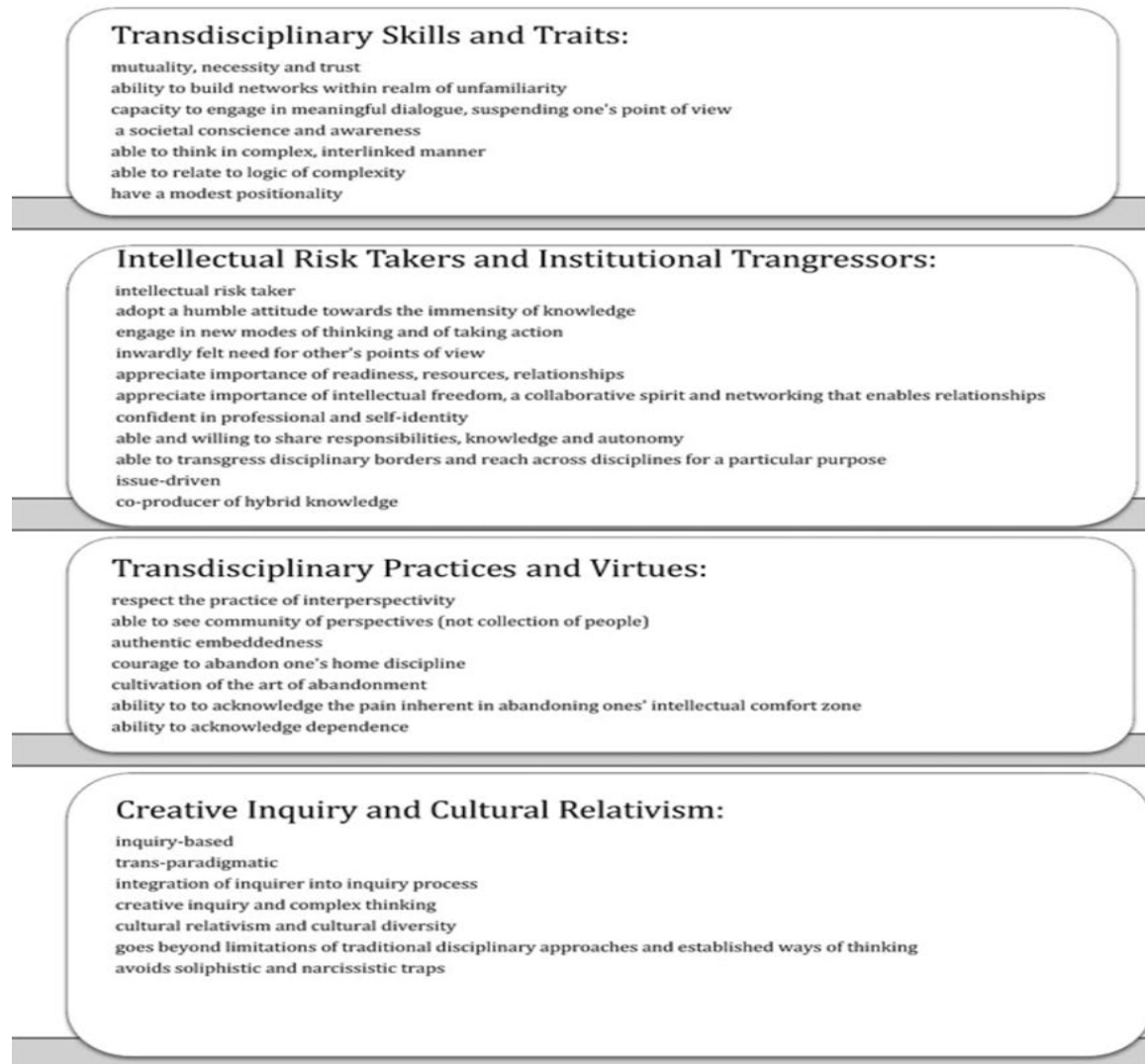
I would often revisit what a leadership institution might look like for the USAF and sketch out ideas in my head, in notebooks, on whiteboards. Other military services had these institutes, but the USAF was lagging behind. But establishing one could be a double- edged sword. An Institute could be created that just focused on those models and would not arrive at answers for me or for future officers. When I first arrived at Air University as a colonel, I asked the Chief Academic Officer why we did not have a leadership institute. His answer was simple, "it is a deliberate choice—we do not want one". Another academic said "the minute we need a leadership institute we have bigger issues than we can address—leadership is baked into everything we do and teach at Air University". That term; "baked in" is used often, but if it is baked in, can you taste it? Does it stimulate your tastes buds, does it have distinctive features? Has it blended in and become invisible?

I realized it was a lofty goal (creating a leadership institute), but if the work was going to be done, I decided it would be done by me and I would need others alongside me. It did not take long to find others of like mind that were more than willing to assist. That said something in itself. My concern was simple; could I really do it. I knew nothing about education and little about leadership curriculum. At the time I was the United States Southeastern Reserve Officer Training Corps (ROTC) Commander, so I started

where I was and read the current cadet curriculum we were offering, and it was basically the same curriculum I had read 20 years earlier. I could not find anyone interested in updating it. I moved to the role of Vice Commandant at Officer Training School (OTS) and began teaching leadership on my own. I later became the Commandant at Air Command and Staff College and began reading, researching, and developing Leaders by Design with an amazing team of both civilian and military leaders.

It was clear the students did not need more reading (see Appendix P for the AY23 reading list for Staff College Students). The military needed a course, and in time an institute, that focused on self-reflection, self-knowledge, and self-improvement. We could not continue to meet the challenges we were receiving from the students with more literature, we had to take them on a journey similar to the one I had been on, but we had to accelerate the learning. Our students are steeped in military literature on everything from international relations, history, and leadership. This new course and institute would not rely on more of the same.

I did not have the term trans-disciplinary (TD) in my vocabulary at the time, but we did indeed embark on a TD journey. The military required a "multidimensional innovative approach to education that was coordinated as a multi-level and multi-goal system" (Jantsch, 72, Augsburg, 2014, 234). The concept of transdisciplinarity remains "a rather elusive concept" that continues to evolve making it difficult to bring into a hard structure looking for firm answers (Jahn, Bergman, and Keil 2012, 1; see also Balsiger 2004; Klein 2004). Reflecting on my personal experience in leading, commanding and building these courses Augsburg's graphic (2014, 240) serves as a retrospective roadmap in building LbD and how TD thinking might make sense in this hard structure

Transdisciplinary Skills and Traits:

mutuality, necessity and trust
ability to build networks within realm of unfamiliarity
capacity to engage in meaningful dialogue, suspending one's point of view
a societal conscience and awareness
able to think in complex, interlinked manner
able to relate to logic of complexity
have a modest positionality

Intellectual Risk Takers and Institutional Trangressors:

intellectual risk taker
adopt a humble attitude towards the immensity of knowledge
engage in new modes of thinking and of taking action
inwardly felt need for other's points of view
appreciate importance of readiness, resources, relationships
appreciate importance of intellectual freedom, a collaborative spirit and networking that enables relationships
confident in professional and self-identity
able and willing to share responsibilities, knowledge and autonomy
able to transgress disciplinary borders and reach across disciplines for a particular purpose
issue-driven
co-producer of hybrid knowledge

Transdisciplinary Practices and Virtues:

respect the practice of interperspectivity
able to see community of perspectives (not collection of people)
authentic embeddedness
courage to abandon one's home discipline
cultivation of the art of abandonment
ability to to acknowledge the pain inherent in abandoning ones' intellectual comfort zone
ability to acknowledge dependence

Creative Inquiry and Cultural Relativism:

inquiry-based
trans-paradigmatic
integration of inquirer into inquiry process
creative inquiry and complex thinking
cultural relativism and cultural diversity
goes beyond limitations of traditional disciplinary approaches and established ways of thinking
avoids soliphistic and narcissistic traps

Figure 1. Factors contributing to transdisciplinary individuals.

Using this framework, I would suggest the military requires TD leaders who process the 1) skills and traits of mutuality, interest, necessity and trust (Klein, 2000, 8). Our courses seek to develop 2) intellectual risk takers and institutional transgressors. We seek leaders with a i) humble knowledge toward the immensity of knowledge, ii) an engagement with new modes of thinking and taking action, and iii) ones who can overcome the feeling of threat by means of an inwardly felt need for the other point of view. (Wall and Shankar, 2008, 552). Military leaders must develop their 3) transdisciplinary practice and virtues by abandoning their comfort zona and areas of expertise (Giri 2002). The course further seeks to develop 4) creative inquiry and cultural relativism through a reliance on autoenthography and personal narrative as the basis for advancing leadership through i) inquiry-based rather than discipline-driven motives and expectations; ii) trans-paradigmatic rather than intra-paradigmatic; iii) complex thinking rather than reductive-disjunctive thinking; iv) integration of the inquirer rather than "objective" elimination of the inquirer; and v) creative inquiry rather than reproductive inquiry (Montuori 2021, b). Simply put this sort of processing is beyond the military leadership literature at this time, but of course the team that has worked so hard on establishing the Leadership Institute and the courses surrounding it, hope to change that going forward.

The next Chapter focuses on Innovators by Design (ibD)

Chapter 3 Public Work 2: Innovators by Design (ibD) (2016 - present)

Field Notes: Innovation in Hard Structures

(Italics below indicate personal thoughts and/or notes in real time)

The alarm warning sounded throughout the cockpit as we made our initial turn into Afghanistan. I glanced down at Master Caution panel in the KC10 and it was lit up like a Christmas tree, but there was one warning light that caught the entire crew's attention—THRUST REVERSER VALVE OPEN. The KC10 has three massive engines—one on each wing and one in the tail, the light indicated our left and tail motors were providing forward thrust, but our right-wing motor wanted to give us reverse thrust. Flying this massive aircraft in a combat zone, early in the war on terror, in broad daylight, clear skies, and the Taliban still having anti-aircraft artillery, and surface to air missiles (none of which

Figure 3.1: KC-10A Extender, #70119

had been effective to this point) was a concern, but now flying an emergency aircraft over enemy territory raised everyone's concerns to heightened levels.

That morning, 18 October, 2001, we were late to our planned rendezvous with our fighters due to a massive hydraulic leak in our aircraft during engine start—our aircraft, Tail #70119 (Figure 3.1) was on its first flight after a #3 engine change and that brand new #3 engine was now trying to go backwards. To make matters worse, the only other tanker in Southern Afghanistan that morning was also an emergency aircraft and could not pass fuel to their fighters due to several system malfunctions. The situation—two KC-10 tankers with emergency conditions that could not off-load fuel, six Marine Corps F/A18s in a critical fuel state—deep over Taliban-controlled territory, unable to recover to their aircraft carrier without additional fuel. The situation seemed obvious to me, I knew we could still perform an aerial rendezvous with the fighters and air-refuel them, we were still flying in a forward motion, our regulations, however, stated we could not aerial refuel the fighters in our current emergency configuration, but we could not simply ignore the situation and allow the Marines to eject.

Figure 3.2 KC-10A Extender refueling USMC F/A 18 Super Hornets

The situation required creative thinking, imagination, and innovation the flight manual was fairly clear, it just seemed there were other options, and we were running out of time. Knowing the aircraft systems, the way we did—we kept the engine running at a high-power setting, the reverser valve was open, but there was a mechanical "over center lock" holding the reverser shut. —moving the throttle toward idle could release the lock with the motor going into reverse and the KC10 departing controlled flight (a nice way of saying falling out of the sky). Further, at our heavy weight (we were close to 500,000 lbs.), we needed the motor to stay at our altitude as far away from the enemy threat as possible. As mundane as it might sound, the innovation was to ignore the emergency checklist, leave the motor running at a high-power setting, and refuel the fighters in order to get them back to their carrier (Figure 3.2). We knew this through exceptional aircraft systems knowledge, situational awareness, and intelligence analysis. This simple, on

the fly innovation did indeed give us a competitive advantage in recovering all the aircraft and aircrew to serve yet another day in combat. That innovation came from the creativity of the aircrew through communication, collaboration, and competency. We knew the aircraft, knew the threat, trusted each other to do our jobs, and ensured the safe recovery of all.

There are as many definitions for innovation as there are for leadership, so it is important to at least start with a working definition. The Latin root of *innovate* is **innovare** meaning to make change, to renew, or alter something. My working definition, as exemplified in the field notes, is to make change or alter a domain, product, strategy, service, theory or doctrine for competitive advantage.

In this situation the innovation might have been small. We understood what the regulation said (you cannot refuel in the air with a motor trying to go backwards). We also understood why the regulation was written. We knew the aircraft systems which in turn allowed us to modify the checklist in order to keep the massive aircraft inflight and stable enough for us to aerial refuel the F-18s. Our regulations were clear, we could not refuel the fighters in our current configuration or situation, and we had to shut the motor down. As we descended over the enemy stronghold of Kandahar to rendezvous with the fighters— the Marines did not even have enough fuel to climb to us—we pondered the situation; we would have to descend into the enemy threat to get the Marines out and we needed the thrust and the power the bad engine offered. In the military's hard structure following regulations is a must—yet in this case and knowing our aircraft systems as well as we did, the regulation may have been in error or over cautious and of course, our context mattered.

Innovators by Design (ibD)

> We have met the enemy and he is us.
> – Pogo (a comic strip character created by Walt Kelly (1970)

The second selected public work Innovators by Design (ibD)[27] is an elective course and the first innovator development course offered at Air University. It is focused on utilizing soft skills as envisioned by Leaders by Design (LbD), while also utilizing innovation frameworks from Stanford University, Cambridge University, UK, and the University of Michigan. The elective is currently in its sixth year and continues to be a popular offering at the Air Command and Staff College (ACSC). The program reaches innovators outside of Staff College to include graduates of the Air War College, the Officer Training School, the Squadron Officer School, and several smaller offerings of the program reach the USAF's enlisted population as well. We have graduated 63 students to date from all US military branches and 6 allied nations.

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[27] See Appendix E and F for syllabus and course outcomes and objectives

Innovators by Design's goal is to assist leaders to reveal their innovative ability through assessments and working with different methodologies to work an innovative idea from origination to an idea pitch. We place students in cognitively diverse groups of three to four each based on the results of the competing values assessment[28]. For ibD, cognitive diversity is defined as differences in perspective or information processing styles (Reynolds & Lewis, 2017). It is not predicted by factors such as gender, ethnicity, or age. For innovation we are interested in a specific aspect of cognitive diversity: how individuals think about and engage with new, uncertain, and complex situations (Reynolds & Lewis, 2017). The idea is to allow the team to form around an innovative concept and provide conditions for debate, dissension, contention in order to highlight the energy that tension can bring in developing the strongest ideas.

In the past we facilitated students to work individually within in a cohort. The cohort set up is key in accentuating the cognitive diversity required in optimizing ideation. Some believe the more diverse the teams in terms of age, ethnicity, and gender, the more creative and productive they are (Reynolds & Lewis, 2017). But a team from Ashridge and London Business schools have run an execution exercise around the world more than 100 times over the last 12 years and found no correlation between this type of diversity and performance. Some groups fared exceptionally well and others incredibly badly, irrespective of diversity in gender, ethnicity, and age. (Reynolds & Lewis, 2017). A high degree of cognitive diversity generates accelerated learning and performance in the face of new, uncertain, and complex situations, as in the case of the execution problem Reynolds and Lewis set for their executives.

The course has employed two formats: (i) solo students working on individual projects and (ii) a team approach working one project together. Our students working alone showed more passion in their chosen innovation project. As a result, and in an attempt to get the best of the group and individual options, in academic year 2022 we adopted a hybrid approach where the students formed into cognitively diverse teams yet had an option to work on their individual projects. In the end students showed a preference toward group work. The final project is a pitch for their innovation project, stopping short of producing an actual

Figure 3.3 Cameron, Quinn, and DeGraff: Competing Values Framework (CVF)

prototype (see Appendices G and H). The course is intended as an introduction to innovation in hard structures. It introduces students to the military innovation ecosystem and discusses how to find champions, mentors, and sponsors for projects in such hierarchical structures. As
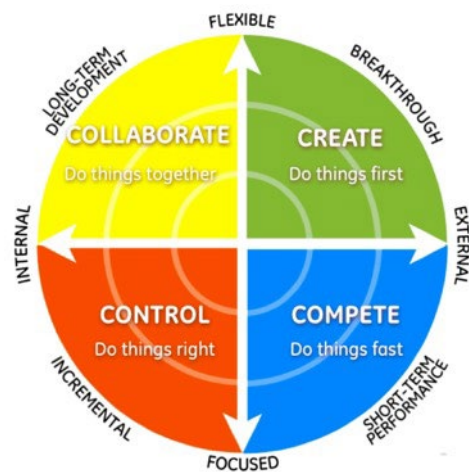
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[28] See Appendix I for CVF Sample report

historian Niall Ferguson (2017, 10-24) points out, two forces shape world events: influential networks and powerful hierarchies. Our students need to understand and be able to work in both. Hierarchies rule, yet networks can disrupt. Networks can catalyze change and innovation. Innovations often begin in networks and then are absorbed into hierarchies. (Reynolds & Lewis, 2017). Innovators by Design educates in both the hierarchical military structure and the innovation ecosystem existing just below the surface in the rhizome[29]. Classroom work in such matters introduces students to concepts, but there is no learning substitute for attempting to innovate a new idea or concept in a structure that has set ways of doing things and procedural hierarchies of enforcement.

The basic course covers thirty hours, or 10 three-hour sessions over a fifteen-week period. Its motivational mantra is "see one, do one, lead one". It begins by attempting to define innovation in context and what is required to create and lead an innovative organization. Leading such an organization requires the coordinating of the efforts of many different actors and the integration of activities across specialist functions, knowledge domains and contexts of application (Lam, 2011). The course makes use of historical case studies examining Air Force innovators including the father figure of airpower, Brigadier General William "Billy" Mitchell; the founder of instrument flight and the famed WWII 'raider of Tokyo', General James "Jimmy" Doolittle; the architect of the Inter-Continental Ballistic Missile, General Bernard Adolph Schriever, and Colonel John Boyd who inspired the USAF's Lightweight Fighter Program (LWF) and whose theories have been highly influential in the military, sports, business, and litigation strategies and planning. Each innovator enjoyed some success, but all four faced adversity and complications as they attempted to make change in a hierarchical, hard system.

Time is allocated to examining innovation archetypes drawing on GiANT Worldwide's 5 Voices[30] and Cameron and Quinn's Competing Values Framework (CVF) (Cameron & Quinn, 2011, 35-50) (Figure 3.3). Students explore and dissect the Department of Defense innovation ecosystem, social innovation, and

Figure 3.4 Stanford's Design School, Design Thinking Model

Stanford's Design Thinking model (Figure 3.4), focusing on using empathy in innovation. Dr. Leticia Britos Cavagnaro at the Hasso Plattner Institute of Design at Stanford (known as the

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[29] Rhizome as conceptualized by Gilles Deleuze and Felix Guattari, the concept describes a process of existence and growth not from a single central point of origin and just below the surface. In A Thousand Plateaus, they name *arborescence* or the model of the tree as the paradigm for knowledge and practice in the modern Western world and hierarchy. (Mambrol, 2017)

[30] See Appendix J for GiANT's 5 Voices

d.school) teaches empathy as an important component in innovation. Empathy is the foundation for a strong, human centered point of view, and a great design project demands a rich empathy experience (Quient, 2022). Dr Gabriel J. Costello (2020) addresses the philosophy of empathy in regard to innovation in, "The Teaching of Design and Innovation, Principles and Practices" (Costello, 2020). As noted, students work in groups of up to four, with each member representing one of the CVF[31] archetypes. They select a problem from their empathy interviews[32] and begin to craft their innovation project, to include problem statements, formal and informal ideation events, elevator pitches, research, prototyping, and finally a presentation to Air Force Senior Leaders. In the past student and student groups have tackled racial inequities in the military justice system, resiliency, combat employment methodologies, and innovation education in the military, care for special needs families, military recruiting, and remote work environments, naming only a few (Appendices G and H).

ibD Program development

ibD is an elective at ACSC. The Staff College offers a robust elective program, allowing students to select two electives or one-year long experience in pursuit of their graduate degree. ibD has been offered in two iterations since its foundation. Beginning in academic year 2018 we offered a basic version as a traditional semester long elective and in 2020 we modified the program and offered a yearlong experience as a Research Task Force (RTF)[33]. The Research Task Force option combines students from several schools to solve a problem harnessing expertise from inside and outside the university. We combined students and faculty from several schools and secured funding from the headquarters of USAF of up to $200,000 for research. Both course offerings were successful, and we plan to return to the yearlong Research Task Force program in the future. The nature of the RTF requires a yearlong commitment from faculty which can be demanding, therefore for the last two years we have run the traditional ibD elective program as we look for those committed professors. This chapter and critique focus on the nature of the innovation program. Both programs use the same curriculum, the only change is the length of time (30 weeks vs 15) with the additional time being used for research, further refinement for prototyping, and 30-week program serves both the Air War College and Air Command and Staff College students.

Much like LbD, ibD has branched out into other schools and colleges around Air University (see figure 3.5). Through a strong partnership with the Ross Business School, University of Michigan and Dr Jeff DeGraff, we crafted an additional course to teach our instructors how to teach innovation. We call this effort Project Mercury. The course takes Cameron and Quinn's original CVF and adds DeGraff's innovation concepts and adapts them to the unique military

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[31] Cameron and Quinn, Figure 3.3 represents each quadrant: Create, Compete, Control, or Collaborate

[32] See Appendix K for the pdf Method—Interview for Empathy (Stanford's d.school)

[33] iRTF historical data available: https://fairchild-mil.libguides.com/c.php?g=1048092&p=7882238

environment. Project Mercury (PM) uses the CVF Framework from ibD but stops short of using other methodologies from ibD (example: Stanford's Design Thinking, Cambridge Social Innovation).
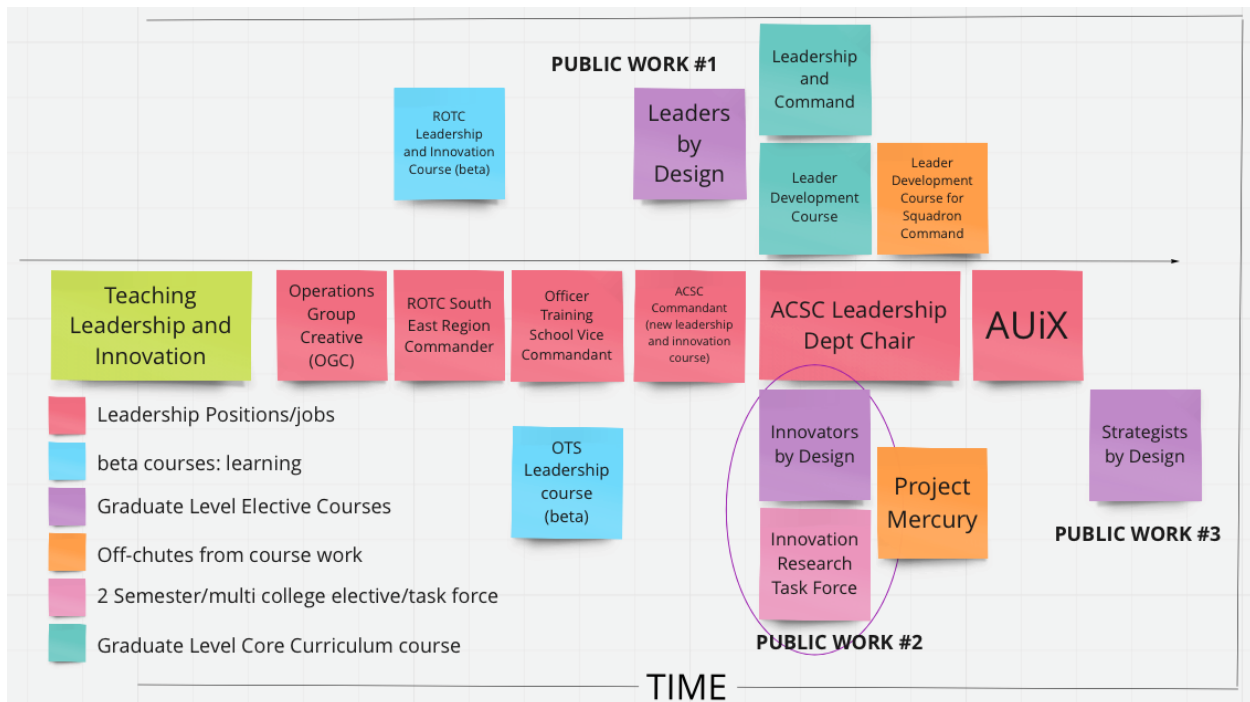

Figure 3.5 Map of courses developed and the links between Lbd, ibD, iRTF, and Project Mercury

Increasing capacity and reach

CVF proved to be a simple concept we could easily export into a "teach the teacher" program. Project Mercury now has 7 graduated cohorts with about 210 "certified professional innovators (CPI)[34]" throughout the USAF. Our latest cohort includes members of NATO. PM is a 90-120-day program mirroring much of the structure of ibD, except PM uses only the CVF in producing innovation pitches. Further we are working with the Singaporean Air Force (RSAF) directly along with the University of Michigan in a PM like effort for their organization. With these CPIs, the USAF has a network of innovators at the grassroots level able to build the creative networks discussed above in order to bring creativity and innovation to the hard structure of the DoD.

Motivation, Context, Need, and Agency
<div align="center">Gentlemen, We Have Run Out of Money; Now We Have to Think.
Winston Churchill[35]</div>

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[34] University of Michigan, Ross Business School offers a certification for all who complete Project Mercury

[35] This quote, or a minor variation of it ("Gentlemen, we have run out of money. It is time to start thinking.") is also attributed to (Sir) Ernest Rutherford (1871-1937), a famed New Zealand chemist and physicist.

Given my working definition of innovation: to make change or alter a domain, product, strategy, service, theory or doctrine for competitive advantage, the agent of innovation must possess or be able to tap into some aspect of creativity. Creativity is another word with many definitions. I would agree that creativity, as it pertains to leadership, is the ability to discover new and original ideas, connections, and solutions to problems (Perina, 2022). In order to make change through innovation, innovation begins with creativity. I would add to the innovation trait list; curiosity, zooming in (detail) l and zooming out (meta view), distinctiveness, new syntheses, passion, commitment. Organizations such as the military are not necessarily known for their creativity and free thinking. There are certain archetypes (see figures 3.5 & 3.6) that are simply more creative than others. By archetype, I use it much as Carl Jung did—as an explanatory paraphrase of the Platonic *eidos*, some philosophers translate the archetype as "essence" (Soccio, 2009, Knox, 2003). Jung maintained that Platonic archetypes are metaphysical ideas, paradigms, or models (Knox, 2003). In the case of ibD we use Cameron, Quinn, and DeGraff's archetypes from the framework at figure 3.6.[36] My motivation for ibD was an attempt to create a course to provide leaders with a sense of cognitive diversity via the architypes introduced. Once students understand their unique qualities, we build a safe space to experience their own creativity as well as the dynamic creativity that can emerge in a diverse group. In fact, ibD is not even taught on base. The course has access to a creative space in downtown Montgomery called MGMWERX, where we create and innovate in a

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[36] CVF/Innovation Genome assessment available at:
https://portal.innovationgenome.com/dashboard (password USAF)

transdisciplinarian way; in civilian clothes, no rank, no titles, no symbols of hierarchical power, practices, and expectations.

THE FOUR FUNDAMENTAL CREATIVE FORCES IN ACTION

LEVEL/TYPE	CREATE TYPE	CONTROL TYPE	COMPETE TYPE	COLLABORATE TYPE
Individual Level	**Artist**	**Engineer**	**Athlete**	**Sage**
Attributes • Examples	**Creativity** • Aesthetic vision • Artistic expression **Discovery** • Psychological • Spiritual exploration	**Security** • Safety • Savings **Productivity** • Accomplishment • Advancement	**Vitality** • Physical health • Emotional health **Prosperity** • Financial well-being • Best in class	**Capability** • Apprenticeship • Continuing education **Community** • Family outings • Service associations
Organizational Level	**Adhocracy**	**Hierarchy**	**Market**	**Clan**
Value propositions • Examples	**Innovation** • Discovery strategy • Radical experiments **Growth** • New market speculation • Greenhouse funds	**Efficiency** • Lean manufacturing • Supply chain innovation **Quality** • Total quality control • End to end IT system	**Speed** • Mergers and acquisitions • Rapid action problem solving teams **Profit** • Revenue insight processes • Market adjacencies	**Community** • Communities of practice • Culture development **Knowledge** • Knowledge management • Search and reapply
Situational Level	**Unique**	**Predictable**	**Contentious**	**Cooperative**
Strategies • Examples	**Breakthrough** • Miracle drugs • Visual prosthetics **Differentiation** • Craft beers • Haute couture fashion	**Scale** • Airline logistics • Heavy manufacturing **Cautious** • Surgical procedures • Power generation	**Aggressive** • Smart phones • Snack foods **Demanding** • Financial services • College football	**Beliefs** • Fair trade coffee • Not for profit groups **Lifestyle** • Bicycle lanes • Gaming

Figure 3.6 Constructive Conflict and Competing Values Framework from jeffdegraff.com

Although innovation and creativity are things I have always valued, I have never quite fully articulated why. Like the many intangibles of life, one is often most aware of them through their absence. From my perspective it seemed there was not enough creativity in the military. I have studied history since grammar school and it was evident to me that the strongest leaders recognized, even if they were not creative and innovative themselves, the necessity of creative responses and solutions. Perhaps they contributed to the daring through permitting the imaginative individuals to simply get on with it. History and mythology demonstrate in different eras that great leaders often had an antithesis or partner (in parenthesis below). These individuals complemented the cognitive makeup of their counterparts and often through friction and energy as if they were on an implicit path to balance: Alexander the Great, (Hephaestion) Julius Caesar (Titus Labienus), George Washington (Alexander Hamilton), Napoleon Bonaparte (Louis-Alexandre Berthier), Abraham Lincoln (William Henry Seward), Billy Mitchell (Clair Chennault), George S Patton Jr (Manton S. Eddy), John Lennon (Paul McCartney). The view is they accomplished more together than they would have done

separately because of the mutual trust alliance that was nurtured in service to common goals. As a young officer there was an assumption on my part that at some point, I would be able to let the creative and innovative side of Bill loose. Yet as the years passed, the hard structure of the hierarchical, bureaucratic military never seemed to loosen the reins enough so that could happen as the primary mode of operation was order, and obeying orders was the only way to protect order.

There was a time in Special Operations when I was able to do some innovative planning, the success of which was marginal at best. In the Field Notes above, one of my biggest concerns innovating around the KC10 regulations was how the hard structure would strike back. I actually recall thinking about how I would explain my actions as we flew through Pakistan after escorting the Marines to their ship. In my mind, I knew we did the right thing and hoped that would win the day once the questions started coming on landing. Much to the credit of my commander at the time, the only question he asked was, *why didn't you shut the engine down?* I responded, *we could not maintain altitude, maneuverability, and were not sure how the jet would perform once we started refueling the F/A-18s*. The commander must have found the answer acceptable and did not ask any follow-on questions. The commander later submitted our crew for several awards. The crew was awarded the 15th Air Force General P.K. Carleton Award for Valor, the James Doolittle Award for Valor, the General Ross Hoyt Award for Valor, and the USAF Air Medal for Heroism for our effort over Afghanistan[37].

This is where ambiguities and contradictions not only stand out but where the consequences are influenced by the context, that is by the outcome. We took a risk, I would say a calculated risk, over Afghanistan; it worked. The award was for valor. Had it not worked it would have been the shame of disobedience. This is the balance/imbalance a leader has to deal with and not only in crises. Leaders facing such choices need to be supported by the system with less polarized repercussions. This is supported from other fields exploring risk governance. According to Renn et al (2011, 240)

> Risk governance draws the attention to the fact that not all risks are simple: they cannot all be calculated as a function of probability and effect. Many risks, which require societal choices and decisions, are adequately characterized as complex, uncertain and/or ambiguous. It is a consistent finding, however, that in most cases they are treated, assessed and managed as if they were simple. The many failures to

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[37] PK Carleton Award for Valor: The Airlift/Tanker Association sponsors the award, recognizing an outstanding airlift or tanker aircrew or aircrew member for valor, based on demonstrated courage, strength, determination, bravery and fearlessness during combat, contingency or a humanitarian mission. It is named in honor of the late Gen. P.K. Carlton, who retired in 1977 as the commander of Military Airlift Command. Ross Hoyt Award: Gen. Ross G. Hoyt Award, on Aug. 1, 2019, for being the best air refueling crew in the United States Air Force.

deal adequately with risks …demonstrate an urgent need to develop alternative concepts and approaches to deal with uncertain, complex and/or ambiguous risks.

In context, the 21st century has clearly illustrated that adversarial challenges have come, and will continue to come, in all shapes and forms. On the grandest scale, any nation's ability to generate power positioning through harnessing the 'chaotic' creativity of the nation is more important than ever (Lo, 2019). America is facing an unprecedented spectrum of conflict. According to Brose (2020) violent extremist organizations will continue to harvest the fruits of globalization, multiply their influence, and frustrate the United States by weaponizing commercial technologies in unconventional manners. Revisionist states, such as Russia and China, will continue to strengthen their core technology base, push the boundaries on all fronts to lay an optimal battleground for themselves, and deliver a deadly strike at a moment most opportune to them. A single, optimum, solution is no longer sufficient to deter modern adversaries, who are rapidly transforming and frustrating America and its allies from every possible angle (Lo, 2019).

The need for innovation in both peace and war becomes clearer and reinforced with every passing month. Leaders in Washington say all the right things about the need for military innovation. My concern is whether the military really understands what innovation requires and what conditions are required for it to flourish. Such conditions include reducing resistance embedded in certain practices. The military celebrates the ebullient years after the triumph of the Cold War and Operation Desert Storm, but what worked then might not work now. The US Military is over invested in large bases and massively expensive and exquisite platforms that its rivals have spent decades watching, learning from, and from this observation are building advanced weapons to counter any US advantage. The US military procurement system is so slow that many of the "transformational" programs of the 1990s and 2000s are arriving so late that the old systems they are replacing are aging out of the force with nothing to take their place. What remains today is a smaller, older force that has been strained by years of combat and, in my opinion, is still many years away from recovering.

Of course, at the same time one of the most significant 'tech' revolutions in history is not only dawning but hurtling towards a zenith. The information age is not necessarily new, but the military must contemplate its implications for the future of warfare. The next war will probably look significantly different from anything the US has witnessed in the past. There are hints at how this might unfold in recent and current areas of vulnerability such as Crimea, the Ukraine (in 2014 and 2022), Georgia, and the 2020 Nagorno-Karabakh war. In many of these cases (not all), the actual conflict has stayed just below the threshold of war, in what has been called the "gray zone[38]". America and the West have spent decades engaged in thinking about and planning for wars of the past, but the wars of the future will follow these recent trends of heavy

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[38] The employment of all the means at a nation's command, short of war.

use of cyber, massive amounts of information and disinformation, big data, unmanned vehicles, and artificial intelligence (Brose, 2020) and the weaponizing of hunger, water, and heat.

Due to the interconnectedness of the global world not only will what happens in one country impact other countries but a whole range of sectors will be affected from medicine to trade. *What can one person do about it?* My answer is quite a lot. Every Airman in the USAF comes to Air University at some point in their career. The degree granting schools (Air War College, Air Command and Staff College, and The School of Advanced Air and Space Studies) teach officers from all over the world and from all branches of the US military. If any place can make a difference in how the military thinks, teaches, and does innovation, Air University has a key role to play in this arena.

Creativity, imagination, curiosity, and a willingness to disregard precedent when the situation demands it, is what sets apart change agents. Some may call this rebellious, others courageous, others may call it recklessness. I would suggest that it is a bit of each combined with preparedness and experience. These attributes or this mindset enable these agents to overcome resistance to new and innovative concepts through the art of persuasion and an ability to engender trust. We need not only the innovation of things but most importantly the innovation of thought into action. Anything less condemns the West to preparing to fight the last war, not the next (Venable, 2019).

Chaos and Order

<div align="center">

Chaos was the law of nature; Order was the dream of man.[39]
Henry Adams (1838-1918)

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A perspective I take is that leaders in the military are themselves in transition driven by global interconnectedness and rapid advances in technology. Their liminality is also like teenagers haunted by fears, illusions, disillusions, and uncertainty. It is understandable they are looking for clarity and firm ground which may influence them to fall back on what they know, even if they understand that is not what is needed. DeGraff (2020) points out that we have absolutely zero data on the future. Leaders simply cannot have data on something that has not taken place yet. Of course, leaders can anticipate, future cast, and sensemake. In all honesty, these are guesswork, albeit presented as an educated hypothesis[40], but best guesses, nonetheless. This creates tension in a hard structure; not knowing what is to come creates a threat to order that could result in **chaos**. The concept of Yin and Yang (*taijitu*) come to mind time and time again as a useful construct. Returning to the Yin and Yang characteristics in Chapter 1 and 2, innovation and creativity is Yin in the Yang world, and this tempered chaos is what the military

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[39] Henry Adams, The Education of Henry Adams (1918)
[40] A supposition or proposed explanation made on the basis of limited evidence as a starting point for further investigation.

needs to be persuaded to embrace; to tolerate a level of chaos/uncertainty so that creativity can be unleashed and change can take place in a balanced way that shifts the rules of order to expand the horizon of possibilities.

The bureaucracy, the system, the hard structure shuns 'chaos' perhaps because it sees its role as creating climates of certainty. Perhaps it has become so risk averse that is its moribund. This is not about the supremacy of one over the other. It is about bureaucracy seeing itself has having untapped resources, possibilities of imaginative thinking, and innovation that could make a significant contribution to re-energizing the whole system. As Ophuls (2012) points out in his "Immoderate Greatness: Why Civilizations Fail", it is not the energy that is lost, as energy is constant, but the decline in its quality through overburdened systems that leads to entropy. Hence it should not be surprising that the military is dealing with a grave and substantial paradox itself: to remain in a state of ambivalence is not an option. Despite senior leaders calling for innovation with such phrases as "accelerate change or lose[41]" there seems to be an ambivalence about making it happen. No matter how many times one says I must/I will test drive my new prototype bike (project) to improve its performance, you cannot ride it if you are equally afraid of crashing it. Having the bike (project) does not make it drive. Ambivalence has Latin roots in being strong about both 'things' which leads not to flight or fright, but freeze. Ambivalence is an antithesis of invention and progress.

Can the Yin and Yang concept function as a way to describe what is going on and identify ways that can move people and systems away from ambivalence? I believe it to be useful. Chaos and order, as understood by the 3rd century BCE philosopher Zou Yan, are complementary forces and the Taoist path of The Middle Way is where the enlightened leader, the innovator exists -- between them both. It is the path of proper Being. Such ideas can be used to help leaders and innovators to understand that they inhabit order which is eternally partnered with chaos in what should be a creative tension. Confident leaders innovate while at the same time, lead from a sense of order encouraging the new to emerge or come into being. Periods of uncertainty are healthy for the organism as this is where it innovates to rebalance/survive before becoming embedded in the order over time. When the order once again declines in energy due to internal and external influences and nothing new comes from order alone, the system becomes out of balance and uncertainty is needed to raise the quality of the energy again. In my conceptualization leaders are the watchtower, the barometer, the translator, the guardians of balance. Balance between oppositional forces can be an aspiration for leadership. Innovators by Design sets out to stimulate this aspiration.

The Phenomenon of Innovation: Setting the Conditions

> Culture is the only asset of humanity that, when divided between us all, becomes greater rather than smaller. -Hans Georg Gadamer

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[41] Gen Charles Brown, USAF Chief of Staff

The military has attempted to jump start innovation across a hard structure with money, facilities, organizations, and action orders given from the highest levels, yet movement towards innovating has been slow at best. The military response is a bureaucratic one, a Yang approach.

To tackle this issue, I have come up with a construct; a practical philosophy l approach using the Yang of Gadamer (1960) and the Yin of Rogers (1951). In my construct, I have paired (i) Gadamer who was a renowned 20th century philosopher among whose works is "**Truth and Method**" (1951) in which he presents conditions that need to be in place if we are to understand anything, with (ii) Rogers a noted 20th century psychologist who conceptualized and practiced a person-centered approach to human relationships. Innovation needs both 'understanding' and 'relational ability'.

How does it work? Leaders set the **conditions for innovation and creativity**. Innovators by Design is not a checklist or a twelve-step program. It is intentional in assisting leaders in the process of innovation, understanding certain methodologies, and giving permission to leaders to get out of the way. Leaders begin with creating a community for innovation, build competency, and then a culture of innovation begins forming (DeGraff, 2020). As a commander, I had Airmen come to me frequently with ideas. In my mind if the idea was not illegal or immoral, the person originating the idea was willing to do the work and I felt l I could take responsibility if the innovation failed, I would 'green light' the idea.

When I took command of the 100 Operations Group at RAF Mildenhall, UK, I had never flown the KC135 (the aircraft assigned to the group) and learning a new aircraft as a colonel was a challenge. I asked my boss why he hired me. He said these Airmen are arguably the best in the world, they fly in a very complicated airspace, against a myriad of NATO receivers and I need you to take them to the next level. I realized I was not going to teach them anything about flying the KC135, but I could teach them about leadership. I could already see in our young Airmen the need for releasing their potential for creativity

Figure 3.7 KC-135R Stratotanker, The Wolff Pack, RAF Mildenhall (My aircraft as commander)

and imaginative thinking. At the time I knew very little about innovation. I felt I had done a good bit of it, but it had been haphazard and ill-structured. Now was the time for me to be more deliberate.

It was 2010. Innovation was not yet a buzzword in the USAF. The authors of "Re-Thinking Science" (Nowotny, et al, 2001 28, 74) argue that the idea of innovation can now be seen as almost a new religion of the late-modern risk society, where everyone is supposed to become creative artists. I began to understand that innovation is of strategic importance: to become a serious player in this game, it is not sufficient to be a consumer; one must also become a producer, a producer of innovative knowledge (Uggla, 2008). I was not clear on how to do that at the time. I did know that as the leader, it probably would not be me producing the ideas. But I had been under command enough to know that what I would have wanted – to be secure in the community, to be confident in competency, and intimately know the culture of the organization before I would feel confident to innovate. So, I set about creating those conditions for Airmen to be free to innovate.

Community, Competency, and Culture

> In the midst of chaos, there is also opportunity — Sun Tzu

Gadamer has much to offer in terms of ideas and concepts on the conditions/the environment needed to facilitate understanding of anything. These are helpful not only in
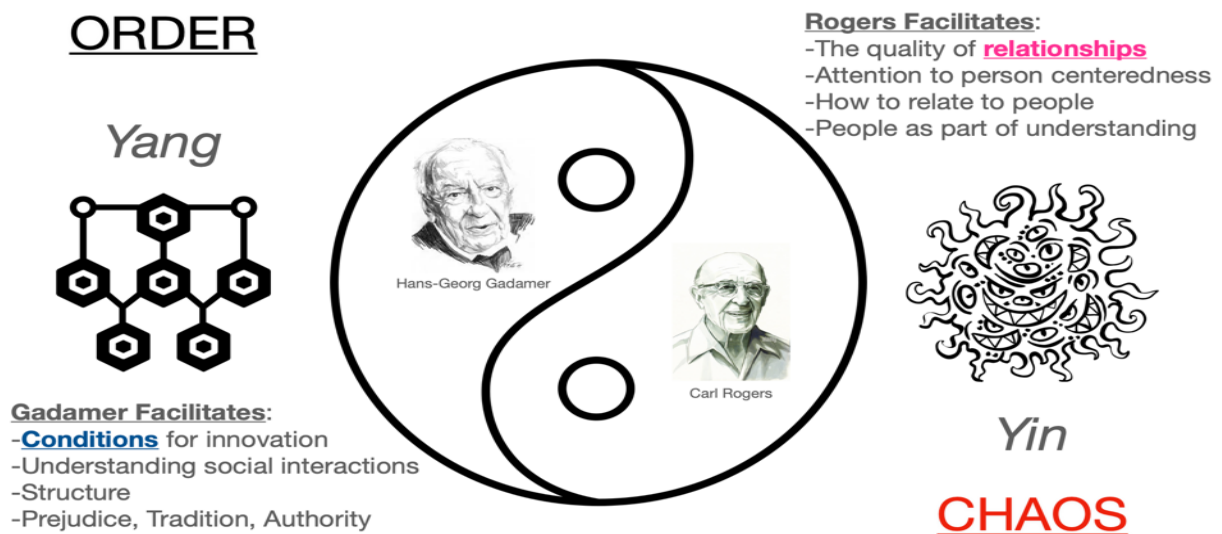
Figure 3.8 Order and Chaos: Gadamer and Rogers

exploring the conditions for innovation but for articulating the complexities involved. Gadamer was an innovator of concepts. His four pillars can be applied to innovation (i) leaders need to understand their own prejudice towards ideas. (ii) acknowledge tradition (iii)recognize authority (iv) engage in reflection. These can contribute to creating the three Cs of innovation: community, competency, and culture (Figure 3.8).

Rogers made significant contributions to a theory of self that is humanistic, existential, and phenomenological (Dagmar, 1996). He posits nineteen propositions [42] that together constitute his person-centered theory of personality dynamics and behavior (Merry, 2002: 23-27). From these Rogers further develops a process of a fully functioning person where a person continually attempts to fulfill their potential. Taking Gadamer and Rogers together they constitute a Yang /Yin approach to innovation: Gadamer is Yang supporting the leader in understanding their function in the hard structure (prejudice, tradition, authority, reflection) and Rogers is Yin focusing on the person's individual development of their self-concept and potential recognizing and overcoming the restrictions of environment to realize their potential and having a non-judgmental, positive regard attitude to others facilitating cognitive diversity and respectful attitudes to difference.

Gadamer: Order and Yang

Gadamer's central thesis is that understanding is always based on a historically inherited fore-structure that preconditions acts of understanding, thereby making understanding inherently interpretative (TM, 268–269). As such subject matters are always already preinterpreted by the way in which they have been understood in the tradition to which the interpreter belongs (Leiviskä, 2015 584). Therefore, the hard structure has historically always been the way it is and there is no need for innovation, creativity, or change. The hard structure is already optimized. Gadamer refers to this fore-structure of understanding with his controversial concept of prejudice (Leiviskä, 2015 584), which he defines as "a judgment that is rendered before all the elements that determine a situation have been finally examined" (TM, 273).

Prejudice:

The fore-structure makes understanding interpretative (*TM*, 268-269). Thus, the interpreter's understanding is not an objective or context-independent view, but rather always already preinterpreted in the way in which they have been understood in the tradition in which the interpreter belongs—this is prejudice (Leiviskä, 2015 585). Prejudice today has a very negative connotation, yet for Gadamer prejudices are the guiding presuppositions that allow different objects of understanding to appear as meaningful and are neither positive or negative (Leiviskä, 2015 584). Prejudice is simply involved in all understanding (TM, 272).

Example: Leaders prejudge almost everything and in many cases it is natural. But they are not infallible. For innovation to thrive in a community, leaders can acknowledge their prejudices yet at the same time question ideas and concepts from their prejudgment. In a cognitively diverse community of trust where greater good leaders are one of the environmental conditions prejudices are discussed openly and safely.

Tradition:

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[42] 19 propositions listed in Appendix L

Gadamer has a unique concept of tradition. It is intimately associated with his concept of the prejudiced nature of understanding. Prejudice did not have a negative connotation until the Enlightenment, at which point it was taken to signify false judgment (Leiviskä, 2015 584). Gadamer points out the Enlightenment's universal demand to discredit all prejudices actually gave root to a "prejudice against prejudices" (TM, 274) and has brought a disregard to the role of tradition as an important source of knowledge (Leiviskä, 2015 584). Tradition can indeed lead to dogma—especially in hard structures, but tradition does not exclude the possibility of prejudices arising from tradition may possibly be of value.

Example: Innovators constantly face the preverbal wall in hard structures embodied in the statement "we have always done it that way". The way things have always been done is usually based on tradition, but tradition need not mean sacred and beyond questioning. Traditions can be founded on reason or have origins in the maintenance of a power structure that often no longer exists. Innovators are often seen as changing things for the sake of change, yet when the community acknowledges and discusses not only the traditions but the prejudices, the community builds competence and expands a culture of communication, collaboration and ultimately trust that enables deeper creativity. Sadly, in so many circumstances in the world today people hang on to traditions that were once important, for example for the cohesion of society but are now symbols of things such as racism, misogyny, and prejudices of the kind that Gadamer opposes.

Authority:
Gadamer's authority concept does not equate to blind obedience, but as something granted to someone when they are acknowledged as having superior knowledge, insight, experience, and competency that is worthy of such recognition (TM, 281). Authority is thus something that has to be earned by its possessor and bestowed by others. Gadamer suggests that the Enlightenment distorted the concept of authority by equating it with deference to prevailing traditions, blind obedience, and submission of one's own judgement to that of another (TM, 278, Duke 2014 27). Authority hinders understanding only to the extent that it replaces one's own judgment, but when authority is granted to a fragment of tradition on the basis of reflectively acknowledging that it can teach leaders something that they did not know, tradition becomes a legitimate source of knowledge (Leiviskä, 2015 587).

Example: Authority is not a position; it is not command. In the innovation space there are many individuals with competency in creativity to whom authority is bestowed who are not in leadership positions. Leaders build innovation networks with these authorities in order to innovate in new and exciting ways. Building this innovation network is a challenge as many authorities can be rigidly hierarchical and disabling.

Reflection: Critical reflection is anything but simple given our prejudice, tradition, and authority. There are simply dimensions in the process of tradition at work that remain beyond

conscious control. However, Gadamer does not believe reflection is useless or ineffectual, rather the whole unconditional antithesis between tradition and reason is mistaken (Leiviskä, 2015 585). Reason is not our master but remains dependent on circumstances in which it operates (TM, 277, Leiviskä, 2015 585). Given that, even employing reflective capabilities, understanding is still guided by tradition in ways that escape the leader's grasp of it. This applies to innovation and creativity—and is indicative of the finitude of existence and the reflective capabilities of humans. Reflection therefore is both effected by tradition and has an effect *on* tradition (TM, 296). Tradition thus is in a constant state of self-transgression and renewal through the new articulations it receives in reflection and understanding—hence reflection is indeed important (Leiviskä, 2015 585).

Example: Innovation in hard structures with entrenched traditions, like the military, require deep reflection. Therefore, leader acknowledgment of where and how tradition impacts personal reflection is incredibly important. A knowledge of self and leading self are part of this reflection. A leader's understanding of personal strengths and weaknesses lead to an acceptance and acknowledgment for the need for cognitive diversity in innovation. Cognitive diversity as presented in courses like ibD and illuminative when innovators from various networks, professions, and career fields outside of the military come together to reflect on ideas, problems, politics, and pain points of interested in the innovation ecosystem. External entities tend to shine light into the dark corners to enable creative reflection beyond tradition.

Rogers: Chaos and Yin

As Gadamer is to the examination of the hard structure and how individuals function in it—through prejudice, tradition, authority, and reflection—in building the dominant logic of the organization, Rogers is to the deeper insights into the leader as an individual and his/her attitude to others. In his nineteen propositions[43], proposition #14 states:

> Psychological maladjustment exists when the organism denies to awareness significant sensory and visceral experiences, which consequently are not symbolized and organized into the gestalt of the self-structure. When this situation exists, there is a basic or potential psychological tension. When something is experienced, that doesn't fit with a picture of oneself and it cannot fit it in with that picture, leaders feel tense, anxious, frightened, or confused. (Merry, 23-27)

This is the very state of the chaos experienced during the act of innovation. When new ideas are tested or implemented there is a tolerance required during the immediate chaos produced between the time the old idea disintegrates and the new idea takes control (Peterson, 331). Some leaders can tolerate more chaos than others, but it is important to understand how much chaos the individual leader and the corresponding hard structure can indeed accept.

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[43] 19 Propositions can be found in Appendix L

Rogers proposes that optimal development (referred to in proposition 14) is a process versus a static state. Rogers describes this as the **"good life"** (Aristotle's eudaemonia), where the individual continually aims to fulfill their full potential. Rogers offers the listed characteristics of a fully functioning person (Rogers, 1961, via The Person-Centered Association):

1. **A growing openness to experience** – they move away from defensiveness and have no need for subception (a perceptual defense that involves unconsciously applying strategies to prevent a troubling stimulus from entering consciousness). (Rogers 1961 180-181)

2. **An increasingly existential lifestyle** – living each moment fully – not distorting the moment to fit personality or self-concept but allowing personality and self-concept to emanate from the experience. This results in excitement, daring, adaptability, tolerance, spontaneity, and a lack of rigidity and suggests *a foundation of trust*. "To open one's spirit to what is going on now and discover in that present process whatever structure it appears to have" (Rogers, 1961 189).

3. **Increasing organismic trust** – they trust their own judgment and their ability to choose behavior that is appropriate for each moment. They do not rely on existing codes and social norms but trust that as they are open to experiences, they will be able to trust their own sense of right and wrong (Rogers, 1961 151, 189).

4. **Freedom of choice** – not being shackled by the restrictions that influence an incongruent individual, they are able to make a wider range of choices more fluently. They believe that they play a role in determining their own behavior and so feel responsible for their own behavior (Rogers, 1961 261, 372).

5. **Creativity** – it follows that they will feel more free to be creative. They will also be more creative in the way they adapt to their own circumstances without feeling a need to conform (Rogers, 1961 193, 349, 372).

6. **Reliability and constructiveness** – they can be trusted to act constructively. An individual who is open to all their needs will be able to maintain a balance between them. Even aggressive needs will be matched and balanced by intrinsic goodness in congruent individuals (Rogers, 1961 260-261).

7. **A rich full life** – he describes the life of the fully functioning individual as rich, full and exciting and suggests that they experience joy and pain, love and heartbreak, fear and courage more intensely. Rogers' description of the good life (Rogers, 1961 183, 189, 193).

This process of the good life is not, I am convinced, a life for the faint-hearted. It involves the stretching and growing of becoming more and more of one's potentialities. It involves the courage to be. It means launching oneself fully into the stream of life. (Rogers 1961 196)
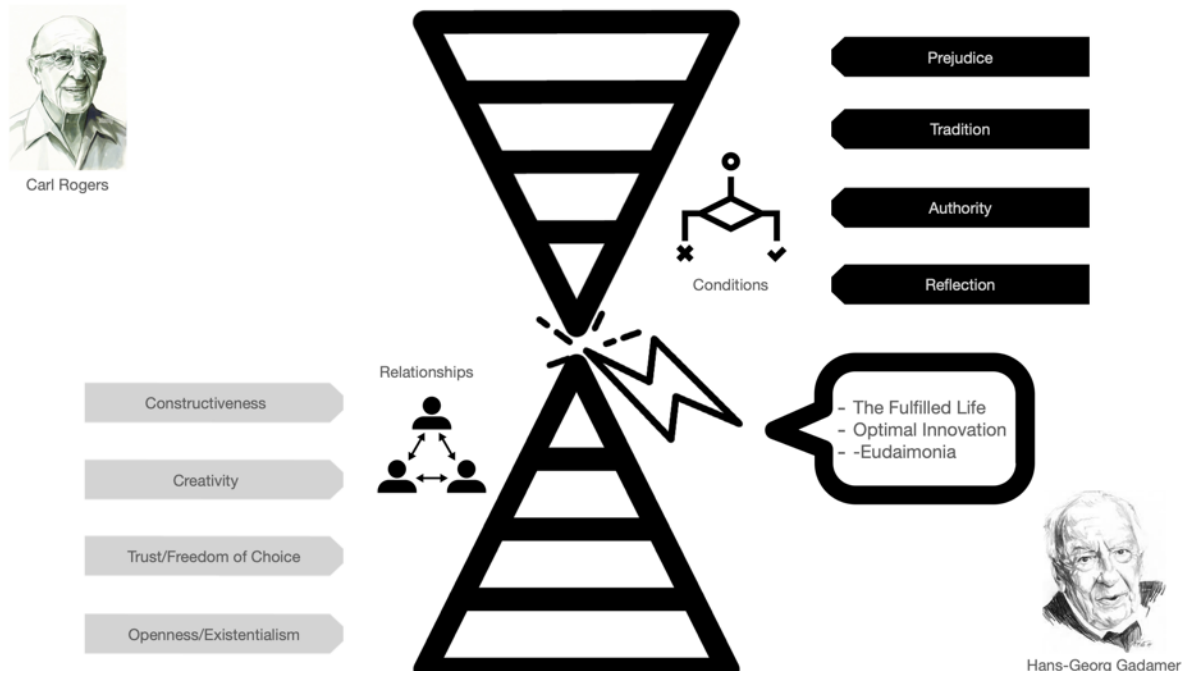
The Conservative and Liberal Approaches


Figure 3.9 Gadamer and Rogers Innovation Frame

You see, boys, everybody thinks they want freedom, but what they really want is order. -Valin Hess[44]

There is nothing inherently political in ibD, but perhaps there is something in what might be considered dominant logic. Gadamer, when examined, is addressing cultural norms, the pre-judging, the tradition, the authority, and reflection of the organization. Cultural norms are a principal enemy of innovation and taking time to examine Rogers' good life may facilitate combating said norms (Monopoli, Valor-Sabatier, 2009). A goal of ibD is supporting the student to understand where they flourish in order to achieve the good life or eudaemonia. n organization needs the conservative and the liberal mindset (order and chaos) in order to provide conditions for consensus through shared invested interests such as safety and security in developing a properly balanced view. (Peterson, 2018 333).

Humans are capable of making themselves at home almost everywhere, geographically, because they change the geography as required and humans have adaptive capacities including modifying behavior (Peterson, 2021 31). Humans have also developed cognitive niches. According to Pinker (2010) the cognitive niche is the "coevolution of intelligence,

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[44] Valin Hess was a human male general who served in the Imperial Army of the Galactic Empire (Mandalorian, Season2, Episode 15, Star Wars)

sociality, and language …hominids evolved to specialize in the cognitive niche, which is defined by: reasoning about the causal structure of the world, cooperating with other individuals, and sharing that knowledge and negotiating those agreements via language…."(Pinker 2010 8998).

Figure 3.10 Taijtu Order and Chaos
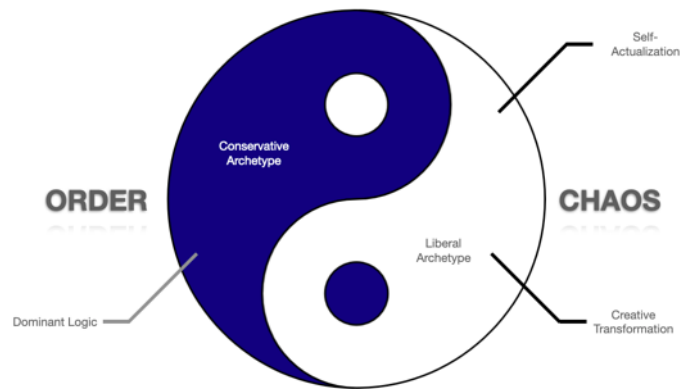
A liberal mindset or archetype usually is enthralled by new ideas. This mindset brings new solutions to problems and this mindset is also inclined to test or implement these ideas. The conservative mindset tends to be wary of new ideas and not particularly attracted to them. These leaders are wary perhaps because they are less sensitive to their possibilities and more concerned about their unpredicted consequences (Peterson, 2018,30). Fixing one problem, does not mean it will not fail to generate another, or worse, several others. The conservative mindset is required for maintaining things when everything is working, and change may be disastrous. The liberal mindset is necessary for changing things when they are no longer working. The balancing act is not an easy task—leaders determine when something needs to be preserved or when it needs to be transformed (Peterson, 2021, 331). If leaders are fortunate to understand Gadamer's concepts and can work with Roger's process there is organizational dialog as opposed to war, tyranny, or submission. Arguments and disagreements about the relative value of innovation vs stability are required in order to determine when each is appropriate and in what the innovation does. The two mindsets—liberal and conservative, chaos and order, are both 'correct', but each only tells half the story. We find the possibilities in the in between.

In summary

Yin and Yang or developing a more balanced view of the world in which one lives, works, and innovates is an aspiration but time is not on our side. As humans, we cannot escape the contradictions, binaries, ambiguities and paradoxes but we can use them much better for learning, innovating, acting and leading. We cannot rely on the constancy of context. We would not want that as we would be in stasis and die out. The future and the present differ from the past. What worked in the last conflict will not necessarily work now and the line between stability and tyranny is maybe closer than once realized. Harnessing Gadamer's concepts with Rogers' humanistic process, leaders can begin to listen to people who differ from them and because of that difference have the ability to innovate, create, to see and react appropriately to things they would not normally be able to detect. (Peterson, 333). Such open thinking has

resulted in the British Intelligence services advertising periodically and openly for cognitively diverse people. They see such individuals not only as potential innovators but able to come at problems from 'left field'.   The leader's job is to provide conditions of safety and belonging which Rogers' person-centered core conditions of relating such as listening, unconditional positive regard and non-judgmentalism achieve.

How it works in LbD and ibD

Leaders by Design and Innovators by Design both hold, as a central tenet, that cognitive diversity (people who have different styles of problem-solving and learning, different ways of seeing the world and acting on it, different perspectives of creativity and of what matters) plays an important role in leading and innovating in the current and most likely future environment. As DeGraff (2021) notes, "Innovation is powered by constructive conflict. This requires that your organization has a wide range of abilities, experiences, and views. If everyone agrees with each other, consider expanding your gene pool." It is not always comfortable working with a diverse group, but innovation is not born from comfort, it is born from chaos. For many years I found comfort in working with individuals who thought the same way as I did, but as I matured in my leadership and innovation ability, I realized growth was not found in that comfort. LbD and ibD actively puts students into the 'chaos/uncertainty' of cognitive diversity and then charges them with problem solving and innovating. The various methodologies used (Design Thinking, Social Innovation, Competing Values Framework) all pull on the students' unique ways of looking at the world and on their unique innate abilities. The individuals quickly realize they are in a place of trust and safety, as they engage in learning, and bring their unique and different perspectives into the open. Threats and opportunities begin to emerge that would have been missed on their own. This chemistry of human interaction is a critical. We have for too long left out the important ingredients which have disabled us from creating new thinking that informs new action and opens up expanded possibilities. Through the constructive conflict and tensions that ensues the students come to realize that they arrive at understandings, perspectives, and innovations that they would have never found on their own.

> In all chaos there is a cosmos, in all disorder a secret order. -Carl Jung

Reflections on Innovation

I grew up with this idea that the military was innovative. When I reflect on that now, I am not exactly sure where that idea came from. In the 1970s I watched a lot of "Baa Baa Black Sheep/Black Sheep Squadron"[45] with Robert Conrad depicting the life of Marine Corp pilot Major Gregory "Pappy" Boyington.

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[45] *Baa Baa Black Sheep* (renamed *Black Sheep Squadron* for the second season) is an American television series that aired on NBC from September 23, 1976, until April 6, 1978. It was part periodmilitary drama, part comedy. The opening credits read: "*In World War II, Marine Corps Major Greg 'Pappy' Boyington commanded a squadron of fighter pilots. They were a collection of misfits and screwballs who became the terrors of the South Pacific. They were known as the Black Sheep.*"

Boyington flew with the Pacific fleet in 1941, In September 1943, he became commanding officer of Marine Fighter Squadron 214 (VMF-214), better known by its nickname, the "Black Sheep Squadron." During periods of intense activity in the Russell Islands-New Georgia and Bougainville-New Britain-New Ireland areas, he shot down 14 enemy fighter planes in 32 days. By December 27, 1943, his record had climbed to 25. Boyington was a tough, hard-living character known for being unorthodox.

A bit shocking to my nine-year old mind, the 1976 television series was only very loosely based on Boyington's memoirs. The show never covered his alcoholism, multiple divorces, or his life in a Japanese POW camp. But Boyington was a highly competent pilot, a master tactician, and an innovator. In many of the episodes, he bucked the system and won.

Historically, the USAF has not responded well to these rebels. The service celebrates names like Billy Mitchell (see context chapter), Jimmy Doolittle,[46] Bennie Schriever,[47] and Robin Olds.[48] Yet, for each of these innovators, there are probably thousands that were shunned and shamed. While serving on the Joint Staff in the Pentagon (Jun 2008-Jun 2010), I would often ask who were our current day airpower leaders, innovators, strategists? At the time, the Army had General David Petraeus[49] who became an international name, the Marines had General James Mattis[50], the Navy Admiral Michael Mullen[51], and special forces and General Stanley McCrystal[52]. Airpower simply did not have any bold audacious

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[46] James Harold Doolittle (December 14, 1896 – September 27, 1993) was an American military general and aviation pioneer who received the Medal of Honor for his daring raid on Japan during World War II. He also made early coast-to-coast flights, record-breaking speed flights, won many flying races, and helped develop and flight-test instrument flying.

[47] Bernard Adolph Schriever (14 September 1910 – 20 June 2005), was a United States Air Force general who played a major role in the Air Force's space and ballistic missile programs.

[48] Robin Olds (July 14, 1922 – June 14, 2007) was an American fighter pilot and general officer in the United States Air Force. He was a "triple ace", with a combined total of 17 victories in World War II and the Vietnam War.

[49] David Petraeus (November 7, 1952) led troops into battle as commander of the 101st Airborne Division during the U.S.-led invasion of Iraq in March 2003. Following the end of major combat operations, the division was responsible for the northern city of Mosul. In addition to maintaining security, the division was charged with rebuilding the local economy and establishing democratic institutions in the city. In June 2004 Petraeus was chosen to head both the Multi-National Security Transition Command—Iraq and the NATO Training Mission—Iraq. In October 2005 Petraeus was appointed to head the U.S. Army Combined Arms Center at Fort Leavenworth, Kansas, home to several army training schools. While at Leavenworth, he coauthored the army's new official manual on counterinsurgency warfare.

[50] James Norman Mattis (born September 8, 1950) is a retired United States Marine Corps four-star general who served as the 26th US secretary of defense from January 2017 to January 2019. During his 44 years in the Marine Corps, he commanded forces in the Persian Gulf War, the War in Afghanistan, and the Iraq War.

[51] Michael Glenn Mullen (born October 4, 1946) is a retired United States Navy admiral, who served as the 17th chairman of the Joint Chiefs of Staff from October 1, 2007, to September 30, 2011. Mullen previously served as the Navy's 28th chief of Naval Operations from July 22, 2005, to September 29, 2007. He was only the third officer in the Navy's history to be appointed to four different four-star assignments.

[52] Stanley Allen McChrystal (born August 14, 1954) is a retired United States Army general best known for his command of Joint Special Operations Command (JSOC) from 2003 to 2008 where his organization was credited with the death of Abu Musab al-Zarqawi, leader of Al-Qaeda in Iraq. His

leaders. In fact, an officer, a few years my senior, warned me, I should stop asking the question. Why? The Air Force answer usually went back a few decades with Colonel John Warden[53] or Colonel John Boyd[54]. Of note, neither Warden nor Boyd were ever promoted to General Officer. I continue to question where the USAF lost its innovation edge. Was this a leadership decision or simply bureaucratic/organizational behavior? Further what could I do about it?

The hard structure is not an innovative one. The hard structure is set up to sustain and make things such as systems, concepts repeatable. This is an industrial way of approaching operations and one whose time has come. The problem is all the incentives in the structure are established based on this industrial approach. The behavior is interesting and a concept of the "frozen middle" has emerged in business management referring to middle managers being frozen between compliance and initiatives but can be easily applied to other sectors with variations on what the frozen middle is(Solis, 2018). Many of the young leaders I work with are convinced there is someone, somewhere stopping their innovative ideas. When I ask where the frozen middle is, the answer is typically one or two ranks/levels above where they currently sit. My argument put to them is there is no actual "frozen middle,". It is a systemic issue that needs innovative thinking and practices.

There are new initiatives led by four-star generals such as the "Marine Corps's Force Design 2030*" and the Air Force's "*Accelerate Change or Lose*" that have experienced struggles in their implementation. On the opposite side, young leaders with new ideas have overcome various resistances on their way from the bottom up. These resistances are often based on tradition, habit or inertia and are continually inhibiting their path and atrophying their energy. Additionally, bureaucracies solve technical problems where authority, experience, and existing solutions can provide a pretext to decision making. When something within the system works, it becomes metaphorically set in stone and therefore difficult to change. It becomes a trusted way of doing things. Then over time it becomes sacred, literally set in stone. The exact opposite is true when our system is posed with a dynamic problem without any clear solution such as strategic competition. (Miranda, 2022)*

My solution is to educate our Airmen. Innovators by Design, The Innovation Research Task Force, Project Mercury are only a few of the investments I believe the USAF must place in terms of human capital. Further, AUiX has developed an OV-1 slide (image 3.1) to provide a strategic view of innovation. Ideas are important, but the ideas hit resistance in our bureaucracy. There are several keys in which we educate our leaders, but perhaps the most important are what we call the "5 Tankers of Innovation" (Funding, Contracting, Partnerships, Networks, and Manpower) in the Innovation Airspace. The whole team is encouraged by the feedback that the course brings to life the theory in books and clarifies the

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final assignment was as Commander, International Security Assistance Force (ISAF) and Commander, United States Forces – Afghanistan (USFOR-A). He previously served as Director, Joint Staff from August 2008 to June 2009.

[53] John Ashley Warden III (born December 21, 1943) is a retired colonel in the United States Air Force. His Air Force career spanned 30 years, from 1965 to 1995. During the First Gulf War, Warden introduced a new approach to the conduct of war; an air- and leadership-centric paradigm diametrically opposed to the AirLand Battle doctrine that relegated air power to a supporting role. John Warden has been called "*the leading air power theorist in the U.S. Air Force in the second half of the twentieth century*". (Olsen 2007) He has also been called "*one of the most creative airmen of our times. John Warden is not just a creative airman; he is one of America's premier strategic thinkers*". (Olsen 2007)

[54] John Richard Boyd (January 23, 1927 – March 9, 1997) was a United States Air Force fighter pilot and Pentagon consultant during the second half of the 20th century. His theories have been highly influential in military, sports, business, and litigation strategies and planning.

personal contribution to professional/military innovation and the realities of team working when one learns to appreciate that the best teams can be the ones who are cognitively diverse – complementarity rather than exclusion.
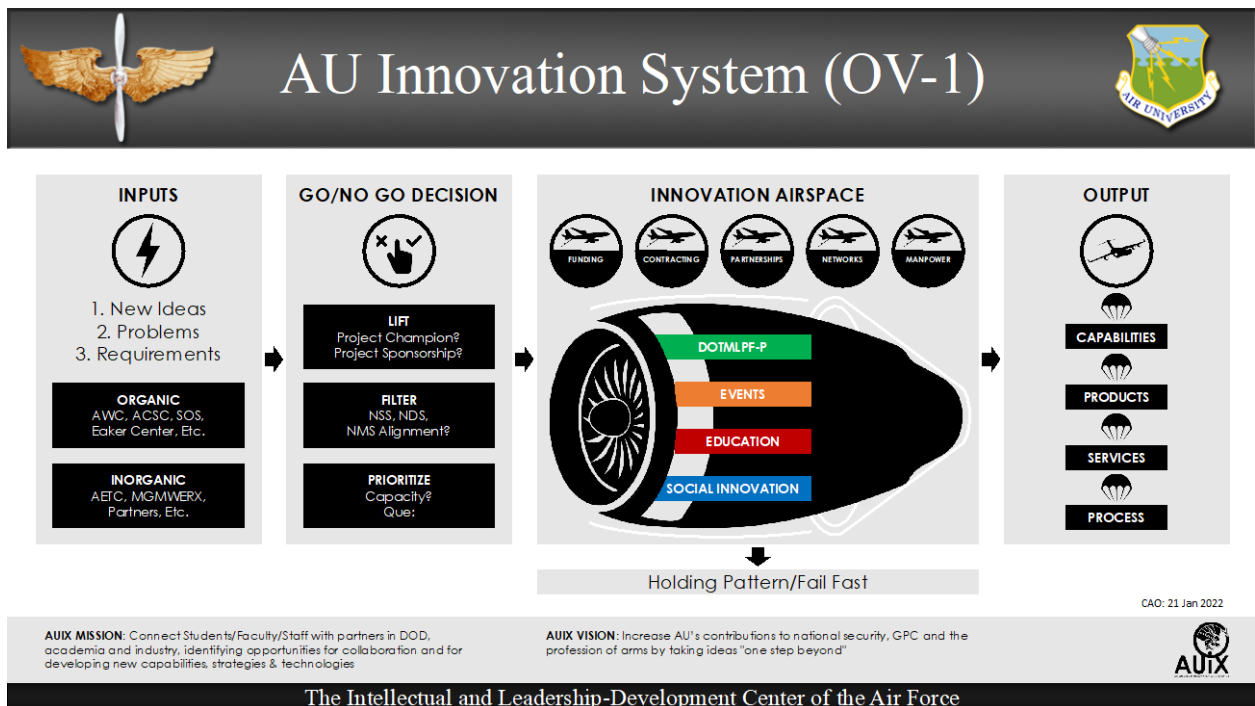

Figure 3.11 DeMarco/Ablay/Carter, 2021

I have had success in several innovation endeavors as a commander and several failures, but the key is making the system of innovation teachable and repeatable without being too prescriptive. It is indeed a Yin/Yang equation. In my mind, it is almost injecting a viral chaotic system into the bureaucratic system of order. Think of H.G. Wells and his "War of the Worlds" where we eventually discover that all the Martians are killed by an onslaught of earthly pathogens, to which they had no immunity: "slain, after all man's devices had failed, by the humblest things that God, in his wisdom, has put upon this earth" (Wells, 1897, book 2, Ch 8). This is my optimism. That we will develop positive pathogens and watch them spread. Perhaps I am overly simplistic or even a hopeless optimist, but so far, so good.

I now move onto one of the most important insights I have had in undertaking this work: the role of strategy and it place in leadership facilitation and development. In the following Chapter I share my critical and operational thinking about leadership, innovation, and the development of the next layer Strategists by Design which has always been an idea, then through this program has started to take enough shape to attract funding. The next Chapter presents how insights from critiquing Leaders and Innovators courses have started to feed into Strategists by Design.

Chapter 4 Prospective Public Work : Strategists by Design: Addressing Complexity and Strategy

Strategy without tactics is the slowest route to victory. Tactics without strategy is the noise before defeat – Attributed to Sun Tzu, The Art of War

Reflections on a prospective work

Since 2015, Leaders by Design has stimulated new perspectives on leadership, and Innovators by Design has produced a number of exceptional innovators for the US and Allied Militaries. The two programs combined have graduated close to 300 leaders now serving in some of the most influential offices in the US and Allied militaries to include The Pentagon, Combatant Commands, Major Commands, and a number of sitting squadron, group, and wing commanders. However, I have always felt there was a missing element which may have been touched on tangentially in both courses, but I believe it needs to become central to any military education program – and that is strategy. What I present below is how the germination of this idea has started to become a reality and how I can now feed in my learning from this critique of my public works into this new work in progress: Strategists by Design (SbD), developing the practice of strategy and its relationship to the practice of leadership and innovation.

Context and Motivation

In 2003, I was fortunate to be accepted and attend the School of Advanced Air and Space Studies (SAASS). The school is designed to produce strategists for the US and Partner Nations' Armed Services. The classes are intentionally small, about 40 students each year. The program began with a study of the various definitions of strategy and quickly moved to Thucydides. My lens for looking at things became more finely focused on foregrounding or contextualizing in terms of strategy. I recall early in the year focusing on a Sun Tzu quote as it pertained to the concept of war and the role of fighting and strategy:

> To subdue the enemy without fighting is the supreme excellence. Thus, what is of supreme importance in war is to attack the enemy's strategy. Next best is to disrupt his alliances by diplomacy. The next best is to attack his army
> (Chapter 3: Offensive Strategy, 78-79)

Shortly after my SAASS graduation I watched the airing of the 2004 Bin Laden interview, and from my SAASS lessons I was convinced the al Qaeda leader made a mistake in revealing his strategy. Once the enemy's strategy is known, it can be attacked, yet that never occurred in Afghanistan. Now over 20 years later NATO has retreated with no real strategy on how to handle the region in the aftermath. Further, strategically what did the retreat do to America in terms of its superpower status or in terms of how allies view the US as a partner?

In the interview Bin Laden recalled how he watched the Soviet Union withdraw from Afghanistan in defeat and then dissolve altogether in 1991. He claimed on multiple occasions

that the mujahidin were responsible for destroying the Soviet empire. Whether or not he had a point, he clearly believed that the high costs imposed by the Afghan-Soviet war prevented the Soviet Union from adapting to other challenges, such as Gorbachev coming to power, Chernobyl, grain shortages and a collapse in world oil prices. (Gartenstein-Ross, 2011)

Bin **Laden** proudly proclaimed

> Al-Qaeda spent $500,000 on the [9/11] event, while America, in the incident and its aftermath, lost, according to the lowest estimate, more than $500 billion, meaning that every dollar invested, al-Qaeda defeated a million dollars." Bin Laden went on «we are continuing this policy in **bleeding America to the point of bankruptcy**. Allah willing, and nothing is too great for Allah (CNN, 2004).

> All that we have to do is to send two mujahedeen to the furthest point east to raise a piece of cloth on which is written al Qaeda, in order to make generals race there to cause America to suffer human, economic and political losses without their achieving anything of note other than some benefits for their private corporations, -bin Laden (CNN 2004)

America had the playbook, but time and again, as great powers often do, the US, in my opinion, succumbed to hubris, an overbearing pride or presumption. Recalling Timothy Snyder's (2018) *politics of inevitability* from the context chapter, America believed the defeat of a backward enemy like Al-Qaeda was simply inevitable. The US arguably possessed the best trained troops in the world, the best equipment coupled with vast resources, yet NATO did not heed the advice of Sun Tzu – to attack the adversary's strategy. More recently NATO witnessed events relating to Russia which it did not interpret as part of a longer-term strategy but only as posturing, interference and nibbling at the edges of other countries: Syria and Crimea. Today we are witnessing in Ukraine the trajectory of that strategy and its threat to security across the world. Now NATO is struggling to find ways to contain Russia. One can understand the caution after the experiences of Afghanistan and understanding the ambivalence (in the Latin sense) in the face of the options presented.

This data on the human cost of the Afghanistan theatre of war has been gathered from different sources:
- the Costs of War project at Brown University, which documents the hidden costs of the post-9/11 wars, as of April 2021, listed
  42,245 Afghan civilians killed
  66,000 to 69,000 Afghan troops killed.
- A U.N. Watchdog:
  72 journalists
  444 aid workers killed.
- US Defense Department (since 2001)
  2,442 U.S. troops killed

20,666 wounded
- Estimates from other sources:
        Over 3,800 U.S. private security contractors killed
        iCasualties website
        1,144 personnel from the 40-nation NATO coalition who trained Afghan forces

According to the Costs of War project, the U.S. has spent a staggering total of $2.26 trillion on a dizzying array of expenses. The Defense Department's latest 2020 report cites war-fighting costs totaling $815.7 billion over the years (operating costs of the U.S. military in Afghanistan) and $143 billion in Nation building. The U.S. borrowed heavily to fund the war in Afghanistan and has paid some $530 billion in interest. According to the Costs of War it has also paid $296 billion in medical and other care for veterans, and that cost will continue for years to come (Debre, 2021). These numbers do not include the costs of retreating from the country or leaving behind millions of dollars in equipment (Andrzejewski, 2021).

As American current and former political, military and intelligence officials ponder who or what is responsible for the catastrophe in Afghanistan, perhaps it was inevitable. Afghanistan has been called the graveyard of empires and to understand why one needs to explore the experiences of the British, the Soviets, and now the Americans (Innocent, et al 2021)[55].

The Chairman of the Joint Chiefs General Mark Milley called Afghanistan a "strategic failure". Perhaps a strategy is not required to induce a strategic failure. In a short review of the two-decade conflict it is difficult to string together a strategy (O'Hanlon, 2021). There was simply no war plan for fighting in Afghanistan. As NATO was drawn incrementally further into the conflict the lack of clear and agreed strategic ends at the institutional level became increasingly troublesome (Johnston, 2019). Improvisation became the guiding principle with aerial attacks against Taliban positions. Americans helped the Northern Alliance overthrow the Taliban in the fall of 2001. Yet the operation could be considered a flawed masterpiece, in that Osama bin Laden and cohorts escaped, but in terms of military innovation it was a masterpiece which may have led to arrogance. Over the next half dozen years or so, America and NATO forces made very modest efforts to help Afghanistan form a government as well as security forces (O'Hanlon, 2021). O'Hanlon's analysis very much resonates with my experience and those of many who served in this theatre of war.

By 2005 the U.S. approach was not working. But rather than adjust, every administration either ignored the evidence or reinforced failure. The military continued to rotate units into the country as if Afghanistan were an extension of its National Training Centers. When "winning" was eliminated from America's political-military list of acceptable terms, leaders focused on getting out with a veneer of honor.

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[55] Perhaps we could add the Persians, Greeks, Arabs, Turks, and the Mongols. Innocent, Malou; Carpenter, Ted Galen (2009-09-14). "Escaping the "Graveyard of Empires": A Strategy to Exit Afghanistan". *Cato Institute*. Archived from the original on 2021-02-25. Retrieved 2021-08-12.

In what might be considered a new phase of the war effort, there was a gradual force buildup in Afghanistan in 2008. Once elected, President Barack Obama conducted an even larger buildup in Afghanistan. In 2012 and 2013, the surge was ending, and another phase of the American engagement in Afghanistan was emerging. The American and NATO roles were scaling back by the end of 2014. The mission accordingly changed names from the "International Security Assistance Force" to "Operation Resolute Support" (ibid).

The "strategy" seemed an attempt to impose a strong central authority from the capital which, in turn, generated insurgencies against it. The presence of security forces composed of nonlocal troops periodically patrolling the countryside added to the instability because they were viewed as defenders of the central government rather than the local population. The policy left the countryside, where 70% of Afghans live, mostly unprotected from the Taliban. Yet the U.S. fell into this pattern, insisting on a government design contrary to the way rural Afghans understand governance and security. This was never a strategy or a formula for stability; it was the cause of instability and of the growth and strength of the insurgency.

This created a complex, unanticipated and undesired situation, similar to Cambodia in the 1970s[56], where the U.S. initiated peace talks directly with the Taliban, the enemy it removed from power almost 20 years earlier. The Afghan government, America's own creation, was excluded from the negotiations because the Taliban (the enemy) demanded it. This 'yo-yo' Afghanistan strategy of simply trying to outlast the Taliban, led to at least two more derivative problems. First, never really settling in for the kind of steady, long-term effort that was needed. Second, America failed to focus on marginalizing the most corrupt actors in Afghanistan (ibid). The American military knew how to do one thing well, to find, fix, and engage the enemy in combat. All other missions were considered tertiary. In hindsight, perhaps combat was not the answer. America knew one big thing, how to fight, and that one big thing became the strategy in Afghanistan. The US and NATO engaged in the strategy of the hedgehog which is discussed below.

Is Not Having a Strategy—a Strategy?

The question is not whether the war was in vain. That debate is beyond my scope here, but whether the strategy was ill conceived or worse—there never was a strategy. This question of strategy is the key motivator of this public work and is a natural development step of LbD and ibD. America can do better in developing strategy and strategists for the future. I believe this next public work which I am in the process of realizing, will have a contribution to make.

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[56] There have also been related allegations by several sources, notably Michael Haas, which claim that the U.S. directly armed the Khmer Rouge in order to weaken the influence of Vietnam and the Soviet Union in Southeast Asia. These allegations have been disputed by the U.S. government and by journalist Nate Thayer, who argued that little, if any, American aid actually reached the Khmer Rouge.

Every decision has a side effect or tertiary outcome. The American decision to engage in Afghanistan and beyond offered other adversarial nations opportunities, and they wisely took advantage of the American lack of focus to strengthen their global power (DeLuce, 2021). China, Russia, Iran, and North Korea have built new capabilities as one would expect in the world of *realpolitik*. At this point, America requires strategists to ponder much larger issues in the context of the interconnectedness and complexity of the global environment. This includes the continued rise of China, India's growth, Russian resurgence, Europe's continued evolution, globalization's powerful and unpredictable effect, nationalism in response to globalism and the cultural and religious reactions to all of the above, then add in climate change and the list is only beginning (DeMarco, 2008).

> Wise men say, and not without reason, that whoever wishes to foresee the future must consult the past; for human events ever resemble this of the preceding times. This arises from the fact that they are produced by men who ever have been, and ever will be, animated by the same passions, and thus they necessarily have the same results. *-Niccolò Machiavelli* (Detmold, Translator 442)

Machiavelli was without doubt, a great strategic and pragmatic thinker. However I would suggest that the comment indicates a solely Yang perspective. Of course, the Yin might simply ignore history's relevance altogether. I believe there is a middle way; history matters but it is not prescriptive. The world is in constant flux and complexity demands strategists to pay attention. Twenty years ago, pre 9/11/01, US Officials were worried about China, and tensions were indeed rising. On 1 April 2001, a Chinese fighter jet collided with an America EP-3 reconnaissance plane off China's coast, forcing the aircraft to make an emergency landing in Chinese territory. The crew was detained for 11 days. The incident reinforced the Bush administration's view that China was America's next major adversary. Of course, September 11 caused America's attention to abruptly shift to the "war on terror" and the challenge posed by China was set aside for two decades. Mahbubani, the former Singaporean UN ambassador notes — "It was an incredible geopolitical gift to China" (De Luce, 2021) *Did America focus on the wrong strategic issue or perhaps too much focus on a less than strategic issue*?

Future Forward: Strategy, Leadership, and Innovation

These are now key questions for historians, but in my view the future belongs to the leaders, the innovators, and the strategists.

With the end of the Cold War America has become notoriously weak at strategy, perhaps it is the political election cycle, or the view that the country is seen to be wedded to US global hegemony combined with a strong dose of hubris. Consider George Kennan[57] and his work

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[57] In 1946, George F. Kennan, while he was Chargé d'Affaires in Moscow, sent an 8,000-word telegram to the State Department (the now-famous "long telegram") on the aggressive nature of

leading to a strategy of containment for the Cold War (DeMarco, 2008). Kennan's famous Long Telegram in February 1946 described "the sources of Soviet conduct" and culminated in NSC-68[58] in the spring of 1950. NSC-68 was a new, original, and well researched examination of the Cold War (Casey, 2005). This internal policy document included precise requests for defense spending and projections for how America eventually defeats the Soviet Union. It did take about four years, but America developed a strategy that ultimately prevailed (Hirsh, 2005, DeMarco, 2008). Therefore, at some point, the US understood strategy. It also understood peace strategy demonstrated by the Marshall Plan; strategic issues for the US then included war, peace, and post conflict strategies; the very things the nation struggles with today.

In Chapter 2 (LbD) I examined the contradictions, paradoxes, and ambiguities in leadership, making a case that a leader must find a sense of balance in these and that clarity is not just around the corner. In Chapter 3 (ibD) I put forth innovation happens only in the chaos. And so births the idea of bringing chaos to order in hard structures. Of course, order is what the hard structure seeks, yet a leader will find order increasingly rare in today's hyper-connective, complex, post-modern world. Instead, leadership is faced with a shift towards this middle space between order and chaos that in turn impacts the stability and balance of all the other parts. Therefore, the hysteresis between a shift and the time it takes for the superorganism's ability to adapt itself, can be where chaos resides but it is in the chaos that we can find the opportunities to impact the way the superorganism adapts and settles.

Chaos is not something to fear, but something to negotiate with beyond metrics and management, beyond avoidance and denial, beyond reactive to being proactive and generative. Chaos is a key component of strategy. Strategists are required to develop strategies dealing with complexity and uncertainty while offering agility and adaptivity and being anticipatory. Strategy is difficult at best. In designing a program about strategy, it is my view that one has to first examine the nature of chaos and its relationship to order. I have chosen to start this with the existential lens of Sartre as explained in "Nausea" (1938).

Stalin's foreign policy. Kennan, writing as "Mr. X," published an outline of his philosophy in the prestigious journal *Foreign Affairs* in 1947. https://history.state.gov/departmenthistory/short-history/kennan

[58] National Security Council Paper NSC-68 (entitled "United States Objectives and Programs for National Security" and frequently referred to as NSC-68) was a Top-Secret report completed by the U.S. Department of State's Policy Planning Staff on April 7, 1950. The 58-page memorandum is among the most influential documents composed by the U.S. Government. The document outlined a variety of possible courses of action, including a return to isolationism; war; continued diplomatic efforts to negotiate with the Soviets; or "the rapid building up of the political, economic, and military strength of the free world." This last approach would allow the United States to attain sufficient strength to deter Soviet aggression. In the event that an armed conflict with the Communist bloc did arise, the United States could then successfully defend its territory and overseas interests. (https://history.state.gov/milestones/1945-1952/NSC68)

Sartre's concept of chaotic absurdity is responsible for his concept of existentialism; it is like a worm in the heart of existentialism's being (Aman, 2007). Sartre's protagonist, Antoine Roquentin, suffers from chaotic absurdity. He utters: "every existing thing is born without reason; prolongs itself out of weakness and dies by chance" (133). Roquentin suffers a life of duplicity, he discovers the chaotic absurdity of his situation, and after an odyssey where he confronts chaos and reflects what is inside him, he writes a novel in order to achieve his being and to enjoy a new order (Aman, 2007). Out of his chaos Roquentin attempts to bring order much like today's strategist. There is simply no escape for leaders from an all too human nature. In the end, dealing with chaos requires humans to master themselves (LbD), something that is difficult in the extreme to achieve (Ophuls, 2012, 1). Chaos also demands creativity and innovative approaches (ibD) and a plan (SbD). A plan that is flexible, a plan that can adapt as conditions change yet still remain focused in its vision—this is strategy.

Due to its abundant usage in organizations, institutions, and across the media, some may be familiar with the term strategy in different contexts but may not fully appreciate its differentiation from tactics for example. An authoritative or universally accepted definition of its complexity is elusive, in my experience. While all three foci for developing future military leaders (leadership, innovation, strategy) appear to lack definitive definitions, I believe they are not about finding answers. Perhaps it is reasonable to assert that seeking these things is of a higher value than finding them due to shifting contextual factors. I have long held the notion that I am a perennial student of leadership, innovation, and strategy and as such I have been a seeker. Perhaps, finding these things would only be an excuse to cease thinking about them. Seekers do ask a lot of questions and can be considered cantankerous pains, can easily become ostracized or, worse, denounced as heretical. Seekers retain doubt in a positive way, challenging assumptions, assessing, evaluating all that undergirds the accepted canon, never quite accepting it and therefore always suspicious of its authority (Bailey, et al 2016 7). My goal with these programs is to build more positive disruptors, more seekers, more heretics, more leaders who ask questions as I believe our organizations will be stronger for it and is more likely to lead to more creative thinking and strategies. Such an approach broadens the horizon of possibilities.

Leadership and innovation require strategy

While insights arising from designing and teaching leadership and innovation courses and creating and running two leadership and two innovation organizations at Air University are evident, many believe that these areas are neither disciplines nor can be taught. On this a latter point, I agree they cannot be 'transmitted learning'. They are the antithesis of transmitted learning. They are areas in which evolution can happen; curiosity is stimulated, discoveries are made, imagination is welcome and critical thinking nurtured. I have come to realize as a creator of such content that it is critical for leadership and innovation to be clearly applicable to an individual's context and being. Leaders by Design and Innovators by Design must be applied in the pursuit of a purpose of some sort. Simply put LbD and ibD,

require SbD to be fully comprehensive. Strategy is the term used to describe the process of shaping what the organization should do to achieve its aims, and this is my goal (Boulton, et, al 2015, 138).

I joined the US Military, as a cadet, in 1984, the Cold War was still being waged. It seemed from WWII through the end of the Cold War, US National Security depended on more than looking out for unipolar or narrowly defined concerns. The threat of WWIII and possible nuclear holocaust forced nations to look beyond any single country's interests. There were missteps, but America avoided a great-power war with the Soviets. The Cold War ended 30+ years ago, very early in my military career. In that time, what has been achieved by that victory? The world did see the reunification of Germany within NATO, the reasonably disciplined handling of the 1990-91 Gulf War and US led military efforts to help end the war in the former Yugoslavia (Haas, 2021). I was deeply involved in both, they were not clean, they were not easy, but in the end, there was more success than failure.

I look at other events and grow concerned. At the end of WWII Washington developed an imaginative, creative strategy, the Marshall Plan. The Plan focused on relationship and institution building around the world. Dean Acheson, Truman's Secretary of State, titled his memoir, *Present at the Creation: My Years in the State Department*. "The creation" refers to the post-World War II international system that exists today. I am not sure any Secretary, Defense or State in the last 3 decades could credibly use the word creation in any part of their memoire. The opportunity to create has indeed presented itself in recent decades but it seems the creativity, imagination, innovation, and strategic thinking have been lacking in leadership at several levels.

In my three decades of service the US failed to adapt to the reality of an emergent superpower, China. After the end of the Cold War—America failed to see a rising and evolving Russia. America took her eyes off Africa and Latin America, although I spent time deployed there during conflicts in Somalia, Rwanda, Panama, and various missions to countries in Central and South America. The work was short-sighted with no longer-term plan. Then there are the post-9/11 wars in Afghanistan and Iraq currently assessed to be failures of both strategy, design, and execution which resulted in overreach. America devotes a massive percentage of effort to this latter region that is home to five percent of the world's population with no great powers, yet it does possess natural resources (Haas, 2021). Strategy may appear to demand a presence everywhere, yet in reference to the famous Churchill quote in chapter 3—we are out of money and it is time to think.

Due to a lack of strategy, a lack of creativity and imagination, and a lack of leadership it appears the US may have squandered three decades of opportunities. *Did America miss an opportunity to update the global system after the Cold War?* Thinking back to my conversation with the Australian General in the Middle-East—these wars have largely soured

the American public on any foreign engagement. This was the general's very definition of failure.

In a recent conversation on Stanford's Hoover Institute's Uncommon Knowledge podcast, Amy Zegart (July 14, 2021) commented, "The United States cannot afford to lose today's global technology competition."(Zegart, 2021) Thinking about technology might lead one to think of the topic as more about innovation than strategy yet they go hand in hand. Ponder a regime like China dominating the world of technology and innovation. The fear is that the West would see a world of diminished freedom; where the internet is divided between a free internet, with a free flow of ideas and a closed internet where propaganda is in a constant process of regurgitation so that people cannot differentiate truth from lies as we have seen in Russia regarding the justification for invading Ukraine, which is taking place as I write these closing chapters. Will this be a world of hyper-protectionism, where China will dominate as a superpower through a slow careful strategy of belt and road, once again an issue not really taken as seriously as it should have been? Are we concerned about China's intentions for Artificial Intelligence (AI) and to become a technological superpower (Ferguson, 2017)? Consider a neocolonial strategy not only in the physical world but across the virtual one as well.

According to Zegart (2022). America has the capability and the capacity for increasing innovation, we just have to get the strategy right—this is a Sputnik moment[59] for the United States in our competition with China (Robertson, 2022, Zegart 2022). I think if we seize it, if there's a sense of urgency, there's no question in my mind that we can win.

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[59] A reference to the Soviet Union's 1957 launch of the first Earth-orbiting artificial satellite Sputnik 1 which caught the USA unprepared. The event ignited the Space Race during the Cold War, and led to the USA successfully completing a human landing on the Moon in 1969.
(https://www.space.com/10437-sputnik-moment.html)
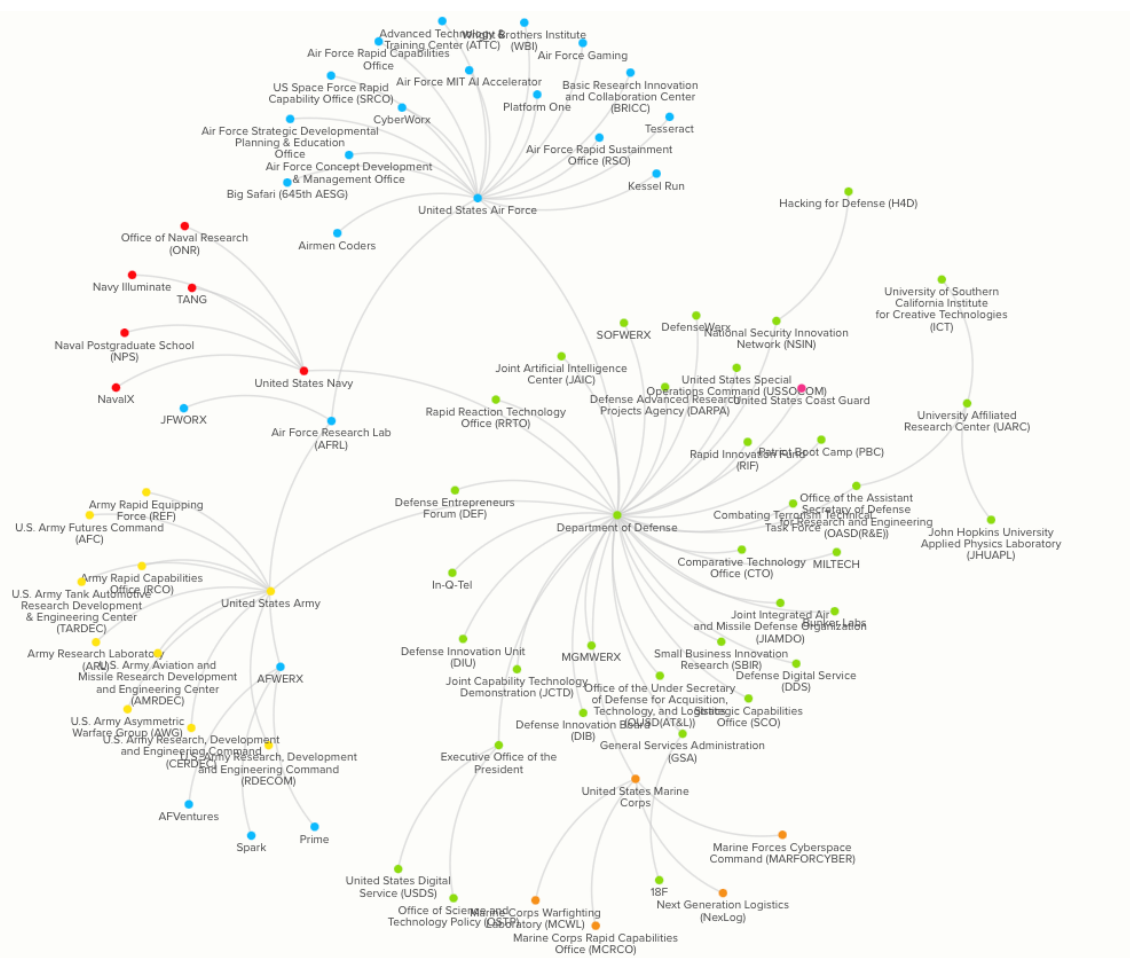
Figure 4.1: Department of Defense Innovation Hubs

Yet the hard structure of the military is struggling to innovate. Zegart cites the myriad of innovation outposts across the country - the DoD has the Defense Innovation Unit (DIU), the National Security Innovation Network (NSIN), AFWERX, SPARK Cells at local bases only naming a few (see diagram 4.1)- all of these entities are a symptom of the struggle, a symptom that the mothership [The Pentagon] is broken. (Zegart, 2021)

Many in the defense innovation ecosystem have a keen awareness that the mothership is broken, further defense acquisition desperately needs reform, US defense spending needs to be smarter and speed of development more focused. As an example, the F-35 fighter jet is older than my oldest child (now 27). The F-35 has spent 28 years from the first idea to the time that it is *becoming* operational, the US does not have that kind of time. America needs to be able to develop a blueprint for a plane and manufacture that next-generation plane, in two and a half or three years, not 25 to 30; the pace of change is completely different, and the Pentagon has to accelerate its means to respond effectively. .   The Pentagon requires leadership and innovation, but also a strategy to lead and innovate toward (Zegart, 2021).

Strategy is not merely planning. Humans can adapt strategy according to the circumstances of the threat's strategy. According to Freedman (2013 *xi*), this interplay, this chaos is a fluid

situation requiring flexibility and constant modification and is essential to strategy. To see how this may be achieved please refer to draft course concept. (Appendix M)

Innovation: Why innovate?

Advances in strategy can often be seen to come from the innovations of great strategic thinkers. Freedman mentions Odysseus, famous for the Trojan Horse, and Pericles, as early practitioners of strategic narrative (ibid, 23, 24). Consider Odysseus: he exhibits an agile and expedient intelligence. He evaluated situations quickly, thought ahead, and stayed focused. The story of the Trojan horse is not just trickery, but an example of a sort of craftiness, innovation, and imagination that distinguished Odysseus from his pedestrian peers (ibid 24, 25). Interestingly, to get home Odysseus needed to rely on a host of cognitively diverse collaborations to great success, yet on his last leg of the journey his ego and narcissism took over and he arrived home having lost his men. Odysseus completed his mission, understood strategy and innovation, but at some point, lost his basic grip on leadership or at least some sense of ethics. Throughout history, advances or major shifts in strategy have also followed epochal events such as the French Revolution or the advent of nuclear weapons. Developments in technology—in areas such as weaponry, transportation, communication, cartography, information processing, and mathematics—drove advances in strategy as thinkers adopted and exploited these new tools (ibid, 24, 25). Such is the place we find ourselves today. Leadership, innovation, and strategy are interconnected and iterative and context based.

One example of the dynamic nature of innovation is the "OODA loop", which Colonel John Boyd (studied in ibD) introduced in the 1970s. A strategist could disorient and paralyze an enemy by interrupting its sequence of "observing, orienting, deciding and acting" (ibid,196-199). This idea inspired business strategizing as well. The cognitive dimension includes attempts to bolster or undermine morale or to influence sentiment, as with election propaganda or the nonviolent campaigns of the American civil rights movements. In business, strategy itself might function as a powerful tactic for enforcing ideology and maintaining power structures (ibid, 196). The OODA loop has only accelerated with the introduction of cyber, social media, and constant connections to the internet.

Dual-use technologies are fueling the demand to evolve innovative technologies with applications in the commercial sphere and the military sphere stimulating the competitive edge. The estimates are that artificial intelligence could affect almost every industry in the world and 15 to 25% of the jobs worldwide (Zegart, 2021). The world is on the cusp of a new dawn where technology is driving not only prosperity, but security, making the stakes significantly high and in the military we have to ensure strategy and strategic thought are not lagging behind competitors of all kinds.

Motivation/Context/Need/Agency

Let China sleep, for when she wakes, she will shake the world
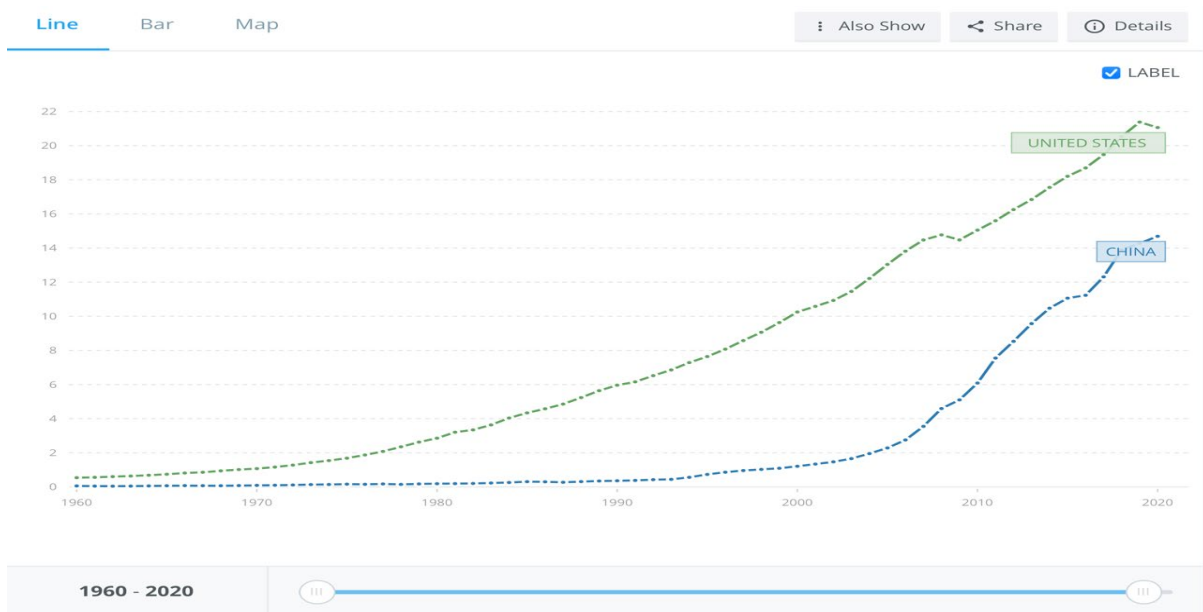(attributed to Napoleon Bonaparte (Allison, 2017 *xii*))

Figure 4.2 GDP is US$ China and the US World Bank (2020):
https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2020&locations=CN-US&start=1960&view=chart

The emergence of China as an economic and military force in the world has given renewed interest in predictions made decades earlier. The predictions do not make a difference as China's rise was inevitable after World War II. Less certain was whether, or by how much it would expand its sphere of territorial and political influence. China's economy has doubled every seven years and by 2024 it is estimated to surpass the US (Allison, 2017 9)(Figure 4.2). The rate of change in China has been stunning. By 2005, China was building the square-foot equivalent of today's Rome every two weeks (Osnos, 2015, 25/ Allison, 2017, 292). Between 2011 and 2013, China produced and used more cement than the US did in the 20th century (Allison 2017 25). In 2014 a Chinese firm built a 57-story skyscraper in 19 days. As I ponder the rate at which the US military performs a construction project on a base—it takes years to build a gym. Beijing replaced the 1,300-ton Sanyuan Bridge in 43 hours. China built 2.6 million miles of roads (70,000 highway miles) between 1996 and 2016, overtaking the US with the most extensive highway system by almost 50% (Allison, 2017, 27).

I understand these are just numbers and are not necessarily indicative of a conflict, but future U.S., allies, and coalition military leadership have to anticipate China as a "peer" adversary. History indicates a certain inevitability of conflict between powerful entities that do not end well as much to do with internal decay as external threat.

Can America avoid the "Thucydides' trap"? This occurs when a rising power threatens to displace a ruling power. China and the US are currently on a collision course (see figure 4.3)

(Allison, 2017 *vi*). The two countries risk falling into what Thucydides identified and made current by Allison (2017). Thucydides was writing about the war (circa 500 BCE) that destroyed the two dominant city-states of his day, Athens and Sparta. As Thucydides explained—it was the rise of Athens and the fear this instilled in Sparta that made war inevitable (Allison, 2017, *vi*).
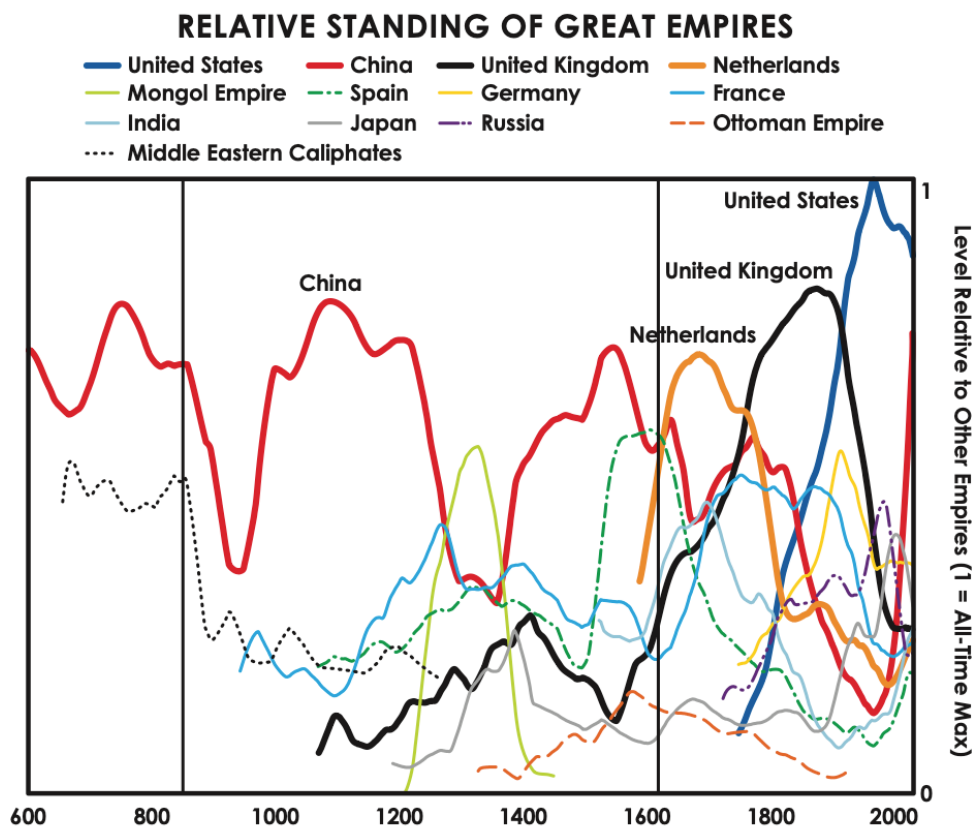
Figure 4.3 Relative Standing of Great Empires (Dalio 2021 pdf)

What the world is witnessing is an expression of what has been described in terms of a biological nature. This is a conceptualization that I can relate to - organisms expand their habitat and exploit available resources, like bacteria in a Petri dish; they grow until they have consumed all the nutrients and die in a toxic soup of their own waste (Ophuls, 2012, 9). As civilizations encounter emerging limits, they innovate their way around them. The human mind excels at concrete perception but is much less adept at abstraction (ibid,17). Comprehending exponential growth is difficult and by the time the average human recognizes a problem it is one minute to midnight. The issue SbD will attempt to resolve is not simply a strategy for today's concerns, but how to inspire in young leadership critical thinking that is creative and responding imaginatively and pragmatically to threat or perceived threat.

Strategists Understand Chaos and Order

As will have become clear by this stage, I engage with a range of concepts to better identify layers of complexity and through that begin to see more clearly not only the gaps and cracks but how we can begin to address them. They will not remain hidden forever, they will become visible at some point when it possibly is too late. My role as I see it is to translate this complexity to young officers who do not have time to read, digest, compare and conceptualize. I am to some extent the shortcut icon on the desktop.

The following concept is one I frequently return to as it makes translation of complex issues easier for students to follow and use as a lens when trying to work out what is going on before they develop or decide on a strategy from the small to the grand.

The Greeks identified two primary modes of strategy: "*mētis*" and "*biē*" or guile and physical strength. This dichotomy aligns well with Yin Yang or **the fox** (*mētis)* and **the hedgehog** (*biē)* and provides a useful framework for understanding both historic and contemporary strategy.

Yang or hedgehog strategy relies on strength or physical violence. Chimpanzees bite fight over mates and "go to war" in territorial disputes (Freedman, 2013, 4). Generals and their armies seek to destroy, exhaust, or overwhelm enemies. Radicals and revolutionaries might damage property, commit assassinations or, during nonviolent campaigns, absorb attacks on themselves.

Yin or fox strategy is cunning or has guile. Cultural attitudes about strength versus scheming, influence the role of cunning in strategy. For 'underdogs', being cunning provides an advantage over physically stronger opponents. Sun Tzu honored generals who could beat an enemy through strategy and who advocated the use of deception and surprise. Niccolò Machiavelli, discussed earlier, influentially recorded deceit and manipulation in 16th-century Florentine politics. Clausewitz (1976) talks about "spiritual" factors as part of strategy. These include the morale of soldiers or civilians, their psychological states, and how they assess a situation and respond (Freedman, 2013, 82-83). Consider today's conflict in the Ukraine where it is clear Russia is employing a hedgehog strategy of power, force, might and *biē.* The hedgehog has been continually frustrated by the Ukrainian fox strategy of cunning, guile, and *mētis.* (See figure 4.4)
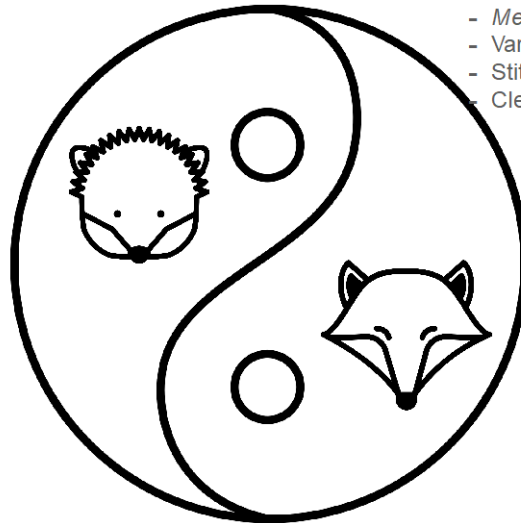
ORDER

Yang
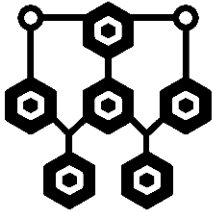
Hedgehog Facilitates:
- Knows one big thing
- *Bie*: Power, Force, Might
- Central vision (Gaddis)
- Experts in a field (Tetlock)
- Focused, simplifying (Collins)

Fox Facilitates:
- Knows many things
- *Metis*: Cunning, Guile
- Varied ends (Gaddis)
- Stitch together info (Tetlock)
- Clever, myriad of strategies (Collins)

Yin

CHAOS

© DeMarco, 2022

Figure 4.4 Order and Chaos, Fox and Hedgehog

Contemporary strategists utilize insights springing from psychology, such as attempts to disrupt an enemy's decision-making ability or cause emotional breakdowns. They also rely on cognitive tools including propaganda, public relations and the use of narratives. (Freedman, 2013, 340)

Fox and Hedgehog—and the Middle Way

An insight from LbD and ibD that continues to resonate is cognitive diversity. The best leaders develop the best teams through diversity. Further, the most groundbreaking innovations are birthed from teams with competing values, where friction generates energy, and diversity fuels imagination.   In his book *Good to Great*, Collins (2001) suggests there are two types of companies: good companies and great companies. Some are cunning and clever, devise myriad strategies, and pursue many ends at the same time; they are the foxes. Others are focused on one thing, simplifying a complex world into a single, organizing idea; they are the hedgehogs. The concept is ancient and is tied to an old proverb, attributed to many people throughout history. The concept is *the fox knows many things; the hedgehog, one big thing*. Building on this is the philosopher Isaiah Berlin's famous essay, "The Fox and the Hedgehog" (1951). But these phrases and references are perhaps eclipsed by Aesop's (620–564 BCE) famous fable of the fox and the hedgehog.

"A Fox with its tail caught was a feast for Mosquitoes. A Hedgehog offered to remove them. Fox said no; those on him were full; new would take more blood" (Daboss, 2013). The moral: Better to bear a lesser evil than to risk a greater in removing it.

However, the actual concept of the fox and hedgehog likely stems from a reference to a fragment attributed to the Ancient Greek poet Archilochus (680–645 BCE) whose writings preceded Aesop. It is clear that neither of the ancient Greeks had anything close to Collins' concept in mind. The Aesop fable of the Fox and the Cat maybe be closer to what Collins and Berlin had in mind

A cat goes up a tree and gets away while a fox is caught trying to figure out what to do. The moral: Better one safe way than a hundred on which you cannot reckon (Daboss, 2016).

The fox had so many plans for escape she could not decide which one to execute. She dodged here and there with dogs on her heels. She doubled on her tracks, she ran at top speed, she entered a dozen burrows, all in vain. The dogs caught her, and soon put an end to the fox and all her tricks. The moral of the story is common sense is worth more than cunning or perhaps who hesitates is lost.

It seems Collins took some liberties with his concept of the Fox and Hedgehogs being strategists. Even if widely validated by Chief Executive Officers of business organizations, it may be a stretch to apply to military strategists and general officers. Berlin (1951) was examining writers (focusing on Tolstoy) and thinkers who, like hedgehogs, view the world through a single defining idea (Plato, Dante Alighieri, Blaise Pascal, Friedrich Nietzsche and others) and foxes, who draw on a wide variety of experiences and for whom the world cannot be reduced to a single idea (Herodotus, Aristotle, William Shakespeare, Johann Wolfgang Goethe, James Joyce, and others). What Berlin does in reference to Tolstoy is remark on the complementarity of these binaries and the challenges to being both. Berlin points out that Tolstoy's talents are those of a fox, yet he believes that one ought to be a hedgehog. At the end of the essay Berlin reasserts his thesis that Tolstoy was by nature a fox, but by conviction a hedgehog and that this division within himself caused him great pain at the end of his life. This is a paradox, a tension for many serving military.

Gaddis (2018) devotes an entire book 'On Grand Strategy' to giving the fox and hedgehog concepts deeper examination. Gaddis notes foxes evaluate detailed, varied ends. Hedgehogs see everything through a "central vision." Foxes evaluate different outcomes, even if those that are contradictory, unrelated or loosely connected. Hedgehogs have an overall view that significantly infuses what they do and say.

Tetlock (2005), a political psychologist, set out to evaluate the accuracy or inaccuracy of people's political judgments. He used the fox and hedgehog framework to look at 27,451 predictions about world politics by 284 experts. According to Tetlock, status, professional history, political leanings and degree of optimism or pessimism did not make much difference in people's predictions. The key variable in Tetlock's "theory of good judgment" was how each expert thinks. Self-identified foxes predicted more accurately than hedgehogs. Foxes

stitch together information from a variety of sources. Being self-deprecating, they are willing to evaluate any thought critically. Hedgehogs went into large explanations and avoided self-deprecation and criticism. Their preconceptions trapped them.

Foxes evaluated contradictions, recalled mistakes without being overly prone to rationalize them and were willing to be self-critical. They were best at evaluating the realistic outcomes of events, and thus gained the strategic upper hand. However, such an outcome is not as neat as it sounds. Together Collins, Gaddis and Tetlock present different perspectives of the fox, all of which are valuable to explore for relevance to the context of the military.

Returning to Collins' point, if a leader were to try to anticipate and evaluate all the details, as a fox might, one could risk not achieving anything. But, if one were to plow ahead, focusing on the big picture without preparing for its many eventualities as a hedgehog would, certainly some things would fail.

Sun Tzu illustrated this in "The Art of War" when he states that although you cannot anticipate all that may happen, being aware of a range of possibilities is better than not having any sense of what to expect. As he wrote, "In battle there are only the normal and extraordinary forces, but their combinations are limitless; none can comprehend them all (Sun Tzu, 1994, 29)."

Returning to Yin and Yang and the middle way: humans may have survived by balancing the habits of foxes – who adapt to rapid change (Yin) – and hedgehogs, who thrive with stability (Yang). Examples of foxlike and hedgehog-like approaches to planning exist throughout history and illustrate the balance necessary to execute grand strategy. Whereas Napoleon, a hedgehog (Gaddis, 2018), forfeited his empire by conflating "aspirations and capabilities", Abraham Lincoln, a fox, helped save the United States by understanding his limits (Gaddis, 2018, 18).

According to Gaddis, it is not about selecting one or the other implied by ancient stories. It is much more useful to think about how both one can be (*but you wouldn't want to be both at the same time* (Maguire, 2022*)*). It is a question of when to be which, when to be a fox and when to be a hedgehog (Gaddis, 2018, Meynhardt, et al, 2017, Olson,, et al, 2007). As with Yin and Yang, a leader does not have to select one. There is some of each in both as the Yin Yang symbol indicates. The point is for neither to be overwhelmed by the other. Such concepts as these and new insights which have emerged from examining LbD and ibD have been informing the design and development of Strategists by Design.

Program Development

An elective to complement, LbD and ibD focused on strategy is this developing public work SbD. The goal is to engage with the dichotomies of the fox and hedgehog combined with

concepts around future casting and sensemaking focused on strategy. Strategy is the term used to describe the process of shaping what the organization should do to achieve its aims (Boulton, et al, 2015 139). The elements of strategy have been recognized and used ever since humans combined intelligence, imagination, accumulated resources, and coordinated behavior to wage war (Cummings, 1993).[60] The eighth-century Greek word *strategía* captures the Yin/Yang of strategy. The word is based on two older Greek terms: "*streatēˉgike episteme* (generals' knowledge) and *strateˉgoˉn sophia* (generals' wisdom). " (Echevarria II, 2017). Strategy from its very origins is combination of objective knowledge (Yang) and subjective skill (yin).

With this elective I would like to approach strategy from a recognition of the unique combination of collective knowledge and wisdom, colliding with the idiosyncratic circumstances of emerging conditions and situations and then to derive feasible recommendations. This would be to enable or at least assist students and future senior leaders to recognize the specific path-dependent circumstances of an organization and recommending courses of action that are appropriately specific but flexible enough to respond to internal and external changes. This is about developing strategic capability that fits well with a complexity perspective.

Strategy is ostensibly about the future of the organization or in this case possibly the country. As such, strategists, leaders, innovators, cannot analyze the future simply by examining the past. The military relies heavily on the assumptions of a historical nature, believing events that happened in the past are strong indicators of what might happen in the future. Enabling future leaders to systematically analyze external environments using tools like PESTE (trends in the political, economic, social, technological, and environmental domains) or using the familiar SWOT (strengths, weaknesses, opportunities, threats) frame will not stretch the students' thinking. These tools, as simple as they are, require strategists to address these phenomena when deriving a strategy but in and of themselves do not create strategy.

Leaders in hard structures tend to deal with complexity by implicitly deciding on a preferred strategy and then assembling the evidence to support it rather than working from the evidence toward a suitable strategy (Boulton, et al, 2015 139). Courses like LbD, focusing on cognitive diversity, and ibD with a concentration on developing creative solutions assist SbD in intentionally engaging diversity to enable sensemaking and future casting.

Generic strategies may tend to be the norm until leaders ponder Machiavellian vs Aristotelian approaches to leading strategy, Gadamer and Rogers in innovating strategy, and the fox and/or hedgehog skills in actually developing strategy.

This 'future casting' is simply the practice of trying to envision an organization in the future (Olsen, 2016). Oxford defines sensemaking as" the process of making sense of or giving meaning to something". It is the enduring retrospective development of plausible images that rationalize what people are doing (Weick, Sutcliffe, & Obstfeld, 2005, p. 409). Weick intended to shift away from the traditional focus of organization theorists on decision-making and move towards a process that constitutes the meaning of the decisions that are enacted in behavior. Future strategists require this meta thinking.

In the military culture there is an assumption the boundaries are definable; competitors and adversaries can be defined around American cultural and ethical values and that competitors and competition might lead to equilibrium (Porter, 1980). When thinking in the Porter view, generic strategies are indeed the outcome. In today's complex environment, strategists require a more multi perspective view, one of which is the fox and the hedgehog, and strategize on complementarity not polarity.

According to Madsbjerg (2017), the hedgehog and the fox go deep into cultural inquiry sensemaking requires the human factor. The human factor is commonly ignored or missed in data.

Breaking free of dominant logic is an important step in innovative, strategic planning for the future. Boulton et al,(2015) emphasize a number of approaches to engaging with complexity. The approach I have become interested in for the purposes of our strategy elective is a transdisciplinary approach which I discuss in more detail in the next chapter. Bearing in mind the popular use of the hedgehog–fox metaphor by many authors including Silver (2015), Collins (2001), Kay (2011), and Kahneman (2013), leaders need be critical about the foundation of metaphors and their use and be aware of the implications. Strategists can ill afford to get lost in binary simplicity.

Cognitive style flexibility or a cognitive spectrum is increasingly important in leadership and innovation (Kozhevnikov et al. 2014) and "[g]ood judgment now becomes a metacognitive skill" (Tetlock 2005, p. 23). Whetten and Cameron (2011) suggest individuals can develop metastyles allowing strategists to consciously switch between different cognitive styles, of course research is needed in establishing the extent to which the flexibility to balance the two dimensions can be trained (Meynhardt, Hermann, Anderer 2017). Self-awareness is a valued attribute of a TD practitioner (Pohl,et al 202,1 18-26) and what we seek to develop in LbD. Cognitive diversity within teams has been evidenced as essential for effective problem-solving and creative thinking (ibD). Importantly, team diversity may increase an organization's flexibility to react to dynamic and complex environments (Jarzabkowski and Searle, 2004).

SbD will not have easy, formulaic answers to engaging with overlapping political, social, technical, financial, and environmental systems. These systems are interconnected in an

unprecedented way. One decision has repercussions on the whole that extend beyond the conflict itself. Artificial intelligence, machine learning, cognitive computing may appear to be in the driving seat of direction of travel, but good leadership recognizes the human is still at the center of learning, imagination, innovating, and crafting strategy. This piece began pondering Aristotle and practical wisdom (phronesis). Phronesis is the synthesis of knowledge and wisdom. Philosophy is considered by many as esoteric, yet in my opinion it offers significant concepts and insights on human behavior and on complexity that are important to the development of strategists relevant for our times.

Summary

In this autoethnographic review of my theoretical and conceptual understanding of leadership (lbD), Innovation (ibD), and strategy (SbD), I propose that the US is declining in its ability to create strategies in environments of complexity and rapid change. Leadership and innovation require strategy as a guiding principle. The three foci are intertwined and mutually dependent on each other in an increasingly complex environment. Harnessing my contributions to practice by substantiating concepts from various cultures and recovering those in a new context, there is value in developing a new course for developing strategists.

In the following, concluding Chapter 5, I reflect on integrating and harnessing the learning and insights which have emerged so far including the possibilities of a new effort. I begin with the strong critique of the US Air Force's current stasis delivered by the highly successful businessman and software engineer, Eric Schmidt. His comments are interspersed with notes of my responses, evoked by his observations. I then go on to the insights I have gained and how they can be focused into a 'Greater Good' program to more comprehensively assist our officers to become more confident in their decision making by understanding themselves enough to understand the 'Middle Way' as it pertains to leadership, innovation, and strategy.

The greater good leader understands the power of thinking through the future, practically and creatively, and the learning potential within paradoxes in large organizations, and that this cannot be approached through a single lens or discipline.

Chapter 5 Insight-ing

Field Notes: *Your Networks Suck* (Eric Schmidt 2022)

This chapter gathers together the new or enhanced key insights which have emerged for me during this period of exploration of my own works from bureaucracy to leadership to the lenses we use to identify 'wicked problems'. The insights from each of the public works are captured in the Insight tables in Appendices N and O. I begin with bureaucracy

Bureaucracy

> Bureaucracy exists in all large organizations and changing culture and practices that prevent timely and effective decisions is difficult—but it starts with the Air Staff –
> General CQ Brown, US Air Force Chief of Staff (Hadley, 2022)

I already knew that bureaucracy has a function and is a constant presence, always necessary, particularly in hard structures. However, what has come into vision is just how much it has shifted from compliance to order to being a structure of compliance of compliance to order where we have become unsure of the continued value of aspects of that 'original' order. At some point we stopped asking the why of something's existence and instead began to accept it as a ritual obstacle that has to be overcome or bypassed or put up with. It has, in some cases, perhaps too many, become an inhibitor of imagination, agility and progress. I have opened this section with General Brown's words on bureaucracy in the US Airforce to set the scene.

Our AUiX (Air University Innovation Accelerator) team also had the opportunity to hear from Eric Schmidt, former CEO of Google and former chairman of the Pentagon's Defense Innovation Board (DIB), when he delivered a keynote address at the Air Force Association (AFA) Warfare Symposium (March 3, 2022).[61] The words below in italics are taken directly from my 'in real time' notes during Schmidt's presentation

Schmidt was very pointed in his comments with his main premise being the USAF needs a thesis of change—a strategy if you will.
Surely the USAF must develop leaders who understand themselves before they can innovate to contribute to strategy[62]

Schmidt went on to say

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[61] Transcript located here: https://www.airforcemag.com/read-watch-former-google-ceo-eric-schmidt-on-how-the-pentagon-can-accelerate-ai/

[62] *Italics indicate personal notes from my journaling in real time and later*

…you're [USAF] doing a very good job of making things…better. But I'm an innovator. And I would criticize… the current structure…a bureaucracy. It's doing a good job at what it has been asked to do. But it [the bureaucracy] hasn't been asked to do some new things.

Not sure I would agree with all of this. Not the bureaucracy that should be asked to do new things but how the bureaucracy can better support the new things leadership is wanting to be done and change its practices to enable movement and change … It's an old culture so not about asking bureaucracy to do more but less… They need to clear the way for stronger interconnections between all the parts and make space to innovate… Many senior leaders, like Air Force Chief of Staff, have asked for change in the bureaucratic system, it is like a juggernaut on a path - hard to get it to change its route or its size… Leadership, over time, has created this bureaucracy. Not found a way yet to adapt it to be in service to the organization rather that the organization being in service to the bureaucracy.

The juggernaut is indeed a 'Marvel X-Men Villain'[63] yet more relevant here it is the anglicized version of Jagannath, an incarnation of the Hindu God Vishnoo. Jagannath represents, universal power and festivals construed this through massive, heavy structures on wheels that was difficult to move and once moving, extremely hard to stop at which point it becomes dangerous. Anglicized it has come to mean a potentially substantial, destructive, and unstoppable force.

In his article (2022), Hadley cites General Brown on his view that the progress on decreasing bureaucracy and to "actually flatten communication [and] … to increase collaboration." remains 'elusive'. (Hadley, 2022)

In talking about innovators, Schmidt notes:

[they] come out of a different background, and you just don't have enough of these. These are hard people to manage. They're often very obnoxious. They're difficult. They're sort of full of things, but they can change the world…

Selection for cognitive diversity informed by positive regard and a non-judgmental attitude towards difference for me is key. Innovators may be perceived sometimes as difficult or 'obnoxious' because they are not 'the norm' in large bureaucracies. Greater good leaders I see as having an attitude of appreciation towards diversity of all kinds, attitude being seen here as an action ensuring that exclusion has no role to play in the US Air Force.

He went on to talk about USAF information technology:

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[63] Juggernaut (Cain Marko) is a fictional character appearing in American comic books published by Marvel Comics. Cain Marko is a regular human who was empowered by a gem belonging to the deity Cyttorak, becoming a literal human juggernaut. He possesses superhuman strength and durability and is virtually immune to most physical attacks; his helmet also protects him from mental attacks.

You, actually your networks, excuse the term, suck.

Leadership, innovation, and strategy all need a healthy dose of risk taking. The idea of changing, building, or improving our information networks actually makes several USAF leaders very nervous, but the demand to change is screaming at the organization, so much so that the military is hearing it from outside the organization from innovators like Eric Schmidt.

Schmidt closed his talk with—
you don't have enough people, you don't have the right contractors, and you don't have the right strategy.

My question is: the USAF has heard all of this before from our Airmen inside the USAF and from several prominent leaders from outside the USAF including Elon Musk (AFA, 2020), Mark Cuban (AFA, 2019), Jeff DeGraff (AFA, 2018), but who is going to fix it? My team may not be able to fix everything, but we can begin to offer new ideas and operationalize them within our own sphere of influence.

Leadership

.. It has been clear to me for some time, but it has come into sharper focus through this critique, that current leadership models are examples or frames that have merit in trying to conceptualize leadership but in a way that does not fully embrace individual diversity and creativity, nor prepare someone for many real life scenarios of decision making. They indicate more how to do and how one should appear rather than who someone is and how their own diverse attributes and strengths can be accepted, trusted and flourish if the environment can provide the conditions for this flourishing. This is a shift in focus from the doing of leadership which can be different in different contexts to the being of leadership that will inform the doing. Frameworks can also narrow the scope of the possible if the frame itself does not have a multiperspective view of what leadership can be. I am focusing on the *practice* of leadership.

Articulating Practice

Preparing this submission for a professional (practitioner) doctorate has served as an invaluable opportunity to reflect not only on theoretical issues, but to examine practices informed by theory predicated on the acceptance that practice is a deep source of knowledge. This opportunity not only acts as the testing ground for theory but contributes to knowledge itself. Knowledge can, too often, be seen to be the exclusive purview of theory. In spite of generations of highly influential proponents (Peirce, 1883, Dewey,1908, Vygotsky, 1934, Freire, 1968, Gramsci, 1929-1935, Kincheloe, 2008, etc.) of knowledge derived from practice the silos and perception persist. In addressing the imbalance in the relationship, knowledge for everyone can accelerate. Another core difference between theory and practice is the role of the researcher who, in practitioner research, is not an instrument of the theoretical paradigm but an agent of change accountable for the change and the reliability of the process undertaken to bring it about. Therefore, the transparency of the agency of the practitioner

researcher is part of the context. There is need for both the practitioner and the theoretician and both can become better aligned. These are the considerations behind each of the programs. Young officers will have learned the theories and the framework but in their duties, they are engaged in the *practice* of leadership not the *theory*.

The programs examined in this critique need to be aligned more closely but also to challenge more proactively the theory that practice might refute and to introduce new ways of conceptualizing the issues as factors change quickly in the new environments that officers will have to operate. This is why, in the case of this critique, this is not only organizational and professional, it is personal. I see now I have always recognized complexity and held the value of a multiperspective view but have felt inhibited not only by environmental factors of a hard structure but by my own inability to articulate it and underpin it not just with models but with more intellectual thought and debate. In a sense I am now finding that my voice range has more than one key.

Complexity

> … the main difference between complicated and complex systems is that with the former, one can usually predict outcomes by knowing the starting conditions. In a complex system, the same starting conditions can produce different outcomes, depending on interactions of the elements in the system (Sargut and Gunther-McGrath, as sited in Kamesnsky, 2011, 66)

One hears the term complexity often in current discourses on every discipline. But, in some cases, it is said without full comprehension. Complication is often translated as complexity. Complexity is now something I do not just say. I conceptualize everything through this lens. My selection of insights all relate in one way or another to complexity and I would advocate that seeing everything through this lens is an attribute of leadership for the future.

Multiple perspectives

It is increasingly clear to me that the USAF has the ability, if not the will yet, to intentionally develop greater good leaders who will wrestle from the juggernaut of bureaucracy the will and the creativity to thrive and at the same time encourage bureaucracy to imagine a different way of doing things for the common good. I believe there is creativity in bureaucracy that needs permission to be released and be given a more imaginative direction. This ties in with my notions of cognitive diversity. We often play to our strengths, and strengths tend to look for their tribes. People can be drawn to processes and procedures and others to risk taking roles. All have untapped creativity that can be manifested in different ways. The greater good leader sees that diversity of potential in everyone and has a strategy for mixing the 'tribes'. When a

culture of trust ensues from appreciating and harnessing individual strengths, leaders can then operate from a place of trust and transparency and in turn accept risk. I suggest that Schmidt's concerns could be laid to rest when leaders understand the 'Middle Way.'

Transdisciplinary thinking and spirit

I have come to see greater good leaders as transdisciplinary thinkers, whose response to the issue of *how to fix it* may be *fix what?* Greater good leaders question assumptions based on polarized views from notions that the bureaucracy is bad, broken, and out of date and so on, to obedience regardless is what keeps us safe.

Is throwing more people and money at the problem helpful or damaging? Is the USAF equipped with the right thinkers, leaders, innovators, strategists to even tackle the problem? Should the USAF fix the bureaucracy? Is the bureaucratic issue one based on a culture of fear? If the USAF had a culture of trust, would the bureaucracy look different? Is the problem one of compliance, incentives, fear, or something else?

Aligning for the Future

I want to go beyond espousing insights and ideas into actual action. The multiperspective lens for example includes being able to hold and creatively work with the perspective of what one sees as oppositional. Not doing so limits possibilities. This is one of the insights that has emerged from my analytical autoethnographic venture as part of my theoretical and conceptual understanding of developing *leaders.* Metaphorically these three stars – LbD (Leaders), ibD (Innovators) and SbD (Strategists) - are forming a constellation that will have its manifestation in a new 'real' as opposed to metaphorical program - LIS

Through a stronger appreciation for emergence in terms of complexity, the LIS initiative is forming as a vehicle for facilitating excellence in these three areas leading to excellence in leadership practice. Individuals who have an open mind to difference, who can identify complexity and perceive it as an opportunity to expand possibilities through skillful navigation rather than more layers of processes and procedures, is a start. The most prominent leaders, innovators and strategists in the world are urging us to change; they are urging us to unleash our creative potential therefore we need to identify and scrutinize the obstacles which are preventing that happening at scale. That means the skill to see the local in the global and the global in the local. It is holding the micro, meso and macro perspectives through the filter of a meta view. An example would be the meta view of the earth is from the complexity of space.

In my conceptualization, these three works all sit at an intersection orbiting around imagination (see figure 5.1). Through this reflection it has never been more apparent that the most effective leaders have a clear understanding of leadership theories and concepts, innovation

and creativity, and how to apply those to strategy. I am presenting below a sample of my integrated concepts as a work in progress and why they matter.
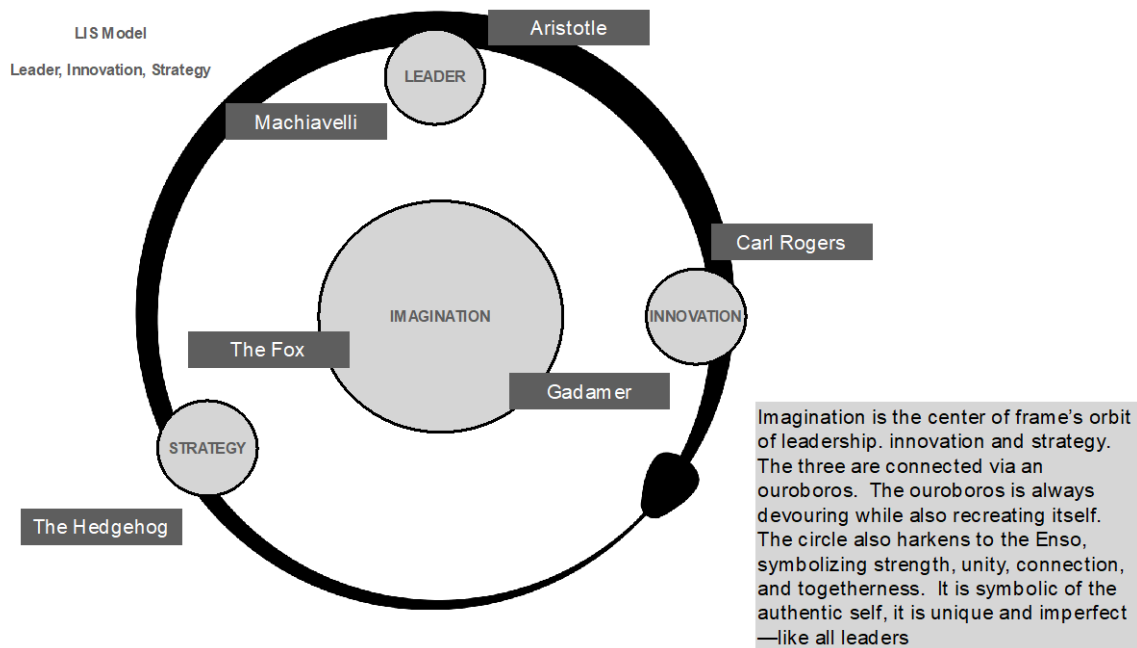

Figure 5.1 Leader, Innovation, Strategy Frame

Program feedback[64] shows LbD and ibD have had a positive influence on the US and partner militaries with close to 300 graduates and that does not take into account all the offshoots of the programs to include the ACSC's Leader Development Course (approximately 3500), ACSC's Leadership and Command Course (approx. 100 grads), the Eaker Center's Leader Development Course for Squadron Command (approx. 1000), Project Mercury (7 cohorts as of this writing and 260 graduates), and the Leadership Institute working across the university.

Looking at that data an obvious question may be if they are having this impact why should I be embarking on changing things. My answer: because time does not stand still nor do the circumstances of an interconnected world that shifts and shapes at an unprecedented speed.

Another insight that emerged was the realization that these courses by being separate and not sufficiently connected reflects the compartmentalism we can all fall into, in one way or another. Even when we try to resist them, contextual factors can be overwhelming such as budgeting for one thing at a time. However, on a positive note, they can exist in a synchronous orbit. In reviewing my research, I developed several charts (Appendix M, N, and O) in attempting to gain a deeper understanding of what informs the creation of my works. One thing which made itself very explicit was 'paradox' in these three areas which can be

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[64] Due to USAF bureaucratic rules, the feedback is considered confidential. The feedback is based on a Likert scale. Questions include: taught me new ways to think about issues dealt with in the course and [the course] improved my ability to effectively and concisely present and discuss solutions to complex problems. Of course, there are limitations in range provided. It was created by the bureaucracy and limited in what it indicates.

intellectually engaging in philosophical theory but is a different matter when confronted with it in practice. It is my role as a leader of this leadership program to keep informed of new thinking and approaches and to translate (Maguire, 2015) them to context and to the individuals in those contexts in ways that increase the manifestation of their creative potential. I have started to become more familiar with approaches that I have come to see as useful in conceptualizing the problems of paradox and hence informing how we tackle them. I am drawn to two: (i) transdisciplinary thinking that supports the development of consciousness of one's agency, complexity learning, a multiperspective view of the world, inclusion, meta-perception, contextual framing, and values to name a few and (ii) sensemaking as a sister concept that goes beyond individual meaning making (Maguire, 2015). Both are responses to complexity.

Thinking practically and pragmatically: a new program

In practical terms I have already gone beyond just having the concept of LIS mentioned earlier in this section. I see it as a yearlong masters level program. The plan is to engage the research task force (RTF) program mentioned in the ibD chapter to reach both the Air Command and Staff College as well as the Air War College students. The program would be 26 days at 3 hours each or 78 hours of instruction. It could easily require more than a year, but we are limited in the amount of time our students can be available due to military demands. At this point I am considering a one semester 'taught' element and a semester research project that requires demonstration of impact beyond graduation. My plan includes exploring the concepts of paradox theory, transdisciplinary thinking, and sensemaking through a philosophical lens and how such a lens can be used in the thesis stage to demonstrate a maturing level of praxis which combines knowledge, thought, practice experience and action. Learning outcomes would be demonstrated by, among other things, 'what if' approaches to paradoxes and contradiction.

My thoughts on leadership, innovation, and strategy have been very much influenced by real life dilemmas. Concepts such as the paradox of Yin and Yang or the Taijitu have helped me 'make sense' of the dilemmas and if sense can be made then this can inform action. In traditional western philosophy, philosophers regard human existence as paradoxes, such as life and death, and good and bad – these are binaries that encourage polarisation (Liu & An 2021, 1592). Aristotle, Hegel, and other traditional philosophers, describe paradox as irrational and unsolvable problems or double constraints (Smith, et al 2017, 303-317) which may encourage letting them exist or trying one's best to avoid them or reducing them to the 'means to an end/end justifies the means' circular argument.

I see paradoxes as not requiring solutions nor being denied nor being relegated to a room where it will be dealt with some other time. Eastern philosophies stress the need to avoid simplistic distinctions and to simply live with the paradox (Lewis, 2000, 760-776). Western dialectics, represented by Aristotle and Hegel, are contradictory to Eastern thought, focusing on the dichotomy of matter and self and the development of rational logic. However Chinese traditional dialectics, represented by Lao Tzu, Confucius and the book of I Ching, are

harmonious dialectics/paradoxes focusing on the unity of humankind and nature and the development of perceptual intuition. (Liu & An, 2021, 1593-1598). Facilitating students to engage with paradox in a more creative positive way will be a key learning outcome of the new LIS Task Force.

Returning to the LbD chapter and the story of Hurricane relief, a leader being comfortable with contradiction/paradox/ambiguity would have anticipated that not explaining the commander deployment decision would leave a set of unvoiced confusions, questionings, and anxieties. Speaking openly about the dilemma and the choice faced by the leader would have shifted the atmosphere to one of trust in the transparency. In transactional analysis[65] terms, the leader's choice not to explain was a father responding as if those in the room were children and provoking thoughts within them of this being unfair, one child being treated differently from another child and contradictory of the values that are espoused and admired in the military like courage. These are real behavioral reactions. The greater good leader, comfortable with contradiction/paradox/ambiguity, can promote climates of adult-to-adult conversations/exchanges and alleviate disparity and tension.

Conceptual Frameworks: Transdisciplinary thinking and Yin & Yang

Defining TD thinking is also not an easy task. Transdisciplinarity presents as a research strategy that crosses many disciplinary boundaries to create a holistic approach (Back, 2016) [66]. As cited in Jantsch 72, the United Nations Educational, Scientific and Cultural Organization (UNESCO) defines it as "an approach to curriculum integration which dissolves the boundaries between the conventional disciplines and organizes teaching and learning around the construction of meaning in the context of real-world problems or themes.[67] The relevance of TD to my PWs is: leadership, innovation and strategy cross multiple disciplines and require a method to interconnect, in some cases integrate or even dissolve boundaries. TD is purposive, building a deeper understanding of a common human and social purpose to direct efforts by bringing values and norms into play (Jantsch, 1972).

Literature highlights two main schools of thought and of course parts of both resonate well with my thinking. The physicist Nicolescu (2002) positions TD thinking as a unique method in creating knowledge aligned with three axioms (Gibbs & Beavis, 2020, 8).

Axioms:

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[65] Transactional analysis (TA) is a psychoanalytic theory and method of therapy wherein social interactions (or "transactions") are analyzed to determine the ego state of the communicator (whether parent-like, childlike, or adult-like) as a basis for understanding behavior. "Definition: Transactional Analysis". Finto. Retrieved May 11 2022.

[66] Definition from DBedia: https://dbpedia.org/page/Transdisciplinarity

[67] See Definition at http://www.ibe.unesco.org/en/glossary-curriculum-terminology/t/transdisciplinary-approach

1) What counts as **knowledge** (complexity and epistemology) or the axiom of **identity** (knowing A is A, *diagram below*)
2) What counts as **reality** (multiple levels of Reality whose interaction is mediated by the Hidden Third) or the axiom of the **excluded** middle or T
3) What counts as **logic** (inclusive so it can include many perspectives, disciplinary and lifeworld) or the axiom of noncontradiction A is not non-A. (McGregor in Gibbs & Beavis 2020 21),in examining Nicolescu's concepts there is a familiar dualism at play—basically a

Using TD through sensemaking to understand the paradox
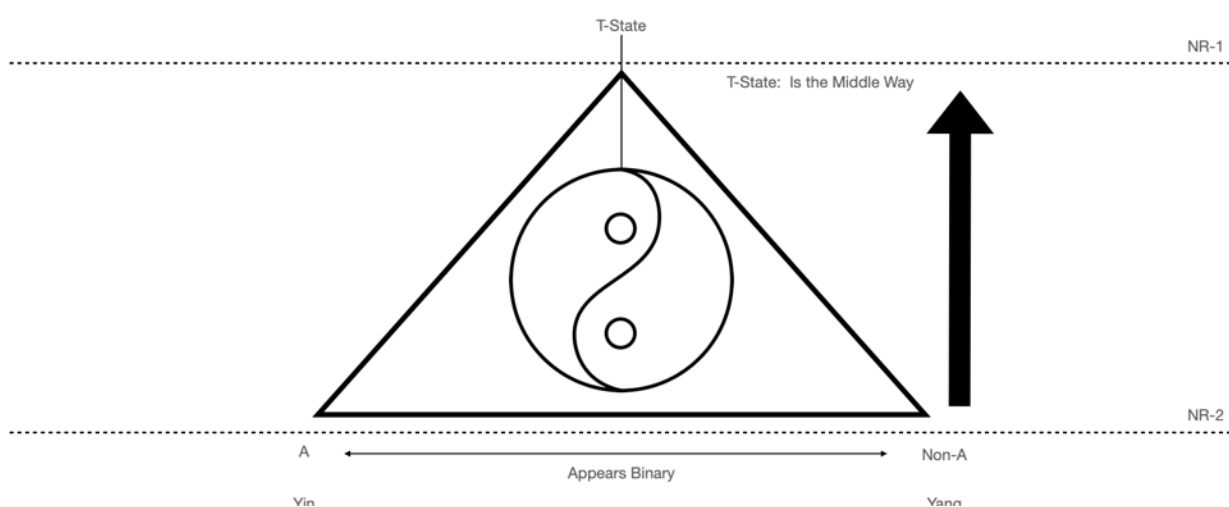
Figure 5.2 Using Transdisciplinary through sensemaking to understand paradox

Yin and Yang (A functioning as Yang, Non-A as Yin) with the T-state functioning as the middle way. The middle way is that which is connecting the pair of contradictories (A and Non-A). The T-State allows the unification of the contradictories (A and Non-A or Yin and Yang by the middle way). Note that this unification takes place at a different level from the one in which A and Non-A exist. The idea is to keep learning, to keep examining, thinking, diving deeper into issues and thoughts in order to get to the next level of reality. Knowledge is open forever (Nicolescu 1996).

Christian Pohl and the Zurich School is not as fluid as Nicolescu's concept of TD. Pohl places his understanding of TD across three broad concepts (Pohl in Gibbs & Beavis, 2020, 65).

Concept A: transdisciplinarity is research that **"transcends and integrates"** disciplinary paradigms to solve real issues and problems.
Concept B: starts from Concept A and adds the **"inclusion of non-academic actors"** (practitioners). The inclusion of the non-academics takes up the discussion with stakeholders from science, civil society, private and public sectors.
Concept C: adds the "search for a unity of knowledge" to Concept A. The overall aim is to reorganize academic knowledge in order to make it useful for addressing relevant issues.

Knowledge is reorganized by developing the basis for a general viewpoint or perspective, beyond all disciplines. (Pohl, 2011,619–620).

As I began researching theories of leadership and innovation, I was often frustrated by some of the academic contributions as well as the too easy formulas of many business models. I am sure the academic theories and ideas made sense at the university, but without paying attention to the audience of practitioners who could benefit most from them, theories remain in the academic club preventing a real test of theories in practice and practice informing theory. As mentioned in Chapter 2 on LbD, I do not recall ever referring to a theory in the grip of a difficult leadership situation. However, scholars and their research are an underplayed asset in giving practitioners a frame, a model, or a concept to embed in their thinking and I find myself, among many others, playing the translator. This is yet another value of TD: the role of translating, negotiating, illuminating at the intersections of difference (Maguire, 2015). TD sits at the interface of the real and metaphoric and is a way for the academic and the practitioner to engage in collective conceptualizing of the challenge or 'wicked' problem' and providing the conditions for the emergence of possibilities cloaked by classifications of exclusion (Adams and Maguire, 2022). As LIS is developed, faculty and researchers will engage in TD thinking to shift their lens when approaching the design. This will encourage them to embrace the complexity of leadership, innovation, and strategy, especially when one considers the complexity and emergent environment into which our students will be graduating. I intend to expand my understanding of transdisciplinarity and to go deeper into the realms of Yin and Yang and Paradox Theory. I look forward to receiving innovative ideas for this LIS program emerging from new writings, from shifting realities brought by young officers from the field and from the variety of military and non-military academics wishing to become involved.

Reflecting on who can teach this, what comes to mind is a common concern for many startups/initiatives across all sectors, and that is, if separated from 'the creator/instigator', can it be sustained? LbD and IbD are now delivered and developed by graduate officers of the program. What I would like to develop is a scholarship of practice for graduate officers of LIS who would like to join faculty and undertake this or a version of this doctorate. Through such programs they too will critique their assumptions, their own ideas and tap into their own creativity to keep up to date with not only changing environmental factors through expanded literature and philosophy of ideas, but to increase the levels of our consciousness in structured environment held together by considerable traditions and habits. Koestler, the twentieth century philosopher, cautions us that

> …consciousness may be described, somewhat perversely, as that special attribute of an activity which *decreases in direct proportion to habit formation*. The condensation of learning into habit is accompanied by a dimming of the lights of awareness. [author's italics] (Koestler, 1982 232)

Beyond LIS

In this autoethnographic approach I have evoked thoughts and feelings in myself, and I hope also in my audiences of young military officers and those who are drawn to work in developing them for a future to which most of us are not invited any longer as serving officers. I have looked reflexively at how the culture of the military, focusing on ray elt has been a way to be honest with myself and with others. Analytical autoethnography is served by this gaze at my own work culture, and myself in it, will have something of value to offer theoretical as well as practitioner knowledge not least in leadership and complexity for those in other forms of hard structure where compliance is heightened due to the nature of the sector. The concepts presented in this study move towards the greater good leader who understands a 'Middle Way' approach to decision making and problem solving, and approaching this through a TD lens. The military is unique in many ways, but more commonalities than differences are present in the field of leadership. Differences include, for example, that the military commander holds UCMJ authority over subordinates that allows the leader to act as judge and jury in terms of discipline. In addition the military also deals in death and destruction. However, I believe what is presented here can be applicable to and used by practitioners in a range of organizational contexts at best and, at the least, pique their curiosity.

Regarding myself, this professional doctorate has already provided a springboard for further engaged scholarship. Through my fellowship with the Judge Business School, Cambridge University, I am working with Professor Neil Stott on two journal articles. One is focusing on *Base, Place & Race: Military cross-sector work, regeneration and social justice in Montgomery, Alabama*. The other is examining social innovation in the US Military through the work we have done with ibD and Project Mercury and cataloging some of our students' research work and projects.

I plan to continue my work with various academic institutions including Cambridge, Auburn, University of Michigan, The Naval Post Graduate School, and the University of Southern California. The professional doctorate will allow me to elevate the work which the USAF is doing in leadership, innovation, and strategy with research fellow projects at Cambridge and other influential and progressive institutions.

I have never regarded myself as an academic but one who has a passion and a curiosity about knowledge and the application of knowledge in challenging and rapidly changing environments. This doctoral undertaking has enhanced the integration of these two parts of my identity diminishing the prior tendency to separate them. One of my goals is to disseminate the body of LIS knowledge through regular journal articles and seminar/symposium lectures and embrace this integrated identity more fully in the academic field.

In conclusion, this professional doctorate has given me the opportunity to critically reflect on my experience and has provided me with both insights into and more fluent articulation of my practice and motivations not least through challenging my own assumptions. Regardless of

how my goals unfold, my work will always be in service to the development of current and future leaders faced with real life dilemmas every day in an uncertain world. This takes courage, discipline, and commitment of those few brave men and women who volunteer to defend their country and our freedom. I am privileged to walk alongside you for a while. I thank all of you for your service and wish you all the best. God bless.

Final words go to, Charles Dickens who sums up the dichotomies leaders faced in 1859 in his "A Tale of Two Cities", and which we still face in 2023. We continue the search for greater good leaders who may find a better way in the Middle Way and the Taijitu.

> It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way--in short, the period was so far like the present period that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only[68]

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[68] https://dickens.ucsc.edu/programs/dickens-to-go/best-of-times.html\

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Appendices

BIOGRAPHY

UNITED STATES AIR FORCE

PROFESSOR J. WILLIAM DEMARCO

Professor J. William "Bill" DeMarco, Colonel, USAF (ret), serves as the Chief of Innovation Development for Air University (AUiX). AUiX connects AU students, faculty, and staff with partners in DoD, academia, and industry identifying opportunities for collaboration, and for developing new capabilities, strategies, and technologies. AUiX's vision is to increase Air University's contributions to national security, great power competition, and the profession of arms by taking ideas and concepts—*"One Step Beyond."* Bill is the founder and former Chair for the Leadership Department, and is a Professor of Leadership Studies at the Air Command and Staff College (ACSC), Maxwell AFB, Alabama.

Professor DeMarco was born in Burlingame, California. In 1988, he graduated from the Citadel, The Military College of South Carolina, as a Distinguished Air Force Student, with a Bachelor of Science degree in Business Administration. He was commissioned as a Second Lieutenant through the Reserve Officer Training Corps.

Professor DeMarco's leadership experiences include command at the squadron, group, and region level, as well as serving as ACSC's 44th Commandant. He served as a National Security Affairs Fellow at Stanford University's Hoover Institution and is currently a fellow at The Judge Business School, Cambridge University, England, as well as a Master Coach with GiANT Worldwide leadership consulting, a visiting lecturer at The Ross Business School, University of Michigan, and with The Marshall Business School, University of Southern California, and an adjunct professor with Auburn University in Leadership. Additionally, he contributes as a leadership consultant for the National WWII Museum's Corporate Leadership Academy in New Orleans, LA, as well as TEDx speaker. Bill also serves on the board of advisors for GEN-POL, a think tank consultancy and social enterprise, and sits on the board for the 100th Bomb Group Foundation. A command pilot having qualified in five different weapons systems (C-23A, C-12F, C-141B, KC-10A, and the KC-135R), Professor DeMarco holds three masters degrees and is a graduate of the USAF's School of Advanced Air and Space Studies and is currently a Doctoral Candidate with The University of Middlesex, London, England.

EDUCATION
1988 Bachelor of Science, Business Administration, The Citadel, The Military College of SC, Charleston, SC
1995 Squadron Officer's School, Maxwell AFB AL.
2000 Master of Science, Military Arts & Science, American Military University, VA
2003 Master of Science, Military Operational Art & Science, Air Command and Staff College, Maxwell AFB AL
2004 Master of Science, Airpower Art & Science, School of Advanced Air and Space Studies, Maxwell AFB AL
2008 National Security Affairs Fellow, Hoover Institute, Stanford University, CA
2020 Doctoral Candidate with The University of Middlesex, London, England

MAJOR AWARDS AND DECORATIONS:
The Legion of Merit
Defense Meritorious Service Medal
Meritorious Service Medal with one oak leaf cluster
Air Medal for Heroism
Aerial Achievement Medal with one oak leaf cluster
Joint Service Commendation Medal
Air Force Commendation Medal with one oak leaf cluster
Air Force Achievement Medal with one oak leaf cluster

PUBLICATIONS
1. *"May the Best Ideas Win"* Hoover Digest, October 14, 2008, No. 4, Hoover Institution, Stanford University.
2. *"Leadership Philosophy 101, Who Are You?"* October 1, 2013, Applied Leadership and Command Course, Air Command and Staff College, Air University.
3. *"4 DEMANDS OF HEROIC LEADERSHIP"* December 11 2014, GiANT Worldwide.
4. *"Public sector intraprenurship: overcoming bureaucratic immune systems"* 20 October 2014, University of Cambridge, Judge Business School, Centre for Social Innovation.
5. *"Embracing dissenters: why you need people who ask difficult questions"* 12 January 2015, University of Cambridge, Judge Business School, Centre for Social Innovation.
6. *"What's More Important: Discipline or Intentionality?"* 11 May 2015, GiANT Worldwide.
7. *"Embracing passion and creativity"* 26 June 2015, University of Cambridge, Judge Business School, Centre for Social Innovation.
8. *"Are you strange, or authentic? Why leaders need to be real."* 20 July 2105, GiANT Worldwide
9. *"First In, Expeditionary Airbase Seizure and Operations Through Mobility Warriors,"* Chapter 1, Defending Airbases in The Age of Insurgency Volume II, edited by Shannon W. Caudill, Col, USAF Retired, AU Press, 2019

(Current as of May 2022)

Appendix B: Leaders by Design Syllabus

Leaders by Design

SYLLABUS

AY 22

UNITED STATES AIR FORCE
AIR COMMAND AND STAFF COLLEGE

1

COURSE INSTRUCTORS:

J. William "Bill" DeMarco
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Cell: 650-336-4291
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ACSC Instructor, Department of Leader and Research Development
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Email: shawn.west.2@au.af.edu

COURSE DESCRIPTION:
The concept of *Leaders by Design* is simply to be intentional and deliberate in how we develop ourselves as leaders. The military has many leadership programs—*but until we take responsibility to develop ourselves*—we will fail to meet the leadership challenges of the future.

THE CURRENT SITUATION:
Our environment is everchanging. It is more complex, volatile, and unpredictable. As such, leaders must adapt, refine, and learn new skills and methods to be successful. At the same time, the methods used to develop leaders globally have not changed (*much*). The majority of leaders are developed from on-the-job experiences, training, and coaching/mentoring. While these are all important, leaders are not developing fast enough, or in the right ways to match our new environment. All of this is compounded by the reality that, too often, leaders wait for training to come to them, rather than taking ownership of their own learning. This is no longer just a leadership challenge (what good leadership looks like); it is a development challenge (the process of how to grow "*bigger*" minds). Leaders have become experts on the "what" of leadership, but novices in the "how" of their own development.

WHAT TO EXPECT:
In this elective we will spend time examining the arena of leader development. This course is meant to augment, not duplicate, the core leader development course within ACSC. While the core leader development course spends equal time in four main areas (personal, ethical, organizational, and challenge), this elective is designed to deep-dive into the personal dimension and challenge students to think through how they can apply what they know about themselves in the other three areas. We will experience visiting lectures from a myriad of civilian entities that will discuss and expose us to leader development outside the military. As we work through the course, students will experience an in-depth analysis of their own strengths and weaknesses. The goal is for students to use this self-knowledge to better lead their team(s) and create organization(s) where people flourish.

2

EVALUATION INSTRUMENTS:

1. **Book Reflection (due EL 8):** Select one book from the required reading list and write a three-page paper on how it impacted you as a leader. We want to know how the book impacted you as a leader, positive or negative. Consider the following questions: What about it impacted you? What did YOU take away? Alternatively, if you didn't like it - why? What about it turned you off? What are you going to do now that you've read this book? Are you going to change how you lead because of something in this book? Formatting for this paper is similar to the core classes (times new roman, 1" margins, 12-point font, requires a title page, thesis, supporting evidence, etc.). Use of first person is encouraged. Adherence to the page count is mandatory. **(25%)**

2. **Journal Entries (due EL 11):** Research has shown that journaling is highly effective in assisting an individual with reflection and self-discovery. This class is all about self-discovery; and therefore, we encourage students to reflect on the questions posed on page 8 and document what comes to mind in whatever form or fashion best suites you. For those who struggle with the idea or process of journaling, please reach out to your instructors. Journals will be "reviewed" on EL-11. By reviewed, we mean that students will flip through pages to show that entries exist. Instructors will not read the journals. **(10%)**

3. **Group Project and Presentation (due EL 14)** to the class. The seminar is divided into 3 teams based on their individual personality/leadership strength and weaknesses. Each team will select one of several pre-determined scenarios to work through and present a 10-minute briefing (give or take 5 minutes) on the last day of class. **(25%)**

4. **Individual Paper and Dashboard (due EL 14):** This assignment has two parts:

   Part 1: Individual Dashboard: Each individual will build a dashboard that describes your strengths and weaknesses. The format is of your choosing and the examples below are provided to spur ideas. Suggested items to include: MBTI, 5 Voices, 5 Gears, Judgment Index, and other tools that you've used previously (DiSC, Enneagram, Strength Finders, etc). This dashboard will be used to complete the final paper.

   Consider the dashboard as a visual reference for you and members of your team. It can be used to quickly assess how you reach decisions, process information and react in stressful situations. Sharing your dashboard with the class is fully optional, but as noted above, it will be required for the final paper. Based on past feedback, the dashboard is a meaningful tool for students to perform self-reflection or educate others on their leadership style.

   Below are other links to consider as you build your dashboard:
   Innovators DNA: usaf.innovationgenome.com
   Harvard's Four Emotional Intelligence Tools
   Strength Finder is $19.99 if interested
   The BIG FIVE Personality Assessment

3

<u>The Grit Scale—Angela Duckworth</u>

*Part 2: Individual Paper***:** Given all you have learned in the course—each student will present a paper on their leadership strengths and weaknesses discovered over the 13 weeks of instruction.

The following are questions to consider, and are not required to be answered:
- Who are you?
- What are you designed to do?
- How will you lead based on your strengths and weaknesses?
- So what? What is the value of having this self-awareness?

Paper is 4-6 pages.

The dashboard and paper are worth **30%** of the final grade.

5. **Class Contribution (10%)**

<u>**YOUR INSTRUCTORS**</u>:

J. William "Bill" DeMarco: serves as the Chief of Innovation Development at Air University. He recently concluded a 6-year tour as Chair of the Department of Leadership at ACSC, and his military leadership and command experiences include command at the squadron, group, and region level, as well as serving as ACSC's 44th Commandant. Bill is an adjunct professor with Auburn University in Leadership. He served as a National Security Affairs Fellow at Stanford University's Hoover Institution, is a fellow at The Judge Business School, Cambridge University, England, a guest lecturer at Ross Business School, University of Michigan, as well as a senior consultant with GiANT Worldwide leadership consulting. He also contributes as a leadership consultant for the National WWII Museum's Corporate Leadership Academy in New Orleans. A command pilot having qualified in five different weapons systems (C-23A, C-12F, C-141B, KC-10A, and the KC-135R), he earned three masters degrees and is a graduate of the USAF's School of Advanced Air and Space Studies.

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Maj Shawn West, USAF: is an instructor in the Department of Leader and Research Development at the Air University's Air Command and Staff College. He holds a Bachelor's Degree in Computer Engineering, a Master of Information Technology Management, and a Master of Military Operational Art and Science. He is a 17D Cyber/Communications officer in the USAF and has served in a variety of leadership roles in the AF as well as within other government agencies. Prior to ACSC, Maj West was a Detachment Commander for an intelligence unit and has experience in both tactical communications and intelligence operations.

VISITING EXPERTS WILL INCLUDE: (in order of schedule)

Amy Norton: is a partner at GiANT Worldwide, a global company dedicated to leadership transformation and healthy multiplication. Her consulting practice is focused on helping companies be better by making their people better. Whether she's coaching individuals or implementing company-wide training programs, her communication expertise enables people to understand their current reality and make meaningful changes in all circles of influence. Experience across a variety of professional settings has allowed her to see that the common denominator of sustainable success in any organization is consistent, secure leadership. She is energized helping people develop to their potential and reach a level of self-understanding that contributes to overall team alignment and synergy. In addition to consulting and speaking, Amy is a writer and editor. She makes her home in Nashville, Tennessee with her husband and children, and they all enjoy traveling and spending time outdoors.

Nicole Pinkham: Founder and Leadership Consultant, Impact Training and Consulting. Nicole Pinkham is a leadership innovator whose work has impacted thousands of government, corporate, and industry leaders across the world. After serving in public education for over 20 years and retiring from Auburn University at Montgomery as the Senior Training and Leadership Consultant, Nicole founded Impact Training and Consulting where she has the opportunity to live her purpose of inspiring and equipping leaders to achieve their individual and corporate visions. Her enthusiasm and expertise in leadership development moves people and organizations to embrace the positive changes needed to drive personal and organizational results. She inspires a mindset of positive optimism while navigating change, and her energy is contagious. Nicole has served as an instructor for Leaders by Design for 7 years, as well as an instructor for the Gathering of Eagles. She has also given leadership briefs for Air Command and Staff College and the Air War College. At home, church and in the community, Nicole is passionate about creating courageous cultures filled with leaders worth following.

Jodi Womack: Jodi helps clients get momentum where they need it most in their lives. Her firsthand experience of business management, marketing and customer service translate to the fast paced and demanding roles that face busy professionals today. She recognizes the common theme throughout audiences that busy, hardworking people have more work to do than time to do it in… and the workload typically doesn't stop at the end of the day but continues at home with even more responsibilities. She coauthored the book, Get Momentum (Wiley, 2016) and cofounded the Get Momentum Leadership Academy in 2012. Her Masters in Psychology comes in handy when coaching clients with difficult situations at work and with the overwhelm of life. She recently moved to Montgomery, Alabama and is adjusting to being called "Ma'am."

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Jason Womack: An author, executive coach, husband, nationally ranked triathlete and life-long learner, Jason helps leaders achieve their own definition of success; and, everyone has their own definition. After 18 years of entrepreneurship - founding two companies and writing three books - Jason has joined Air University. He is here to serve in the position of Professor of Leadership Studies, teaching the Leaders Development Course while researching leadership, influence and human potential. His compassion and empathy are immense and those attributes help to propel those he works with to new heights with little resistance and maximum effectiveness. Knowing that you have many roles such as: leader, student partner, spouse, child, friend, community volunteer, athlete and more, Jason is here to help you Get Momentum and make your best even better. He blogs, tweets and shares ideas on the web regularly.

Andy Christiansen: CEO of High Capacity Leaders, Atlanta GA. He is a nationally renowned thought leader on the topic of identifying "*what matters most*!" Working primarily with Gen Y leaders (21 to 31 years old) and those who are trying to lead Gen Y (45+ year old CEO's and business owners). Andy co-created Fruit2O® the first no-calorie fruit flavored water that caused a ripple effect of an additional 21 brands worldwide resulting in well over one billion dollars in annual sales. He is the author of The 40:40 Principle, a book that reveals the surprising power of strategic relationships in this post information age economy. With experience in all three major economic sectors, he advises CEO's and top leaders in business, military and non-profit organizations, like Coca-Cola, U.S. Air Force, Chick-fil-A, the Mattress Firm, Team Novo Nordisk and Northwestern Mutual.

Karla Nelson: Is a CEO, Mover-Shaker, Performance Trainer, TEDx Speaker & Host of The People Catalysts Podcast. Karla and her team are committed to, "Revolutionizing the Way Work Is Done," through licensing and teaching leadership and innovation trainers with their proven methodology. Karla launched her first of many businesses when she was 20. As a young CEO, she quickly realized the importance of relationships and the value of enabling leadership within an organization. Between Karla and her team, they have trained the WHO-DO Method™ to 25+ of the Fortune 100 and hundreds of mid-market companies and startups. The WHO-DO Method™ enables 100% buy-in from the team and produces better results with happier people. Their client list includes Target, Best Buy, Disney, Comcast, 3M, Amazon, General Mills, HP, Coca-Cola, Deloitte, Chase, US Bank, IBM among many other corporate leaders.

Megan Allison: serves as the Deputy Director of Leadership Development in the Ira C. Eaker Center for Leadership Development, Maxwell AFB, Alabama. A command pilot with more than 3,000 hours, she served in various squadron, group and wing positions, flying the C-21A, C-17, MQ-1, MQ-9, and C-146. She commanded the 27th Special Operations Support Squadron at Cannon Air Force Base and served on the Strategic Command Staff. She is a 1998 graduate of the Reserve Officer Training corps program at the University of Virginia, holds two masters degrees (Masters of Business Administration and Masters of Science in National Security & Strategic Studies), and is a graduate of the USN's College of Naval Command & Staff.

Lt Col Brandie Jefferies, USAF: Lt Col Jeffries is a core manpower and personnel officer with extensive background in strategic planning and programming. Lt Col Jeffries holds master's degrees from Chapman University in Human Resource Management and Air University in Military Operational Art and Design; a graduate certification from Chapman University in

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Organizational Leadership; and pursuing a PhD from Grand Canyon University in Industrial and Organizational Psychology. Lt Col Jeffries has served in various capacities over the last eighteen years including assignments within AMC, AFMC, AFSOC, JSOC, AETC, and AU.

REQUIRED TEXTS:

Brene Brown, *Dare to Lead: Brave Work. Tough Conversations. Whole Hearts*, (Random House, NY, 2018), ISBN 978-0399592522 (320 pages)

Epictetus, *A Manual for Living* (Little Book of Wisdom (Harper San Francisco)), ISBN 978-0062511119, (96 Pages)

Ryan Holiday, *Stillness Is the Key*: (Portfolio/Penguin Books, NYC, NY, 2104) ISBN-10: 978-0525538585 (283 pages)

Gordon MacKenzie, *Orbiting the Giant Hairball: A Corporate Fool's Guide to Surviving with Grace* (New York, NY: Penguin Putnam Inc., 1996) ISBN 0-670-87983 (224 Pages)

Greg McKeown, *Essentialism: The Disciplined Pursuit of Less*, (Crown Business, NYC, NY, 2014) ISBN-10: 0804137382 (272 pages)

Jason W. Womack, Jodi Womack *Get Momentum: How to Start When You're Stuck*, (Hoboken, NJ, Wiley; 2016) ISBN-10: 1119180260 (120 pages)
- Note: This book will be issued to students on EL 1. It is provided by the author and students are allowed to keep it. All other books must be returned to ACSC.

Total Page Count: Approximately 1,300

Optional: Andy Christiansen, *The 40: 40 Principle: Are You Really Connected or Just Linked? How to Create Powerful, inspiring Conversations That Lead to Greater Success* (Bloomington, IN: WestBow Press, 2010) ISBN 978-1-4497-0071-3 (136 pages)

Optional: Ryan Holiday, *The Obstacle Is the Way: The Timeless Art of Turning Trials into Triumph*: (Portfolio/Penguin Books, NYC, NY, 2104) ISBN-10: 1591846358 (224 pages)

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ROADMAP:

Over the course of 14 days, students will reflect on the following questions:

- EL 1: What does **lead by design** mean and how can I **intentionally develop**?

- EL 2: What is my **primary voice** for **communicating** and how does that impact others?

- EL 3: What are my **natural strengths** based on my MBTI personality type?

- EL 4: What are my **natural weaknesses** based on my MBTI personality type?

- EL 5: How can I **get momentum** when I feel stuck?

- EL 6: How strong is my **judgment** in the countless number of everyday decisions?

- EL 7: How can this analogy of **shifting gears** help me be more present and productive?

- EL 8: Am I doing the right things based on my **core nature of work**?

- EL 9: Am I willing to **rumble with vulnerability**?

- EL 10: How can I incorporate **design thinking** into my problem-solving toolkit?

- EL 11: Is it possible to be steady, **to be still**, while the world spins around you?

- EL 12: How much time do I spend doing **essential tasks** versus everything else?

- EL 13: Research Day

- EL 14: So what? How can I apply the new knowledge I have gained?

- EL 15: Makeup Day

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LESSONS:

EL 1 - LEADERS BY DESIGN (18 Aug)
(Primary Instructors: Bill DeMarco and Maj Shawn West)

- **LESSON OVERVIEW**: This lesson has three parts:
  - Personal introductions and overview of the course, to include review of the syllabus, expectations, and deliverables.
  - Discuss the question - what does it mean to "lead by design?" This course is designed for students to examine the "art of you." It is important to have a solid understanding of who you are and what makes you tick before stepping into any leadership position. While the concept of self-awareness and self-understanding is easy to grasp, achieving it can be a lifelong journey.
  - Discuss Gordon MacKenzie's *Orbiting the Giant Hairball*, and how the organizations and groups for which we belong impact our development.

- **REQUIRED READING**:
  - Gordon MacKenzie, *Orbiting the Giant Hairball* (whole book)
  - Epictetus, *A Manual for Living* (1-8)

- **OPTIONAL RESOURCES** (not required, can assist learning for those interested):
  - TEDx Talk: Great leadership starts with self-leadership | Lars Sudmann
  - Podcast: Coaching for Leaders: The Way to Be More Self-Aware, with Tasha Eurich
  - Article: Who Is Epictetus?

EL 2 - GiANT'S INCREASING INFLUENCE (FIVE VOICES) (25 Aug)
(Primary Instructor: Amy Norton)

- **LESSON OVERVIEW**: *Most people are in it for themselves.* We don't like to think that, mind you. We typically consider ourselves, as a whole, to be rather altruistic. While most of us would count our relationships as congenial at worst and certainly non-self-serving at best, the truth is that at the end of the relationship for most of us stands a transaction. There is something we want to get out of it. That transaction isn't necessarily negative. You want the best from the people you lead. You are working toward something great together and they have an important part to play. You know what you are providing can solve a problem they have. We are typically looking for an end in mind, whether consciously or unconsciously. Think about it this way: how carefully do you choose your words or your timing in a conversation in order to obtain the end result you want? Be honest with yourself. We might not go into the conversation thinking about manipulating things to our benefit, but many times we do just that. We know that if we approach the person at the right moment, using the right words, our chances of getting what we're after increase. Amy Norton will dive deeply into these concepts and more.

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- **REQUIRED READING**:
  - Epictetus, *A Manual for Living* (9-17)

- **DELIVERABLE**:
  - Prior to the lesson, complete the Five Voices Assessment:
    - Set up free account on GiANT TV. Sign up for free here.
    - Go to Media. Watch two videos in the *Where Are You Now* series
      - "What is your leadership voice?" (9 minutes)
      - "Are you your best self?" (5 minutes)
    - Go to Assessments and complete the 5 Voices Assessment. Read through your Voice order descriptions and bring results to class.
      - https://www.giant.tv/assessments

- **OPTIONAL RESOURCES** (not required, can assist learning for those interested):
  - Go to Media. Watch two videos in *The 100X Leader* series
    - "What is a 100X leader?" (3 minutes)
    - "Why leadership has changed in the 21st Century" (9 minutes)
  - Podcast: GiANT's Liberator Podcast - The 4 C's of Unlocking Trust & Influence

EL 3 - MBTI DEEP DIVE (1 Sep)
(Primary Instructor: Nicole Pinkham)

- **LESSON OVERVIEW**: We will spend some time dissecting our MBTI types, examining our strengths and our kryptonite. We will take MBTI to the next level. In addition to understanding where we get our energy, and how we process information, make decisions, and live life—Type Dynamics will help us understand how we interact and how we annoy others. Nicole Pinkham will visit from Auburn University: a true master of all things Myers-Briggs.

- **REQUIRED READING**:
  - Epictetus, *A Manual for Living* (18-29)

- **DELIVERABLE**:
  - Prior to the lesson, complete the personality assessment at: https://www.16personalities.com/free-personality-test (bring results to class)

EL 4 - EXPLORING YOUR KRYPTONITE (8 Sep)
(Primary Instructor: Bill DeMarco)

- **LESSON OVERVIEW**: Once we know ourselves, lead ourselves, and lead our teams— what are the weaknesses or Kryptonite of our personality types? We will spend time discussing the downsides of our MBTI.

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- **REQUIRED READING**:
  - Epictetus, *A Manual for Living* (30-35)

EL 5 - GET MOMENTUM (15 Sep)
(Primary Instructors: Jason and Jodi Womack)

- **LESSON OVERVIEW**: Do you sometimes feel stuck, despite real efforts to gain momentum on goals we've set? Momentum means you're doing more than simply getting things done. It's that feeling of satisfaction, the belief that we can achieve big goals and complete important projects that fulfill us both personally and professionally. Get Momentum coaches us in the mindset, skill set, and toolkit required to make progress on the items we have set on our life and work goals faster and easier, while living a less stressful, more meaningful life. Jason and Jodi provide valuable insights into the psychology of change and how to direct our focus to experience fulfillment at work and in life.

- **REQUIRED READING**:
  - Jason W. Womack, Jodi Womack *Get Momentum* (whole book)
  - Epictetus, *A Manual for Living* (36-43)

EL 6 - JUDGEMENT INDEX (22 Sep)
(Primary Instructor: Andy Christiansen)

- **LESSON OVERVIEW**: Andy Christiansen will be our guest and walk us through a leadership assessment known as The Judgment Index. Yes, personality profiling, psychiatric wellness indexes, and measuring rational intelligence are important. But more crucial to the success of an organization is accurately assessing an individual's judgment abilities. No matter how impressive their personality or intellect, people from the shop-floor to the top-floor will simply not perform as desired if their judgment is poor. Andy will walk us through this odd test that you took, explain how to read the results, and offer suggestions on what you can do moving forward.

- **REQUIRED READING**:
  - Epictetus, *A Manual for Living* (44-50)

- **DELIVERABLE**:
  - Complete the judgement index assessment and bring results to class. Login info will be sent prior to class.

- **OPTIONAL RESOURCES** (not required, can assist learning for those interested):
  - Video: Guide to Taking the JI
  - Andy Christiansen, *The 40:40 Principle*

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<u>**EL 7 - FIVE GEARS (29 Sep)**</u>
(Primary Instructor: Maj Shawn West)

- **LESSON OVERVIEW**: Ever wonder how to be present and productive when there is never enough time? The 5 Gears concept and model attempt to get at just that. Greater good/liberating leaders use their influence for the benefits of others. We will look at a day in the life of a leader through the lens of having a variety of gears—a powerful tool developed by GiANT. The "driver" is required to shift up and down through various gears in order perform various functions.

- **REQUIRED READING**:
    o Epictetus, *A Manual for Living* (50-59)

- **OPTIONAL RESOURCES** (not required, can assist learning for those interested):
    o Podcast: <u>Coaching for Leaders: How to Be Present and Productive</u>

<u>**EL 8 - CORE NATURE OF WORK (20 Oct)**</u>
(Primary Instructor: Karla Nelson)

- **LESSON OVERVIEW**: It's Time to Revolutionize the Way Work is Done. We approach work in the 21st Century with a 19th work style. Gallup has conducted research for the past 30 years on employee engagement, and have reported that "70% of people hate their jobs" in the U.S and "89% hate their jobs internationally." Think about the impact on a person's health, relationships and finances. The often 'one-sized' fits all of making the people fit the work, versus the work fit the people isn't effective and leaves leadership and the team frustrated and exhausted. We know we shouldn't try to shove a square peg into a round hole, however, that's precisely what often happens. W. Edwards Deming, at the conclusions of his career, estimated that 94% of failure is process failure, not people failure. However, the first reactions from leadership down the chain of command, is to blame each other when anything goes wrong. This undermines trust and creates friction. A better way is to understand WHO is on the team and teach a process that puts the *right people, in the right place, at the right time, doing the right thing*.

- **REQUIRED READING**:
    o Epictetus, *A Manual for Living* (60-68)

- **DELIVERABLE**:
    o **Book Reflection** - in accordance with instructions on Canvas (25%)
    o Complete the WHO-DO™ assessment and bring results to class. Login info will be sent prior to class.

- **OPTIONAL RESOURCES** (not required, can assist learning for those interested):
    o Podcast: <u>The People Catalysts: The WHO-DO: Deep Dive</u>
    o Podcast: <u>The People Catalysts: MBTI and the WHO-DO</u>

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EL 9 - EMBRACING VULNERABILITY AS A LEADER (27 Oct)
(Primary Instructor: Nicole Pinkham)

- **LESSON OVERVIEW**: Brene Brown's latest book, Dare to Lead, offers leaders practical advice on how to connect more deeply with people. Below is the description of her book, of which we will discuss in class.
    - Leadership is not about titles, status, and wielding power. A leader is anyone who takes responsibility for recognizing the potential in people and ideas, and has the courage to develop that potential. When we dare to lead, we don't pretend to have the right answers; we stay curious and ask the right questions. We don't see power as finite and hoard it; we know that power becomes infinite when we share it with others. We don't avoid difficult conversations and situations; we lean into vulnerability when it's necessary to do good work.

- **REQUIRED READING**:
    - Brene Brown, *Dare to Lead* (whole book)
    - Epictetus, *A Manual for Living* (69-78)

EL 10 - DESIGN THINKING (3 Nov)
(Primary Instructor: Megan Allison and Lt Col Brandie Jefferies)

- **LESSON OVERVIEW**: Design Thinking is an iterative process in which we seek to understand the user, challenge assumptions, and redefine problems in an attempt to identify alternative strategies and solutions that might not be instantly apparent with our initial level of understanding. At the same time, Design Thinking provides a solution-based approach to solving problems. It is a way of thinking and working as well as a collection of hands-on methods. Can we apply Design Thinking to our leadership and get a deeper understanding of where we might excel and where we struggle? Brandie and Megan will take us through an exercise to help us decide.

- **REQUIRED READING**:
    - Epictetus, *A Manual for Living* (79-88)

- **OPTIONAL RESOURCES** (not required, can assist learning for those interested):
    - Article: What is Design Thinking?
    - TED Talk: Tim Brown | Designers - Think Big!
    - Article: 5 Stages in the Design Thinking Process

EL 11 - WHAT STOICISM CAN OFFER 21ST CENTURY LEADERS (10 Nov)
(Primary Instructors: Bill DeMarco and Maj Shawn West)

- **LESSON OVERVIEW**: This lesson will have two parts:
    - 1.5 hours: Stoicism is a philosophy founded in the Hellenistic period and was strongly influenced by Socrates. It is based on the thought that in order to achieve

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intellectual and moral perfection, an individual must be impervious to emotions such as fear and envy. A leader must rely on logic, physics and ethics to make sound decisions. This seminar will examine stoicism, specifically through Ryan Holiday's book, and its applicability to today.

- o 1.5 hours: Discuss how to operationalize the concept of mind, body, spirit such that we can be more intentional in these areas.

- **REQUIRED READING**:
  - o Ryan Holiday, *Stillness Is the Key* (whole book)

- **OPTIONAL RESOURCES** (not required, can assist learning for those interested):
  - o Podcast: The Art of Manliness #565 -Stillness is the Key
  - o Video: The Obstacle Is the Way by Ryan Holiday (Summary)
  - o Book: Ryan Holiday, *The Obstacle Is the Way*
  - o Article: Leadership and the importance of body, mind and spirit

- **DELIVERABLES**:
  - o During class: Students flip through **journals** to show entries. Instructors will not read anything; we are validating that the journal was used. (10%)

EL 12 - AN ESSENTIALIST'S GUIDE TO DECISION MAKING (17 Nov)
(Primary Instructor: Maj Shawn West)

- **LESSON OVERVIEW**: This lesson will have two parts:
  - o 1.5 hours: Several sources suggest that the average adult makes 35,000 decisions a day. While majority of these decisions happen subconsciously, the point is clear that we make a lot of decisions. The question is, are we grounded in the knowledge of who we are so that we can make better decisions more quickly; versus simply reacting to decisions merely on gut instinct. Also, Greg McKeown makes a strong case that we need to decide to say "no" more often. When we compare his theory to the self-awareness we have gained throughout this course, what does that mean with regard to how we make decisions as leaders? How does our personality, tendencies, and habits influence our decisions? What, if anything, do we need to change so that we can better lead?

  - o 1.5 hours: Time for students to work on their final project in class.

- **REQUIRED READING**:
  - o Greg McKeown, *Essentialism* (whole book)

EL 13 - RESEARCH DAY (24 Nov)
- No class. This is time for students to work on final presentations and papers.

EL 14 - PROJECT PRESENTATION DAY (1 Dec)
(Primary Instructors: Students)

- **LESSON OVERVIEW**: Students will present their group project to the rest of the class.

- **DELIVERABLES**:
  - During class: **Group Project** (25%)
  - **Individual Paper and Dashboard** - in accordance with instructions on Canvas (30%)

EL 15 - MAKE-UP DAY (8 Dec)
- No class. This is a backup date to use if necessary.

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Appendix C: LbD Course Objectives and Outcomes

COURSE OBJECTIVES

The emphasis of this course is upon habits of mind and habits of practice—supporting the cultivation of the underlying qualities, dispositions, and routines that contribute to great leadership. Our course objectives are:

1. Understand theories and practices of personal and organizational leadership.
2. Understand personal development as a leader in the profession of arms.
3. Apply ethical principles to challenges of field grade military leadership.

COURSE OUTCOMES

Leaders by Design addresses Intermediate Joint Learning Areas (JLAs) for Joint Professional Military Education (JPME), established by the Chairman of the Joint Chiefs of Staff via the Officer Professional Military Education Policy (OPMEP), CJCSI 1800.01F, signed 15 May 2020. The course supports the following JLAs through the course content listed below them:

Joint Learning Area 1 – Strategic Thinking and Communication
Joint Learning Area 2 – Profession of Arms
Joint Learning Area 6 – Globally Integrated Operations

Appendix D: Leaders by Design Student Paper and Link

Please see the link for a sample of student leader philosophy papers:
https://demarcobanter.wordpress.com/2013/08/03/applied-leadership-philosophy-examples/

Below also find a sample of a random student paper

Leaders by DESIGN "4.2" Paper

by

Major XXX

Seminar XX, Student Number XXXX

Individual Leadership Paper

7 March 20XX

Air Command and Staff College

Maxwell AFB, AL

Leaders by DESIGN "4.2" Paper
XX-XXXX

People would rather follow a leader who is always real than one who is always right.

— Craig Groeschel (Life.Church)

I have really come to believe there is no leadership model which will work for everyone. There are so many books and speakers available to tell you how to be, how to act, or steps to follow, but in the end, we all have the capacity to be leaders in our own way; one true to ourselves. I have heard before that leadership is an art and science. Perhaps it means to describe the evolution of a person's leadership in which the science is the study of history and experiences, while the art refers to the present and future paths. It is trying to determine what worked and what didn't in a near "scientific method" sort of way. In using past experiences to help form our basis, we then work creatively and artistically in the present and future not really having the end picture, but knowing only a vision in our heads of what it should be.

The Leaders by Design class has really helped add to my "palate" of colors toward my leadership art, while investigating who I am and dug deeper to why I lead the way I do. Each speaker and book communicated to me in a different way and in this paper, I will describe what stood out the most, what the class did to help focus on strengths and mitigate weakness, and how I plan to use it toward my career goal of being a commander. Everything learned has helped me become a better and *real* leader, rather than search for being the *right* leader.

In the course of 13 years so far in the military, I have to admit the bureaucracy and red tape of the organization has suppressed my raging forest fire of motivation to crackling embers. It is easy to get overwhelmed in the macroscopic view and see yourself as just a small part of a big machine. I realize if I were to leave the Air Force tomorrow, the mission would still carry on. After reading *Get Momentum* by Jason and Jodi Womack and having them speak in class, I was

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refreshed in a sense of purpose and a thought that even a grain of sand becomes a pearl when cultivated enough.

In their book, the main thing which stood out was the first stage of getting momentum presented as the question, "What do I want to be known for?"[1] In class, they expanded it to also ask, "What do I want to be known as?" It was interesting to me in the differences of the last word as they shared the first resulted in a verb, the second as a noun. Someone may want to be known for (building) a great bridge, (inventing) the next smartphone, (creating) a small business. Another may want to be known as a teacher, volunteer, genius, or leader. What this all came down to was spending your time, money, and focus on creating your legacy.[2] This is what helps me come down from the overwhelming macroscopic Air Force view.

So, the truth is if I left the Air Force tomorrow, the mission would still get finished. But it is also true I can have a big impact by focusing on what I want to be known as. I have spent so many hours focusing on the verb in working projects, building reports, and finishing tasks which don't leave a legacy. By focusing on what I want to be known as, I gain clarity to my true purpose in the big machine and become a commander, mentor, friend, and leader. In a different perspective, I don't remember what people did at work or what projects they completed, but I do remember who they are and what they meant to me in our relationships. In that light, I need to focus on how I am known rather than known for what I do. The relationships I build as a leader and commander will leave a longer and meaningful legacy to the purposeful microcosm of the organization compared to the tasks completed for the whole of the larger Air Force. This perspective helped me see my purpose in a smaller, but more meaningful way to help re-ignite my motivation. It allows me to develop into a valuable pearl from a grain of sand in a big ocean.

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I may not mean much in the big ocean, but I mean something to a select few who know me as the valuable pearl.

Less, but better.

— Greg McKeown (*Essentialism*)

Another reoccurring theme I saw throughout the class directly tied to my challenge of time management. This skill (or lack thereof) has impeded my ability to do the things I have wanted to do well and with meaning for my entire career. My wife would whole-heartedly agree. I can attribute this similar to a balance in which time management is on one side and detail oriented and organized on the other. I am so focused on organization and remembering all the details of a task I completely forget the entire purpose behind the task and spend time uselessly in areas that don't contribute to the overall goal. Once again, Jason and Jodi Womack and Greg McKeown in their books turned my perspective around.

I first gravitated to the concept of focusing on one thing at a time. While it is tempting to consider changing many things at once, the Womacks suggest to choose less, more.[3] I often get distracted being so detail oriented and start to concentrate on smaller "low hanging fruit" tasks to make sure all is in order before big prioritized events need attention. In addition, I can put many of these items before interacting with people and relationships to get them "out of the way." The idea of choosing less, more of the time, helped me start to think about my priorities and fight the urge to get too detailed.

Where the slight switch really had the biggest impact was with Greg McKeown's book, *Essentialism*. His concept is similar, but spoke to me differently by the idea of less, but better.[4] The idea of not getting more things done, but rather getting the right things done resonated with me on a deeper level.[5] I presented myself the question, "Am I doing things right now that matter

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to my overall goal and focused on the priority at hand?" The question also made me focus on the first topic considering what I wanted to be known as. This question started to roll into every activity I did.

A simple example of less, but better, started at home. In our rigorous Air Command and Staff College (ACSC) curriculum, I was being detail oriented and trying to read every page assigned as though it were a checklist, however at the expense of being known as a good husband and outgoing colleague. Where were my real priorities and could I be doing less, but better? I started to relax (not give up) my tendencies, read the overview (thesis), conclusion, and beginning of each paragraph. I came to class only slightly less informed, but had time at night to spend with my wife and I had a much better attitude as I had time to focus some on my family life instead of reading until 11 pm. In trying to quantify it, it would be like being 20% less informed with knowledge material, but 80% better as a husband and coworker. It was a matter of less, but better.

The idea which really solidified the less, but better concept, was the presentation of the phrase, "If you don't prioritize your life, someone else will."[6] First, as a person who likes the thought of controlling their own life compared to others doing it for me, this was received with healthy rejection. This phrase seemed to jump into my gut and instinctively resist others prioritizing my life. I am in control of my life, or am I? I started realizing where people or tasks were controlling me and I had to take control by prioritizing what was really important. Second, as thoughts of being a future commander came into my head, I could see every email, calendar item, meeting, subordinate, and "emergency" take control of my life as if it were happening only moments away. If I were to figure out how to be a successful commander and focus on what really mattered, I knew I had to prioritize my life before everyone in the squadron did it for

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me…and I knew they would. I know it would not be a malicious intent, but the nature of the job starts to demand it unless I keep my focus and priorities on what matters and always consider if I am doing the things to shape who I am known as.

There is nothing either good or bad, but thinking makes it so.

— William Shakespeare

Attitude is everything. I have heard it many times and have seen it on display consistently in my life through an eternally positive father. I have never understood why I have a predisposition to look at challenges as bad growing up in that positive environment, but it is something as a commander I must deal with. Our current Chief of Staff of the Air Force, General David Goldfein, has stated in forums (as passed to me via notes taken at his first wing commander's call in late January of 2017), the squadron takes on the attitude and culture of the commander after around six weeks. As I approach the possibility of command, the reality of the statement is sobering.

What I have learned recently by correlation is you can't just change your attitude by thinking it, willing it, or faking it. Since the beginning of ACSC, teachers and peers have discussed if it is necessary to have "authentic" leadership and as stated before towards my belief, you must be *real* as a leader as opposed to *right*. If you are unauthentic to play the role of a leader, then you are just trying to be right in the moment. Where the correlation presents itself is where attitude meets with perception.

Perception is the basis for attitude and how to allow a positive attitude to truly be authentic. I was made aware of this in Ryan Holiday's book, *The Obstacle is the Way*. His first (of three) main parts is devoted to perception and properly framing the mind. His first chapter is even correctly called, "The Discipline of Perception" instead of the discipline of attitude. It is a

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paradigm shift to see things in such a way in which nothing makes us feel the way we do about them, but instead we choose to give in to such feelings.[7] This reframing of my thoughts allowed me to see things in a less emotional way. I can think of many cases where my feelings and instant emotions would take over in supervisory roles, only to require an apology later. This must absolutely be resolved before assuming any command and the discipline of perception is crucial.

As a matter of practicing this discipline, I tried testing myself mentally with some "seemingly bad" commander like scenarios. I imagined a DUI case, a death in the squadron, or a failure during a mission. Putting initial emotion aside and framing a new perspective, perhaps a teaching and mentoring moment can occur in the DUI case. Maybe a new found purpose and process can be created by the failure. Perhaps the squadron can further grow and nurture a culture of family in the tragedy of a death. Everything can be made into a better attitude if the perspective is in the right place and framed appropriately.

The greatest leader is not necessarily the one who does the greatest things. They are the one who gets the people to do the greatest things.

— Ronald Reagan

When I think about my role in the Air Force, the single most important thing that drives my passion is the privilege to be able to influence people in a positive way. I see a vision of myself as a leader communicating to others in a way which makes them feel good about themselves and about what they do. I am most empowered and have an overwhelming sense of accomplishment when I have helped others see the potential in themselves beyond what they would see otherwise. This is the reason I am driven to be a squadron commander in the future.

The best analogy I related to in the course came from Gordon MacKenzie's book, *Orbiting the Giant Hairball*. He presented two images, one of a pyramid and the other of a plum

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tree. Of course with the pyramid, it directly made me think of the Air Force structure of a 4-star

general down to the Lieutenants and Sergeants. In the beginning, I could not imagine where the

story was going with a plum tree. Eventually, the plum tree became exactly what I want my

command to look like if I am ever privileged with the position. The plumb tree is supported by

top management (the squadron commander) and allows resources and nutrients to get to the

branches and fruit (the Airmen). It supports what makes the tree valuable and enables stability

for increased growth. It holds it firm in gusty winds, lifts it from a flood, and gives it the freedom

to move without separation. This is a stark difference from the pyramid, where the leader is on

top and the workers are crushed at the bottom. The pyramid is a tomb while the tree is a living

organism.[8] I want our squadron to be living, where I support Airmen, mentor and feed into their

potential, and allow them room to grow, flourish, and even blow in the wind with some mistakes.

I have learned many things in the course and even more in how it relates to my thoughts

on leadership. It has allowed me to think deeper into whom I want to be known as, in prioritizing

my life before others do it for me regarding time management and how it fits into my overall

focus, have a clearer perspective to gain a better attitude, and to form my leadership style to

resemble a plum tree compared to a pyramid. I know I have strengths to continually build and

weaknesses to mitigate, but the concepts from class and the books read have given me a better

way to look at things and in a way that communicated better than in similar messages before.

Similar to learning any new skill before the first attempt, I am excited to put these lessons

learned to practice and positively influence the next generation of Airmen.

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[1] Jason W. Womack and Jodi Womack, *Get Momentum: How to Start When You're Stuck* (Hoboken, NJ: John Wiley & Sons, 2016), 28.

[2] Ibid., 32.

[3] Ibid., 109.

[4] Greg McKeown, *Essentialism: The Disciplined Pursuit of Less* (New York: Currency/Penguin, 2014), 5.

[5] Ibid.

[6] Ibid., 10.

[7] Ryan Holiday, *The Obstacle is the Way: The Timeless Art of Turning Trials into Triumph* (New York: Portfolio/Penguin, 2014), 16.

[8] Gordon MacKenzie, *Orbiting the Giant Hairball: A Corporate Fool's Guide to Surviving with Grace* (New York: Viking/Penguin, 1998), 179.

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Innovators by Design (ibD) 5.0

SYLLABUS

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JOINT PROFESSIONAL MILITARY EDUCATION
PHASE I INTERMEDIATE LEVEL COURSE

UNITED STATES AIR FORCE
AIR COMMAND AND STAFF COLLEGE
21st Century Leaders for 21st Century Challenges

Innovators by Design: ibD

**COURSE INSTRUCTORS**:

Professor J. William "Bill" DeMarco
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Course Flow:

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COURSE DESCRIPTION/CONTEXT: Accelerate Change or Lose: The term innovation seems to be a top priority for most organizations today. The CJCS and CSAF make remarks concerning how we need to be innovative within our services and the DOD, but what does it mean to innovate and how do we make it happen? Through readings, class discussions, and *Praxeum*, we explore frameworks to discover how different kinds of thinkers and leaders can create constructive conflict, channel it, and develop something completely new.

https://www.hoover.org/events/conversation-chief-staff-gen-charles-q-brown-jr

THESIS and SCOPE: Why has innovation become a buzzword? The most recent National Security Strategy (NSS) attempts to refocus the U.S. back towards the country's greatest strategic competitors by stating:

> *"New commercial technology will change society and, ultimately, the character of war. The fact that many technological developments will come from the commercial sector means that state competitors and non-state actors will also have access to them, a fact that risks eroding the conventional overmatch to which our Nation has grown accustomed. Maintaining the Department's technological advantage will require changes to industry culture, investment sources, and protection across the National Security Innovation Base."*

The new strategy tells the Nation to "Organize for innovation" but do we know how? The NSS further states:

> *"The Department of Defense management structure and processes are not written in stone—they are a means to an end—empowering the warfighter with the knowledge, equipment and support to fight and win. Department leaders will adapt their organizational structures to best support the Joint Force. If current structures hinder substantial increases in lethality or performance, it is or expected that Service Secretaries and Agency heads will consolidate, eliminate, or restructure as needed. The Department's leadership is committed to changes in authorities, granting of waivers, and securing external support for streamlining processes and organizations."*

We are charged with establishing an unmatched twenty-first century National Security Innovation Base that effectively supports Department operations and sustains security and solvency.

American technological innovation and a culture of performance will generate decisive and sustained U.S. military advantages. This is course is the first step towards this much larger goal—educating the warfighter in the finer points of innovation.

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EVALUATION INSTRUMENTS:

Innovation Portfolio (75%):

TABS	DUE DATE
1. 2 x Empathy Interviews	23 Mar
2. Problem Statement	30 Mar
3. Ideation	13 Apr
4. Prototyping	20 Apr
5. Concept Test	20 Apr
6. Mobilize/Partner	20 Apr
7. Final Pitch Slides	20 Apr
	10-20 pages/slides

Oral Presentations (25%):

PRESENTATION TITLE	DUE DATE
1. Empathy Outbrief	16 Mar
2. Elevator Pitch (Problem Statement)	30 Mar
3. Ideation & Prototype Outbrief	13 Apr
4. Customer Feedback / Lessons Learned	13 Apr
5. Final Pitch/Partnership Presentation	20 Apr

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Professor J. William "Bill" DeMarco, Col, USAF (ret), serves as the Chair and Dean of Education Leadership Department, and Professor of Leadership Studies, Air Command and Staff College, Maxwell AFB, Alabama. His Leadership and Command experiences include command at the squadron, group, and region level, as well as serving as ACSC's 44th Commandant. Bill is an adjunct professor with Auburn University in Leadership. He served as a National Security Affairs Fellow at Stanford University's Hoover Institution and is a fellow at The Judge Business School, Cambridge University, England, as well as a senior associate with GiANT Worldwide leadership consulting. He also contributes as a leadership consultant for the National WWII Museum's Corporate Leadership Academy in New Orleans, LA. He is board member for the 100th Bomb Group Foundation and an advisor to Gen-Pol a European think tank focused on gender and policy. A command pilot having qualified in five weapons systems (C-23A, C-12F, C-141B, KC-10A, KC-135R), he holds three masters degrees and is a graduate of the USAF's School of Advanced Air and Space Studies.

Major Timothy Jay (T.J.) Ablay is an Air University Fellow and Instructor in the Department of Airpower at the United States Air Force's Air Command and Staff College. He first enlisted in the USAFas an In-Flight Air Refueling Specialist where he flew on the KC-135R Stratotanker as an Evaluator/Instructor Boom Operator from 2002-2008. He has flown over 450 combat hours in support of Operation Iraqi Freedom/Enduring Freedom. As an Acquisitions Officer, he has held several assignments at the branch, group, division, and headquarters levels. Additionally, he completed the Logistics Career Broadening Program completing tours in aircraft commodities, supply chain, and program management. Prior to his current position, Major Ablay was the Chief of Strategic Engagements, Office of the Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics, Headquarters U.S. Air Force, the Pentagon, Washington D.C.

Jodi Womack: Jodi helps clients get momentum where they need it most in their lives. Her firsthand experience of business management, marketing and customer service translate to the fast paced and demanding roles that face busy professionals today. She recognizes the common theme throughout audiences that busy, hardworking people have more work to do than time to do it in... and the workload typically doesn't stop at the end of the day but continues at home with even more responsibilities. She coauthored the book, Get Momentum (Wiley, 2016) and cofounded the Get Momentum Leadership Academy in 2012. Her Masters in Psychology comes in handy when coaching clients with difficult situations at work and with the overwhelm of life. She recently moved to Montgomery, Alabama and is adjusting to being called "Ma'am."

Major Ben Johnson: Maj Johnson is an Instructor in the Department of Leader and Research Development at the United States Air Force's Air Command and Staff College (ACSC). Prior to instructing at ACSC, Maj Johnson was a member of ACSC's AY21 class. He is a prior enlisted Civil Engineering troop. He received his commission from OTS and after graduating pilot training at Columbus AFB, MS, Maj Johnson was assigned to fly the KC-135 while stationed at MacDill AFB, FL followed by an assignment as a T-1A Instructor Pilot at Vance AFB, OK. Most recently, he was the Chief of Command Post at MacDill AFB, FL. Maj Johnson graduated with a BS in Criminal Justice and MS in Public Affairs from Park University. He is a senior pilot with more than 3,000 flying hours in the KC-135 and T-1 aircraft.

VISITING EXPERTS:

Dr. Jeff DeGraff: Jeff DeGraff is an advisor to Fortune 500 companies, a top innovation speaker, a business professor at the Ross School of Business at the University of Michigan, and a bestselling author. He founded the Innovatrium, an innovation consulting firm focusing on creating innovation culture, capability, and community. He earned his nickname, the "Dean of Innovation," while working as an

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executive for Domino's Pizza in his youth, where he accelerated Domino's growth from a regional success story to an international franchise phenomenon. He is also the author on several books on how teams innovate, his most recent being The Innovation Code: The Creative Power of Constructive Conflict.

Maj Anthony Bunker: Wedge has spent his career focused on employing weapons from the legendary B-1 Bomber and has dropped weapons in anger in three hostile nations. As the US shifted its focus from the Middle East to the Pacific, likewise Wedge shifted his focus to the shrinking capability divide between the US and its near peers. This shrinking divide has created a necessity across the 7BW to rethink the way we operate. Wedge's mission is to advocate for the disruption of the status quo, instruct airmen on methodologies for attacking pain points, and empower airmen to take risks. Wedge believes that remaining the greatest country in the world is not a guarantee and that it is up to all of us to radically fight to be better.

Lt Col Scott Van DeWater: Experienced Special Operations combat aviator with a demonstrated history of Leadership, Vision, and Technology expertise. Skilled in Intrapreneurship, Research and Development (R&D), and Information Technology. Strong technical background with operational experience and a Bachelor of Science in Mathematics and Physics from United States Air Force Academy.

Jason Brown: Jason M. Brown, Col, USAF (ret) is a professional services manager at Google. He leads a cloud program management and technical support team responsible for delivering Google products and services to public sector customers, including the Department of Defense, Department of Energy, the National Institutes of Health, the U.S. Postal Service, the Department of Veterans Affairs, and the U.S. Intelligence Community. Jason previously served 26 years as an intelligence officer in the U.S. Air Force. While serving, he commanded several large organizations including the 480th Intelligence Surveillance and Reconnaissance Wing. He also helped establish several innovation initiatives through AFWERX and AF Ventures. Jason also led a national mission initiative at the Joint Artificial Intelligence Center, and founded the Air Force Artificial Intelligence Accelerator at MIT.

Colonel Douglas D. DeMaio: Col "Cinco" DeMaio is the Commander of the 187th Fighter Wing, Dannelly Field, Ala. As commander, he oversees the operations of over 1,400 personnel and 22 permanently assigned F-16C+ Fighting Falcons in support of the State of Alabama and the federal government. The wing also provides support to four geographically separated units. Colonel DeMaio earned his commission from the United States Air Force Academy in 1991. Upon completion of Under Graduate Pilot Training at Sheppard Air Force Base, Texas, he was assigned to Luke Air Force Base, Ariz., as the 56th Transportation Squadron Vehicle Maintenance and Vehicle Operations flight commander. Upon completion of F-16 training at Luke AFB, he went on to serve in a variety of roles at the squadron, group and wing-level. The colonel has served as a squadron commander, the director of staff and as the Director of the Deployable Air Operations Center. DeMaio attended the Eisenhower School for National Security at the National Defense University, Fort McNair, Washington D.C., where he earned his master's in Long Term Strategy Development. Prior to this assignment, he served as the Vice Commander and Director of Doctrine Development at the Curtis E. LeMay Center, Maxwell AFB, Ala.

Col Johnny Barnes: Johnny Barnes is Director of the Air Education and Training Command and Air University Liaison Office in the National Capital Region, as well as Director of the Air Force Fellows Program. He served as commander of the 9th Air Refueling Squadron from 2009 – 2011. He also served as the deployed commander of the largest KC-10 unit in the world, the 908th Expeditionary Air Refueling Squadron at Al Dhafra AB, United Arab Emirates, in 2010, where his crews delivered over 50% of the fuel over Afghanistan for Operation Enduring Freedom. Following his command, Col Barnes was the Deputy Commander, 60th Operations Group, Travis AFB, CA. He served in several capacities at Air University, including the chair of the Joint Warfighting Department, Air Command and Staff College. Prior to his current assignment he was the Vice Wing Commander for the 380 Expeditionary Air Wing, with over 3500

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joint and coalition warriors and seven Major Weapons Systems employed in Strategic, Operational, and Tactical missions in the Middle East. He is a command pilot, having logged over 3000 flight hours.

Lt Col Newcomer: Lt Col Jason M. Newcomer, D.B.A. is an Associate Dean of Education at the Air Command and Staff College, Maxwell Air Force Base, AL. He leads diversity, equity, inclusion, and access efforts for the 500-student and 140 faculty/staff resident college. He also manages the colleges learning management system, PhD selection program, and advises the Commandant on organizational change and leadership strategies. He is an assistant professor of leadership studies and has numerous publications and conference presentations in the leadership, management, and aviation fields. He holds a Doctorate in Business Administration specializing in leadership, and a Masters in Military Operational Art and Science. Lt Col Newcomer is a certified professional innovator (CPI), an innovation coach, and is a graduate from the Stanford University design school.

Lt Col Mark Jacobsen: Lt Col Mark D. Jacobsen is a Professor of Strategy and Security Studies and the Director of Staff at the School of Advanced Air and Space Studies (SAASS), Maxwell AFB, AL. Lt Col Jacobsen received his commission in 2002 from the United States Air Force Academy, with a BS in Astronautical Engineering. He served as an Olmsted scholar in Amman, Jordan, where he obtained a Master of Arts in Conflict Resolution. He also holds a Master of Arts in International Relations and a Master of Philosophy in Military Strategy. In 2018 he earned his Doctor of Philosophy in Political Science from Stanford University. His research focused on fragmentation and cohesion among armed groups in civil wars. Lt Col Mark Jacobsen is C-17 Instructor Pilot and Arabic-speaking Middle East Regional Affairs Specialist. He is also a defense intrapreneur, who has used his unusual career to promote new ideas and develop new capabilities for the Air Force. In 2013 cofounded the Defense Entrepreneurs Forum (DEF), a 501(c)3 organization committed to promoting innovative thinking within the Department of Defense. He later founded and led a 501(c)3 nonprofit called Uplift Aeronautics, aimed at using drones to deliver humanitarian supplies inside conflict zones. From 2017-2020 Lt Col Jacobsen worked at the Defense Innovation Unit (DIU) in Silicon Valley, where he founded and led a drone software development team called Rogue Squadron.

Maj Steve Lauver: Maj. Steven D. Lauver is the Deputy Director of AFVentures at AFWERX. As Deputy Director, he leads a team that is responsible for building trust and awareness with the startup and venture ecosystems and for developing and testing pathways to deliver cutting edge, dual-use technology to the warfighter, faster. Maj Lauver was born in Charleston, South Carolina. He entered the Air Force in May 2011 as a graduate of the U.S. Air Force Academy. He has served 7 years on Active Duty, during which time he has been stationed at Sheppard Air Force Base, TX, Hurlburt Field, FL and the Pentagon and has deployed four times in support of Operations Inherent Resolve and Freedom Sentinel. Prior to his current position, the Major was a Tactics Officer and U-28A Aircraft Commander, 319th Special Operations Squadron, Hurlburt Field, FL.

Brig General (Ret) Trent Edwards: Trent is a former Director, Air Force Budget Operations and Personnel. Formulated and executed $80 billion Air Force daily operating, military personnel and civilian pay budgets. Served previously as the Programmer and CFO for $10 billion Air Force Space Command mission which included funding Air Force-wide cyber operations. History of success as senior executive leading people and building teams. Strongly experienced developing, mentoring and inspiring people and building positive organizational culture. Team builder and collaborator with experience scaling organizations. Possesses a strong ability to connect and empower people at the individual and organization-level; putting people and organizations in the best position to succeed. Specializes in education and training and government sector environments. Public speaker on unconscious bias and its impacts on leadership, talent management and organizational success. Passionate and strong history inspiring and mentoring youth and young leaders to succeed in school, work and life.

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Col Gareth Littlechild: Group Captain 'Gaz' Littlechild OBE MA RAF, serves as the inaugural UK Exchange Officer to HQ US Space Force – as Deputy Director S5P (Partnerships Office), where he is responsible for developing international relationships with USSF partners & allies. Following his time with the USSF, Gaz will return to the UK in May 2022 to take up post as Deputy Head Defence Space Programs (Acquisitions) in the newly formed UK Space Command. In Dec 21, Gaz completed his three years as the UK Exchange Officer to the CSAF's Strategic Studies Group (SSG), a small international team responsible directly to the CSAF and VCSAF on matters concerning innovation strategy implementation and emerging tech adoption. During his time on the team, Gaz assisted with standing up the AF/MIT AI Accelerator in Boston and is a graduate of the Project Mercury program with USAFA and Michigan University. Gaz joined the Royal Air Force in 1992, direct from High School, flying Tornado Fighters for most of his operational career. His operational experience includes Iraq, Libya, Afghanistan and Syria. He has also commanded at the O4, 5 and 6 levels, including as the Wing Commander for the UK's Air Operation in Syria & Iraq against ISIS. In staff roles, Gaz has spent time in A5 and as the Senior Exec to the RAF's Chief of Staff, but has more recently (2018) served as the RAF's Capability Development Manager – horizon scanning for future capability across the entire portfolio from offensive cyber to software defined radios. In this role, Gaz was also responsible to the RAF Chief of Staff for the newly developing service innovation ecosystem.

Dr. Neil Stott: Neil Stott was Chief Executive of Keystone Development Trust until April 2015. Keystone is one of the largest development trusts in the country delivering community development, social enterprises and property development. Neil is a Fellow of the Inter University Seminar on Armed Forces and Society, a Fellow in Clayton State University's Center for Social Innovation & Sustainable Entrepreneurship, and an Adjunct Professor in the Faculty of Business Administration at Memorial University, Newfoundland.

Mr. Adlai Wertman: Adlai Wertman is the David C. Bohnett Professor of Social Entrepreneurship at the USC Marshall School. He is the founding Director of the Brittingham Social Enterprise Lab, as well as the Academic Director of the Master of Science in Social Entrepreneurship and the Warren Bennis Scholars programs. Before USC, Adlai spent seven years as CEO of Chrysalis — an LA social enterprise devoted to helping homeless through employment. Prior to Chrysalis, Adlai spent 18 years as an investment banker. He earned his BA in economics from SUNY Stony Brook and his MBA in finance from The Wharton School.

Dr. Paul Johstono: Dr. Paul Johstono is Associate Professor of Leadership Studies at the Air Command and Staff College (ACSC), in Montgomery, AL. Prior to joining ACSC in January 2019, he was Associate Professor for History of Warfare at The Citadel, in Charleston, SC. Dr. Johstono received his Bachelor's Degree in History from Furman University in Greenville, SC (2005), and a Master's Degree (2008) and Ph.D. (2012) in History from Duke University. His articles on popular political organization and violence in antiquity have appeared in Ancient History Bulletin and Archiv für Papyrusforschung, and chapters on ancient insurgency and the impacts of military defeat on warrior classes and military institutions have appeared in volumes of the Brill Companion series on War in the Ancient Mediterranean. He is on the editorial board for the Brill series on War in World History. He is completing his manuscript on the military history of Ptolemaic Egypt, and developing projects on leadership in ancient warfare.

Dr. Amber Batura: Dr. Amber B. Batura is an Assistant Professor of Military and Security Studies in the Department of Leader and Research Development at Air Command and Staff (ACSC) College in Montgomery, AL. Prior to joining ACSC in March 2021, she was an Instructor at Texas Tech University in Lubbock, Texas. She also taught online courses for Texas Tech Costa Rica and the University of Texas Permian Basin. Dr. Batura graduated with her Bachelor of Arts in History from the University of Texas Permian Basin in Odessa, Texas in 2009, a Master of Arts (2012), and a Ph.D. (2018) in History from Texas Tech University. Her specialization looks at the intersection between war and culture and war and society, with a special focus on gender & the military. She has published articles in The NY Times, the Journal of American-East Asian Relations, and has contributed to edited volumes on the Vietnam War. She is

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currently working on a manuscript on the importance of Playboy magazine to soldiers in the Vietnam War.

Lt Col Brandie Jefferies, USAF: Lt Col Jeffries is a core manpower and personnel officer with extensive background in strategic planning and programming. Lt Col Jeffries holds master's degrees from Chapman University in Human Resource Management and Air University in Military Operational Art and Design; a graduate certification from Chapman University in Organizational Leadership; and pursuing a PhD from Grand Canyon University in Industrial and Organizational Psychology. Lt Col Jeffries has served in various capacities over the last eighteen years including assignments at AMC, AFMC, AFSOC, JSOC, AETC, and AU.

Lt Col (ret) Megan Allison: serves as the Deputy Director of Leadership Development in the Ira C. Eaker Center for Leadership Development, Maxwell AFB, Alabama. A command pilot with more than 3,000 hours, she served in various squadron, group and wing positions, flying the C-21A, C-17, MQ-1, MQ-9, and C-146. She commanded the 27th Special Operations Support Squadron at Cannon Air Force Base and served on the Strategic Command Staff. She is a 1998 graduate of the Reserve Officer Training corps program at the University of Virginia, holds two masters degrees (Masters of Business Administration and Masters of Science in National Security & Strategic Studies), and is a graduate of the USN's College of Naval Command & Staff.

Col (ret) James Dryjanski: Experienced executive leader and educator in the international political-military strategy environment. Skilled in Strategy, Operational Planning, Global Logistics, Leadership Development, Project Management, Talent Management, and Air Force Policy, Strategy, and Flight Operations. Dryjanski is a command pilot with more than 3,900 flight hours in the C-21A, C-141B, C-130H3 and the C-130J aircraft. Dryjanski served as the Deputy Director of Operations and Plans at U.S. Transportation Command, Scott Air Force Base, Illinois. Before taking command of the Barnes Center, Dryjanski was the Commandant of the Air Command and Staff College.

Ms. Kathleen Kennedy: Kathleen Kennedy is Executive Director of the MIT Center for Collective Intelligence, a multidisciplinary center which includes Collective Intelligence Design Lab and Pandemic Response CoLab. She also heads MIT Horizon, an initiative of MIT Open Learning. She is a venture partner at Good Growth Capital.

Dr. Ethan Eagle: Dr. W. Ethan Eagle has been a consultant and innovation coach for the Innovatrium Institute for Innovation for 10 years. As an Advisor to Jeff DeGraff, he has worked with many firms in the Fortune 500 as well as large academic and national lab partners on research and innovation in teams. He has coordinated and run innovation competitions across multiple departments and universities. For the past three years, he has been the instructor for the University of Michigan Certified Professional Innovator Online program. In 2018 Dr. Eagle returned as a faculty member to the University of Maryland. He holds degrees from the University of Maryland in Aerospace Engineering and Mathematics. His PhD is in Aerospace Engineering from the University of Michigan.

Dr. Mark Rowland: Mark is British/Australian and started his career with PwC in corporate finance and then moved to management consulting where he was a strategy consultant to Global 500 companies in Asia Pacific and Europe. Mark then became GM Strategy & Business Development for Australia's largest company, then he was CEO of wagamama in Australia prior to launching a tech startup where he was CEO and Co-founder. After the successful exit of this startup Mark relocated to the US to assist Tony Hsieh with his Downtown Project initiative, which was a $400m project to create an entrepreneurial ecosystem in Las Vegas. Now Mark is the Innovation Actualizer of AFWERX Vegas, an innovation hub that is finding innovation from non-traditional sources to support the US Air Force.

Lt Col Miranda Lashinski: Lieutenant Colonel Miranda S. Lashinski is the Commander, 42d Contracting Squadron, Maxwell Air Force Base, Alabama. In this role, she leads a squadron of 57 military and civilian

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Airmen supporting the 42d Air Base Wing, Air University, the 908th Airlift Wing, and 44 mission partners. She serves as the lead business advisor to the installation's senior leaders and interacts with private industry and various federal agencies. She is responsible for executing over $1.1 billion annually for educational and technical training, base operating support, commodities, construction, and service contracts. Lt Col Lashinski earned her commission from the U.S. Air Force Academy in 2002. She has served within the contracting career field as a squadron commander, warranted contracting officer, Air Staff officer, and director of contracting operations. Further, she was an assistant professor of English at the United States Air Force Academy, where she also served as assistant to the dean of faculty and command mission briefer for the academy superintendent.

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REQUIRED READINGS:

BOOKS:
1. Bahcall, Safi. Loonshots: How to nurture the crazy ideas that win wars, cure diseases, and transform industries. St Martin's Press, 2019.
2. Degraff, Jeff, and Degraff, Staney. *The innovation code: The creative power of constructive conflict.* Barrett-Koehler Publishing, 2017.
3. Grant, Adam. Originals: How non-conformists move the world. Penguin, 2017.
4. Jensen, Benjamin. *Forging the sword: doctrinal change in the US army.* Stanford University Press, 2016.
5. Kubicek, Jeremie, and Steve Cockram. *5 Voices: How to communicate effectively with everyone you lead.* John Wiley & Sons, 2016.
6. MacKenzie, Gordon. *Orbiting the giant hairball: A corporate fool's guide to surviving with grace.* Viking Adult, 1998.
7. Osterwalder, Alexander, and Yves Pigneur. Business model generation: a handbook for visionaries, game changers, and challengers. John Wiley & Sons, 2010.
8. Weiner, Eric. *The geography of genius: a search for the world's most creative places from ancient Athens to Silicon Valley.* Simon and Schuster, 2016.

ARTICLES:
1. Amabile, Teresa A., and Mukti Khaire. Creativity and the role of the leader. Cambridge, MA: Harvard Business School Publishing, 2008.
2. Beckman, Sara L., and Michael Barry. "Innovation as a learning process: Embedding design thinking." California management review 50, no. 1 (2007): 25-56.
3. Bishop, Benjamin W. *Jimmy Doolittle: The Commander behind the Legend.* AIR UNIV MAXWELL AFB AL SCHOOL OF ADVANCED AIR AND SPACE STUDIES, 2015.
4. Blank, Steve. "Why the lean start-up changes everything." *Harvard business review* 91, no. 5 (2013): 63-72.
5. Bogaert, Nick. 4 golden rules of ideation. Retrieved from: https://www.boardofinnovation.com/blog/golden-rules-of-ideation/
6. Brown, Tim. "Design thinking." Harvard business review 86, no. 6 (2008): 84.
7. Cantwell, Houston R. *Col John Boyds Innovative DNA.* Air Force Research Institute Maxwell AFB United States, 2015.
8. DeGraff, Jeff. "Mastering the five levels of creativity," PDF.
9. DeGraff, Jeff. "The seven deadly sins of innovation leader," PDF.
10. Eisenhardt, Kathleen M., and Donald N. Sull. "Strategy as simple rules." *Harvard business review* 79, no. 1 (2001): 106-119.
11. Elsbach, Kimberly D. "How to pitch a brilliant idea." *Harvard business review* 81, no. 9 (2003): 117-123.
12. Farris, Karl. "A comparison of two military innovators: Brigadier General William" Billy" Mitchell and Vice Admiral Hyman G. Rickover." (1967).
13. Govindarajan, Vijay, and Chris Trimble. "Building breakthrough businesses within established organizations." *Harvard business review* 83, no. 5 (2005): 58-68.
14. Grissom, Adam R., Caitlin Lee, and Karl P. Mueller. *Innovation in the United States Air Force: Evidence from Six Cases.* No. RR-1207-AF. RAND Corporation-Project Air Force Santa Monica United States, 2016.
15. Hamel, Gary. "Moon shots for management." Harvard business review 87, no. 2 (2009): 91-98.
16. Kanter, Rosabeth Moss. "Innovation: the classic traps." *Harvard business review* 84, no. 11 (2006): 72-83.

Innovators by Design: ibD

17. Liedtka, Jeanne. "Perspective: Linking design thinking with innovation outcomes through cognitive bias reduction." *Journal of Product Innovation Management* 32, no. 6 (2015): 925-938.
18. Liedtka, Jeanne. "Why design thinking works." *Harvard Business Review* 96, no. 5 (2018): 72-79.
19. McMullen, Jeffery S., and Alexander S. Kier. "You don't have to be an entrepreneur to be entrepreneurial: The unique role of imaginativeness in new venture ideation." *Business Horizons* 60, no. 4 (2017): 455-462.
20. Moogk, Dobrila Rancic. "Minimum viable product and the importance of experimentation in technology startups." *Technology Innovation Management Review* 2, no. 3 (2012).
21. Neufeld, Jacob. *Bernard A. Schriever: challenging the unknown.* Office of Air Force History, 2005.
22. Pisano, Gary P. "You need an innovation strategy." *Harvard Business Review* 93, no. 6 (2015): 44-54.
23. Rigby, Darrell, Sutherland, Jeff, and Takeuchi, Hirotaka. "The secret history of agile development." Retrieved from: https://hbr.org/2016/04/the-secret-history-of-agile-innovation
24. Satell, Greg. "The 4 types of innovation and the problems they solve." *URL: https://hbr. org/2017/06/the-4-types-of-innovation-and-the-problems-they-solve* (2017).
25. Skillicorn, Nick. "What is innovation? 15 experts share their innovation definition." *Idea to value* 18 (2016).
26. Sutherland, Jeff, and Ken Schwaber. "The scrum guide." *The definitive guide to scrum: The rules of the game. Scrum. org* 268 (2013).
27. Sawhney, Mohanbir, Wolcott, Robert, and Arroniz, Inigo. The 12 different ways for companies to innovate. Retrieved from: https://sloanreview.mit.edu/article/the-different-ways-for-companies-to-innovate/
28. Tracey, Paul, and Neil Stott. "Social innovation: a window on alternative ways of organizing and innovating." *Innovation* 19, no. 1 (2017): 51-60.

12

Innovators by Design: ibD

LESSON SCHEDULE:

Day 1: Course Introduction: What is Innovation?
(12 Jan 21)

Lesson Description: Start with Why. This module will set the stage for the rest of the course. We will define innovation and what it means to lead an innovative organization. What is innovation in the Air Force and why are the senior leaders pleading for more of it? This will serve as a building block for all the modules to follow. Dr Jeff DeGraff will kick-off our deep dive and practicum into getting ideas across the goal line – to be deviants.

READINGS:
1. Bahcall, Safi. Loonshots: How to nurture the crazy ideas that win wars, cure diseases, and transform industries. St Martin's Press, 2019. Part 1 (pages 1-150)
2. DeGraff, Jeff. *The Seven Deadly Sins of Innovation Leaders:* The Innovation Library (11 pages)
3. Satell, Greg. "The 4 types of innovation and the problems they solve." *URL: https://hbr. org/2017/06/the-4-types-of-innovation-and-the-problems-they-solve* (2017). (6 pages)

GUEST SPEAKER:
Virtual - Dr. Jeff DeGraff – ibD Kick Off
Virtual - Maj Anthony Bunker - AFGSC

13

⚙ Innovators by Design: ibD

Day 2: Innovation Case Studies
(19 Jan 21)

Lesson Description: Developing innovative *means* to go "over not through" national strategic challenges has long been central to the Air Force's contribution to American security. In recent years, however, U.S. Air Force (USAF) senior leaders have raised questions of whether the service is sufficiently innovative today and what can be done to make it more innovative for the future—sometimes when looking toward the future we need to glance back at the past. In this lesson we will look at some of the USAF's greatest innovators to see what we can learn.

READINGS:
1. Bahcall, Safi. Loonshots: How to nurture the crazy ideas that win wars, cure diseases, and transform industries. St Martin's Press, 2019. Part 2/3 (pages 151-264)
2. Cantwell, Houston R. *Col John Boyds Innovative DNA*. Air Force Research Institute Maxwell AFB United States, 2015. (3 pages)
3. Neufeld, Jacob. *Bernard A. Schriever: challenging the unknown*. Office of Air Force History, 2005. (33 pages)

GUEST SPEAKER:
Maj Scott Van DeWater – Pilot Training Next – Innovating Doctrine – JADO
Jason Brown – Innovation at Google
Col Doug "Cinco" DeMaio & Lt Col Brandon "Boar" Baughman – Agile Combat Employment

14

Innovators by Design: ibD

Day 3: Team Building & Beyond (5 Voices & Competing Values Framework)
(26 Jan 21)

Lesson Description: *5 Voices* is the code for unlocking your capacity to have honest conversations and build deeper, more authentic relationships with your teams, your families and your friends. In order to lead others effectively, we need a true understanding of ourselves, our natural tendencies and patterns of behavior. In learning what your leadership voice sounds like to others, you will discover what it feels like to be on the other side of your personality, as well as how to hear and value others' voices, namely the Pioneer, the Connector, the Creative, the Guardian, and the Nurturer. Once you understand your own leadership voice, you'll discover how best to communicate with each of the other voices, which will transform your communication at every level of relationship, both personal and professional. In mastering the 5 Voices of leadership, you will increase your emotional intelligence, allowing you to gain a competitive advantage as a leader. You will also be equipped with a simple, easy to remember vocabulary that, when shared, has a track record for decreasing the drama, misunderstanding and miscommunication in all spheres of influence.

The Innovation Genome (iGenome), also referred to as the Competing Values Framework (CVF) is a strategic blueprint developed from over 25 years of academic research that identifies and solves particular innovative challenges. Recognized by the Financial Times as one of the 40 most important frameworks in the history of business, the iGenome has been used as the game-changing innovation playbook by thousands of organizations worldwide. By identifying and analyzing four different types of innovation, the iGenome helps you understand how you can use the tension between competing forces—like the simultaneous pursuit of standardization and customization—to create positive movement. The iGenome is a practical way to help organizations develop, implement, and sustain change and innovation. The iGenome represents a unified theory of practice that aligns and integrates different kinds of leadership, culture, and competencies, as well as situational elements like industry dynamics, markets, and even financial valuation. It allows you to align your organizational practices with the strategic factors that lead to growth—the key to making innovation happen.

READINGS:
1. Kubicek, Jeremie, and Steve Cockram. *5 Voices: How to communicate effectively with everyone you lead.* John Wiley & Sons, 2016. (Pages Intro-45; Your Specific Voices; 163-207)

DELIVERABLE: Take Assessments:
https://5voices.com/assessment/
https://usaf.innovationgenome.com/

GUEST SPEAKER:
Col Barnes (Virtual) (CVF – Yellow); Lt Col Newcomer (CVF Red) and Lt Col Brandie Jeffries (Green)
Building a Team of Teams for your innovation project

Panel 0930-1130

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♊ Innovators by Design: ibD

Day 4: DoD Ecosystem: Tools Panel
(2 Feb 21)

Lesson Description: There is an ecosystem within the DoD ready to assist innovation efforts—the trick is how to access it. Our guest speakers will discuss the focus of NSIN and where they are seeing innovation amongst the services (e.g. DIU, AFWERX, etc.)

READINGS:
1. MacKenzie, Gordon. *Orbiting the giant hairball: A corporate fool's guide to surviving with grace.* Viking Adult, 1998: (Pages 1-113)

GUEST SPEAKER:
Virtual Panel - Lt Col Jacobson, Ph. D. (Formerly DIUx; now SAASS) & Maj Steve Lauver (AFWERX), Trent Edwards (MGMWERX), Col Gareth Littlechild (CSAF Strategic Studies Group)

16

Innovators by Design: ibD

Day 5: Social Innovation
9 Feb 21

> **Lesson Description:** Dr. Stott will discuss the theory and history of social change, innovation and ventures. The social innovators at JBS critique ideas from sociology, political science and organizational behavior in order to build a deep knowledge and understanding of different forms of social and organizational change.
>
> **READINGS:**
> 1. MacKenzie, Gordon. *Orbiting the giant hairball: A corporate fool's guide to surviving with grace*. Viking Adult, 1998: (Pages 114 – 224)
> 2. Tracey, Paul, and Neil Stott. "Social innovation: a window on alternative ways of organizing and innovating." *Innovation* 19, no. 1 (2017): (Pages 51-60)
>
> **GUEST SPEAKER:**
> Dr. Neil Stott (University of Cambridge) & Mr. Wertman (USC)

17

Innovators by Design: ibD

Day 6: FIELD TRIP: Walking Tour of MGM Civil Rights Key Locations
(16 Feb 21)

Lesson Description: We will take a guided walking (driving if poor weather) tour of the local Montgomery area focusing on notable Civil Rights locations and memorials. Dr. Paul Johstono will lead a discussion focused on the history and social innovations utilized during the CRM. Be prepared to discuss the implications of social change and how to begin/sustain them. What social change do we see in American society today? What social changes are present in the USAF? What lessons can be learned from the CRM and implemented in a large, complex organization/bureaucracy?

> **READINGS:**
> Watch Selma Feature Film (2014); Yep – your homework is to watch a movie!

GUEST SPEAKER:
Dr. Paul Johstono/Dr. Amber Batura – Social innovation as demonstrated during the American Civil Rights Movement

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Innovators by Design: ibD

Day 7: Design Thinking Challenge— Start with Empathy!
(23 Feb 21)

Lesson Description: Einstein was certainly right — we can't solve problems by using the same kind of thinking we used when we created them. In addition, with the rapid changes in society, the methods we have previously used to solve many of the problems we face are no longer effective. We must develop new ways of thinking in order to design better solutions, services and experiences that solve our current problems. Design Thinking steps in with a bold newly systematized and non-linear human-centered approach. This will help us radically change how we go about exploring problems and creating solutions to those problems.

Design Thinking is best suited to addressing problems where multiple spheres collide, at the intersection of business and society, logic and **emotion**, rational and creative, **human needs** and economic demands and between systems and individuals. We would most likely *not* require Design Thinking to tackle *tame problems* — that is, problems that are simple and that have fixed and known solutions — unless we were seeking a novel or innovative means to solving the problem with a different desired goal than the typical available solutions.

Design Thinking cannot begin without a deeper understanding of the people you are designing for. In order to gain those insights, it is important for you as a design thinker to empathize with the people closest to the problem to understand their needs, thoughts, emotions and motivations. Here's the good news: With enough mindfulness and experience, anyone can become a master at empathizing with people!

READINGS:
1. Beckman, Sara L., and Michael Barry. "Innovation as a learning process: Embedding design thinking." California management review 50, no. 1 (2007): (Pages 25-56)
2. Brown, Tim. "Design thinking." Harvard business review 86, no. 6 (2008): (10 pages)
3. DeGraff, Jeff. "Mastering the five levels of creativity," PDF. (Pages 1-19)

GUEST SPEAKER:
Lt Col Brandie Jeffries and Lt Col (ret) Megan Allison – Design Thinking Sprint
MSgt Conor Gray (AFSNCOA) – Design Thinking

19

Innovators by Design: ibD

Day 8: Empathy Outbriefs
(16 Mar 21)

Lesson Description: One-on-one interviews can be a productive way to connect with real people and gain insights. Talking directly to the people you are designing for may be the best way to understand needs, hopes, desires and goals. The benefits are similar to video- and camera-based studies, but interviews are generally structured, and interviewers will typically have a set of questions they wish to ask their interviewees. Interviews, therefore, offer the personal intimacy and directness of other observation methods, while allowing the design team to target *specific* areas of information to direct the Design Thinking process. In this block we will see what we have learned from engaging users.

READINGS:
1. Jensen, Benjamin. *Forging the sword: doctrinal change in the US army.* Stanford University Press, 2016. (Pages 1-24; 142-154)
2. Grant, Adam. Originals: How non-conformists move the world. Penguin, 2017. (Pages 1-28; 175-209)

DELIVERABLES:
Innovation Portfolio Tab 1: Empathy Interviews
Interview Outbrief: Lessons Learned; Ah-Ha Moments

GUEST SPEAKER:
Col (ret) Dryjanski, Lt Col (ret) Brandi Jeffries / Col Johnny Barnes

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Innovators by Design: ibD

Day 9: What's the problem? Problem Statements and Elevator Speeches.
(23 Mar 21)

Lesson Description: An integral part of the Design Thinking process is the definition of a meaningful and actionable problem statement, which the design thinker will focus on solving. This is perhaps the most challenging part of the Design Thinking process, as the definition of a problem will require you to synthesize your observations about your users from the first stage in the Design Thinking process.

When you learn how to master the definition of your problem and create a solid problem statement, it will greatly improve your Design Thinking process and result. Why? A great definition of your problem statement will guide you and your team's work and kick start the ideation process in the right direction. It will bring about clarity and focus to the design space. On the contrary, if you don't pay enough attention to defining your problem, you will work like a person stumbling in the dark.

READINGS:
1. Hamel, Gary. "Moon shots for management." Harvard business review 87, no. 2 (2009): (Pages 91-98)
2. Pisano, Gary P. "You need an innovation strategy." *Harvard Business Review* 93, no. 6 (2015): (Pages 44-54)
3. Degraff, Jeff, and Degraff, Staney. *The innovation code: The creative power of constructive conflict.* Barrett-Koehler Publishing, 2017. (Pages 1-48)

GUEST SPEAKER:
Virtual - Kathleen Kennedy – Executive Director of the MIT Center for Collective Intelligence (Sloan School)

21

Innovators by Design: ibD

Day 10: Elevator Pitch (Outbrief of Problem Statements)
(30 Mar 21)

Lesson Description: You can be asked at any time to explain the innovation project you are pursuing – to commanders, potential partners, resource providers, stakeholders, and others in your organization. Your success in launching a new innovation project depends on your ability to clearly communicate a number of ideas: the problem or pain that currently exists; the features of your innovation project you are developing; the resources needed to implement it; the risks involved and how you plan to mitigate them; and the benefits for all stakeholders that your innovation project may provide.

READINGS:
1. Elsbach, Kimberly D. "How to pitch a brilliant idea." *Harvard business review* 81, no. 9 (2003): (Pages 117-123)
2. Weiner, Eric. *The geography of genius: a search for the world's most creative places from ancient Athens to Silicon Valley*. Simon and Schuster, 2016. (Pages 1-12; Case study – city of your choice; 321-326)

DELIVERABLES:
1. Innovation Portfolio Tab 2: Problem Statement
2. Problem Statement Outbrief and Elevator Pitch

GUEST SPEAKER:
NA

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Innovators by Design: ibD

Day 11: Ideation
(6 Apr 21)

Lesson Description: In the Ideation stage, design thinkers spark off ideas — in the form of questions and solutions — through creative and curious activities such as Brainstorms and Worst Possible Idea. In this article, we'll introduce you to some of the best Ideation methods and guidelines that help facilitate successful Ideation sessions and encourage active participation from members.

Further—Innovation often happens when and where you least expect it. This is why you need to constantly look around yourself for new sources of innovation. The first step in the creative process is to set high-quality targets. In order to set the best targets for your organization, you need to develop an innovative mindset.

READINGS:
1. Bogaert, Nick. 4 golden rules of ideation. Retrieved from: https://www.boardofinnovation.com/blog/golden-rules-of-ideation/ (4 pages)
2. Osterwalder, Alexander, and Yves Pigneur. Business model generation: a handbook for visionaries, game changers, and challengers. John Wiley & Sons, 2010: (Pages 135-159)
3. Sawhney, Mohanbir, Wolcott, Robert, and Arroniz, Inigo. *The 12 different ways for companies to innovate.* (Pages 1-10)

GUEST SPEAKER:
Virtual - Dr. Ethan Eagle – Innovatrium – Ideation kick off
Mark Rowland – AFWerx
Brandie Jeffries (LDC) – Helping shape ideation of ideas

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Innovators by Design: ibD

Day 12:   Prototyping & Lean Startup
(13 Apr 21)

Lesson Description: One of the best ways to gain insights in a Design Thinking process is to carry out some form of prototyping. This method involves producing an early, inexpensive, and scaled down version of the product in order to reveal any problems with the current design. Prototyping offers designers the opportunity to bring their ideas to life, test the practicability of the current design, and to potentially investigate how a sample of users think and feel about a product.

Prototypes are often used in the final, testing phase in a Design Thinking process in order to determine how users behave with the prototype, to reveal new solutions to problems, or to find out whether or not the implemented solutions have been successful. The results generated from these tests are then used to redefine one or more of the problems established in the earlier phases of the project, and to build a more robust understanding of the problems users may face when interacting with the product in the intended environment.

Time permitting: Innovation Teams will present their final innovation pitch in a teaming/collaboration setting.

READINGS:
1. Moogk, Dobrila Rancic. "Minimum viable product and the importance of experimentation in technology startups." *Technology Innovation Management Review* 2, no. 3 (2012). (Pages 1-4)
2. Osterwalder, Alexander, and Yves Pigneur. Business model generation: a handbook for visionaries, game changers, and challengers. John Wiley & Sons, 2010: (Pages 161-169)
3. Hill, Andrew. "Culture and the U.S. Army-Military Innovation and Military Culture" (2015). (Pages 85-98)

GUEST SPEAKER:
Lt Col Miranda Lashinski 42 CONS: Contracting Arrows & Quivers

DELIVERABLES:
1. Tab 3: Ideation Conceptualization Slides
2. Lessons Learned Outbrief from "Do One" Phase presentation

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Innovators by Design: ibD

Day 13: Pitch Presentation
(20 Apr 21)

Teams will deliver final pitch presentations—some teams may be chosen to record pitches at AUTV for dissemination amongst senior leaders for sponsorship of projects.

Lesson Description:
DELIVERABLES:
1. Tabs 4 & 5: Prototyping and Mobilize: Partners and Allies
2. Innovation Portfolio Tab 6: Mobilize/Partnership Documents
3. Pitch/Partnership Presentation

GUEST SPEAKER:
NA

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Appendix F: Innovators by Design/Innovation Research Task Force DRAFT Course Objectives
Academic Year 2023

Learning OUTCOMES

The learning objectives of the innovation research task force are related to a student profile able to master the following functions as future innovators and leaders of innovators:

- Participate both as a member and as a leader of a team to produce innovative solutions
- Supervise, mentor and coach teams attempting to produce innovative solutions
- Support, promote and encourage Department of Defense innovation

SEE ONE:

- To understand CJCS, SECAF, and CSAF innovation priorities and imperatives

- To understand how innovation impacts national strategic challenges and objectives

- To comprehend and implement a wide range of idea creation & imagination techniques (such as brainstorming)

- To understand how to understand ourselves, natural tendencies, and patterns of behavior towards unlocking the capacity to have honest conversations and build deeper, more authentic relationships with teams

- To understand what innovation means and what it means to lead innovative organizations

- To understand how to identify, build, and grow innovation networks

- To understand the theory and history of social change, innovation, and ventures

- To explore innovation frameworks towards discovering how different kinds of thinkers and leaders create constructive conflict, channel it, and develop something completely new

DO ONE:

- To develop new ways of thinking using empathy in order to design better solutions, services, and experiences that solve our national strategic problems

- To synthesize end user observations and develop/deliver a meaningful and actionable problem statement which the student will focus on solving

- To learn and apply ideation techniques using creative and curious activities towards setting best targets for solution sets

- To gain insights using prototyping, testing, and lean startup methodologies towards revealing problems/opportunities with solutions

- To be able to clearly articulate and communicate a number of ideas in the form of an "elevator pitch"

- To apply design methods to develop innovative solutions answering the potential customer's needs

- To organize and lead an innovative project, using design-thinking approach

- To produce documentation outlining and defining the innovative solutions proposed by the project team, in order to ensure performance, relevance, feasibility and appropriateness of the cost objectives

TEACH ONE:

- To manage and lead design workgroups (SOS) with multidisciplinary competences, methods, and approaches ensuring a harmonious convergence towards end user satisfaction

- To understand how to coordinate and organize training programs with the aim of promoting a culture for creativity and innovation through the application of design thinking approaches and methods

AIR WAR COLLEGE

AIR UNIVERSITY

FOUR PROPOSED CHANGES TO IMPROVE THE EXCEPTIONAL FAMILY MEMBER PROGRAM PROCESS IN THE ASSIGNMENT SYSTEM

by

XXX, Lt Col, USAF

A Research Report Submitted to the Faculty

In Partial Fulfillment of the Graduation Requirements

Advisor: Mr. J. William DeMarco

6 March 2020

DISCLAIMER

The views expressed in this academic research paper are those of the author and do not reflect the official policy or position of the US government, the Department of Defense, or Air University. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.

Biography

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Abstract

The Exceptional Family Member Program (EFMP) has changed throughout the past five years, but the EFMP process, with respect to how airmen receive and process their assignments for a Permanent Change of Station (PCS), has changed very little. The current process puts undue stress and anxiety on airmen as they await confirmation of a new duty location. It also puts them at a disadvantage finding housing that is in an area near medical facilities and schools that can meet their family's special needs. In this paper I will argue that the Air Force should inform airman of duty locations that have the services and availability to treat their special needs family members before they provide assignment inputs.

Rearranging the process and informing airmen earlier will reduce the stress and frustration associated with completing and adjudicating PCS EFMP paperwork and get their PCS orders published sooner. Additionally, it will redistribute the workload of the medical staff that review and adjudicate the paperwork and reduce the number of reworked assignments. To successfully change the process, four modifications must be made to the existing system.

First, members should be instructed to fill out non-location specific EFMP paperwork before they submit assignment inputs, six to twelve months prior to moving, vice waiting until their assignment is received, which is typically three to four months prior to moving. Second, transition the EFMP forms to an application which can allow for easy transmittal between patients, physicians, and adjudicators. Third, the Air Force should take this early information gathered and match it to bases that can definitely meet each airman's family's medical needs to accelerate medical clearance decisions. Last, inform the airmen of the bases which definitely

4

have the available services to meet their family's special needs prior to them choosing future assignments.

5

Introduction

The Exceptional Family Member Program (EFMP) has changed throughout the past five years, but the EFMP process, with respect to how airmen receive and process their assignments for a Permanent Change of Station (PCS), has changed very little. The process has the airman select prospective duty locations, receive an initial duty location for reassignment, and then verify their family members can be medically cleared to go to that initial duty location. In this paper I will argue that the Air Force should inform airman of duty locations that have the services and availability to treat their special needs family members before they provide assignment inputs.

Recently EFMP has received a lot of negative publicity as military family members testified in front of Congress about how the process was broken, lacked standardization, and was not being evaluated by the Defense Department.[1] The reaction from the Air Force was to have General Stephen Wilson, the Vice Chief of Staff of the Air Force, challenge airmen in 2020 to reduce time wasted processing PCS orders and navigating EFMP.[2] This was further pushed by Chief Master Sergeant of the Air Force Kaleth Wright stating the Air Force's EFMP is not meeting needs and should "get [airmen] to the right base that has the resources that they need to be able to take care of their children, or spouses, or whomever it is."[3] The problem is that EFMP did not magically break in 2020; putting airmen whose family members have special needs at the right base has plagued the Air Force for almost a decade. A 2018 RAND study noted that "needs related to having a family member [within] the Exceptional Family Member Program (EFMP) were the most frequently mentioned negative aspect of [Permanent Change of Station (PCS)] moves."[4] Besides it being a hassle, a 2013 study showed that many military members do not understand the assignments process and are not confident, if able to communicate with an

1

assignments officer, the "communication would not be held against them."[5] While the Air Force has moved to improve transparency in the assignments process, through activities such as Talent Marketplace for officers, the EFMP families still have the same frustrating process.[6]

According to Air Force 2017 data, the EFMP "enrollment has doubled in the last eight years" to 45,120 EFMP dependents and continues to rise.[7] As EFMP numbers increase and the push for more transparency in the assignments process continues, now is the time to take steps to improve how EFMP needs are met in the assignments process. All this data correlates to show the Air Force has a broken process that is not meeting the needs of airmen or their family members and the number of airmen impacted by EFMP is almost ten percent of the force and will continue to increase.[8]

In this paper I will start by describing EFMP in the Air Force assignment process followed by the design process used to develop a recommended solution. I will then describe the four steps that must be accomplished to put this recommendation in place along with their associated benefits and potential shortfalls. Last, I will conclude with why it is critical to start changing this process vice waiting for years to find a perfect solution or for it to become someone else's (like the Defense Health Agency's) problem.

EFMP in the Assignment Process

The EFMP guidance, with regards to the assignment process, has significantly changed over the last decade as Congressional lawmakers became involved and the services were directed to implement these changes. The National Defense Authorization Act for Fiscal Year 2010, Public Law 111-84, included Section 563 which introduced a Defense Department office called the Community Support for Military Families with Special Needs and charged them to "monitor the programs of the military departments for the assignment of members of the armed forces who

2

are members of military families with special needs."[9] Guidance to the services was provided through DODI 1315.19, *The Exceptional Family Member Program,* which states that during the assignment process EFMP should be taken into account along with the member's career and the needs of the service.[10]

Due to lack of adequate support in the Office of Community Support for Military Families with Special Needs, which later became the Office of Special Needs, the services were left to implement the guidance on their own and assess their own programs.[11] Each service's process focuses on different aspects and the Air Force is focused on making sure they do not discriminate against the member in the assignment selection process. While the Air Force process has its flaws, the other services processes are not much better.

The Army and Marine Corps have similar processes, while the Navy and Air Force are different. The Army and Marine Corps take their soldier's and marine's desires into consideration and then propose an assignment for them internally, which is submitted to their EFMP offices. If the service member's EFMP data is out of date, they will ask for forms to be filled out prior to them receiving an assignment. Their EFMP office will then determine if the new duty location has the capabilities to provide care for the soldier's or marine's family. If the new duty location does not have the necessary capabilities, a new assignment is worked until a match is made. At this point the soldier or marine receives their assignment. If the soldier or marine is going on a remote tour or the needs of the service take precedence, then the soldier or marine will be sent while their family stays in place or moves to a location that can meet their needs.[12] The problem with the Army and Marine Corps systems are that the soldier and marine do not get to know what bases have the capabilities and availability to take care of their family members prior to submitting their assignment preferences.

3

For sailors, the Navy collects the EFMP data and then uses a six-category system based on the severity of the issue the family member is facing. They can be in a monitor status, temporary status, one of three CONUS only statuses, or, for those families with major medical needs, sailors may homestead in certain areas until the family member no longer meets that criteria. When evaluating assignments this categorical system is used to determine the best course of action for the sailor.[13] The six-category system is constraining and can lead to the sailor missing out on jobs that could help them get promoted.

The Air Force EFMP process starts after the airman receives an initial assignment, three to four months prior to their move date (See Figure 1). This forces an airman to quickly complete EFMP paperwork to determine if they will be approved to move to the new location. The drawback to this system is the airman is planning for a new job and duty location, while also processing the paperwork to find out if the new duty location has the capabilities and availability to care for their family members. Disapproving family clearance due to an EFMP reason makes the airmen choose to: take a new assignment, where their family can come; leave the family behind for career progression; fight to stay at the current location; or take the family knowing they may incur out of pocket medical expenses. While this allows for assignments to be based on progression and does not discriminate, this decision comes too late in the process for the airman.

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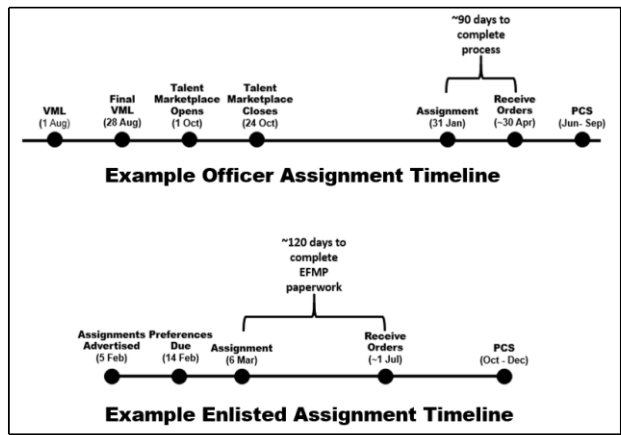
Figure 1: Example Assignment Timelines

The Air Force, Army, and Marine Corps processes all fail to inform the service member of what capabilities and availability of services are at bases before allowing them to enter assignment preferences. The Navy system has six broad categories which can be career limiting. Additionally, the Air Force starts the EFMP paperwork too late in the process. To develop a way to improve the Air Force's EFMP assignment process, I teamed up with Ms. Purvi Desai, Major Will Harrell, and Major Alex Hausman as part of the Air University's Innovation Research Task Force.

Addressing the Problem Through Innovative Design Techniques

In the Innovation Research Task Force, we used a simple design technique shown in Figure 2. We started off by conducting empathy interviews with nine military personnel and family members involved in this process. This was to determine how people felt about the EFMP process and to determine their pain points, the things that caused them excessive or additional work in the process. Based on our review of all the pain points in the empathy interviews, we developed the problem statement "how might we help service members to

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minimize burdens, while obtaining affordable, adequate dependent care, and maintaining career satisfaction?"
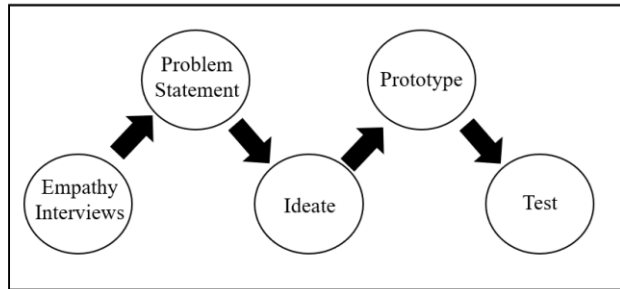
Figure 2: Innovative Design Technique[14]

We then began the ideation phase by brainstorming over 70 ideas on ways to address this problem statement. These ranged from cancel EFMP and let families provide for themselves all the way to increase EFMP personnel staffing. We pondered disenrollment, having a way to continually update the Tricare database of providers, modifying the process to include more than just an EFMP code (Q-code), eliminating PCSing, and online paperwork that gets pushed around (vice the hard copy forms).

During the prototype phase, we consolidated the ideas down to eight that would help address our problem statement. We grouped these into three categories to develop a prototype: Improve Q-coding to include regions an airman's family can go, consider changing when to fill out paperwork in the assignment timeline, and linking the product to medical and assignment databases. We revisited our interviews and researched historical studies to determine how to best implement our proposed solution.

As we pitched our proposed solution to people in order to test if it met their needs, we were constantly cautioned to not limit the number of bases an airman can be stationed. A family member's situation may change, the airman may want to leave their family in place, and most of

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all you do not want to discriminate against the airman because of their family's medical needs. After these caveats, interviewees still wanted to provide airmen all data so they can make the best decision for their career and family at the earliest point.[15] This way the member could choose whether to pursue an EFMP approved location, to stay with family, pursue a base that is not approved due to family circumstances, or to appeal and state why they should be able to go to a certain base.

After bouncing between the prototype and test phase several times, we finally determined the best way to reduce stress and anxiety of EFMP airmen in the PCS process was to have the Air Force inform airman of duty locations that have the services and availability to treat their special needs family members before these airmen provide assignment inputs. To do this we developed four steps the Air Force must take. First, members should be instructed to fill out non-location specific EFMP paperwork before they submit assignment inputs, six to twelve months prior to moving, vice waiting until their assignment is received, which is typically three to four months prior to moving. Second, transition the EFMP forms to an application which can allow for easy transmittal between patients, physicians, and adjudicators. Third, the Air Force should take this early information gathered and match it to bases that can definitely meet each airman's family's medical needs to accelerate medical clearance decisions. Last, inform the airmen of the bases which definitely have the available services to meet their family's special needs prior to them choosing future assignments so they can make the determination on whether career progression or family needs is more important at that time.

Step 1: Fill Out EFMP Paperwork Sooner

The first step is to require the member to fill out EFMP paperwork sooner in the assignment process. The current process has the airmen filling out the confusing, complicated,

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and redundant EFMP paperwork and awaiting a determination in a very short time period which causes stress and anxiety.[16] The goal of this step is to prevent airmen from having to complete EFMP paperwork and engage in the adjudication process during the three to six months before they are projected to move. One of the potential downfalls is that the airmen's paperwork might expire before they actually depart their current duty station.

Current Process

First, the airman takes their family members to the necessary appointments with physicians at the Military Treatment Facility (MTF) and civilian specialists in the local area to fill out the EFMP forms. Next, they submit the completed paperwork to the local Special Needs Coordinator (SNC) who reviews the information for accuracy and contacts the member to correct any discrepancies. This completed paperwork is then submitted to the gaining base for review in which that base's SNC reviews and assesses if medical support for the airman's family exists at the gaining MTF or in the local area within a 50-mile radius.[17]

If support is available, the airman will receive the gaining MTF's Chief of Medical Staff (SGH) approval for family members to travel. If support is not available, the package is further examined by the gaining MTF's SGH. The SGH can ask for additional inputs from other physicians and even contact the airman for more information and then either approve the family member(s) to travel or not recommend their travel to that location.[18] There is an appeals process for family members not recommended for travel, that varies upon duty location. Other options at this point include the airman: receiving a new assignment, and starting the EFMP paperwork process over again; taking the assignment and leaving their family at a different location that can adequately support them; taking the family to the new duty location without Air Force support,

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which means anything the new base cannot provide they must pay out of pocket; or being told to stay at their current base for a longer period of time.[19]

Proposed Change and Benefit

Airmen should complete the Air Force Form 4380, *Air Force Special Needs Screener*, and Department of Defense Form 2792, *Family Member Medical Summary*, right after the Vulnerable to Move List (VML) is released, for officers, or prior to the assignment advertisement date, for enlisted (See Figure 3). Completing the Air Force Form 4380 at this point will identify any special needs not previously identified and enable the Special Needs Coordinator (SNC) to work with the airman to enter them in EFMP and help them complete the Department of Defense Form 2792, which is current for 12-months, with their family member's provider or specialist.[20] This form is the most difficult for members to get accomplished during the EFMP paperwork process and it is not location based. This will help the SNCs to spend more time with members without having to acquire additional staff, like they must today during peak PCS time when they are simultaneously handling inbound and outbound cases.[21]

Adjusted Officer Assignment Timeline

Adjusted Enlisted Assignment Timeline
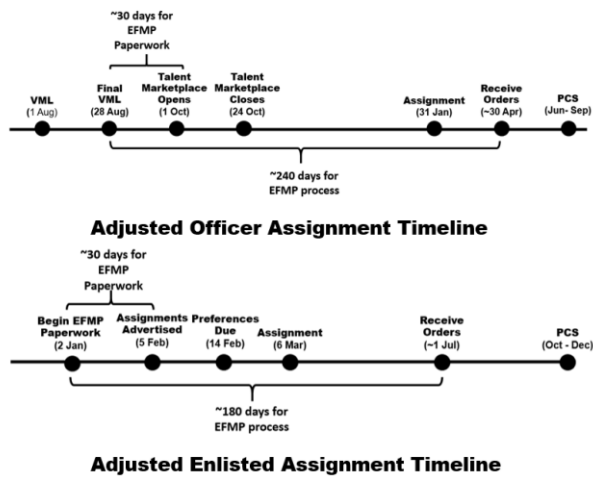
Figure 3: Step 1 – Fill out EFMP Paperwork Sooner

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Potential Issues

A potential issue with this first recommendation is that the member may, in limited cases, receive a report no later than date one year after their Department of Defense Form 2792 is completed. For example, if someone filled out the form on 15 September 2019 and received a report no later than date of 30 September 2020, the form would be invalid for their move. Currently, the assignments personnel are providing earlier reporting dates to avoid members moving during peak moving season, which may work out in this step's favor. Another concern was having the airman fill out the AF Form 4380 twice, once before submitting assignment preferences and a second time upon notification of their assignment; however, it is a one-page form to verify needs and is not extremely time consuming, especially if it becomes web-based.

Step 2: Create a User Interface to Complete the Forms

The second step is to have airmen, family members, and providers complete EFMP paperwork through a user interface in Q-base. A joint Cornell University and University of Kansas study from 2013 notes the military "members and family support providers ... strongly endorsed" ways to "[streamline] and [automate] the enrollment and recertification system and [make] the assignment coordination process more transparent."[22] The purpose of this step is to develop a user interface that can insert data received into multiple forms and also shepherd the user through the process to ensure the most accurate medical data is captured. The potential drawbacks to this recommendation are the time to get the approvals to allow users to view and access the system along with finding the funding to address this issue.

Current Process

The biggest hassle for airmen in this process is accomplishing the Department of Defense Form 2792. This is a 13-page form that either base doctors or civilian specialists must complete

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to detail the special needs of the family member and what support is required at a new location to provide care for the member.[23] Getting an appointment with a civilian specialist to have them fill out this "lengthy paperwork" after notification of assignment and prior to getting orders is difficult due to appointment availability.[24] These delays prevent airmen from getting their orders and confirmation that their family is cleared for travel. This delay makes it difficult for families with special needs to transfer care to new specialists in the area or choose a new residence next to a school or facility that can meet their family member's special needs.[25] The additional forms, such as the Air Force Form 1466, *Request for Family Member's Medical and Education Clearance for Travel*, have similar information required in the Department of Defense Form 2792 and people find these forms and others to be redundant and frustrating.[26]

As I spoke with a SNC and two SGHs they expressed frustration at the paperwork and the timeframe they had to accomplish the review. The paperwork they receive from the member or a civilian specialist can be incomplete or not provide enough information to allow the gaining base to make an informed decision.[27] At a base like Maxwell Air Force Base (AFB), this means the SNC will have over one hundred cases for outbounds and over one hundred inbound cases each year being accomplished in approximately an eight week time period using the process mentioned above.

The last concern is the hard copy forms being lost as they are uploaded, emailed, or faxed. EFMP families have learned over time not to trust the system and are always trying to verify that their paperwork is being reviewed and processed.[28] Even though the Air Force has switched to Q-Base to track medical clearance information, the forms are still submitted to the SNC via hard copy or through email for them to upload and distribute. The Air Force Medical Readiness Agency (AFMRA) took action to give EFMP airmen access to Q-base in 2014;

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however, airmen only received access to view the status of their package in October 2019 and still may not submit forms through this medium.[29]

Proposed Change and Benefit

Instead of facing the confusing Department of Defense Form 2792, the Air Force could develop a new user interface to help fill out this form, or the next form the Defense Health Agency develops, and it should be included in Q-base. This user interface would help the airman, family member, and physician navigate to the correct sections to fill out. Q-Base should also allow family member access to fill out the required medical forms. This could improve form accuracy ensuring all required items are filled out, decreasing SNC review time. This would also allow airman to have previous data from prior forms stored and ready for family members that have a diagnosis that will not change, which was a complaint found in the Cornell University and University of Kansas study and repeated in an interview.[30] Additionally, the data inserted could be used to complete the Air Force Form 4380 and Air Force Form 1466.

Potential Issues

Giving access to more people inside a database that contains Health Insurance Portability and Accountability Act (HIPAA) information will require additional approvals through the Air Staff and Department of Defense, such as a Statement of Records Notice. Expanding the system to enable family members to fill out the forms would be even more difficult since the system is currently only accessible through a common access card.[31] However, if the Tricare online system can show airman and their family members the data collected from each of their respective appointments by using a common access card or through user name and password login, then Q-base can also be updated to accept the same credentials.[32] Finding funding for this proposed change is always a concern, especially since it took four years for the AFMRA to

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receive funding to allow EFMP sponsors access to Q-base.[33] The recent Vice Chief's Challenge

2020 should be used to acquire the necessary funding to make this change occur.

Step 3: Use a Correlation Matrix

The third step is to upgrade Q-base to have a category code matrix that compares needs

of members to the capabilities at each MTF or in the local area. The current EFMP medical

clearance process, also known as the Family Member Relocation Clearance (FMRC), varies

based upon the location the member will be stationed. The proposed action is to have the SNCs

focus more on researching both capabilities and availability of local providers and the MTF in

their area of responsibility in association with Tricare as noted in Air Force Instruction (AFI) 40-

701.[34] They will then update this information into Q-base so it can be matched against family

member needs for correlation. The end result will match capability and availability to family

member needs. The negative aspects to this step are that it requires the Air Force to invest in

updating a legacy software system which will be costly and require additional, lengthy approval

chains.

Current Process

Currently there are two process avenues for EFMP airmen to accomplish FMRC. First, is

the expedited route in which airmen fill out less paperwork and it is supposed to have a 5-

calendar day turn around.[35] In 2018 there were ten CONUS expedited bases for the Air Force

listed on the Air Force EFMP Facebook page, but the other 48 CONUS locations have varying

degrees of medical capabilities.[36] These expedited bases have 98-100% of the specialties needed

to meet any family member need.[37] Second, is the traditional process which is in place for the

other 48 locations and any geographically separated units. This lengthy process is shown in

Figure 4 in which the Facility Determination Inquiry (FDI) has a 14-day average, but the clock

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does not start until the losing EFMP office transmits the FDI package to the gaining EFMP office.
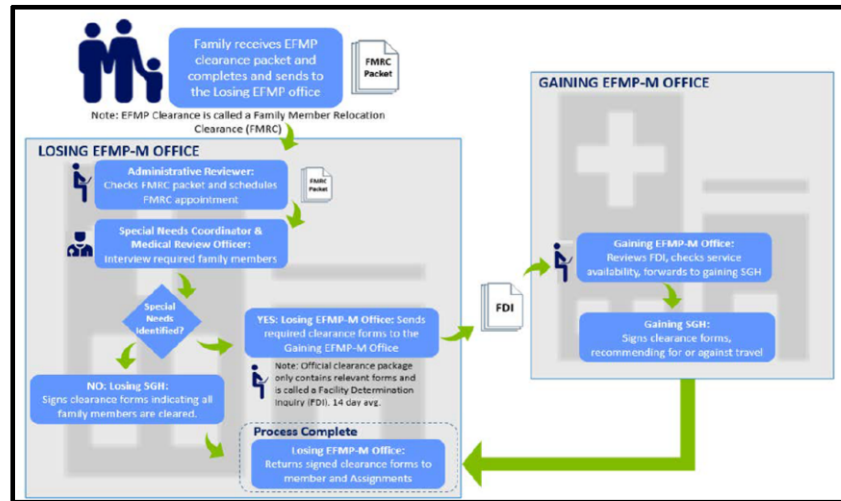

Figure 4: Traditional EFMP Clearance[38]

To handle the EFMP medical workload in this small PCS timeframe, SNCs must pull medical staff from other areas of the MTF to help manage the paperwork during the peak PCS time period.[39] Any case the SNC questions must be reviewed by the SGH for a determination which cuts into the SGH's normal, hectic schedule as they try to make the most informed and best decision to protect the airman's family.[40] The current system can take one to three months to complete.

Proposed Change and Benefit

The Air Force should update Q-base to match base capabilities with EFMP member needs. This system would accelerate medical clearance decisions. This step will have the SNC focused on updating the Tricare and Q-base databases with local capabilities and availability during off-peak processing periods and enable more help to address local EFMP family member needs. This will distribute the SNC workload removing the need to take other personnel from

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medical jobs to supplement during the peak EFMP paperwork timeframes. This will also greatly reduce their workload for inbound verification and enable the SNC to accomplish more inbound welcoming and assistance.

Potential Issues

One negative aspect of this recommendation is the SNC has to expend a lot of time with Tricare representatives and local medical services to verify the Tricare database is updated for all potential special needs and also ensure this data is transferred to Q-base. In some locations this can be extremely time consuming; however, prior knowledge would require less work on the back end. This constant checking would also allow the SNC to check on availability of appointments vice just verifying a specialist is in the area, which was a recent complaint to Congress in 2020 as well as a historical problem mentioned in the 2013 Cornell University and University of Kansas study.[41] A second concern is the cost associated with modifying the legacy Q-base software to incorporate this correlation function. The cost benefit analysis may show that it is cheaper to design a new software program to accomplish this, but the approach could take years to develop and accredit, which will not meet Air Force needs.

Step 4: Display the Results to Airmen

The last step is for Q-base to display the bases that can meet an airman's EFMP needs before they make assignment choices. Currently, airmen choose locations based upon desired location and jobs and then find out later they may or may not be able to go based on their family's special needs. Since EFMP cannot be used to prevent an airman from being selected for assignment, the Air Force allows them to receive the assignment and then forces them to choose career or family. This approach would enable airmen to see what bases have the capabilities and availability needed before they make assignment preference choices. This should also interface

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with Talent Marketplace and the vMPF so airman could toggle locations based on EFMP needs. The negative aspects of this step are cost associated with modifying the legacy code of each application and the perceptions that EFMP members are getting preferential treatment or they are being discriminated against.

Current Process

The Air Force, and the other services, informed the US Government Accountability Office (GAO) that they monitor assignment coordination, "review[ing] proposed assignment locations for families with special needs enrolled in EFMP."[42] Figure 5 shows an example of the officer assignment process in which the airman receives an assignment notification and then must accomplish FMRC before being issued their orders. The Air Force has moved to an Accelerated Orders Initiative to enable some airmen to get orders quicker and then they follow up later to ensure all other outprocessing actions are accomplished. One of the populations this does not apply to is airmen enrolled in EFMP, who still must go through the traditional orders process.[43] When airmen are attempting to secure housing near needed medical areas and schools, this delay in getting orders can prevent them from finding an affordable home in the location they need.

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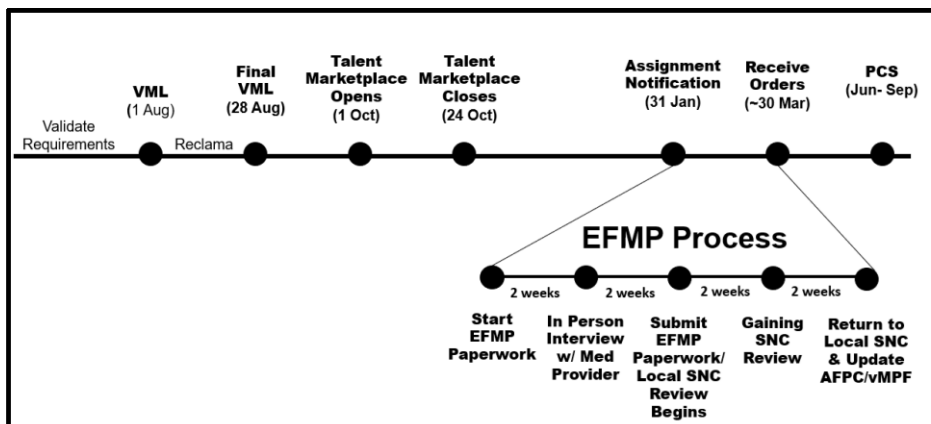
Figure 5: The Current EFMP Process for PCSs

Proposed Change and Benefit

The proposed change is to take the correlated data from step 3 and display the bases that can meet an airman's family member's needs before they make assignment choices. While this can be displayed in Q-base, providing this data in Talent Marketplace and vMPF with a toggle switch would help airmen provide better inputs to assignments personnel. A benefit of this modification would be that airmen with family members in EFMP can see what locations definitely have the services needed for their family. This enables the airman to choose an assignment that definitely will allow their family, will have them go unaccompanied, or is worth fighting in the gray area to acquire. The Chief of Staff of the Air Force, General David Goldfein, has continually pushed for multi-domain operations in which systems talk to each other to enhance battlefield situational awareness and improve effects.[44] Linking Q-base to vMPF and Talent Marketplace would enhance an airman's situational awareness and help them in the decision-making process before they submitted assignment preferences, reduce the workload of SNCs at PCS season, and minimize assignment rework to ensure the essential Air Force positions are filled.

Potential Issues

The negative aspects of this recommendation are modifying the code of each application, and its associated cost, and the perceptions that EFMP members are getting preferential treatment or they are being discriminated against. Changing the applications to ensure no HIPAA data is shared between Q-base and Talent Marketplace and vMPF is critical to this being successful. The desire is to show cleared bases, without showing the associated medical data. Additionally, modifying legacy code is costly and funding for these modifications is hard to

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attain. For example, as stated earlier, it took AFMRA four years to receive the required funding to make the last update to Q-base.[45] This is another area where the Vice Chief's Challenge 2020 should be used to acquire the necessary funding to make this change occur.

The perception of preferential treatment is seen from multiple views. Many EFMP members feel the system makes them non-promotable because their family's needs, and their desire to stay with their family for each assignment may give the impression they are not properly advancing; however, the member always has the option to travel without their family.[46] Others will see the EFMP addition to Talent Marketplace and vMPF as a way airmen can avoid certain unliked assignments. This last perception is false, for the assignments team clearly states "[e]nrolling a family member in the EFMP does not negate the Airman's responsibility to serve their share of overseas duty or meet deployment requirements."[47] In the end, the needs of the Air Force will always take priority whether the member wants to be considered or not. While funding may be hard to acquire and many opinions will be raised, linking the two systems will help give the members more information and help them better communicate their desires to assignments personnel.

Conclusion

The Air Force should inform airman of duty locations that have the services and availability to treat their special needs family members before they provide assignment inputs. This would reduce stress and anxiety on airmen, enrolled in EFMP, and help them secure housing and medical services they need earlier in the PCS process. The recommendation will also distribute the workload of the SNC to maintain a better battle rhythm for the medical staff throughout the year and also reduce the number of reworked assignments. Last, this will address the recent call from the Air Force senior leaders and Congress to help EFMP families get to the

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right bases that have the services and availability to meet their special needs. This will

implement a solution now to help out these struggling families vice waiting several years for a

Defense Health Agency solution to be implemented.

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[11] "DOD Should Improve Its Oversight of the Exceptional Family Member Program," United States Government Accountability Office, May 2018, 21.

[12] Army Regulation 608-75, *Exceptional Family Member Program,* 27 January 2017, 24 and Marine Corps Order 1754.4B, *Exceptional Family Member Program,* 20 September 2010, 2-9 and 2-10.

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2019, text notes., and Mary Carnduff, "EFMP Concept Test Discussion," interview conducted by T. Christopher Ward, January 6, 2020, audio, 21:15.

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[45] Air Force Medical Readiness Agency, "Q-Base Sponsor Page," Version #1, September 2019, 3.

[46] Bronfenbrenner Center for Translational Research, Cornell University and Beach Center on Disability, the University of Kansas "Department of Defense Exceptional Family Member Program Benchmark Study" (Final Project Report, September, 2013), 37-38.

[47] Air Force Personnel Services Delivery Guide, *Voluntary Assignments Exceptional Family Member Program (EFMP) Reassignment and Deferment*, 20 March 2014, 2.

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Appendix H: ibD Student Pitch Projects Video Links

Major Jones: Teaching Innovation: https://youtu.be/lt_u0xLm_IQ

Major Yates: Racial Discrepancies in the Military Justice System:
https://youtu.be/anOXrDsGTRE

Major Ablay: COVID Lessons and The Classroom: https://youtu.be/OCLXr3kbXzQ

Majors XXX, XXX, XXX: ACE https://youtu.be/qh89132wvmg

Majors XXX: Talent Management: https://youtu.be/VWAlHOWI0m0

Majors: Recruiting Modernization in the Near Peer Age: https://youtu.be/hcPvmVzyLe8

Majors: Moving the Needle: Transitioning Innovation : https://youtu.be/1T9AqPbZYY4

Appendix I: Competing Values Framework Sample

Assessment available here: https://portal.innovationgenome.com/dashboard (Password: USAF)

DEMARCO RESULTS (example)

OVERALL RESULTS

PURPOSES
You want your unit to be more **responsive** and **aggressive**, achieving and maintain global air and space superiority.

How you want your units/USAF to function in the future is in alignment with how you approach your work currently. Consider how you can use your skills to be an effective agent of change.

PRACTICES
Your unit emphasizes **efficiency**. Procedures, process, standardizations, and turnkey systems are very important.

Your unit/USAF needs to change to build the capability you want in the future. Consider how you can be an effective agent of change in your role.

PERSONAL
You are **competitive**. Focused on your goals, you work rapidly, get things done, and want to challenge yourself and others.

You do not work in the same way as your unit/USAF. Consider how you can develop new skills and become more effective in your role.

PURPOSES: YOUR GOALS FOR YOUR UNIT/USAF

COMPETE

Fast Paced and Result Oriented

A competitive, aggressive, and goal-oriented organization, your desired future for your unit/USAF is one that produces global air and space dominance. Short-term oriented, it values the achievements of quick decision-makers and deal-makers. There is a bias toward action and superior performance is highly rewarded.

BOND: Connected by shared GOALS

ENVIRONMENT: Fast-paced atmosphere, direct, cut-throat, winners and losers, high-pressure, demanding

EXAMPLES: Netflix, Microsoft, Goldman Sachs, General Electric

SPEED	RESULT	INTENSITY	DOMINANCE
Confronting problems as soon as they occur	Accomplishing missions	Eliminating underperforming initiatives	Maximizing effectiveness and lethality
Making real-time decisions in a fast-moving environment	Winning in warfare and competition	Rewarding high performance	Creating unmatched global eminence

PRACTICES: THE CURRENT PRACTICES OF THE USAF

CONTROL

Complex System and Continuous Improvements

Your unit is methodical, analytical, and efficient, relying on standards, policies, and procedures to synchronize complex operations around the globe and manage an excellent Command and Control mission. It is one that is cautious, risk-adverse, and focuses on fail-safe systems. Technical expertise and data are important.

BOND: Connected by shared PROCESS

ENVIRONMENT: Complex logistics, quality control, pragmatic thinkers, embracing rules and procedures

EXAMPLES: Amazon, McDonald's, Boeing, Toyota

HOW TO FUNCTION IN A CONTROL UNIT

Provide details

Follow the rules

Explain things in sequential order

Conform to accepted esprit de corps

Demonstrate how things work

Gather the facts and analyze them objectively

Organize your resources to do more with less

Clarify roles and responsibilities

Measure progress

Make a budget and stick to it

Keep things organized

Enhance your analytical skills

Respect hierarchy and chains of command

Learn to be logical and less emotional

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PERSONAL: YOUR INNOVATION APPROACH

COMPETE
Primary Trait

Blues (Athletes) are very focused individuals who want to get things done and win. They appreciate people who are competent and expect the best of everyone since they work very hard themselves. They can be aggressive and assertive. They are very aware of what's going on around them, including their competitors. Their decisiveness enables them to capture opportunities as they appear in the horizon.

CREATE
Secondary Trait

Greens (Artists) are very creative and constantly testing boundaries to discover new ideas and explore possibilities. Unafraid to experiment and fail, greens thrive in ambiguous situations and show great flexibility and agility to adapt to new situations. Visionaries, they focus on the future and the strategy to get there. Greens make great entrepreneurs, harnessing their abstract thinking and imagination to craft radical, out-of-the-box solutions.

MOTTO: Just do it; Let's do it NOW

KEYWORDS: Energy, speed, winning, getting it done

OCCUPATIONS: Motivators, athletes, brokers, CEOs, lawyers, surgeons

EXAMPLES: General David Lee Goldfein, General George S. Patton, Bill Gates, Jack Welch

STRENGTHS	WEAKNESSES
Strategic, opportunistic, incisive	Single-minded to achieve goals, ruthless
Focused, self-motivated, ambitious	Self-centered
Assertive, decisive	Short-sighted, overlook long-term implications
Rational, pragmatic, loyal	Aggressive, domineering
Skillful, competent, hard-working, persistent	Brusque, rude, uncaring, insensitive
Fast, action-oriented	Workaholic, overworked, burn-out
Effective, rewards others for performance	Uncollaborative, not inclusive

OVERALL PROFILE

COMPETE   CREATE

A blue-green, you are very focused on your external environments: what your allies and partners need, future trends, changes in the adversaries' strengths, etc. This ability to see the bigger picture puts you in the forefront of any relevant changes. The green in you gives you the future orientation to project what will happen next and the visions of what is to come, helping you spot opportunities in the horizon. The blue in you translates those possibilities into real plans fast, which gives you a competitive advantage. You are faster and more focused than everybody else.

The blue-green combination produces an individual who has a natural instinct to be at the right place at the right moment, fully ready to engage. You are competitive, hard working, flexible, adaptive, and creative. You welcome continuous change and encourage your colleagues to come up with creative new solutions. This combination leads to one of the most powerful and successful leaders in a quickly changing environment full of ambiguity where the fastest and strongest wins.

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Appendix J: GiANT's 5 Voices Model
DeMarco Results: Pioneer
Information and Assessment: https://5voices.com

5 VOICES
The Art of Team Collaboration

- Pioneer
- Nurturer
- Connector
- Creative
- Guardian

12   5 Voices System™ | GiANT Worldwide

The Pioneer
Discover Your Leadership Voice

Pioneer

VOICE VOLUME

POPULATION   7%

CHAMPION OF
Strategic vision, results-focused, and problem-solving

WATCH OUT FOR
Pioneers lack sensitivity, can be unwilling to listen, and perceived as arrogant

HOW TO EMPOWER THEM
Don't worry - they empower themselves. Just affirm their competence

44   5 Voices System™ | GiANT Worldwide

METHOD
Interview for Empathy

Explore
Emotions

Evoke
Stories

Question
Statements

Thank &
Wrap-up

Build
Rapport

Intro
Project

Intro
Yourself

time

WHY interview

You want to understand a person's thoughts, emotions, and motivations, so that you can determine how to innovate for him or her. By understanding the choices that person makes and the behaviors that person engages in, you can identify their needs, and design to meet those needs.

HOW to interview

Ask why. Even when you think you know the answer, ask people why they do or say things. The answers will sometimes surprise you. A conversation started from one question should go on as long as it needs to. **Never say "usually" when asking a question.** Instead, ask about a specific instance or occurrence, such as "tell me about the last time you ____"

Encourage stories. Whether or not the stories people tell are true, they reveal how they think about the world. Ask questions that get people telling stories.

Look for inconsistencies. Sometimes what people say and what they do are different. These inconsistencies often hide interesting insights.

Pay attention to nonverbal cues. Be aware of body language and emotions.

Don't be afraid of silence. Interviewers often feel the need to ask another question when there is a pause. If you allow for silence, a person can reflect on what they've just said and may reveal something deeper.

Don't suggest answers to your questions. Even if they pause before answering, don't help them by suggesting an answer. This can unintentionally get people to say things that agree with your expectations.

Ask questions neutrally. "What do you think about buying gifts for your spouse?" is a better question than "Don't you think shopping is great?" because the first question doesn't imply that there is a right answer.

Don't ask binary questions. Binary questions can be answered in a word; you want to host a conversation built upon stories.

Make sure you're prepared to capture. Always interview in pairs. If this is not possible, you should use a voice recorder—it is impossible to properly engage a user and take detailed notes at the same time.

:: **10** :: Visual adapted from Michael Barry, Point Forward

d.

Appendix L: Rogers' 19 Proposals
Available at https://www.the-pca.org.uk/about/carl-rogers.html

The following is taken from Merry's book 'Learning and Being in Person-Centred Counselling' (Merry, 2002: 23-27):

"Rogers offered a group of nineteen hypothetical statements which, together constitute his person-centred theory of personality dynamics and behaviour . 'A theory of personality and Behaviour' can be found in Rogers (1951, pp. 481-533). Rogers makes the following statement: *"This theory is basically phenomenological in character,* and *relies heavily on the concept of the self as an explanatory construct. It pictures the end-point of personality development as being a basic congruence between the phenomenal field of experience and the conceptual structure of the self - a situation which, if achieved, would represent freedom from internal strain and anxiety, and freedom from potential strain; which would represent the maximum in realistically oriented adaptation; which would mean the establishment of an individualised value system having considerable identity with the value system of any other equally well-adapted member of the human race."* (p. 532)

The nineteen propositions' repay careful reading because together they provide us with an eloquent theory of personality which is entirely consistent with Rogers' theory of how people can change for the better, and why certain qualities of relationship are necessary in order to promote that change. Interspersed with Rogers' (1951: 483-522) original wording **(in bold)** Merry (2002: 23-27) has added *(in italics)* some explanations in different and more familiar terms:

1) Every individual exists in a continually changing world of experiencing of which he is the centre.

2) The organism reacts to the field as it is experienced and perceived. This perceptual field is, for the individual, 'reality'. *We see ourselves as the centre of our 'reality'; that is, our ever- changing world around us. We experience ourselves as the centre of our world, and we can only 'know' our own perceptions.*

3) The organism reacts as an organised whole to this phenomenal field. *The whole person works together rather than as separate parts.*

4) The organism has one basic tendency and striving – to actualize, maintain, and enhance the experiencing organism. *Human beings have a basic tendency to fulfil their potential, to be positive, forward looking, to grow, improve, and protect their existence.*

5) Behaviour is basically the goal-directed attempt of the organism to satisfy its needs as experienced in the field as perceived. *The things we do (our behaviour in everyday life) in order to satisfy our fundamental needs. If we accept proposition 4, that all*

needs are related, then all complex needs are related to basic needs. Needs are 'as experienced' and the world is 'as perceived'.

6) Emotion accompanies and in general facilitates such goal-directed behaviour, the kind of emotion being related to the seeking versus the consummatory aspects of the behaviour, and the intensity of the emotion being related to the perceived significance of the behaviour for the maintenance and enhancement of the organism. *Feelings are associated with, and help us to get, satisfaction and fulfilment. Generally speaking, pleasant feelings arise when we are satisfied, unpleasant feelings when we are not satisfied. The more important the situation, the stronger the feelings.*

7) The best vantage point from which to understand behaviour is from the internal frame of reference of the individual himself. *To understand the behaviour of a person, we must look at the world from their point of view.*

8) A portion of the total perceptual field gradually becomes differentiated as the self. *Some of what we recognise as 'reality', we come to call 'me' or 'self'.*

9) As a result of interaction with the environment, and particularly as a result of evaluational interaction with others, the structure of the self is formed – an organised, fluid, but consistent conceptual pattern of perceptions of characteristics and relationships of the 'I' or the 'me' together with values attached to these concepts.

10) The values attached to experiences, and the values which are part of the self structure, in some instances are values experienced directly by the organism, and in some instances are values introjected or taken over from others, but perceived in a distorted fashion, as if they had been experienced directly. *As we go about our everyday life, we build up a picture of ourselves, called the self-concept, from relating to and being with others and by interacting with the world around us. Sometimes we believe other people's version of reality and we absorb them into our self-concept as though they were our own.*

11) As experiences occur in the life of an individual, they are either a) symbolized, perceived and organized into some relationship to the self, b) ignored because there is no relationship to the self-structure, c) denied symbolization or given a distorted symbolization because the experience is inconsistent with the structure of the self. *There are several things we can do with our everyday experience: we can see that it is relevant to ourselves or we can ignore it because it is irrelevant; or if we experience*

something that doesn't fit with our picture of ourselves we can either pretend it didn't happen or change our picture of it, so that it does fit.

12) Most of the ways of behaving which are adopted by the organism are those which are consistent with the concept of the self. *Most of the time we do things and live our lives in ways which are in keeping with our picture of ourselves.*

13) Behaviour may, in some instances, be brought about by organic experiences and needs which have not been symbolised. Such behaviour may be inconsistent with the structure of the self, but in such instances the behaviour is not 'owned' by the individual. *Sometimes we do things as a result of experiences from inside us we have denied, or needs we have not acknowledged. This may conflict with the picture we have of ourselves, so we refuse to accept it is really us doing it.*

14) Psychological maladjustment exists when the organism denies to awareness significant sensory and visceral experiences, which consequently are not symbolized and organised into the gestalt of the self-structure. When this situation exists, there is a basic or potential psychological tension. *When we experience something that doesn't fit with our picture of ourselves and we cannot fit it in with that picture, we feel tense, anxious, frightened or confused.*

15) Psychological adjustment exists when the concept of the self is such that all the sensory and visceral experiences of the organism are, or may be, assimilated on a symbolic level into a consistent relationship with the concept of the self. *We feel relaxed and in control when the things we do and the experiences we have all fit in with the picture we have of ourselves.*

16) Any experience which is inconsistent with the organization or structure of self may be perceived as a threat, and the more of these perceptions there are, the more rigidly the self-structure is organized to maintain itself. *When things happen that don't fit with the picture we have of ourselves, we feel anxious. The more anxious we feel, the more stubbornly we hang on to the picture we have of ourselves as 'real'.*

17) Under certain conditions, involving primarily complete absence of any threat to the self-structure, experiences which are inconsistent with it may be perceived, and examined, and the structure of self revised to assimilate and include such experiences. *When we are in a relationship where we feel safe, understood and accepted for who we are, we can look at some of the things that don't fit in with our picture of ourselves and, if necessary change our picture to fit our experience more accurately. Or we can accept the occasional differences between our pictures of ourselves and our experience without becoming anxious.*

18) When the individual perceives and accepts into one consistent and integrated system all his sensory and visceral experiences, then he is necessarily more understanding of others and is more accepting of others as separate individuals. *When we see ourselves more clearly and accept ourselves more for what we are than as how others would like us to be, we can understand that others are equal to us, sharing basic human qualities, yet distinct as individuals.*

19) As the individual perceives and accepts into his self-structure more of his organic experiences, he finds that he is replacing his value system – based so largely upon introjections which have been distortedly symbolized – with a continuing organismic valuing process. *We stop applying rigid rules to govern our values and use a more flexible way of valuing based upon our own experience, not on the values we have taken in from others.*

A reading of the 'nineteen propositions' gives a clear sense of how person-centred personality theory reflects a view of the person continually in *process.*   The person is able, or potentially able to become free from conditions and move away from its debilitating effects towards becoming more integrated and fully functioning. In other words, Rogers viewed the negative effects of early relationships imposing conditions of worth as being largely responsible for the development of emotional or psychological disturbance; the other side of this coin is the person-centred idea that whilst some relationships can be damaging, others can be positively growth promoting." (Merry, 2002: 23-27).

Appendix M: Strategists by Design Course Concept

Block 1: Intro/Define Strategy, outline fox and hedgehog thinking (assessments)	Block 7: Technology & Strategy	Block 13: War Game Day 2
Block 2: History of Strategy	Block 7: Intro to Wargaming	Block 14: Lessons Learned Outbrief (Presentations)
Block 3: Ways, Means, and Ends	Block 8: Tactical Level (Unit)	Draft Concepts for Strategists by Design (SbD) Will combine in class work, guest lecturers, and group projects to gain a deeper understanding of what strategy is, how to create strategy, and ultimately how to operationalize it utilizing cognitive diversity
Block 4: Good Strategy vs Bad Strategy: Case Studies as seen through the fox and hedgehog	Block 10: Operational and Grand Strategy	
Block 5: Student Presentations: What is Strategy?	Block 11: War Game Prep: Presentations on Team Strategy	
Block 6: Game Theory, Sensemaking, and Future Casting	Block 12: War Game Day 1	

Appendix N: Insight Chart LbD

| Pre-Understanding	Design	Challenges	Reflection	Post-Understanding
Soft skills are important	Self awareness, emotional intelligence, positive attitude, communication skills, empathy, listening, creative problem solving, feedback, mentoring	The military originally baulked at the idea, hover the term soft skills was developed by the US Army in the early 1970s. Fighting the idea that leaders do not need soft skills in hard structures	probably a poor name (soft skills), for some this comes natural, for others it is a struggle. Connecting with people is vital to leadership.	leaders function between chaos and order. Both exist—the key is for them to exist in harmony. Soft skills and hard skills are required.
One size leader development does not fit all	Leaders need a personality, what is your personality? Accentuate who you are	The hard structure does demand a leader to know certain things, but these are not the only things. Law, order, good discipline are important, but there is a lot of room for a more creative approach to this	Ambiguities existing in leadership concepts and manifestations which are influenced by the context and by the "being" of the person	Ambiguity is everywhere, we live in paradox and contradictions are important to understanding. Leaders need to live with this, it won't go away—in fact it will probably get worse
A leader must be oneself	Design tools that will assist leaders in understanding your unique design	What if you don't like who you are? Don't feel like you fit in the hard structure, will the leader be accepted?	self perception vs other perception. We need to allow leaders to challenge self perception.	knowledge is derived from insights. Each leader has different adaptive capabilities, agitates, strength, and challenges.
Know what you do well	When the above is met, a leader gets clarity in their skills	Authenticity can be a bad word	congruency, harmony is a better way to thinking	understanding skills, passions, drive, fantasy, lack, and reality.
Know what you do not do well	All leaders have weaknesses, there is no shame in that, own it—leaders may hide it, but followers know	what if this becomes an anomaly in the hard structure	facilitating others voices, develops cohesion—need to appreciate yourself	honoring others with a compliment, you do XX very well, can you assist me with that—is a great way to bring coherence and congruency to the organization
It's okay to disagree	the USAF has a bit of a problem with conflict and as a culture we avoid it.	Disagree with respect, know when to accept orders and when to push back. Be clear in your mind what "hill you will die on." Helping other to disagree	know you can't speak for everyone, but you can speak for yourself. Challenge assumptions, put the contextual into context. Understanding situatedness	agreement is not a requirement for moving forward, but debate, dialog, conversation, and individuals being heard is important
Help people do what they do well	Leaders identify skills in followers, help develop those skills and acknowledge, don't ignore weaknesses	many do not know what they do well. People want to do what the organizational culture tells them to do	Habituate leaders on thinking, discovering, learning their unique skill sets.	help people to articulate and consciously express themselves with opportunities to advance their skills
Admit mistakes	The team knows you made the mistake, will you hide it or admit to it?	fighting the perception of the one mistake USAF	Mistakes are about trust. Stress is the uncertainty of the outcome	Responsibly, consciously leading. Kahneman: *I enjoy being wrong because now I am less wrong:* a mindset
No Time To Think (NT3)	There is so much busy work, it gets difficult to find time to plan, strategize, visualize the future and some leaders get comfortable with that. Where does the leaders	Thinking will work to surface the dilemmas and work toward harnessing both dimensions of ambiguity and paradox for a different approach to leadership	ponder a leader you admire and one you don't—what was the difference?	Paradox is part of the human condition. Leaders need to understand and be comfortable with *aporia* (an irresolvable internal contradiction or logical disjunction in a text, argument, or theory.)

	look to take the organization			
MBTI/5 Voices are important	Assessments are important, but not necessarily an answer, but they can serve as a beginning of discovery	Can one change or is there an arrested development. A good conversation for leaders—nature vs nurture and which is dominant	Human kind is a variation on a theme. Diversity makes the best teams	assessments can enlighten archetypes—but it is simply an awareness
USAF teaches leadership late in ones career / strong leaders teach leadership earlier	leader development is not a bureaucratic responsibility, it is a leader and individual responsibility.	the USAF is highly technical as such it takes a great deal of time to master weapons systems which places leadership as a tertiary course of study	Yinyang: Yang is the aircraft, the weapon system. Yin is the darker less firm concept of leadership. As a warrior we are required to know both the weapon and the skills required to lead	leadership is a trans-discipline subject which it makes it very difficult to study and even harder to master. Mastery of an aircraft is an easier challenge. This is an individual responsibility.
Personal Power vs Greater Good Leadership	What type of leader are you? Early in my career it seemed there were two basic types. In it for the glory or in it for others.	a leader needs to be promoted to continue in service.	what is the motivation of the leader, money, power, rank or passion, enthusiasm, does the hard structure recognize the difference?	the answer is not as clear as it first appears. Aporia is at play, ambiguity, paradox, and contradiction
Imposture syndrome is real	leaders can fake somethings and they need to, but do you know when you are faking?	no one can provide a leader with a checklist for command	confidence in who you are as a leader and a person plays into a leadership ability.	Leadership is an imagined context
			Lbd has become the articulation of what is implicit. It is increased articulation of implicit knowledge.	*Coup d'œil*
Leadership is…	The concept of *ikigai*		trans disciplinary	phenomenology
Character/Charisma				

Appendix O: Insight Chart ibD

Innovators by Design

Pre-Understanding	Design	Challenges	Reflection	Post-Understanding	Discourses
Creative people are THE innovators	Leaders need to know themselves and their organization well enough to assist the creatives	The hard structure crushes creatives or they are assimilated into the organizational culture	Paradox: the hard structure requires innovators while at the same time it inhibits their creativity	innovation must have purpose or reason that aligns, complements, accelerates the organizational interests	
Leaders must be creative in order to lead	leaders can intentionally create conditions enabling the realization/ manifestation of creativity as something to be embraced	hard structure privileges conformity over creativity	leaders don't need to "move the pieces on the board" but can help when they want to move —but can develop a three dimensional strategy that clears the path when the 'pieces' want to have agency in the game	The leader does not need to be creative in themselves but needs to recognize its value in others and encourage it	B3: Gadamer
An understanding of the rules and structures is required in order to innovate in those structures	competency in your job is important BEFORE one can really innovate. Learn the ropes and then look to innovate	hard structures have a rules based culture with right and wrong thinking and answers	learning the rules and developing competency may lead to deeper assimilation into the hard structure	Again we see a paradox here, where we need to understand how we can influence a creative shift in the hard structure with care, concern, and humility	
Global politics is complex with binary splits and ideologies about what the future can/should look like and what action should be taken now. Innovating can enable the global good in a new and creative direction	draw out the creatives, acknowledge their gifts, but also that we need a diverse team around the creative to truly bring ideas to light and ensure a diverse team around them to support and trial new ideas	technology is driving the world at such a pace that no one person can innovate successfully on their own. It takes a diverse team and diversity can provide creative friction	Friction is energy. Energy is needed to move forward. Shared goals, values, direction, are foundational to trust and trust supports innovation	innovation and creativity is viral. Ideas and concepts are brought into being and they simply cannot be owned by one person, they are shared and spread throughout the organization towards a larger strategic impact	
Senior leaders say innovation is a priority yet an innovative culture fails to take hold	linking into senior leader documents, speeches, and ideas to better understand the organizational context and purpose behind different perceptions of innovation	Middle management are often tasked with compliance to ensure orders are followed— thus creating a perception of a "frozen middle."	organizational behavior plays a major role in innovation or the lack of it	'chaos and order' can explain a great deal of the organizational contradictions and paradoxes (Gadamer and Rogers)	
Competency, community, and culture are important to innovation	Community and culture are key, leaders can foster these in their organization simply in how they respond to new ideas when they are presented	a common concern is people will fail or worse. If someone in the organization fails, what does that say of the leader? Does the larger culture of the hard structure accept failure as part of innovation?	accepting risk and failure is a matter of trust. Leaders must build trust up and down the chain of command in hard structures	building culture takes time, building community can be done more quickly. Begin with a community and culture should follow	
Collaborative teams are key—ownership is not	trust and communication are the bedrock of collaboration. Open lines of communication	Leaders will hear NO often, that does not necessarily mean stop	communication leads to collaboration. Collaboration leads to more brains thinking about a problem and an innovation which in turn leads to creativity on the grandest scale.	Conservative and liberal approached to innovation— organization need both (this is not about politics)	

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Appendix P: ACSC AY23 Reading List
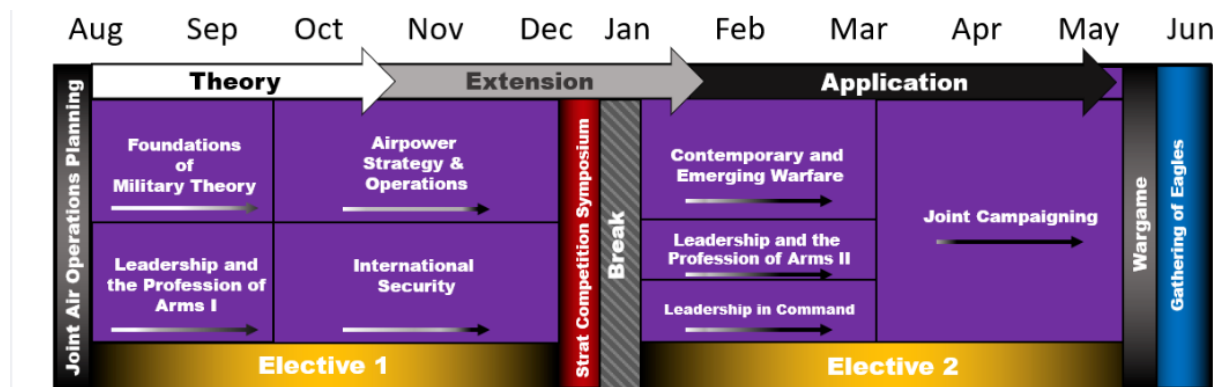
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2. Kahneman, Daniel. *Thinking, Fast and Slow*. New York: Macmillan, 2013.
3. McChrystal, Stanley. *Leaders: Myth and Reality*. New York: Penguin, 2018.
4. Shanks-Kaurin, Pauline. *On Obedience: Contrasting Philosophies for the Military Citizenry and Community.* Naval Institute Press, 2020.
5. Northouse, *Leadership Theory and Practice*, pp. 1-16, 19-29, 39-40, 73-81, 91-2, 95-100, 114-5. **[EL]**
6. *AFDP 1-1* (2021), pp. 8-9 "Chapter 2: Who We Are: Airmen." **[EL]**
7. *USAF Doctrine 2.0 Leadership*, pp. 13-14 "Followership", 16-22 "Core Values," 31-33 "Leading Airmen," 38-48 "Leadership Levels, Competencies, Components." **[EL]**
8. *USAF Manual for Leadership* (1948), pp. 4-9 "What is Leadership?" and "The Mission," pages 48-53 "Attributes of a Leader." **[EL]**
9. Dr. George Lucas, *Military Ethics: What Everyone Needs to Know*, 1-10, 15-30, 100-118. **[EL]**
10. Ethics Reader: Plato's The Ring of Gyges (5-8), Aristotelian Virtues (11-20), Kant's Categorical Imperative (23-29), Bentham's Principle of Utility (33-40), Rawls' Theory ofJustice as Fairness (42-51)
11. William Deresiewicz, "Solitude and Leadership," *The American Scholar* (Spring 2010) 1- 10. **[EL]**
12. Lt Col Jesper Stubbendorff (USAF) & Robert Overstreet, "A Commander's First Challenge: Building Trust," *Air & Space Power Journal*, 33.2 (2019), 15-25. **[EL]**
13. Kimberly Breevart and Reinout DeVriees, "Followers' HEXACO personality traits and preference for charismatic, relationship-oriented, and task-oriented leadership" *Journal of Business and Psychology* 36 (2021) 253-265. **[EL]**
14. Christian Miller, *The Character Gap*, pp. 25-48, 55-78, 82-100, 142-165.
15. Pauline Shanks-Kaurin. *On Obedience,* pp. 50-95, 143-193.
16. Case Study on the *USS Theodore Roosevelt* and COVID-19 **[EL]**
17. Joseph Chapa, "The Oath of Office and the Insurrection," *The War Room*, 2022 **[EL].**
18. Daniel Goleman, Richard Boyatzis, & Annie McKee, *Primal Leadership: Unleashing the Power of Emotional Intelligence*, 3-18, 33-52, 253-256. **[EL]**
19. Kevin Cutright, "The Empathetic Soldier" *IJPS* 27.2 (2019) 265-283. **[EL]**

20. Elizabeth Stanley and Kelsey Larsen, "Difficulties with Emotion Regulation in theContemporary U.S. Armed Forces," *Armed Forces and Society* 47.1 (2021) 78-93. **[EL]**
21. Deirdre Dixon *et al.* "Making Sense when it matters most" *JLOS* 2016: 1-24. **[EL]**
22. Cranny-Evans and Kraushal, "Intellectual Failures Behind Russia's Bungled Invasion" *RUSI* (2022) **[EL]**
23. Case Study: Jo Ann Robinson, "The Boycott Begins" from *The Montgomery Bus Boycott and the Women Who Started It*, National Humanities Center Resource Toolbox. **[EL]**
24. Case Study: excerpts from Donald Miller, *Masters of the Air*, pp. 102-110, 124-137. **[EL]**

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