

## FOSTERING DEEP INSIGHT THROUGH SUBSTANTIVE PLAY<sup>1</sup>

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*In the Machine Age, life, and every aspect of it, was taken apart by analysis. Work, play, and learning were separated and kept separate by institutions dedicated exclusively to one of them...In the Western world attitudes towards business and work have been dominated by the Protestant, if not Puritan ethic. This ethic separates work from play and learning, and views it as an ascetic, not an aesthetic, activity.*

Russell Ackoff<sup>3</sup>

*A person willing to fly in the face of reason, authority, and common sense must be a person of considerable self-assurance. Since he occurs only rarely, he must seem eccentric (in at least that respect) to the rest of us...For best purposes, there should be a feeling of informality. Joviality, the use of first names, joking, relaxed kidding are, I think, of the essence—not in themselves, but because they encourage a willingness to be involved in the folly of creativeness.*

Isaac Asimov<sup>4</sup>

*I don't know what you think you're trying to do, but the krauts ought to pin a medal on you for helping them mess up discipline for us.*

George S. Patton, during meeting with cartoonist Bill Mauldin in March 1945, where Patton complains about the 'Willie and Joe' comics<sup>5</sup>

Why don't military organisations welcome the incorporation of 'play' into planning or military design activities? The concept of play is not often of much serious interest in military organisations, perhaps due to a variety of cultural and institutional tensions that associate play with immaturity, a lack of seriousness, or worse yet a breakdown in professional discipline. This chapter explores these barriers and where these institutional fears may be altered through deliberate military design engagement. The socially pervasive fear of being taken as a fool tends to isolate 'play' into sanctioned spaces where small groups of military professionals are allowed to relax, bond with trusted agents, or participate in socialised events for physical, social and ritualised activities. We in the military are careful and quite aware of the locations, contexts, and with whom we engage in playfulness. This doesn't mean that the military is devoid of personality or a sense of humour; rather the application of work, play and learning remain strictly regimented and independent within military organisational forms and functions.

Philosophically, this may harken back to the Puritan traditions that founded much of the modern Western world<sup>6</sup> and that remain well entrenched in existing hierarchical forms for education, business, militaries and law.<sup>7</sup> Any notion of diversion, playfulness, or exercising experimentation outside of sanctioned processes becomes both disruptive and professionally hazardous for career-minded military professionals. Play is allowed, as long as it occurs within a tightly regulated box, complete with rules and other rituals. Play within military culture often includes competition, whether overt or implied. Play may occur within very specific contexts and social cues, often without us reflecting much on why this is or why it matters. If they do not approach these challenges with great consideration the disruptive thinker and military provocateur may present innovation to the organisation yet suffer remarkable resistance, backlash, and even their own demise.<sup>8</sup>

As the Program Director for Special Operations education on military design and innovation at the Joint Special Operations University, my faculty and I continue to explore how traditional military planning processes interact with broader military efforts in design, innovation and organisational transformation within complex environments.<sup>9</sup> Over the last few years of design education for a variety of international, conventional and special operations military students in different settings, my faculty and I have experimented with this somewhat forbidden notion of 'play' with 'serious' military challenges.

The term 'forbidden' may seem slightly provocative, however when we consider some of the design concepts and techniques offered in this chapter their relevance towards military improvements will likely produce scepticism. Yet, complex systems are rarely going to provide any clear cause-effect relationship between play and innovation. A more interesting social concern addressed here is on the significant barriers already in place to prevent most play from being conducted in the first place. This chapter provides recent observations, the results of various experiments, and my own professional opinion on how play is not only useful *but essential in design praxis for the most challenging of society's military applications*.

## 'Surely you can't be serious?' 'I am serious, and don't call me Shirley'

One significant area where play is frequently discouraged is in the spaces where organisations prepare detailed plans for military activities within complex, dangerous (and quite serious) contexts. Within traditional military planning practices written doctrine, as well as sanctioned application of said doctrine, reflects the belief systems of Armed Forces.<sup>10</sup> In a powerful culture, filled with what some describe as a 'suck it up and drive on' mentality, military planners often are challenged to hold concentration for extended periods with little rest, recovery or distraction.<sup>11</sup> In many of the military organisations most closely associated with direct combat applications (such as the Infantry), there is usually an implied competition among members to equate greater adherence to lengthy concentration and focus over any reprieve or rest; a mantra of 'sleep and food is a crutch' is frequently uttered with a dash of institutional sarcasm. One may have a sense of humour while going about difficult and serious work but only within the societally accepted rules for playfully obeying with the sanctity of the work at hand.

When a military organisation is charged with entering a dynamic and wildly complex environment with vague and contradictory guidance, it is expected to perform under tremendous pressures and excel. These pressures reflect the challenges of all complex dynamic systems—where emergence, nonlinearity and rapid change feature

prominently.<sup>12</sup> But, there are additional self-imposed social pressures. Militaries also tend to apply cognitive barriers in how and why they approach and interact with complexity, including their preferred paradigms for making sense of complex reality,<sup>13</sup> as well as their rather rigid toolboxes filled with sanctioned methodologies, language and values, which they rummage through when confronting a challenge.<sup>14</sup> Adding new conceptual tools is nearly as difficult as tossing out old or irrelevant ones, as over time militaries often cover favourite tools with deeply ritualised and culturally self-defining elements.<sup>15</sup>

While methodologies and favourite cognitive tools are perhaps easy to identify for the critically reflective military professional, many of the deeper social and organisational aspects remain elusive. Why is 'play' so repugnant, particularly in the most demanding cognitive contexts? How does working excessively and frequently to the point of mental confusion and exhaustion somehow become an attribute of strength, dedication, and even admiration?<sup>16</sup> Are there any areas within military decision-making and problem management where 'play' could definitively offer tremendous benefit, if it was more socially accepted by military culture? In this chapter, military design applications may be the first area where substantive play is not only cognitively suitable but also likely essential for innovation and organisational transformation.

### 'The only thing that matters is work and productivity'

In the maze of military cubicles within almost all western military organisations, there are many humorous cartoons, memes and printed documents hung around office areas for the familiar purpose of group humour and amusement. I noticed one in my office area recently because it took a self-deprecating take on the intense work focus expected of military professionals, in this case specifically of military planners performing operational planning and campaign design. It lampooned some common socially encouraged behaviours across military staffs, groups and teams by decreeing a list of rules that needed to be obeyed by those undertaking the duties of operational planning. The poster was placed up for humour and thus it represented one of the accepted forms of play while also helping to reveal the frames and limitations of military playfulness. Where, when, and in what contexts these posters are allowed or restricted also provides elements of military boundaries for the notion of a 'playful' frame.

The poster had the title of 'perspectives' and listed the five bullet points below:

- A balanced life is a myth perpetrated by liberal arts schools. Don't be foolish; the only thing that matters is work and productivity.
- Your body serves your mind, and your mind serves the Army. Push the mind and the body will follow.
- Never say no to anything. It shows weakness.
- Always attempt to do everything. You ARE responsible for it all.
- If you feel something is dragging you down, suppress those thoughts. This is a weakness. Drink more coffee.

The first statement, printed in bold font, directed that ‘the only thing that matters is work and productivity’. I found this statement significant because it addressed at a rather fundamental level a powerful military forcing function that saturates into most aspects of military culture. There are many variations of this; for instance, when many Army graduates of the US Army School of Advanced Military Strategies, as well as other similar planning courses, utter the quote from the movie, *Ben Hur*: ‘We keep you alive to serve this ship. Row well, and live’. This view is not just deeply engrained into military culture; it manifests within American culture and arguably across many societies that associate with Protestant and even Puritan origins. With the arrival of the Machine Age, man moved from doing the labour himself into overseeing the production of labour through manmade machines; the development of machines to do that labour only validated the prominence of these categorisations for work, education and play into separate and reducible elements.<sup>17</sup> The division of work, education and play are formalised in militaries in this Machine Age effort of maximising productivity, efficiencies and reducing risk.<sup>18</sup>

The rise of the Industrial Revolution inevitably brought with it modern management theory and the goal to maximise human labour towards greater and more efficient levels of production and benefit.<sup>19</sup> This is not a cause-effect relationship where industrialisation must bring with it a positivist, mechanistic-minded form of managerial control. Rather, the first popular managerial methodologies, which emerged to span vast command and control of industrialised economies, attempted to displace natural science metaphors and concepts into managerial disciplines where natural science laws ended up being entirely lacking in quantification or scientific rigor.

This hardly mattered in the 20th century. Military organisations got swept up in the broader rush to adapt pseudo-scientific methodologies into managerial practices in an attempt to validate hierarchical structures of control, power, and decision-making. Military organisations, in particular, capitalise upon a power relationship across the social system where both the means and ends are autocratic,<sup>20</sup> and thus the centralised hierarchical form becomes a rigorously enforced power structure for controlling and influencing behaviour. The early fad of wrapping natural scientific concepts into entirely unscientific applications has now been perpetrated in civilian business thinking, as well as parallel military management doctrine, so that they now are institutionalised, and often off limits for critical inquiry or criticism at the epistemological level.

This prioritisation of emphasising hard work and productivity is expressed in military organisations through the convergent processes espoused in most military doctrine. Doctrine, as a reflection of a military’s belief system, uses authoritarian logic to drive conformity and predictability through a measured adherence to doctrinal form, which in the case of operational planning is whether that organisation has effectively done their decision-making and problem management in accordance with the procedures and structure within doctrine.<sup>21</sup> Beyond the doctrinal adherence, military organisations are also implying their paradigmatic preferences on how to make sense of reality.

Militaries almost exclusively adhere to the functionalist paradigm where analytic reasoning generates optimised problem solutions within what might be framed a positivist epistemology.<sup>22</sup> In laymen’s terms, militaries view reality as a system that can be categorised and reduced into smaller, more manageable components. By taking a snapshot of a complex reality, they can reduce things down into fundamental or elemental components where one can establish and prove a set of universal laws,

principles, or at least a working theory.<sup>23</sup> These smaller elements can then be re-assembled into the whole, so that more control and understanding is gained of the larger system. End states are established into the frozen snapshot of the complexity and planners can reverse engineer a sequence of deliberate planned activities that link back to the present state. Once planning is completed, the entire system can be released to begin moving and, while some variations will occur, the optimisation and analysis will stabilise the established plan so that the desired end state is eventually reached.<sup>24</sup>

Functionalists require a stable reality so that these rules can persist in a timeless sense across all of space, and the gradual accumulation of more information will lead to greater understanding of the complexity.<sup>25</sup> Further, the military force expects to be able to assess all feasible options for solving a problem and that accumulating deeper knowledge from past experience should make future challenges tamer. Working harder within this paradigm has a deductive logic in that more work completed within the approved military methodology (through doctrinal adherence) results in greater progress towards the desired ends. The greater the complexity, the more work is required to accumulate information, gain greater control, and eventually capitalise on past experience in order to be productive. Productivity means that one moves closer towards the goal, instead of falling behind or wandering off. If the old goal is changed midway through planners create branch plans to reorient the hard work towards the newly reverse-engineered goal, with the same link of activities nested between the desired end state and where the organisation currently stands.

Although some of this requires abstract thought, most military planning endeavours essentially follow this format due to the broad adherence to a single military paradigm and the powerful social forces that shape the military profession. Within these social forces, the element of 'play' becomes quite difficult to tolerate in anything but periods of approved relaxation or further social conforming activities. Were professionals to engage in playful activities they would need to experiment and potentially disrupt both the desired accumulation of more control and information, and also the perpetual single-direction focus on progress towards previously engineered end states.<sup>26</sup>

## 'Drink more coffee'

The next line in that playful planner meme on the wall was 'if you feel something is dragging you down, suppress those thoughts. This is a weakness. Drink more coffee'. Again, while it is a rather tongue-in-cheek critique of a common shared military sentiment, the deeper sociological aspects of military culture are represented here. With the increasing complexity and reduction of military resources creating a pressure cooker for overexertion of military forces, political and senior leadership have finally begun to take notice.<sup>27</sup>

Although military organisations can quickly assemble a series of risk reduction procedures drawing from the same functionalist paradigm and analytic methodologies, there is a significantly deeper issue here worth exploring. The mindset of 'suppress weakness, drink more coffee' is superficially a sarcastic nod towards a systemic military institutionalisation of working convergent towards the paradoxical goal of innovation when we consider design.<sup>28</sup> These socially playful elements in military life are well known within the profession, although rarely discussed in any academic study or within established military doctrine on leadership or organisational management.

A group of military planners organise along Napoleonic-inspired staff compartments, where each staff element follows a convergent organising logic and the positivist epistemology to seek analytically optimised problem solutions as framed through an ends-ways-means construct. Progress is measured by accomplishment of standardised sequences of indoctrinated methodology, typically a formal decision-making model such as the Joint Planning Process (JPP) or the Military Decision-Making Process (MDMP) or other similar structure.<sup>29</sup> Militaries have woven a culture of intensive production timelines upon these models where military staffs commit extensive time and resources with long hours and perpetual adherence to the model rules.

The outputs of these endeavours are legendary in military organisations, with some PowerPoint presentations for decision briefs measuring into the hundreds of slides. Operations orders become extensive documents measuring in the hundreds of pages, often published on shared servers with large numbers of annexes and appendixes that frequently require many more hours of digestion from the receiving subordinate organisations. In the various pressures to follow this methodology and complete the lengthy busywork of hundred-slide presentations, military professionals are compelled to ‘suppress those thoughts’ and ‘drink more coffee’ to produce rather ineffective presentations that military senior leadership grow increasingly frustrated over.<sup>30</sup>

## Distinctions between military design and traditional reductionist planning

The military design movement has spread across Anglo-Saxon militaries and beyond since it was first implemented by the Israeli Defense Force in the late 1990s.<sup>31</sup> Over the past two decades, and within the most recent generation of military professionals, many different interpretations of ‘design’ for military application have been expressed in theory, practice and, in some cases, codified into doctrine. Regardless of what design methodology or mixture of design processes one supports, the application of design thinking towards military matters signals a significant departure from traditional and highly convergent military analytical approaches to decision-making in complex environments. Design represents for the 21st century what the rise of scientific thinking represented for pre-Industrial military societies; the design approach to complexity ushers in novel ways to appreciate complex environments and generate divergent and innovative military transformations.<sup>32</sup>

In military applications, design represents an iterative and highly emergent process where systemic perspectives provide disruptive and transformational consequences that challenge established forms and functions. Design can radically reconfigure not just the military formations on the ground, but also inside of minds and shared organisational understanding of complex topics.<sup>33</sup> For innovation to be expressed through military design, the process should emerge through an iterative blend of critical and creative thinking; sociologists offer the term ‘reflective practice’ for what the military attempts to do in these highly challenging cognitive, as well as tangible, contexts.<sup>34</sup>

When military professionals attempt to conduct design applications towards complex military environments they are challenged to generate innovative and organisationally disruptive deliverables that provide a military force with what does not yet likely even exist but it *now* needs. However, these creative practitioners must also fight through

institutional resistance as well. Further, the intellectual burdens for deeply self-reflecting upon oneself and one's institution as well as highly dynamic and ill-structured contexts makes for perhaps the most challenging military enterprise of all.

Designers need to become comfortable with uncertainty. They need to be able to travel between the abstract and the structured, and persuasively deliver novel concepts across an entire organisation, which likely remains tightly wedded to outdated or irrelevant concepts. While Columbus only needed to bring back physical artefacts of his New World discovery to persuade sceptical Spaniards, military designers are only able to convince with the certainty of their new understanding and ability to evoke new meaning through metaphors and narrative.<sup>35</sup> Many organisations are not prepared to receive innovation, particularly when it disrupts established practices and has no history or 'proof' of past success; innovation by its very definition is something novel and unproven.<sup>36</sup>

The design challenge for military practitioners is a steep one; yet, the reflective practitioner need not fall into the rote machinations of the unwitting planner. Designers do not need to pursue working harder to gain in productivity. Complexity does not yield to repeated efforts to simplify it, and imagination cannot be reduced to a sequential process or checklist. Novice military designers tend to follow the same imposed social forces that drive military planning activities, if only because they are conditioned to, and potentially they are dual-tasked to be both a planner and a designer.

Military leaders in key positions such as a Command or Chief of Staff role may also misunderstand the vast epistemological differences between analytic-based decision-making and the more abstract and innovative design approach to complexity.<sup>37</sup> Thus, many design endeavours *turn into planning*, with the design team seeking a sequential and highly analytic process for design in order to experience a sense of accomplishment towards the predetermined goals of innovation and organisational transformation. However, design is iterative as well as emergent. Innovation does not work in a sequential manner, where trying to work harder is supposed to yield additional results.

This is where the paradox of substantive play enters the conversation. In order to get more innovation potential out of a design team, the facilitator and all associated leadership must encourage them to work differently as well as under significantly dissimilar conditions. A design team will likely not accomplish any additional development towards innovation or novel discovery through forced iterations and additional time alone. If anything, the deliberate application of 'suppress those thoughts...drink more coffee' can potentially discourage innovation and instead drive the design team towards the embrace of mediocrity to justify completion of task. Focusing a group towards a set sequence of analytic planning is not the same as expecting a design team to have increasingly divergent iterations of ideation that are meaningful. They are entirely distinct, and military leaders should avoid conflating the two.<sup>38</sup>

At this point, dedicated military traditionalists might reject the consideration that professionals attempting to plan and achieve goals in complex environments are single-focused lemmings unaware and unable to break out of the aforementioned processes. Jack Nicholson's character in Stephen King's '*The Shining*' warned that 'all work and no play makes Jack a dull boy'. Yet everyone knows how to take a break and blow off steam while working hard at a task or complex project, including

military professionals. The difference here is that 'play' is not accepted within the work context. Or to express this by modifying Nicholson's famous line, 'Jack cannot avoid becoming dull by playing while he works because work is about being productive towards established goals'. What if 'play' were substantive to the work progress, particularly in the dynamic, complex environments that today's military forces routinely encounter? This is where design provides a useful vehicle for organisational transformation.

## 'I was just playing catch with a UAE Officer in the rain, here on the grass!'

While I have experimented with blending design and substantive play in a variety of applications with US conventional forces, Special Forces, as well as international military and other large organisations, my opportunity to apply this concept extensively occurred with several seminars of Field Grade officers at the Canadian Forces College (CFC) in 2017.<sup>39</sup> Previously, the CFC had invited me to facilitate design education with seminars in 2015–2016; however in 2017, I was able to incorporate the concept of substantive play deliberately into the entire design practicum. This desire to experiment with rather radical play concepts was the direct result of several years of educating design students and witnessing their gradual cognitive exhaustion when performing deep design activities within the traditional military contexts of long hours with infrequent rest breaks.<sup>40</sup>

Substantive play is what I term the essential balance of cognitive exertion towards design coupled with an opposing exertion towards play. The play periods should not feature any of the cognitive stimulation associated with the design work or any other associated work. It is in this period of substantive play where the military designer rests, regains mental energy, and potentially makes some subconscious efforts that later become realised in the consciousness as a 'eureka' moment relating to the design challenge at hand.

The Canadian Forces College assigned each of the design educators to a specific seminar for the two-week period, under the overarching strategy to expose the entire class of students to a variety of design methodologies and educational approaches. Along with my own design preferences and philosophy towards design education, the CFC had designers from civilian design fields teaching human-centric design models, post-modern military design as well as advocates of variations of both US Army Design Methodology and its parent form, the Israeli developed 'Systemic Operational Design'. Aside from daily coordination meetings and some broad training objectives, each of the design educators had a wide aperture to consider their design educational approach for their assigned seminar of a dozen field grade officers.

Along with the design lessons and the overarching 'second generation design methodology' that I applied for the seminar's design educational journey, I implemented a deliberate 'play period' that would occur approximately every two or three hours during the eight-hour duty day. Each play period would last a minimum of 30 minutes, and the students had to plan and coordinate for an activity they would do. As this was a military campus, we were fortunate to have access to sports equipment, playing fields, and various other areas that supported student play.

During the design course, students engaged in softball catch, croquet, basketball, and other familiar sporting activities. Further, I added some more unusual events,



which were intended to bring the students further out of their comfort zone while still providing a mental distraction from the design work. Students from multiple seminars participated in an Aikido balance drill activity, where partners faced one another on their knees and attempted to push the other over without falling over as well. In another play activity, students meditated at the indoor coy pond in the Canadian Forces College's greenhouse. These play events were deliberate break periods aligned with providing mental rest and distraction for the students while they conducted a military design inquiry concerning a demanding military topic. Students were told to just 'let go' and to not think much about the previous design challenges that had taxed their intellects during the day.

## Introducing play within design education

At the Joint Special Operations University (JSOU), as well as in many civilian design educational courses, facilitators bring 'play' into the classroom directly. While the substantive play examples from the CFC represented a specific time period for mental decompression and relaxation, the JSOU design faculty also utilises play within certain classes and practical exercises. Faculties provide students with play dough, tinker-toys, Lego, coloured post-it notes, picture cards and other objects intended for play sessions. This is in addition to the overlooked playful aspects concerning whiteboards and dry-erase markers that the design students use to draw pictures and concepts for the courses. These objects are provided to students informally. As they conduct design discussions or collaborative activities around the whiteboards students begin to play with these objects and many become comfortable with objects that frequently caused apprehension or nervous laughs when they first arrived.

The design education for Special Operations professionals through the Joint Special Operations University employs active play activities during the design courses, including sessions where students are led through outdoor play activities with a facilitating faculty member providing some structure. The design course is arranged in a flexible framework with a high emphasis on student practical exercise periods, multiple media and sensory engagement, as well as a variety of stimulus during the program, such as classical music piped into the classrooms during student group design work.

One particular feature of the JSOU design family of programs involves the principle of getting students up and drawing on the whiteboards within the first 15 minutes of the course. During this initial design exercise, students are instructed to watch a short video and to then attempt to frame and explain the scene without using words. By forcing them to 'drop their tools' and express their ideas in pictures, this first experience in the JSOU design program quickly challenges them while also establishing a very distinct educational environment. The introduction of 'play' into this design context appears easier and relaxes the students by potentially marginalising some of the strong military institutional functions that are removed immediately and symbolically distanced.<sup>41</sup>

## Scepticism, cultural resistance, and general apprehension

The introduction of substantive play has not been without setbacks, resistance or institutional confusion. At the Canadian Forces College, some participants from other seminars were curious about our seminar's play activities while others regarded it as

a waste of valuable time, or even unprofessional. By the middle of the first week, several other seminars, as well as design faculty, became interested in the substantive play concept, with some perhaps interested in whether the process enhanced their own design struggles in the classroom. In particular, the Aikido balance session on a large grassy space in front of the college dining facility featured four seminars and a large number of observing faculty. Some students felt that the play activities were a bit of a gimmick and did not make a strong connection between the play activities and enhanced design innovation in practice.<sup>42</sup> As of this article's writing, the CFC has not only endorsed a continuation of substantive play sessions during the June 2018 'Shifting Sands' design exercise, but has expanded the substantive play experiment across all of the student seminars to open up a wider target audience for faculty observation and study.

As a brief anecdote, the comments and experiences of a senior retired Canadian General Officer during the June 2017 design exercise are worth mentioning for this section. The CFC assigns a senior mentor to these major exercises, and for the 'Shifting Sands' design activity in 2017, the retired General expressed curiosity, as well as scepticism, on how our seminar conducted substantive play sessions daily. These retired Generals are termed 'Gray Beards' in military vernacular, and our Gray Beard came out to observe the play sessions for the first two days without participating. By the third day, when the group had softball gloves and began playing catch in the damp Toronto weather, the students managed to equip the Gray Beard with a glove and get him into a game of catch. As I and other design faculty observed, we had our own concerns, as we could not readily determine his enthusiasm or whether he was simply playing along.

As a light rain and cloudy skies hung over our students, softballs whizzed through the air as officers in a variety of uniforms played catch. One of the international students (from the UAE) tossed the ball to the General for several minutes as they exchanged throws. Towards the end of the session, the General turned to me with a smile and a determined look in his eyes that indicated some sort of epiphany. 'I just realised that I am here at the CFC, playing catch in the rain with a United Arab Emirates student', he exclaimed. Our Gray Beard had gone from sceptic to a believer in the process, it seemed. While this experience is anecdotal and these observations are only mine and those of my fellow design educators present, we all were relieved to see that the senior military leader assigned to the entire exercise had at least experienced something stimulating during one of the play sessions.

Concerning the design education at the Joint Special Operations University, a majority of students in end-of-course surveys provide positive feedback on the various play activities, since the significant inclusion of these activities in late 2017 through 2018. Although initial student results remain inconclusive due to a small sampling size as of the date of this article, by late 2018 enough iterations of the revised design program have occurred to provide potentially more conclusive feedback on increasing design play activities within the family of five-day design courses and custom design inquiry sessions.<sup>43</sup>

## How to introduce substantive play to enhance design applications

Design facilitators seeking to implement substantive play into design sessions should consider the following in order to enhance design outputs as well as improve the ability for the unit to express the desired traits of a learning organisation. These are

not rules; however, there are some overarching patterns that appear to apply in many design applications for military professionals.

Balancing design work sessions with play sessions requires deliberate planning and time management by the design facilitator. Although each design context will remain unique, a useful planning consideration would be a 30 minute play session for every two or three hours of design work, or potentially a longer play session associated with half of a duty day dedicated towards design activities. Introducing design play activities within the design space can reduce some stressors, however it is essential that the design facilitator monitor and manage the design team to determine when they require a significant break.

Design play sessions are not necessarily formalised, but they do require the distinction of playfulness over work. When distinct play sessions are unavailable, design facilitators may instead insert play activities within practical exercise periods or formal lecture sessions. The inclusion of play objects, informal classroom environments, deliberate group activities that disrupt traditional military educational formats, and the utilisation of mixed methods for design education are all useful. Design lessons that feature video clips, blogs, podcasts, and other mixed-media engagements provide a useful change of pace within what can otherwise become a traditional 'sage on the stage' format. Efforts to reduce PowerPoint or provide alternative educational presentation formats appear to produce quite positive results in design education. Some design teams even engage in playful activities and challenge the traditional military briefing form by presenting their design concepts in alternative delivery means.<sup>44</sup>

When design faculty shape a design course or a design inquiry event, the application of 'play' becomes a critical contextual factor for setting the conditions for design innovation. Humans express humour through play and thus, in some regard, design without humour is essentially 'play' without any sustenance or soul. Again, all military professionals can demonstrate a sense of humour when doing even the most routine or stressful of tasks; potentially humour is enhanced at times through these tensions. When designers attempt to create the conditions for design innovation, they ought to be mindful of where humour can ease institutional pressures and foster divergent thinking. In many of my design lessons, I prefer non-military examples as well as comedic elements to not only place students in unfamiliar contexts but also to use humour as a necessary vehicle to introduce rather disruptive and controversial design concepts. While the inclusion of humour in design education remains a highly subjective and stylistic choice, every design facilitator must be reflective on how they practice design for military applications.

## Conclusion

The resistance to this topic remains vast, and potentially daunting. A misapplied institutional fear remains: 'We must remain professional...and playing is unprofessional for serious military affairs'. Yet the most difficult, complex, and wickedly tangled challenges appear to reject everything we throw at them through the conventional way endorsed by our profession. We end up failing but all agreeing in the seriousness of our efforts as they fail. We implicitly do this and thus agree as an institution that our military content is less significant than our preferred military form. Work, education and play remain traditionally distinct and compartmentalised in our customs, traditions and military rituals.

The solution frames, as well as the problem statements themselves, are entirely unscientific in the current methodological applications nearly all militaries promote in their planning doctrine across the industrialised West, due largely to a pseudo-scientific approach that is set solidly within a positivist way of making sense of reality. Coupled to this is a mechanistic managerial style that overemphasises a false notion of 'seriousness' in the application of these single-paradigm decision-making methods, while underemphasises 'play' to suppress not just the right conditions for innovation and divergent thinking but the essential qualities of epistemological self-reflection and critical inquiry into *why we do what we do*. Twenty-first century militaries require a genuine scientific approach where these failing and entirely positivist constructs for 'military science' and management are debunked and marginalised. Doing this would likely disrupt a significant portion of traditional military education, training, doctrine and schooling. Yet until it occurs, militaries will continue to fight off innovation and be largely unaware of why they remain static and reactive to radical changes.

In military design applications, form needs to follow an emergent relationship dependent upon novel content ...this is innovation. To open these pathways, we need to free up our minds; especially when stressing them with the hardest possible challenges a military will ever face. Military playfulness seems like an oxymoron, yet when design is done for highly complex and adaptive contexts we tend to discover that the strangest of bedfellows are often the very things we need and have the hardest time realising. Substantive play, done within a structured design process of framing and ideation, will enhance and enable our profession to transform into the next future force that is essential for the accomplishment of our enduring national security desires. Finally, without senior leadership's awareness, acceptance, and dedication towards shaping substantive play sessions in their organisations these concepts will remain largely unrealised.

## Notes

<sup>1</sup> An earlier version of this chapter was presented as a keynote paper at the 'Innovation Methodologies for Defence Challenges' conference held at Saint Paul University, Ottawa, Canada from 30 January to 1 February 2018.

<sup>2</sup> Disclaimer: The views and opinions expressed in this chapter are those of the author and do not reflect the opinions or any official position of the US Department of Defense or the US Government.

<sup>3</sup> Russell Ackoff, *Creating the Corporate Future* (New York: John Wiley & Sons, 1981), p. 43.

<sup>4</sup> Isaac Asimov, 'Isaac Asimov Asks, "How Do People Get New Ideas?"', *MIT Technology Review*, 20 October 2014.

<sup>5</sup> *Mauldin at War, 1943-1945*. Online: <https://www.loc.gov/rr/print/swann/mauldin/mauldin-atwar.html>, accessed 26 January 2018.

<sup>6</sup> Ackoff, *Creating the Corporate Future*, pp. 43-45.

<sup>7</sup> Christopher Paparone, *The Sociology of Military Science: Prospects for Postinstitutional Military Design* (New York: Bloomsbury Academic Publishing, 2013), p. 14; Geoffrey Sloan, 'Military Doctrine, Command Philosophy and the Generation of Fighting Power: Genesis and Theory', *International Affairs*, Vol. 88, No. 2 (2012), pp. 244; Earnest Gellner, *Plough, Sword and Book: The Structure of Human History* (Chicago: University of Chicago Press, 1989), p. 70.

<sup>8</sup> Michel Foucault, *Discourse and Truth: The Problematization of Parrhesia* (University of California at Berkeley, November 1983), p. 65. Online: [http://foucault.info/system/files/pdf/DiscourseAndTruth\\_MichelFoucault\\_1983\\_0.pdf](http://foucault.info/system/files/pdf/DiscourseAndTruth_MichelFoucault_1983_0.pdf), accessed 26 January 2018; Shimon Naveh, Jim Schneider & Timothy Challans, *The Structure of Operational Revolution: A Prolegomena* (internally produced publication: Booz Allen Hamilton, 2009), p. 9; John Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago: University of Chicago Press, 2002), p. 9.

<sup>9</sup> This design experimentation occurs within JSOU-CCE (Center for Continuing Education) design faculty, outreach to other military organisations and academia, as well as through research and implementation within military and intergovernmental design challenges.

<sup>10</sup> Aaron P. Jackson, *The Roots of Military Doctrine: Change and Continuity in Understanding the Practice of Warfare* (Fort Leavenworth, KS: Combat Studies Institute Press, 2013).

<sup>11</sup> Wendy Troxel, et al., *Sleep in the Military: Promoting Healthy Sleep among U.S. Service Members* (Santa Monica, CA: Rand Corporation, 2015), pp. 103-6.

<sup>12</sup> Jeff Conklin, *Dialogue Mapping: Building Shared Understanding of Wicked Problems* (West Sussex: Wiley & Sons, 2006), pp. 3-40; Antoine Bousquet & Simon Curtis, 'Beyond Models and Metaphors: Complexity Theory, Systems Thinking and International Relations', *Cambridge Review of International Affairs*, Vol. 24, No. 1 (2011): pp. 43-62.

<sup>13</sup> Gibson Burrell & Gareth Morgan, *Sociological Paradigms and Organisational Analysis: Elements of the Sociology of Corporate Life* (Portsmouth, NH: Heinemann, 1979); Majken Schultz & Mary Jo Hatch, 'Living with Multiple Paradigms: The Case of Paradigm Interplay in Organizational Culture Studies', *Academy of Management Review*, Vol. 21, No. 2 (1996), pp. 529-57; Paparone, *The Sociology of Military Science*.

<sup>14</sup> Paparone, *The Sociology of Military Science*, pp. 19-21; Austin Long, *The Soul of Armies: Counterinsurgency Doctrine and Military Culture in the US and UK* (Ithaca, NY: Cornell University Press, 2016), p. 16.

<sup>15</sup> Sociologist Karl Weick provides significant studies on firefighter culture that parallels with military culture as framed in this article. Weick used the 'dropping tools' metaphor for cognitive reluctance in replacing favoured methods with novel and unfamiliar ones. See: Karl Weick, 'Drop Your Tools: An Allegory for Organizational Studies', *Administrative Science Quarterly*, Vol. 41, No. 2 (1996), pp. 301–13; Karl Weick, 'The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster', *Administrative Science Quarterly*, Vol. 38, No. 4 (1993), pp. 628–52.

<sup>16</sup> Stephen Flanagan, 'Losing Sleep', *Armed Forces Journal*, Vol. 149, No. 5 (December, 2011), pp. 12-39.

<sup>17</sup> Ackoff, *Creating the Corporate Future*, p. 43.

<sup>18</sup> Russell Ackoff, 'Science in the Systems Age: Beyond the IE, OR and MS', *Operations Research*, Vol. 21, No. 3 (May-June 1973), pp. 661-671.

<sup>19</sup> Stephen Waring, *Taylorism Transformed: Scientific Management Theory since 1945* (Chapel Hill, NC: The University of North Carolina Press, 1991), pp. 9–19.

<sup>20</sup> Ackoff, *Creating the Corporate Future*, pp. 46–47.

<sup>21</sup> Jackson, *The Roots of Military Doctrine*; Markus Mader, *In Pursuit of Conceptual Excellence: The Evolution of British Military-Strategic Doctrine in the Post-Cold War Era, 1989-2002* (Bern, Germany: Peter Lang, 2004), p. 31; Paparone, *The Sociology of Military Science*, pp. 10–14.

<sup>22</sup> Donald Schön, 'The Crisis of Professional Knowledge and the Pursuit of an Epistemology of Practice' in: Louis Barnes, C. Roland Christensen & Abby Hansen (Eds.), *Teaching and the Case Method: Instruction Guide* (Boston, MA: President and Fellows of Harvard College, 1987), pp. 6–8; Anders Sookermany, *On Developing (Post)Modern Soldiers: An Inquiry into the Ontological and Epistemological Foundation of Skill-Acquisition in an Age of Military Transformation* (Oslo, Norway: University of Oslo, 2013), p. 85.

<sup>23</sup> Chris Doran, 'Jumping Frames: Reflexivity and Recursion in the Sociology of Science', *Social Studies of Science*, Vol. 19, No. 3 (1989), p. 156; Marianne Lewis & Andrew Grimes, 'Metatriangulation: Building Theory from Multiple Paradigms', *Academy of Management*, Vol. 24, No. 2 (1999) p. 685; Antoine Bousquet, 'Chaoplexic Warfare or the Future of Military Organization', *International Affairs*, Vol. 84, No. 5 (2008), pp. 919-920.

<sup>24</sup> Aaron Wildavsky, 'If Planning is Everything, Maybe It's Nothing', *Policy Sciences*, Vol. 4, No. 2 (1973), pp. 127-129.

<sup>25</sup> Henry Mintzberg, 'The Fall and Rise of Strategic Planning', *Harvard Business Review*, February 1994, pp. 107–14; Henry Mintzberg, 'Patterns in Strategy Formation', *Management Science*, Vol. 24, No. 9 (1978), pp. 934–48.

<sup>26</sup> Wildavsky, 'If Planning is Everything, Maybe It's Nothing', pp. 129-132.

<sup>27</sup> Karen Jowers, 'McCain: Military Personnel's 100-Hour Work Weeks Must Stop', *Military Times*, 14 November 2017. Online: <https://www.militarytimes.com/news/pentagon-congress/2017/11/14/mccain-military-personnels-100-hour-work-weeks-must-stop/>, accessed 26 January 2018.

<sup>28</sup> Troxel, et al., *Sleep in the Military*, pp. 103–8. Although this study focuses on military culture and sleep, the conclusions reinforce the argument that military culture embraces an unhealthy work-to-life balance, complete with social and cultural forces compelling adherence to risky positions on rest.

<sup>29</sup> Ackoff, *Creating the Corporate Future*, p. ix.

<sup>30</sup> Elisabeth Bumiller, 'We Have Met the Enemy and He is PowerPoint', *New York Times*, 26 April 2010. Online: <http://www.nytimes.com/2010/04/27/world/27powerpoint.html>,

accessed 26 January 2018. Bumiller quotes multiple senior military leaders attacking PowerPoint and the lack of critical thinking, synthesis, and depth of understanding as demonstrated in the modern military digital briefing process.

<sup>31</sup> Ofra Gracier, 'Self Disruption: Seizing the High Ground of Systemic Operational Design (SOD)', *Journal of Military and Strategic Studies*, Vol. 17, No. 4 (2017), pp. 21–37; Ofra Gracier, 'Between Teaching and Learning: What Lessons Could the Israeli Doctrine Learn from the 2006 Lebanon War?', *Experticia Militar*, October 2017, pp. 22–29.

<sup>32</sup> Alex Ryan, 'A Personal Reflection on Introducing Design to the U.S. Army', *Medium* (blog), 4 November 2016. Online: <https://medium.com/the-overlap/a-personal-reflection-on-introducing-design-to-the-u-s-army-3f8bd76adcb2>, accessed 26 January 2018; Shimon Naveh, *The Australian SOD Expedition: A Report on Operational Learning*, unpublished manuscript dated 10 December 2010; Grant Martin, 'Deniers of "The Truth": Why an Agnostic Approach to Warfare Is Key', *Military Review*, February 2015, pp. 42-51.

<sup>33</sup> Philippe Beaulieu-Brossard, 'Encountering Nomads in Israel Defense Forces and Beyond', unpublished draft chapter in: P. Ish-Shalom (Ed.), *Concepts at Work*, edited volume in preparation, draft version dated 2018, pp. 3-7.

<sup>34</sup> Philippe Beaulieu-Brossard & Philippe Dufort, 'Introduction to the Conference: The Rise of Reflective Military Practitioners', conference paper presented at the *Hybrid Warfare: New Ontologies and Epistemologies in Armed Forces* conference, Canadian Forces College, Toronto, Canada, 2016; Christopher Paporone & George Reed, 'The Reflective Military Practitioner: How Military Professionals Think in Action', *Military Review*, April 2008, pp. 66–76; Willemien Visser, 'Schön: Design as a Reflective Practice', *Collection, Art+Design & Psychology*, No. 2 (2010): pp. 21–25; Donald Schön & Martin Rein, *Frame Reflection: Towards the Resolution of Intractable Policy Controversies* (New York: Basic Books, 1994).

<sup>35</sup> Haridimos Tsoukas & Mary Jo Hatch, 'Complex Thinking, Complex Practice: The Case for a Narrative Approach to Organizational Complexity', *Human Relations*, Vol. 54, No. 8 (2001), pp. 979–1013; Karl Weick, 'The Role of Imagination in the Organizing of Knowledge', *European Journal of Information Systems*, vol. 15 (2006), pp. 446–52; Karl Weick, 'Reflections: Change Agents As Change Poets: On Reconnecting Flux and Hunches', *Journal of Change Management*, Vol. 11, No. 1 (2011), pp. 7–20.

<sup>36</sup> Karl Weick, 'Drop your Tools: An Allegory for Organizational Studies', *Administrative Science Quarterly*, Vol 41, No. 2 (1996), pp. 301-313.

<sup>37</sup> Ben Zweibelson, 'Change Agents for the SOF Enterprise: Design Considerations for SOF Leadership Confronting Complex Environments', *Special Operations Journal*, Vol. 3, No. 2 (2017), pp. 127–40.

<sup>38</sup> Zweibelson, 'Change Agents for the SOF Enterprise', pp. 127–40.

<sup>39</sup> One seminar was the primary design group for my instruction while in several opportunities, the substantive play sessions expanded to multiple seminar groups as well as design faculty. These seminar groups were composed of predominantly Canadian Armed Forces professionals, with several additional international students per seminar.

<sup>40</sup> Over the past ten years I have led, facilitated or participated in multiple design inquiries, education events, courses and activities where the length of time and complexity of tasks and balance of work and play largely mirrored traditional military planning activities instead of design ones. This pattern exists across militaries, Western and non-Western cultures, and across services as well as inter-governmental and para-military organisations.

<sup>41</sup> Other deliberate efforts by the JSOU faculty include a business casual uniform for the military members, first name utilisation and no rank or status for students, and the removal of doctrine as well

as military planning language and methodologies except for specific design learning objectives on design-planning integration.

<sup>42</sup> Informal student feedback to multiple design cadre and CFC faculty after the 2017 'Shifting Sands' design exercise provided to the author. However, CFC faculty also greatly emphasised the observation that Seminar 12 (the seminar performing play activities) produced a novel design deliverable with a level of design self-reflection and innovation outperforming all other seminars. (Observation taken from personal correspondence between Philippe Beaulieu-Brossard and the author in June 2017 after the design exercise).

<sup>43</sup> At the Joint Special Operations University, each class requires the students to complete a survey at the end of the course. These critiques are categorised along with student demographics to compile statistics for course evaluation and validation over time. As the inclusion of substantive play activities were applied for the late 2017 JSOU-CCE design program, by October 2018 a large enough sample size will be available to make conclusive comparisons between the new program and the earlier program that emphasised traditional military educational practices, formal lectures, and extensive PowerPoint presentations (this data was not yet available at the time of writing of this paper).

<sup>44</sup> JSOU design faculty have observed students present design concepts through a scripted play format as well as using props and costumes. Many groups use a combination of white board drawings, written narratives, as well as additional models, props, and non-standard deliverables that express innovation as well as disruptive thinking.