ORGANIZATIONAL MANAGEMENT

# Promoting Polyarchy and Professionalism in Officer Character and Leadership Development

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> *"I listened with fascination. I had always admired [Commanding General of the Army Air Forces Henry H.] Arnold's great vision, but I think then that I was more impressed than ever. This was September 1944. The war was not over; in fact, the Germans were to launch the Battle of the Bulge in December. Yet Arnold was already casting his sights far beyond the war, and realizing, as he always had, that the technical genius which could help find answers for him was not cooped up in military or civilian bureaucracy but was to be found in universities and in the people at large." (von Karman & Edson, 1967, p. 268)*

Having just passed the 71st anniversary of the establishment of the U.S. Air Force, it is appropriate to reflect on all that has been accomplished, but it is also an opportunity to cast our sights beyond today, as Arnold did, to consider where the Air Force will find the resources necessary to solve the complex and dynamic problems of tomorrow.

## ABSTRACT

The U.S. Air Force's first seventy years have witnessed frame-breaking advancements in the equipment, tools, and technologies employed for mission accomplishment, but those same seventy years have also been accompanied by a substantial accretion of organizational formalization, resulting in delayed decision-making and increased bureaucratic inertia. The complex and rapidly changing social, political, and technological environments of the next seventy years and beyond will require Air Force leaders who can initiate and nurture individual and collective dynamic capabilities to sense and seize opportunities quickly and proficiently. Developing these capabilities will require less emphasis on rules-based scripts, hierarchical referral, and unitary decision-making processes (bureaucratic processes), and more emphasis on differentiated decision-making through polyarchy and integration via the social proof of military professionalism.

The recollection above, from a pioneering aerospace leader who worked with Arnold (von Karman & Edson, 1967), seems to suggest that visions (great and small), and solutions (great and small), do not spring easily from the confines of large, bureaucratic systems. To the contrary, the theory of dynamic capabilities (Barreto, 2010; Teece, Pisano, & Shuen, 1997) suggests that only those organizations which "integrate, build and reconfigure internal and external competencies to address rapidly changing environments" (Teece et al., 1997, p. 516) will be able to succeed in such environments. Put another way, organizations which build the capacity to sense and shape opportunities and threats (Teece, 2007), and to then seize opportunities quickly and proficiently (Teece, 2000), are those that are better able to succeed in rapidly changing, complex environments. General Hap Arnold knew this, just as he knew that large bureaucratic systems, dictated as they were by the contingencies of military strategy, size and the technology of the day, were not the place to look for answers to the complex problems the future would present. The leaders of the Air Force of tomorrow are being educated and trained today, so we might ask: how do we prepare young people to lead with character in dynamic environments where agility, speed, rapid decision-making, and extraordinary vision will be required? We believe that the answer lies, in part, in leadership and character development programs that include discussion and practice in the use of self-organizing processes for problem-solving and decision-making (known as polyarchy; Dahl, 1972), combined with a focus on professionalism as a means of integrating solutions within our highly-differentiated (military) command and control framework.

## In Defense of Bureaucracy

It has become de rigueur to set up bureaucracy, and particularly government bureaucracy, as a straw man, and then proceed to knock it down a few pegs by citing evidence of its many and varied limitations and failures (Edwards, 2015; Johnson & Libecap, 1994). We do not intend to do that here. For each set of organizational contingencies (e.g., strategy, size, technology, environment), there is an appropriate, though imperfect, structural match (Miller, 1987; 1988). In the early days of the Industrial Revolution, bureaucracy was a welcome antidote to the rampant nepotism, cruelty, capriciousness and waste associated with operations in most organizations at the time (Bennis, 1965). Every member of the military likely understands the usefulness of the bureaucratic form for peacetime operations. Bureaucracy, as Wriston (1980) describes, is "characterized by:

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1. Its hierarchical relationships, culminating in one boss "at the top".
2. Its attempt to prescribe all action and authority through written rules and regulations.
3. Its relative isolation from outside evaluation or "feedback".
4. Its attempt to hire and promote staff, and divide work, based on specialization and technical competence.
5. Its attempt to adhere to the strict rule of rationality.
6. Its dependent membership (i.e., its members depend on it for their livelihood)" (p. 179).

On balance, the advantages of a mechanistic or bureaucratic form for the U.S. Air Force substantially outweigh the disadvantages of the form when considering the peacetime missions, size, technology, environment and activities of the service. The mechanistic/ bureaucratic form of organization is well-suited, in most peacetime situations, as a structure to differentiate the work that needs to be done and integrate the many activities that result. In short, this paper is both a defense of bureaucracy and an indictment of it as an all-encompassing mental model (or cognitive framework) for decision-making in routine and non-routine environments.

With the increase in the size and complexity of the Air Force mission set has come a corresponding increase in organizational formalization. Analysis by the Regulatory Studies Center at George Washington University of the Code of Federal Regulations (CFR) shows that the number of pages in all federal rules and regulations has grown from a count of 71,224 in 1975 to 178,277 at the end of 2015 (GWU, 2017). A good bit of growth in policy guidance is understandable. New tools, methods and environments require new policies and procedures to ensure uniformity of action, the preservation of resources, and the safety of organizational participants, among other important outcomes. We do not argue that rules are unnecessary, but that an organization which relies on an ethos of rule-making to shape behavior in all environments, including those that are non-routine, dynamic and complex, risks delayed decision-making, inefficient operations, and mission failure. Routine situations demand programmed decisions using policies, procedures and regulations. Non-routine situations demand different mechanisms to ensure mission accomplishment...and those mechanisms cannot be formalized (nor will they ever be). Unique problems require unique solutions, and officer candidates must be taught how to utilize the resources of the organization to more quickly solve complex problems in dynamic situations. We cannot hope to foresee all of the problems that will arise in the near and not-so-near future, and therefore cannot write rules fast enough to address them. The best we can do is train our officer candidates to recognize unique and ill-structured problems, seize the most promising opportunities extant, and execute solutions with speed and precision. Bureaucracies do not move fast, as they were not designed to. We must teach our young officers how to quickly and proficiently sense, shape and execute solutions to our most acute and important problems (some of which do not currently exist). We must teach them to be dynamic decision-makers and we must build their capabilities to do so, much as we build their capacities for working in a military bureaucracy.

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## The Dynamic Capabilities View

The failure to address and respond to major environmental changes is a harbinger of organizational failure (Audia, Locke, & Smith, 2000). As such, organizations operating in hypercompetitive (D'Aveni, 1994) or high-velocity (Bourgeois & Eisenhardt, 1988) environments are encouraged to operate in such a way as to build successive temporary advantages to respond to these environmental shocks (D'Aveni, 1994; Felin & Powell, 2016). Dynamic Capabilities Theory builds from the resource-based view (RBV) of the firm (Barney, 1986), which explains how an organization might achieve a competitive advantage by using their unique resources and capabilities, where resources are things owned/controlled by the firm, and capabilities refers to the organization's capacity to deploy their resources toward a desired end (Barney, 1991). However, RBV assumes that resources and capabilities are essentially static in nature (rare, non-substitutable, and difficult to imitate), and inadequate to provide an advantage in a dynamic environment (Priem & Butler, 2001). The Theory of Dynamic Capabilities (Teece et al., 1997), in contrast, is defined as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (516). Eisenhardt and Martin (2000) characterized dynamic capabilities as the firm's processes that use resources to match/create market change. Winter (2003) suggested that dynamic capabilities were those that operated to extend, modify, or create ordinary capabilities, suggesting that dynamic capabilities could spring organically from the ordinary activities in the organization. It is worth noting that there are many definitions of dynamic capabilities, but that the construct can be defined using terms such as abilities, capabilities, capacities, processes and routines (Barreto, 2010).

While some find the many definitions useful for describing what dynamic capabilities are, others have suggested that the differing definitions are vague and invite theoretical and empirical confusion (Kraatz & Zajac, 2001). Barreto (2010) consolidated and integrated the various definitions into one overall description: "A dynamic capability is the firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base" (p. 271). This definition suggests that dynamic capability is a composite of four dimensions, all directed toward solving problems: the propensity to sense opportunities and threats, the propensity to make timely decisions, the propensity to make market-oriented decisions, and the propensity to change the resource base of the organization. In other words, an organization develops dynamic capabilities to solve problems, first and foremost. It must develop the capacity to sense opportunities and threats in its environment (internal and external), it must develop the capacity to make timely and appropriate decisions, and it must be willing to change its resource base (the strategic assets used to produce outcomes). Only by doing those things will an organization be able to build the necessary abilities, capabilities, capacities, processes and routines that solve problems. So, what are those capabilities, and how should the Air Force seek to develop them?

## Polyarchy

Dynamic environments place great demands on the organization to process and act on complex, time-sensitive and often incomplete information. Imagine the volume and complexity of data and information flowing to organizational leaders in the midst of combat operations, for example. Who is best prepared to receive, parse, integrate, apply and decide subsequent actions based on that information? Who fully grasps what the disparate elements of the organization are experiencing, what their adversaries are contemplating, and how the battle is unfolding? Unfortunately, no one is capable of such information processing. But that is exactly what bureaucracy demands – hierarchical referral, task specialization, behavioral scripts (e.g., regulations), and unitary

decision-making. Bureaucracy demands that someone, usually high-placed, makes important decisions about what to do. Whereas organizational design suggests that this bureaucratic model is appropriate in stable environments, it is wholly unsuited to operations in dynamic environments (the realm in which we are supposed to be training to fight). Therefore, our first challenge is to find a better way to sense opportunities and threats in our immediate environment, and to bring information to bear on problems so that solutions can be developed and executed quickly and proficiently.

If the information processing abilities of a unitary leader are limited, it seems logical to suggest that we should multiply the number of leaders engaged in information processing and decision making. The value of collaborative decision-making over individual decision-making has been demonstrated time and time again in research on team behaviors and outcomes in organizations (e.g., Mathieu et al., 2017). It is not that two heads are necessarily better than one, but that many, well-informed heads are almost always better than one. Enter polyarchy. Robert Dahl introduced the term polyarchy to characterize American politics and other political systems that are open, inclusive, and competitive (Dahl & Lindblom, 1953; Dahl,1972). In the organizational sciences, polyarchy refers to systems in which autonomous individuals or small groups are given the power to make their own decisions about the conduct of their work (Sah & Stiglitz, 1986). Those individuals and groups, typically those whose jobs require that they be closer to the foci of action, have specialized knowledge and skills, operate at the boundaries of the organization, and are subject to, and aware of, the full magnitude of environmental change as it impacts their work. It is these individuals and groups who are in the best position to sense opportunities and threats, make decisions and solve problems.

Polyarchy promotes collaboration and decision-making in dynamic environments by bringing the necessary resources to bear quickly and efficiently so that focal individuals can sense and shape opportunities quickly and make decisions proficiently. Polyarchy is to organizations what the "kill box" is to military aviators. Kill boxes were introduced in the Gulf War as a way to delineate boundaries for combat operations and de-conflict the airspace within those boundaries. A kill box was a three-dimensional area that enabled timely, effective coordination and control, and allowed for rapid and spontaneous attacks. By extension, giving junior officers the authority to sense and exploit opportunities within their "kill boxes" (areas of responsibility) would allow organizations to capitalize on opportunities that are increasingly fleeting and dynamic.

Polyarchy illustrates Patton's maxim that you should "never tell people how to do things; tell them what to do, and they will surprise you with their ingenuity." When we specify the exact order of things, micro-manage decision processes and decisions, or specify the voluminous regulations, policies, and procedures that must be strictly attended to, we risk telling people how to do things. Polyarchy emphasizes the "what" – the outcome, result or action that must be taken (here and now) in order to capitalize on the situation and achieve success. Rather than emphasizing decision-making by authority, polyarchy emphasizes team decision-making, with coordination and control exercised in a timely fashion at the level where action occurs.

Polyarchy can be the mechanism by which differentiation is optimized in dynamic environments. The essential function of any structure is to break up the work of the organization. In stable environments, hierarchy breaks up the work so that specialized units can develop and produce a small range of outputs at great volumes. In dynamic environments, hierarchy breaks down, as systems designed for one environment prove ill-suited to rapid problem definition, solution development and execution. What is needed in dynamic environments is the development of a larger

range of *possible* solutions to ill-structured, time-sensitive problems. Polyarchy allows for differentiation with a defined purpose, so that the necessary and appropriate resources are engaged in real-time to solve unique problems. Polyarchy is more than just an ambidextrous approach to organization (O'Reilly & Tushman, 2004). It is a mindset and shared vision about how the work of the organization should proceed when faced with rapidly changing conditions, ill-structured problems, and limited time for information processing. It is a mental model for rapid organization, deliberation and decision. Our junior officers can quickly and, with a little training in team formation, team development, and consensus decision-making, learn to use polyarchy as a framework for decision and action in dynamic environments. For example, manufacturing companies that practice lean production often constitute kaizen teams to work on production inefficiencies with the goal of achieving continuous improvement. Kaizen is a structured, iterative, and participatory approach for making continuous improvements in organizations (Petterson, 2009). Kaizen teams are rapidly constituted, given the information and resources they need to develop and test solutions, and are just as rapidly disbanded following problem resolution. The reason these problem-solving teams work so well is that kaizen (continuous improvement) philosophy and team decision-making are integral to their way of doing business. The legendary Kelly Johnson of Lockheed developed a philosophy of innovation at the Skunk Works facility (Lockheed, 2018) based on the idea that rules and bureaucracy stifled group work, experimentation, and dynamic problem-solving. His "14 Rules and Practices" read like an owner's manual for polyarchy: clearly define the problem, give the development team the information and resources they need to innovate, and keep rules, reports, and interference by outsiders to a minimum. Likewise, our junior officers must be taught how to rely on the wisdom of teams, the power of collaborative decision-making, and the value of rapid prototyping and testing of solutions. They must also learn to trust that the process will be more effective if practiced often, critiqued frequently, and ruthlessly exploited, when necessary.

*Polyarchy is both a mechanism and a mindset that can help the Air Force speed attention to change in the organization's dynamic environment, to integrate actions and activities, to collect and focus individual efforts, and to ensure that everyone is working together, at all times and career stages, to achieve strategic goals.*

At first blush, polyarchy applied to a military organization seems like folly. It seems absurd to spend time and effort developing the curricula of basic, intermediate, and senior service schools if we are going to suggest turning the decision-making apparatus on its head. Basic service schools teach technical and followership skills, intermediate schools teach some elements of group decision-making, and senior service schools prepare officers for the day when they will exercise command (and control). But this assumes that command and control in a well-organized bureaucracy is the pinnacle of service leadership. As all senior leaders know, participative decision-making is the core of what they should be doing. But learning this lesson at the 15-year point seems anticlimactic. Where does that leave junior officers today? Where is there room for innovation, deliberation and critical thinking in their current positions? Polyarchy is both a

mechanism and a mindset that can help the Air Force speed attention to change in the organization's dynamic environment, to integrate actions and activities, to collect and focus individual efforts, and to ensure that everyone is working together, at all times and career stages, to achieve strategic goals. But there is a fine line between polyarchy and anarchy, and there must be sufficient consideration of integrating mechanisms to coordinate the complex internal activities that polyarchy has the potential to create.

## Professionalism

Regulations, rules, policies and procedures (formalization) are the most well-known approach to integration. But there are other approaches, and some that would work more effectively in the context of polyarchy. The Air Force has a very strong culture of professionalism (the confidence and skill expected of a professional). Each individual is expected to know their job and to do it well ("*Excellence in all we do*."). We spend a great deal of time educating and training our officers in the technical aspects of their duties. But we know that there is not enough time to teach everyone how to respond to every conceivable situation, nor can we write regulations sufficient to cover every contingency. And it is often that when time is critical and information lacking that officer professionalism, in its many forms and manifestations, helps guide decision-making and action. Officer professionalism integrates the disparate actions of many by focusing effort on the mission at hand. But how does professionalism do that? What is the mechanism responsible? One particularly powerful approach to integration by professionalism is the use of social proof. In social psychology, a social proof is a mechanism of social influence that tends to produce common behavior among members of a group (Cialdini, 2009; Lun et al., 2007). Social proof is a type of conformity (Cialdini & Goldstein, 2004), and can lead to herd behavior. A more familiar, and decidedly negative, example of a social proof is groupthink. But social proof can also persuade in positive ways (Cialdini, 2001) by reinforcing core values, positive group norms and expected modes of behavior.

Air Force leaderships' innate understanding and use of social proof is demonstrated in numerous ways. For example, a demonstration of social proof is literally written on the sleeves of United States Air Force Academy (USAFA) cadet uniforms. Starting with the class of 2000, a class exemplar is chosen to inspire (as the name suggests), exemplary values, character, and leadership. The name of the chosen leader is sewn onto the sleeves of cadet Athletic Jackets for that class. The power of this particularly symbolic form of social and cultural integration among cadets is compelling. Invoking the name of the exemplar reminds cadets of the values the exemplar embodied, and it serves as a guide to their own behavior and development. That constant reminder reinforces, in a very simple way, the core elements of character and those behaviors that are valued by the organization. Acting against those values would be, and should be, unthinkable to the cadets who wear that name on their sleeves.

The Air Force employs other implicit means of integration by professionalism in its accession programs, either through selection or during initial training. The System Socialization Model (explained in more detail in Levy & Blass, 2006) illustrates many of the components that impact effective integration, most of which can be used to inculcate the ethos of polyarchy into junior officer training programs and practices. Air Force organizational culture, values, and reputation ostensibly act as mechanisms to increase self-selection by individuals who will be committed to the Profession of Arms. These are positive implicit integration mechanisms. However, those same mechanisms might also increase socio-cultural inertia in the Air Force; we would recommend that Air Force officer accession programs focus on recruiting a more diverse officer corps, including those from different (non-traditional) educational and socio-cultural backgrounds who have

demonstrated creative approaches to problem solving, particularly so in fields such as cyber and space. The more the Air Force focuses on recruiting a true diversity of backgrounds, experiences, knowledge, skills, and abilities, the more effectively our force will be able to address future challenges. While integrating those diverse voices will be challenging at first, we trust that professional integration via explicit (formal training) and implicit (acculturation) means will smooth the rough edges of that diversity and harness those differences toward the use of more effective approaches to solving problems in dynamic environments.

Given the thrust of this article, it might be appropriate to suggest a few modest mechanisms to ensure the introduction and development of polyarchy and its associated processes in educational environments within the Air Force. However, we don't want to give the impression that these suggestions are quick-fixes, comprehensive, or will result in immediate change. On the contrary, the present state of formalization in the Air Force has been laid down over time, layer upon layer, like the process of building a coral reef, one well-meaning directive at a time. It will take time and energy to replace this accretion with meaningful, and less prescriptive, behavioral guides. Culture change is a slow process of unfreezing unproductive behaviors, training to the new behavior, and refreezing behaviors that represent improvements over the old system. Initially, however, it would serve as a useful signal if training programs emphasized individual and team performance, and rewarded them, equally. There is an award for the distinguished graduate of our various technical and educational programs; might there not be an award for the best team? We often refer to USAFA as a leadership laboratory. While that may have been the intention, when was the last time an individual or group was recognized for an experiment that failed? Do we train our new leaders to fail fast, learn quickly, and move on? Or do we punish the slightest infraction from standard procedure thereby creating an officer corps that is averse to change and apphrehensive to question those in power when the situation warrants? An essential understanding within Kaizen teams is that systems are never perfect but can often be improved from their current state. Do we teach prospective leaders how to question current processes with an eye toward seeking alternative, and perhaps better, solutions? Do we teach young officers to question *anything*? One of the enduring lessons of Cockpit/Crew Resource Management programs within the airline industry, for example, is that if anyone on the crew notices something that isn't as it should be, the appropriate first step is to verbalize the concern – before the accident investigation board does it for you.

In terms of actionable suggestions, we would revise leadership development programs in the Air Force to emphasize self-directed learning teams as the focal unit of decision-making and action in organizations. We would reorient performance evaluations to include more emphasis on team development, team leadership, and team performance. There are very few positions within the Air Force that do not require team effort. The outcomes of any activity therefore, have individual and group causes which should be understood and addressed. We believe team-based learning approaches (Michaelsen, Knight, & Fink, 2004) should be part of the academic curriculum at USAFA, at technical schools, and at service schools. Individuals should be trained in the theory and practice of team formation, team development, team leadership, and team performance. Individuals should understand the process gains and process losses associated with work in teams and should be equipped to enhance the former and mitigate the latter.

Advancement and promotion systems should expressly measure and evaluate the individual's contribution to team leadership. And finally, flexibility should be designed into systems that address individual

and group failures, of any kind, so that the Air Force can move away from an evaluative, performance orientation to a developmental, learning orientation. There can be no learning if one never tries anything new, and no one ever tried anything new if the response was always and predictably negative. The future requires adaptation – what brought the Air Force to this point is not necessarily what will take it through the next seventy years. If the inputs are changing, and we want the outputs to change as well, we have to address the processes we use to transform inputs to outputs.

*We must be willing to risk "letting go" of an ethos of rule-making in order to "hold on" to the very thing we train our officer candidates to be: officers of character to lead our Air Force and our nation into the future.*

## Conclusion

We understand that what we are proposing is easier said than done. It is difficult to build dynamic capabilities that are intangible, and polyarchy and professionalism are, by nature, composed of soft skills and soft power employed to achieve organizational goals. It is always easier to train someone to do something by rote. That, however, is our biggest concern. We do not believe that the Air Force can build dynamic capabilities to respond to challenges in our current and future environments by dictating new rules, policies, and procedures. The ethos of rule-making must be supplanted by an ethos of "capability" which values rapid problem identification, alternative solution generation, evaluation, and selection. We must train our officer candidates to sense, seize, and exploit opportunities, using the soft skills and collaboration of polyarchy as a tool to solve problems. We must trust that all of our mechanisms of professionalism – tangible and intangible – are sufficient for guiding the selection of appropriate, and ethical, solutions. In short, we must be willing to risk "letting go" of an ethos of rule-making in order to "hold on" to the very thing we train our officer candidates to be: officers of character to lead our Air Force and our nation into the future. These ideas may be nothing more than an old wine in a new label, but they offer the only logical means of developing the capabilities necessary to sense, shape, and seize opportunities quickly and proficiently in the dynamic environment that Hap Arnold cast his sights on so many years ago.

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