

## Innovation: An Austrian Model for the American Military

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Class of 2016

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REPORT DOCUMENTATION PAGE			Form Approved--OMB No. 0704-0188		
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1. REPORT DATE (DD-MM-YYYY) 01-04-2016		2. REPORT TYPE STRATEGY RESEARCH PROJECT		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Innovation: An Austrian Model for the American Military			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Lieutenant Colonel Bob Krumm United States Army Reserve			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Dr. Andrew Hill			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army War College, 122 Forbes Avenue, Carlisle, PA 17013			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution A: Approved for Public Release. Distribution is Unlimited. Please consider submitting to DTIC for worldwide availability? YES: <input checked="" type="checkbox"/> or NO: <input type="checkbox"/> (student check one) Project Adviser recommends DTIC submission? YES: <input checked="" type="checkbox"/> or NO: <input type="checkbox"/> (PA check one)					
13. SUPPLEMENTARY NOTES Word Count: 5,679					
14. ABSTRACT The U.S. military has proven itself adept at creating a decentralized culture that produces innovation during long periods of conflict, as in World War II and more recently during the wars in Afghanistan and Iraq. However, the military has been less successful at being able to maintain that type of culture in peacetime. This paper analyzes the concepts of entrepreneurship, competition, and knowledge through the filter of the lessons of the "Austrian school of economics" and applies them to the current U.S. military. This analysis concludes that the military retains vestigial conscription-era controls that inhibit a culture that encourages disruptive innovation. This paper proposes that DoD move to a post-conscription professional model, redefine and make greater use of mission command, add bottom-up experimental units, and create an internal, competitive marketplace by giving greater requirements validation and funding authorities to the regional combatant commanders instead of to the service chiefs.					
15. SUBJECT TERMS Competition, Economics, Entrepreneur, Fog of War, Knowledge, Mission Command, Remagen					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 28	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UU	b. ABSTRACT UU	c. THIS PAGE UU			19b. TELEPHONE NUMBER (w/ area code)

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(5,679 words)

### Abstract

The U.S. military has proven itself adept at creating a decentralized culture that produces innovation during long periods of conflict, as in World War II and more recently during the wars in Afghanistan and Iraq. However, the military has been less successful at being able to maintain that type of culture in peacetime. This paper analyzes the concepts of entrepreneurship, competition, and knowledge through the filter of the lessons of the “Austrian school of economics” and applies them to the current U.S. military. This analysis concludes that the military retains vestigial conscription-era controls that inhibit a culture that encourages disruptive innovation. This paper proposes that DoD move to a post-conscription professional model, redefine and make greater use of mission command, add bottom-up experimental units, and create an internal, competitive marketplace by giving greater requirements validation and funding authorities to the regional combatant commanders instead of to the service chiefs.

## **Innovation: An Austrian Model for the American Military**

When American forces unexpectedly seized the Ludendorff Bridge in March 1945, General Bradley “could not believe that General Eisenhower [would be] so rigid that he would ignore a bridgehead over the Rhine, even though it did not fit into previous plans.”<sup>1</sup> So Bradley ordered the First Army to continue to push into the heart of Germany “as much material over the river” before informing Eisenhower.<sup>2</sup> However, even before Bradley had learned of the intact bridge, subordinate commanders, from Lieutenant Colonel Leonard Engemann, commander of the 14<sup>th</sup> Tank Battalion, through General Courtney Hodges, commander of the First Army, had all taken it on their own initiative to transform what had been a supporting attack to secure the west bank of the Rhine River into an impromptu river crossing and the theater’s main effort. As Bradley suspected, Eisenhower was not so rigid as to ignore the unplanned opportunity. Against the advice of his own G3, Eisenhower ordered, “To hell with the planners,” and changed the plan in response to the fortuitous event.<sup>3</sup>

The initiative demonstrated at Remagen did not come easily to the United States Army. By the time Lieutenant Colonel (LTC) Engemann discovered the intact bridge, the Army had been in near continuous action in North Africa and Europe for 25 months. It had learned a great deal since its first trials at Kasserine when the untested American force still contained inept and inflexible commanders like Major General Lloyd Fredendall, who “rarely left his command post” and who was “impatient with the recommendations of subordinates more familiar with the terrain.”<sup>4</sup> It required the lessons learned from more than two years of war and many thousands of casualties before the Army was capable of executing the mission command that it displayed at Remagen.

The initiative displayed at Remagen went beyond mission command, which the Army defines as “the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander’s intent to empower agile and adaptive leaders in the conduct of unified land operations.”<sup>5</sup> No one in the chain of command had the intention of seizing the east side of the Rhine so as to continue to pressure disorganized German forces. But Ike recognized immediately that the Ludendorff Bridge was the “greatest possible threat” to the Germans.<sup>6</sup> So too did the subordinate commanders between him and Engemann.

Lieutenant Colonel Engemann found an undreamt of opportunity. Gregory Derry, in his review of the history of science, refers to this as a “serendipitous discovery.”<sup>7</sup> However, Derry also reminds the reader that serendipity is more than luck. In the words of Louis Pasteur, “Chance favors the prepared mind.”<sup>8</sup> Two years of fighting had prepared the minds of LTC Engemann and his boss, Brigadier General (BG) William Hoge to understand the significance of this serendipitous discovery. Likewise, two years of war prepared the chain of command to support the unplanned exploitation of the intact bridge.

More recently, junior officers have demonstrated uncommon initiative in Afghanistan and Iraq. Three Army War College professors, Steve Gerras, Leonard Wong, and Charles Allen, found that in both wars, “Leaders are increasingly responsible for building units in which individuals and organizations learn from their experiences and for establishing climates that tap the full ingenuity of subordinates.”<sup>9</sup> However, they noted three decades of Army climate studies that indicate that, “There is a disconnect between an espoused goal to have an adaptive, learning environment to deal with the

complexities of today's challenges and the creation of the corresponding culture and climate to enable this adaptation and learning."<sup>10</sup> Thus, the challenge is not how to conduct mission command; the challenge is how can the U.S. Army create and sustain a culture of mission command outside of contact with the enemy? The answer might come from an unlikely source: a group of renegade economists known as the "Austrian school."<sup>11</sup> What this theory of economics teaches about entrepreneurship, competition, and knowledge suggests a reordering of peacetime military structures and norms.

### Entrepreneurship

Economist Israel Kirzner distinguishes entrepreneurship from incremental improvement because the former involves the "discovery of new means-ends relationships, whereas the latter involves optimization within existing means-ends frameworks."<sup>12</sup> Harvard Business School professor Clayton Christensen similarly differentiates when he make a "strategically important distinction between . . . *sustaining* technologies and those that are *disruptive*."<sup>13</sup> It is not just technology that can be disruptive. Another economist, Joseph Schumpeter, asserted that new organizations and procedures likewise can be disruptive.<sup>14</sup>

Christensen, in *The Innovator's Dilemma*, says that successful organizations are not adept at creating disruptive innovations.<sup>15</sup> This often is true even when those organizations discover the new technologies themselves, as in the case of Polaroid's invention of digital photography and Swiss Centre Electronique Horloger's experimentation with the world's first quartz watch.<sup>16</sup> Christensen is not the first to argue that successful organizations generally do not excel at implementing disruptive innovations. However, Christensen offers a counterintuitive conclusion. He asserts that it is the very things that make organizations successful that causes their downfall--

“Good management was the most powerful reason they failed to stay atop their industries.”<sup>17</sup> Instead of pursuing disruptive innovations, well managed companies generally pursue sustaining innovation. They seek to “improve the performance of established products, along the dimensions of performance that mainstream customers . . . have historically valued.”<sup>18</sup>

Military strategist Edward Luttwak sees an example of the focus of large successful organizations on incremental sustaining innovations in the design of most modern military equipment. “Canonical weapons platforms and configurations of World War II have endured, despite all the new possibilities opened by technological advancements in the past six decades.”<sup>19</sup> He cited main battle tanks, fighter aircraft, and aircraft carriers as being “prisoners of tradition.”<sup>20</sup> Kirzner believes that organizations like the military tend to engage in “systematic search.” The services seek more of what they know, attempting to make it better. This view helps to explain Luttwak’s assertion that most of today’s weapons are little more than faster, stronger, and more accurate versions of their 1945 predecessors.

While systematic search is an efficient way of finding “missing information” that improves existing designs, Kirzner’s view is that it is not an effective means of finding something new and disruptive.<sup>21</sup> Central to the Austrian approach is that discovery is “midway between that of the deliberately produced information in standard search theory, and that of sheer windfall gain generated by pure chance.”<sup>22</sup> From the Austrian perspective, “When one becomes aware of what one had previously overlooked, one has not produced knowledge in any deliberate sense.” Instead, in such a circumstance the entrepreneur becomes aware that an assumption, previously overlooked, and

perhaps not even explicitly assumed, no longer holds. In Remagen, the assumption was that there would be no bridges across the Rhine. Brigadier General Hoge, Commander of Combat Command B, 9<sup>th</sup> Infantry Division, mentioned in his memoirs that in the planning phase someone mentioned the possibility of finding an intact bridge, “But nobody paid any attention to that.”<sup>23</sup> The assumption that there would be no standing bridges was so strong that no one gave it a second thought--until an entrepreneur came along.

One of the luminaries of the Austrian school of economics, Ludwig von Mises, wrote that the field of economics has in mind entrepreneurs, not as men, “But [as] a definite function.”<sup>24</sup> Crediting Mises, Kirzner concludes that, “Modern Austrians learned to see the market as an entrepreneurially driven process.”<sup>25</sup> This distinguishes Austrian thought from neoclassical economics that view entrepreneurship as something that just happens in a system that otherwise is in equilibrium. Austrians, not only believe that growing, healthy economies are in a perpetual state of disequilibrium, they view entrepreneurship as the reason why equilibrium is impossible, since it is the very disequilibrium brought about by disruptive innovation that creates large gains in economic growth.<sup>26</sup>

If disruptive innovation is the engine that drives increased performance, what does this portend for the American military? Imagine an officer telling the Army’s senior leadership, “I want funding to discover a new weapon or method that renders the tank obsolete,” or telling the Chief of Naval Operations, “Instead of trying to find a way to counter an adversary’s anti-access weapons, I want to make the aircraft carrier irrelevant to gaining access.” The constituencies, both inside and outside the military,

that perpetuate existing systems and organizations, would not allow more than constrained and token research on such disruptive innovations. Even when disruption has occurred within the military, as it did with the development of the aircraft carrier in the interwar years, it came about within the existing order and not as a means to supplant it. Geoffrey Till, who studied the evolution of the carrier, noted that an “overwhelming majority” of flyers of the period thought that the “chief function of naval aviation was to support the battle-line.”<sup>27</sup> Few openly advocated that the carrier would replace the battleship.

The military’s final, and best, argument against disruptive innovation is cost. Advocates of armor and aircraft carriers always can point to a higher priority upgrade that improves the performance of a known platform, while the disruptive innovator can offer only expensive speculative theory. When militaries exist in a resource constrained environment, which often is the case during peacetime, it is too easy to default to sustaining the status quo.

### Competition

Austrians believe that the impetus behind entrepreneurship is competition.<sup>28</sup> While wartime is the ultimate expression of competition, competition is not the natural state of a peacetime military. As the sole authorized provider of legitimate violence against foreign foes, the U.S. military is a monopoly. Additionally, as the only authorized purchaser of much of the hardware that makes possible that violence, the Department of Defense (DoD) is a monopsony. Both monopolies and monopsonies subvert normal market functions by eliminating the competition that gives discipline to the marketplace.

The *1986 Goldwater-Nichols Act* reorganized DoD and prioritized cooperation over competition between the services. Where previously, the services independently

fought military engagements, the new act placed operational units under regional joint commands that were responsible for the forces of all services within their regions. Most observers have viewed favorably the resulting jointness of military operations. However, Goldwater-Nichols did not reorganize how DoD conducts force development. The services still write their own requirements that they then approve and develop into new weapons platforms and organizational capabilities. Unfortunately, even though the Geographic Combatant Commanders (GCCs) are, in effect, the customers of the hardware and organizations that the services provide, they do not have a customer's usual supremacy over suppliers. Therefore, the marketplace's demand signals from customer to supplier do not exist in DoD. This is because the Joint Capabilities Integration and Development System (JCIDS) keeps the requirements determination process in the hands of the services. While there has been a recent change to JCIDS that gives the GCCs a vote within the Joint Requirements Oversight Council, it still is a process dominated by the service chiefs.<sup>29</sup>

Because the service chiefs operate without answering to their customers, the GCCs, they are more free to design their services in images of their own choosing. Carl Builder, A Rand defense analyst, said in 1989 that the military's "dominant concepts of war" had not changed from what they were in "the last year of World War II."<sup>30</sup> If nearly 20 years later, Edward Luttwak was making the same observation about the pervasiveness of the World War II paradigm, it lends even more support to the idea that the military is hostage to a tyranny of inertia and that it prefers to implement only incremental change.

There also is little desire to challenge those images. Former Undersecretary of Defense for Policy Michèle Flournoy testified to the Senate Armed Services Committee that there exists a “tyranny of consensus” within DoD that is “antithetical to what the Department needs to understand how best to design the force of the future.”<sup>31</sup> In her view, the tyranny of consensus too often results in “lowest common denominator solutions” because the service chiefs agree on what they can agree on.<sup>32</sup> Disruptive innovations stand little chance of surviving against consensus, since by definition, they disrupt the status quo. As Nolan Bushnell, the Atari co-founder who first hired a young Steve Jobs, said, “True innovation has no constituency.”<sup>33</sup> Thus, the emphasis on cooperation between the services exacerbates the already uncompetitive nature of DoD.

In a remark that sounds as if it could have come from Mises himself, Flournoy offered that, “Competition is critical to true innovation.”<sup>34</sup> Friederich Hayek, another Austrian luminary and Nobel laureate, referred to competition as a “discovery procedure.”<sup>35</sup> He noted the economic importance of it as being a process “whereby entrepreneurs constantly search for unexploited opportunities that can also be taken advantage of by others.”<sup>36</sup> We readily see that Engemann’s discovery of the intact Ludendorff Bridge was a military example of this economic phenomenon. It, however, was a wartime event where competition between Axis and Allies more readily encouraged discovery procedures that upset the status quo. Working against it in peacetime is the military hierarchy, a tradition of subservience to rank, and the tyranny of consensus. Unfortunately, aligned against innovation in DoD is a room full of stars.

## Knowledge

Also working against innovation and entrepreneurship is how the military uses knowledge. When Kirzner wrote of the foundational principles of Austrian economics he said that from Hayek, Austrians “learned to appreciate the role of knowledge.”<sup>37</sup> Hayek remarked that, “It is useful to recall that wherever we make use of competition, this can only be justified by our not knowing the essential circumstances that determine the behavior of the competitors.”<sup>38</sup> His point was that if one knew beforehand what was the better option, then indeed competition would be a waste of resources. However, one never knows outcomes before the contest.

One of the tenets of Austrian economics is that no person or committee can ever possess the perfect knowledge that would render competition unnecessary. An illustration of this comes from an unlikely object. “I, Pencil” is economist Leonard Read’s “autobiography” of the number two pencil. It would seem to be a simple account: wood, graphite, yellow paint, and a bit of eraser at the end. However, Read demonstrated that there is far more to the making of such an everyday commodity so easily taken for granted. His tale starts in Oregon’s logging camps with their “saws and trucks and rope” and the “untold thousands of persons [who] had a hand in every cup of coffee the loggers drink,” and moves to San Leandro, California, where a mill cuts trees into “small pencil-length slats less than one-fourth of an inch in thickness,” and then to Sri Lanka, where miners take graphite from out of the earth to ships that bring it to the United States, where it mixes with Mississippi clay, ammonium hydroxide, and sulfonated tallow.<sup>39</sup> The rest of Read’s story of the makings of a pencil continues along the same vein that one is more accustomed to seeing in a children’s book about fantastic voyages in far-off lands than in a serious economics essay. However, Read concluded with a

serious point: the pencil is a “complex combination of miracles.” It is the “configuration of creative human energies--millions of tiny know-hows configuring naturally and spontaneously . . . in the absence of human master-mind.”<sup>40</sup>

Read illustrated complexity by showing how incomprehensibly complicated is even the manufacture of one of the simplest things. If centralized control of pencil making was inconceivable, what about control of more complicated entities? Humorist P.J. O’Rourke comically demonstrated the failings of one of those centralized entities when he attended a cruise through the Soviet Union sponsored by *The Nation*, an American magazine with socialist leanings. He observed that his fellow travelers were “people who believed that everything about the Soviet Union was perfect, but they were bringing their own toilet paper.”<sup>41</sup> The USSR’s central authorities concentrated on the production of military hardware, but could not produce enough toilet paper for its citizens. There simply was too much knowledge for the Soviet system to manage. The DoD, with all its moving parts and many millions of personnel, is far more complicated than a pencil and nearly as complicated as a country. In Read’s view, if it is impossible for one man, or even a committee, to know and understand all that goes into the making of a simple pencil, then it would be even more absurd to expect that military leaders could understand everything required to run the military.

What Read creatively demonstrated is the knowledge problem. A knowledge problem is the difficulty one faces when making decisions in the face of imperfect, untimely, uncertain, and contradictory pieces of information. Read concluded that in the marketplace there is no central manager of all that imperfect information. Instead there is the “absence of a master mind, of anyone dictating or forcibly directing these

countless actions.”<sup>42</sup> Hayek, so associated with the study of knowledge problems, that they often are known as “Hayekian knowledge problems,” asserts that the “knowledge of the circumstances . . . never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess.”<sup>43</sup>

The knowledge problem is a concept familiar to the military. Clausewitz called it the fog of war. “War is the realm of uncertainty . . . wrapped in a fog.”<sup>44</sup> He warned that “imperfect knowledge . . . can bring military action to a standstill.”<sup>45</sup> This military knowledge problem exists in peacetime as well. In between wars, the sources of uncertainty include knowledge of who the enemy is, what his intentions are, and how he organizes and equips. Every decision about equipment, organization, and doctrine is a trade-off against other equipment, organizations, and doctrines not selected. Thus, there is an element of risk in the choosing. Clausewitz argues that to overcome uncertainty, the superior force requires “military genius.” In his view that genius possesses, “A power of judgment raised to a marvelous pitch of vision, which easily grasps and dismisses a thousand remote possibilities which an ordinary mind would labor to identify and wear itself out in so doing.”<sup>46</sup>

Austrian economists also place their faith in genius. Mises wrote of them: “A creative genius cannot be trained. There are no schools for creativeness. A genius is precisely a man who defies all schools and rules, who deviates from the traditional roads of routine and opens up new paths through land inaccessible before.”<sup>47</sup> Mises, of course, described the entrepreneur, while Clausewitz exalted the general. However, it is easy to see in Mises’ description of an iconoclast, how difficult it would be for the

entrepreneur to become the general. Standing against the genius' rise to rank is the military's hierarchical system which "can bring about conditions which paralyze the efforts of a creative spirit."<sup>48</sup> Gerras, Wong, and Allen noted the military's high power distance, a measure of an organization's hierarchical control, and found that, "The Army's high power distance culture is not always conducive to the evolving nature of war."<sup>49</sup> This type of restrictive culture inhibits the potential for growth in the military.

### Military Applications of Austrian Economics

The peacetime U.S. military could benefit from the introduction of Austrian concepts of entrepreneurship, competition, and knowledge. Because the American economy is more decentralized, makes greater use of competition, and better rewards entrepreneurs than do most nations, Austrian notions already exist within the society from which the military draws its ranks. Thus, instilling Austrian concepts into the American military is less foreign than it would be in other nations with a culture of centralized control and a history of rigid hierarchy. In fact, there already is an American doctrinal military concept that supports much of what the Austrian school teaches about innovation: mission command.

However, before DoD can benefit from mission command, it must begin with a better understanding of what it is. Army doctrine recognizes six principles of mission command. As principles, there are problems with all six. Two of them are "use mission orders," and "provide a clear commander's intent." These, however, are artifacts of the culture necessary for mission command. If the culture is there, then the orders process is an afterthought. They are not principles; to describe them as such is backwards. The remaining principles of mission command are: build cohesive teams through mutual trust, create shared understanding, exercise disciplined initiative, and accept prudent

risk. Unlike the nine principles of war, seven of which are one-word nouns, mission command's principles are directive sentences. Such constrained directions contradict the essence of mission command itself. Consider, for example, "Exercise disciplined initiative." Why *disciplined*? After LTC Engemann told BG Hoge about the bridge, Hoge exercised very undisciplined initiative. He was under orders to cease his attack toward Remagen and instead to attack south to link up with Third Army. Hoge disobeyed the order and did not tell anyone until he was sure that the bridge was in American hands and there was an infantry battalion on the other side.<sup>50</sup> Austrians would say that, by its very nature, initiative is undisciplined, radical, and disruptive. At times, so too must be mission command. Therefore, the U.S. military must redefine mission command's principles to be less directive and more decentralized. This will provoke hostile reactions from an entrenched culture of control. Former Chairman of the Joint Chiefs of Staff, General Martin Dempsey, recognized this and told the military that, "Decentralization will occur beyond current comfort levels and habits of practice."<sup>51</sup> Still, there will be great resistance.

Since World War II, there have been many attempts to instill a mission command-like culture in the Army. Retired LTG James Dubik more than 20 years ago said, "Commanders must understand that to command and control their units using a decentralized approach requires a training and education process, a common outlook, mutual trust and a uniform perspective in tactical operations."<sup>52</sup> He focused at the battalion level, where leaders and soldiers "must trust and respect one another," and "must use the same modus operandi in garrison as well as the field."<sup>53</sup> Many, including Dubik, have interpreted guidance like this to mean uniform standing operating

procedures (SOPs).<sup>54</sup> While SOPs are important, everyone understanding their role in rote procedures is neither mission command, nor is it Austrian entrepreneurship. The 14<sup>th</sup> Tank Battalion had no SOP for what to do when the unit discovers an intact bridge across the Rhine. It was an unforeseen event, an “unknown unknown,” in the phraseology of former Secretary of Defense Donald Rumsfeld. Instead of shared understanding through SOPs, mission command requires a shared culture.

Culture is the aspect of mission command that doctrine underappreciates. Defense Analyst Don Vandergriff long has highlighted the role of an “Industrial age” Army personnel system that centrally manages people as if they were assembly line workers. He advocates a much more unit-centric and individualized focus. To inculcate mission command, he says, “Army culture must become more accepting of change, including creativity and independence,” which is exactly what the Austrians would suggest.<sup>55</sup>

Unfortunately there still remain significant vestigial obstacles to creating a culture that supports mission command. Author and retired Colonel Douglas Macgregor mentions control measures as an example of an anachronism originally used in the First World War because, “Senior officers feared that without tight control from above millions of citizen Soldiers would be impossible to manage or control in combat.”<sup>56</sup> More than four decades after the end of conscription, the U.S. military still organizes itself around draftee concepts where Soldiers are suspects to be controlled instead of resourceful human beings. Austrian theory suggests that an all-volunteer force would benefit from the entrepreneurship unleashed by its members if it was to remove conscription era controls.

Developing a post-draft professional force which is more capable of judiciously exercising autonomy begins with accessions. Macgregor cautions that, “Successful completion of college without acquiring a criminal record” is an inadequate standard for entry to the officer corps.<sup>57</sup> Perhaps he understates the requirement to be an officer, but not by much. The minimum score required for an Army Reserve officer Training Corps scholarship on the Scholastic Aptitude Test is 920, almost 100 points below the national average, and includes individuals who scored lower than 65% of college-bound test takers.<sup>58</sup> While cognitive aptitude is not the only requirement for being an effective officer capable of succeeding at mission command, it is a necessary minimum prerequisite. It is not enough simply to change recruiting and benefits and declare the force professional. Especially for officers, there is the potential to alter the military’s culture through higher standards for entry and better education. The elimination of the draft offers the yet-to-be realized potential to benefit from flattened hierarchies and reduced overhead. It is long past time to make those changes.

Critics would contend that decentralization is risky and expensive. Yes, it is both. However, the existing hierarchical culture of control sacrifices the ability to exploit opportunities in its attempts to mitigate risk--and it is still expensive. Much of what passes for hierarchy from company to corps and at the institutional level is really supervision disguised as command. It is reminiscent of Dr. Seuss’ “bee watcher-watcher watching the bee watcher.”<sup>59</sup> A force of professional “bees” requires fewer “watchers,” which saves significant resources and reduces force structure requirements. Higher standards and better training are the keys to instilling the professionalism necessary for

mission command to succeed. Both Macgregor and Vandergriff offer many ideas to accomplish this.

It is not only through mission command that the military can better take advantage of the Austrian lessons related to entrepreneurship and knowledge. Changes to how the military conducts operational testing also offer significant opportunities for gains. The 2<sup>nd</sup> Brigade, 1<sup>st</sup> Armored Division at Fort Bliss is home to the Army's experimental brigade. There, the unit tests equipment before fielding it to the rest of the Army. However, testing authority resides with the Vice Chief of Staff of the Army (VCSA). This is not a bottom-up entrepreneurial laboratory. Instead, it is a top-down proving ground, where the experimental brigade proves or disproves someone else's experiments.<sup>60</sup> It is not an example of entrepreneurship or disruptive innovation; it is the final opportunity for the Army to check that its sustaining innovations are ready for fielding.

Rather than a VCSA-directed testing program, the Army should stand up a true experimental brigade, which has the authority to approve its own experiments with equipment, doctrine, and organizations. The unit would become the Army's in-house laboratory of entrepreneurship. DoD then should apply this experimental unit model across the services.

The criticism of this recommendation is that it would be an expensive use of limited resources to let Soldiers perform unapproved and unsupervised experiments. Yes, these units will require higher budgets and liberal spending authorities. Many of the ideas they test will fail. However, the focus should be on "failing faster" so that they can innovate more quickly. Because, the later one fails, the more expensive it is to correct

failure.<sup>61</sup> In practice, contractors and suppliers will want to come to this type of a unit with their products because it will be the best place to beta test their equipment. In the end, this is less expensive than how the military currently conducts much of its testing. Already the service chiefs are clamoring for ways to improve the acquisitions process so that it is faster and more reliable.<sup>62</sup> Introducing more entrepreneurial opportunities into the military's experimentation processes is one such way.

The third recommendation to take advantage of Austrian concepts in the U.S. military is the most controversial. In order to provide for competition in the peacetime military, Congress should legislate changes to how DoD validates requirements and funds the services.

While it is difficult to imagine the services disrupting themselves, it is not so hard to conceive of them attempting to disrupt each other. When U.S. Marines first attacked Afghanistan in 2001, they did so from the sea--a distance equivalent to attacking Ohio from the Atlantic Ocean. Marine Corps doctrine long had advocated the service's expeditionary capability. However, they generally limited discussions of that capability to the world's littoral regions within 100 miles of open water. Meanwhile, the post-Cold War U.S. Army also had been touting its ability to deliver a combat ready brigade in 96 hours. When U.S. Central Command (USCENTCOM) selected the force that they wanted for the mission, they rightly recognized that the Marines offered a better product.<sup>63</sup> Were the services operating within a free market, the Army would have taken lessons from observing a potential customer, USCENTCOM, purchasing a product from their competitor, the Marines. The Army then would have reevaluated its position and decided either to improve its deployable product, or would have discontinued the

product altogether. Instead, the bureaucratic solution is to define what expeditionary missions belong to the Marines and which might go to the Army.

In light of the cooperative spirit of Goldwater-Nichols, defense Analyst Harvey Sapolsky offers what might first sound like a heretical view: interservice competition is “the solution, not the problem.”<sup>64</sup> He argued that the services, like all competitors, prefer not to compete; they would rather collude, which is what we would call it if “Army Co.” and “Marine Inc.” decided to divide the marketplace between themselves.<sup>65</sup> Sapolsky’s recommendation is to introduce competition, not in operations, but in procurement and design. He suggests that otherwise, the nation’s four rotary wing air forces, three fixed wing air forces, and two armies, “Are indeed wasteful luxuries if they are not harnessed to generate policy options and comparisons.”<sup>66</sup> Austrian theory suggests that Sapolsky’s ideas for competition would reduce price and improve performance.

In addition to giving the GCCs greater control over the selection of forces that the services provide, they should have greater control over weapons development.

University of Manchester professor of enterprise, Matthew McCaffrey, noted the link to research and the market, by cautioning that, “when science is separated from the market, it loses access to economic calculation, and thus, the ability to rationally allocate resources.”<sup>67</sup> Substitute “weapons development” for “science” and his point is clear that without the competitive forces that the marketplace’s customers impose on their suppliers, weapons development will probably proceed unevenly. The F35 Joint Strike Fighter offers an example. Much of the justification for the joint development of the aircraft was the seemingly rational belief that a single common aviation platform would save operating costs. Unfortunately, along with a long list of other problems, the

reality is that the contractor will be able to deliver only 20-percent commonality, as opposed to the desired 70-percent level.<sup>68</sup> This, however is a result that would not surprise economists. Lockheed Martin, one of only two American fighter aircraft manufacturers, along with its subcontractor Northrup Grumman, the other fighter manufacturer, has a single customer: DoD. As the result of the ultimate monopoly-monopsony relationship, the F35's development has proceeded devoid of competitive market forces. Simple economics supports Sapolsky's recommendation. If each of the services alone was responsible for its own product, competitive spirits among both suppliers and customers have much greater potential of pushing defense contractors in the direction of better results.

Economic theory suggests that DoD must create an internally competitive marketplace in order to restore discipline to the system. The DoD should give the GCCs approval authority over requirements and should fund the services for the forces that the GCCs select for regional alignment and for inclusion within their contingency plans. Force structure left over then serves as a signal to the services of lower demand for that type of capability. The services then can decide to pay for those capabilities out of their own overhead or decide to discontinue them. Meanwhile, instead of complaining about the lack of "high-demand, low-density" units, the services will have an economic incentive to compete with each other to produce more of the most demanded capabilities.

Of course, DoD must be mindful of Christensen's caution that too much customer focus is the downfall of successful organizations. For this reason, the services still require their own robust budgets to support experimentation and to retain some

capabilities that the GCCs might not be able to foresee. Additionally, the services must maintain a long-term focus on development so that the GCCs can concentrate on the near to mid-term.

Advocates of government efficiency will point out that it is wasteful to have redundant capabilities. However, the risk of DoD having only one option for every requirement is that the one option is inadequate when the time comes. Efficiency is a ratio where the numerator is effectiveness. Reducing waste comes at the cost of an increased risk that the only option does not work, resulting in an efficiency of zero percent.

Additionally, even in spite of the failure of the F35 to deliver sufficient commonality, there will be those who claim that with more oversight and control the next big joint weapons program will eliminate those problems. Austrians would contend that they are wrong and that the knowledge problem is just too large to manage without delays and cost overruns. While, unlikely, more supervision and control may succeed. But what is certain is that more supervision will cost even more and will slow the acquisition process further still.

### Conclusion

More than four decades after the end of the draft, the U.S. military still retains anachronistic cultural artifacts that inhibit the acceptance of the mission command concept that the military itself long has recognized is necessary to encourage adaptation and innovation. While it has been receptive to change during long periods of war, the military's culture discourages innovations in times of peace. Austrian economic theory suggests a way out of this conundrum. By encouraging entrepreneurship, introducing a competitive internal marketplace, and decentralizing knowledge, the

military has the potential to avoid future defeat at the hands of an innovative enemy less resistant to change. The alternative is to continue to hope that the nation's adversaries likewise fail to introduce disruptive innovations of their own. However, Austrian economists would caution that expecting a perpetual state of equilibrium, in which the military never has to deviate from its Second World War perceptions of itself, is a foolish and ultimately very costly belief.

### Endnotes

<sup>1</sup> Stephen E. Ambrose, *The Supreme Commander: The War Years of General Dwight D. Eisenhower* (New York: Anchor Books, January 2012), 618-19.

<sup>2</sup> *Ibid.*, 618.

<sup>3</sup> *Ibid.*, 619.

<sup>4</sup> Stephen L. Ossad, "Command Failures: Lessons Learned from Lloyd R. Fredendall," *Army* 53, no. 3 (March 2003): 45-52, <http://search.proquest.com.usawc.idm.oclc.org/docview/237080780?accountid=4444> (accessed March 15, 2016).

<sup>5</sup> U.S. Department of the Army, *Mission Command*, Army Doctrine Publication 6.0, Includes Change 2 (Washington, DC: U.S. Department of the Army, March 12, 2014), 1.

<sup>6</sup> Stephen E. Ambrose, *The Supreme Commander*, 619.

<sup>7</sup> Gregory N. Derry, *What Science Is And How It Works* (Princeton, NJ: Princeton University Press, 1999), 11.

<sup>8</sup> Louis Pasteur, quoted by Gregory N. Derry, *What Science Is and How it Works* (Princeton, NJ: Princeton University Press, 1999), 13.

<sup>9</sup> Steven J. Gerras, Leonard Wong, and Charles D. Allen, *Organizational Culture: Applying a Hybrid Model to the U.S. Army* (Carlisle Barracks, PA: U.S. Army War College, November 2008), 9, <http://www.carlisle.army.mil/orgs/SSL/dclm/pubs/Organizational%20Culture%20Applying%20a%20Hybrid%20Model%20to%20the%20U.S.%20Army%20Nov%2008.pdf> (accessed March 23, 2016).

<sup>10</sup> *Ibid.*, 15.

<sup>11</sup> There is no physical "Austrian School of Economics." The name was bestowed upon a group of economists in the late 19<sup>th</sup> century and early 20<sup>th</sup> centuries to distinguish them from the

“Prussian School” of economic thought. Most of the early Austrian economists, had at one point studied in Vienna. By the mid 1930s, most of them had fled to the US and the UK.

<sup>12</sup> Israel Kirzner, paraphrased and quoted by Scott Shane and S. Venkataraman, “The Promise of Entrepreneurship as a Field of Research,” *The Academy of Management Review* 25, no. 1 (January 2000): 220.

<sup>13</sup> Clayton M. Christensen, *The Innovator’s Dilemma: When New Technologies Cause Great Firms to Fail* (Boston, MA: Harvard Business Review Press, 1997), 171. (Emphasis in original.)

<sup>14</sup> Joseph Schumpeter, *Capitalism, Socialism, and Democracy*, 3<sup>rd</sup> ed. (New York: Harper Collins, 2008), 132.

<sup>15</sup> Christensen, *The Innovator’s Dilemma*.

<sup>16</sup> Mary Tripsas and Giovanni Gavetti, “Capabilities, Cognition, and Inertia: Evidence from Digital Imaging,” *Strategic Management Journal* 21 (2000): 1147-1161; Wikipedia, “Quartz Crisis,” [https://en.wikipedia.org/wiki/Quartz\\_crisis](https://en.wikipedia.org/wiki/Quartz_crisis) (accessed March 31, 2016).

<sup>17</sup> Christensen, *The Innovator’s Dilemma*, 125.

<sup>18</sup> *Ibid.*, 178.

<sup>19</sup> Edward N. Luttwak, “Breaking the Bank: Why Weapons Are So Expensive,” *American Interest* 3, no. 1 (September/October 2007): <http://www.the-american-interest.com/2007/9/1/breaking-the-bank/> (accessed March 3, 2016).

<sup>20</sup> *Ibid.*

<sup>21</sup> Israel M. Kirzner, “Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach,” *Journal of Economic Literature* 35, no. 1 (March 1997): 71.

<sup>22</sup> *Ibid.*, 72.

<sup>23</sup> U.S. Army Corps of Engineers, *Engineer Memoirs: General William M. Hoge*, Engineer Publication 870-1-25 (Washington, DC: U.S. Army Corps of Engineers, January 1993), 147.

<sup>24</sup> Ludwig von Mises, *Human Action, A Treatise on Economics* (Chicago, IL: Henry Regnery Company, 1966), 252.

<sup>25</sup> Kirzner, “Entrepreneurial Discovery,” 67.

<sup>26</sup> *Ibid.*, 66-67.

<sup>27</sup> Geoffrey Till, “Adopting the Aircraft Carrier: The British, American, and Japanese Case Studies,” in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan R. Millett (Cambridge, UK: Cambridge University Press, 1996), 211.

<sup>28</sup> Kirzner, “Entrepreneurial Discovery,” 68.

<sup>29</sup> U.S. Joint Chiefs of Staff, *Charter of the Joint Requirements Oversight Council (JROC)*, Chairman of the Joint Chiefs of Staff Instruction 5123.01G (Washington, DC: U.S. Joint Chiefs of Staff, February 12, 2015), A-3.

<sup>30</sup> Carl Builder, *The Masks of War* (Baltimore: The Johns Hopkins University Press, 1989), 132.

<sup>31</sup> Michèle A. Flournoy, *The Urgent Need for Defense Reform before the Senate Armed Services Committee*, 114<sup>th</sup> Cong., 1<sup>st</sup> sess., December 8, 2015.

<sup>32</sup> *Ibid.*

<sup>33</sup> Andy Meek, "The Man Who First Hired Steve Jobs on Finding Unusual and Creative Talent," *Fast Company*, June 19, 2014, <http://www.fastcompany.com/3032043/hit-the-ground-running/the-man-who-first-hired-steve-jobs-on-finding-unusual-and-creative-ta> (accessed March 15, 2016).

<sup>34</sup> Flournoy, *Testimony before the Senate Armed Services Committee: The Urgent Need for Defense Reform*.

<sup>35</sup> Friederich A. Hayek, "Competition as a Discovery Procedure," trans. Marcellus S. Snow, *The Quarterly Journal of Austrian Economics* 5, no. 3 (Fall 2002): 9-23.

<sup>36</sup> *Ibid.*, 18.

<sup>37</sup> Kirzner, "Entrepreneurial Discovery," 67.

<sup>38</sup> Hayek, "Competition as a Discovery Procedure," 9.

<sup>39</sup> Leonard E. Read, "I, Pencil: My Family Tree as told to Leonard E. Read," <http://www.econlib.org/library/Essays/rdPnc1.html> (accessed February 27, 2016).

<sup>40</sup> *Ibid.*

<sup>41</sup> P. J. O'Rourke, *Republican Party Reptile: The Confessions, Adventures, Essays and (Other) Outrages of P. J. O'Rourke* (New York: Atlantic Monthly Press, 1987), 45.

<sup>42</sup> Read, "I, Pencil."

<sup>43</sup> Friderich A. Hayek, "The Use of Knowledge in Society," *American Economic Review* XXXV, no. 4. (1945): 519-30, <http://www.econlib.org/library/essays/hyknw1.html> (accessed October 14, 2015).

<sup>44</sup> Carl von Clausewitz, *On War*, eds. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), 101.

<sup>45</sup> *Ibid.*, 84.

<sup>46</sup> *Ibid.*, 112.

<sup>47</sup> Ludwig von Mises, *Bureaucracy* (Indianapolis, IN: Liberty Fund, 2007), 11.

<sup>48</sup> Mises, *Bureaucracy*, 11.

<sup>49</sup> Gerras, Wong, and Allen, "Organizational Culture," 14.

<sup>50</sup> U.S. Army Corps of Engineers, *Engineer Memoirs: General William M. Hoge*, Engineer Publication 870-1-25 (Washington, DC: U.S. Army Corps of Engineers, January 1993), 147.

<sup>51</sup> Martin E. Dempsey, *Mission Command White Paper* (Washington, DC: U.S. Joint Chiefs of Staff, April 3, 2012), 4, [http://www.dtic.mil/doctrine/concepts/white\\_papers/cjcs\\_wp\\_missioncommand.pdf](http://www.dtic.mil/doctrine/concepts/white_papers/cjcs_wp_missioncommand.pdf) (accessed October 23, 2015).

<sup>52</sup> James M. Dubik, "Decentralized Command: Translating Theory into Practice," *Military Review* 72, no. 6 (June 1992): 27.

<sup>53</sup> *Ibid.*, 28.

<sup>54</sup> *Ibid.*, 36.

<sup>55</sup> Donald E. Vandergriff, "One Step Forward, Two Steps Back: Mission Command versus the Army Personnel System," *The Land Warfare Papers*, no. 84 (August 2011): 17.

<sup>56</sup> Douglas A. Macgregor, "Strategic Means: Building an Army for an Era of Strategic Uncertainty," in *American Grand Strategy and the Future of U.S. Landpower*, eds. Joseph Da Silva, Hugh Liebert, and Isaiah Wilson III (Carlisle Barracks, PA: U.S. Army War College, December, 2014) 156-157.

<sup>57</sup> Douglas A. Macgregor, *Transformation Under Fire: Revolutionizing How America Fights* (Westport, CT: Praeger, 2003), 215.

<sup>58</sup> Gerras, Wong, and Allen, *Organizational Culture*, 14. Gerras, et al., provide a source for the 920 minimum SAT requirement to receive an Army ROTC scholarship. However, they misstate that a 920 is one standard deviation below the national average. According to results provided by the College Board, the mean combined score on the critical reasoning and mathematics portions of the test is approximately 1005, with a standard deviation of 205 points. A combined score of 920 is 85 points below the national average and at the 35<sup>th</sup> percentile. Source: *SAT Percentile Ranks for Males, Females, and Total Group: 2015 College-Bound Seniors – Critical Reading + Mathematics* (New York: College Board: 2015), <https://secure-media.collegeboard.org/digitalservices/pdf/sat/sat-percentile-ranks-composite-crit-reading-math-2015.pdf> (accessed October 23, 2015)

<sup>59</sup> Dr. Seuss, *Did I Ever Tell You How Lucky You Are?* (New York: Random House, 1973).

<sup>60</sup> Colonel Daniel A. Pinnell, former Commander, 2<sup>nd</sup> Heavy Brigade Combat Team (The Iron Brigade), 1<sup>st</sup> Armored Division, interview by author, Carlisle Barracks, PA, March 11, 2016.

<sup>61</sup> "Fail Faster: A Mantra for Creative Thinkers," February 5, 2014, *Extra Credits You Tube Channel*, video file, <https://www.youtube.com/watch?v=rDjrOaoHz9s> (accessed March 18, 2019).

<sup>62</sup> Yasmin Tadjdeh, "Service Chiefs: Time to Speed up Acquisition," *National Defense Magazine Online*, March 11, 2016, <http://www.nationaldefensemagazine.org/blog/Lists/Posts/Post.aspx?ID=2121> (accessed March 11, 2016).

<sup>63</sup> Bob Krumm, "Why are the Marines in Afghanistan," *Proceedings* 128, no. 1 (January 2002): 112.

<sup>64</sup> Harvey M. Sapolsky, "Interservice Competition: The Solution, Not the Problem," *Joint Force Quarterly* (Spring 1997): 50.

<sup>65</sup> *Ibid.*, 51.

<sup>66</sup> *Ibid.*

<sup>67</sup> Matthew McCaffrey, "Science and the Market Test," *Mises Wire*, blog entry posted August 25, 2015, <https://mises.org/blog/science-and-market-test> (accessed March 18, 2016).

<sup>68</sup> Marcus Weisgerber, "F35 Chief: Think Very, Very Hard before Making another Joint Fighter," *Defense One*, March 11, 2016, <http://www.defenseone.com/technology/2016/03/f-35-chief-think-very-very-hard-making-another-joint-fighter/126587/?oref=d-topstory> (accessed March 11, 2016).