Joint Force 2020 and the Human Domain: Time for a New Conceptual Framework?

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“The effects of physical and psychological factors form an organic whole which, unlike a metal alloy, is inseparable by chemical processes.” — Carl von Clausewitz[1]

The fundamental nature of war is a clash of wills between organized socio-political entities. This understanding about war emphasizes its iterative and competitive nature, but American strategic culture often overlooks Clausewitz’s insight that strategy is not an exercise with inanimate matter, but with living opponents with interests, passions, decision options, and above all else, a will and goal of their own. It is a profoundly human activity, inspired by human emotions (fear, honor, and interest), guided by human genius and imagination, and conducted by groups and institutions shaped by human leaders and occupied with human actors.

However, our doctrine and approach to war often overlooks this essential depiction of war as a human enterprise. This article explores how to rectify this misconceptualization within the context of supporting the evolution of the U.S. military towards Joint Force 2020.

Despite rhetoric about the human and moral components of warfare, much of Western military theory focuses on physical domains (air, sea, land, and space). These are actually spatial regions or locations in which human activity occurs. Despite the previously cited Clausewitzian injunction that physical and moral forces are fused, American security institutions are largely organized around these physical domains, increasingly now connected by a cyberspace domain. Even the latter is still disputed in some military circles. These domains create a frame of reference that defines the preparation and conduct of war. Each military institution and Service crafts doctrine and platforms that are designed to operate or maneuver in their dominant domain. Little preparation is made to conduct war beyond them. Because of this focus on the physical domains, Americans tend to overlook, and underinvest in, the more important aspects of war and warfare—those best defined as human.[2]

This paper explores alternative and competing constructs to better capture the human aspects of war. It examines the fundamental nature of war and the evolving characteristics of contemporary conflict that are influenced by human dynamics. This paper identifies and assesses current concepts on the human dynamics of war and shows why the emerging concept of the Human Domain should be added to the U.S. Military’s conceptualization of battlespace domains. It also explores existing Joint concepts to determine how they could better integrate human factors into Joint Force 2020. The paper concludes with a number of recommendations for consideration by the Department of Defense (DOD) and the Chairman of the Joint Chief of Staff (CJCS).

The Enduring Nature of War
Since war is a contest of human wills, not just technology or machines, our ways and means must reflect that reality in order to ensure we have the requisite capabilities to achieve victory. There is no doubt that science and the application of advanced technology and enabling logistics is involved. But in the world we face now and for the foreseeable future, our ways and means are likely to be more complex, and the circumstances in which ends are secured will be shrouded by greater ambiguity. The human element of war will remain relevant to conflict. A military strategy and force posture that does not grasp (or even worse evades) this fundamental challenge will be an irrelevant and expensive illusion.

This tendency to overlook human factors has a long history, and reflects a tension in American strategic culture which values science, technology, and logistics over other strategic dimensions. The proverbial American Way of War emphasizes analysis of the ‘physical sciences’ of warfare at the expense of the contributions of history and relevant human elements of warfare. Two senior military theorists and practitioners noted a decade ago:

> For those placing unbridled faith in technology, war is a predictable, if disorderly, phenomenon, defeat a matter of simple cost/benefit analysis, and the effectiveness of any military capability a finite calculus of targets destroyed and casualties inflicted…. Real war is an inherently uncertain enterprise in which chance, friction, and the limitations of the human mind under stress profoundly limit our ability to predict outcomes; in which defeat to have any meaning must be inflicted above all in the minds of the defeated.”

Our tendency is to emphasize technologically-produced solutions to what are inherently political challenges that can only be resolved in the minds and will of the social community that is challenged. While our approach to war cannot ignore the influence of technology, it must keep this aspect or dimension in context. The American Way of War may be technology-enabled, but it must also respect the fact that both war and warfare are culture-centric as well as human-centric. A number of research and scholarly papers published by the National Defense University suggest a growing awareness of the importance of this field. Others, both within the U.S. Military, and our allies, have engaged with this issue to a greater degree.

**Terminology and Typologies**

Human factors are the basis for all action within, and interaction between, the various actors in the physical domains of the battlespace. Within this section, some definitions on terminology and typology, via three different approaches or constructs, will be explored. Joint planning doctrine already incorporates a broad approach to examining adversaries with the PMESII construct that captures most human factors. This framework lays out the Political, Military, Economic, Social, Information, and Infrastructure networks and nodes of the opponent in a systematic manner and does so even more holistically than just the human dimensions. This construct is usually depicted and applied however in terms of just the prospective opponent and only as a unitary state actor. Some argue that the construct is narrowly applied as a targeting approach, and focuses on nodes or entities rather than interactions and inter-relationships which explain intensity or criticality of nodal links. As noted in JP5-0, producing a holistic view of the relevant enemy, neutral, and friendly systems as a complex whole includes many external influences and relationships, and ultimately, the intelligence support and planning analysis should define how these systems interrelate.

**U.S. Army Human Dimension Construct**
The U.S. Army has done the most formal research and conceptual thinking about the human dimension in the past several years. In 2008, the Army published a formal concept paper and defined the Human Dimension as “That which encompasses the moral, intellectual, and physical components of Soldier, leader, and organizational development and performance essential to raise, prepare, and employ the Army in full spectrum operations.”[10]

The Army concepts offers a comprehensive portfolio approach to the various components (Cognitive, Physical and Social) of the Soldier, leader, family and civilian development and performance essentials to raise, prepare, and employ forces for full spectrum operations in today’s dynamic operating environment. **Cognitive:** This includes Learning capabilities, Cognitive training and education, and Psychological, Character, and Morale factors. **Physical:** Improve fitness through comprehensive wellness programs that build aerobic/mental capacity, strength, endurance, agility, and resilience; focused nutrition; stress and sleep deprivation management. **Social:** This component is comprised of the Army ethic, Faith, Moral/ethical foundation, Esprit de corps, Cohesion, Trust, Sociocultural awareness, and Adaptability.

It should be clear that this definition is centered entirely on U.S. forces, or just the Blue side of the equation. It does not acknowledge enemy forces, local populations, or host nation government forces. Nor does it suggest that the various components interrelate with other aspects of the operating environment, or each other. Obviously the Army’s definition is focused on their particular Service, and a broader definition that is more applicable for today’s Joint warfighting community would be needed.

**UK Joint Doctrine and the Human Domain**

A second formulation has been developed by the United Kingdom’s joint doctrine community which published a formal conception of the Human Domain. They define the Human Domain as “the totality of the human sphere of activity or knowledge.”[11] This interpretation focuses on the interaction of human actors and their activity with a broader “environment.” This environmental context includes four sets of factors or sub-environments. **Cultural:** which affects how people interpret and orient themselves includes ideological concepts, language, religion, and psychological issues including fears, attitudes, etc. **Institutional:** which embody cultural ideas and norms as practices and beliefs in political, military, economic, or legal systems. **Technological:** includes how communities shape the environment and create infrastructure with technology and media. **Physical:** where people live and where resources are found. Categories include traditional environments such land, air, maritime, and space, resources, and climate.

UK doctrine writers listed their construct in a matrix but they do describe it as overlapping and interdependent. From a definitional perspective, the totality of human activity is broad and could refer to everything within a conflict. Moreover, the inclusion of the technological, institutional, and resource issues tend to pull this discussion completely away from the essential human element or aspects of conflict. The inclusion of these other dimensions is best thought of as the interfaces between humans and the operating environment.

**The Human Environment**

One way to think about the issue is based on Joint doctrine which addresses various forms of “environment” and their subordinate dimensions. In Joint Publication 3-13, *Information Operations*, the Information Environment was depicted as comprised of three “dimensions.” These were physical, cognitive, and informational processing.[12]

Like the Human Dimension construct, the Human Environment framework only addresses a single population, rather than the interactive of various human populations in the human environment. For a more apt concept, we must acknowledge that it is the interaction of our forces that affect the will, actions,
cognitive processes, and emotions of friendly and allied (Blue), host (Green), and adversarial (Red) forces (including political and military decision-makers), as well as the local populations (White). Our interest in this environment, which cuts across and drives our operational effectiveness in all other domains, is predicated upon the need to shape the attitudes and behavior of decision-makers, individuals, and relevant populations to our desired political outcomes.

**Expanding our Concepts of Domains and Maneuver**

After a decade of war, one in which our pre-war strategic culture was framed almost entirely by a technology-driven Big War paradigm, we should step back and attempt to recalibrate our understanding and approach to war and warfare. Efforts to capture key insights from the last decade are ongoing.\[^{13}\] We have re-learned there is more to war than simply warfighting, and there is much more to warfare than simply targeting the fielded forces of our adversaries with precision munitions.\[^{14}\] The capability of shaping perceptions and influencing the will of targeted relevant populations (friendly, enemy, neutral and one’s own forces) across the spectrum of conflict is relevant to all forms of conflict from major conventional war to irregular. As Sir Rupert Smith has noted, commanders are not simply in a kinetic duel with metaphorical pistols, they operate as producers with competing narratives, supporting imagery, and correlated actions in a theatre of operations.\[^{15}\]

In this regard, we need to recognize that the Human Domain can be thought of as part of the maneuver space that we seek to operate within. This requires a broader understanding of maneuver however. “Maneuver” has full spectrum and cross-domain context and applicability. It does not have to be constrained to ground movement or operating aircraft in the air domain. It is a much larger construct with application across many domains. As Winston Churchill noted in *The World Crisis*:

> There are many kinds of manoeuvre in war, some only of which take place upon the battlefield. There are manoeuvres far to the flank or rear. There are manoeuvres in time, in diplomacy, in mechanics, in psychology; all of which are removed from the battlefield, but react often decisively upon it, and the object of all is to find easier ways, other than sheer slaughter, of achieving the main purpose.\[^{16}\]

Although it has not focused on “maneuver” as a broader conception within contemporary conflict, the U.S. Army has recently devoted significant conceptual effort to capture the human component in greater detail and admitted a doctrinal gap:

> Current doctrine does not adequately address the moral, cognitive, social, and physical aspects of human populations in conflict. Since the purpose of military action is to affect the behavior of human groups in the operational environment toward a defined objective, the Army must improve the doctrinal representation of the operational environment and account for the socio-economic, cognitive, and physical aspects of human activity.\[^{17}\]

Despite the intervention of technology in the physical domains, the human component remains the base of all domains. Literally no action can take place in the other physical domains without this vital human element. It is humans who fly aircraft and apply precision power in the air domain. It is trained professionals who operate sophisticated surface and subsurface platforms in the sea domain. Cyber
professionals operate and defend our computers, and seek to outwit hackers and intruders in the cyber
domain. As such, the human essence of conflict remains relevant to the performance of all elements
of the Joint warfighting community. However, doctrinally and conceptually, the U.S. military does not
consider the human aspects of conflict to be a domain of its own, nor does it relate it to the other domains
or environmental constructs.

If a Human Domain were established in doctrine, it could be operationalized as depicted in Figure 1 as a
foundation for the other domains. It is relevant to all domains, but it most directly interacts with the land
domain and thus it has the highest relevance to this concept since that is where humanity lives. While
humanity interacts, with the intervention of high technology, in the space, air, and sea domains, it is in the
land domain that friendly, partner, and opposing forces interact the most—and interact with a degree of
frequency and close proximity, to a far greater degree than any other domain.
Despite the existing physical domains and their associated technological means of operating and maneuvering, the human domain remains the base component or fundamental foundation for all domains. Literally no action can take place in the other domains without human action, and its purpose is guided by the need to influence other humans. This influence can be both physical or cognitive, and direct or indirect. As such it remains relevant to the performance of all elements of the Joint warfighting community.

The last 10 years has made it clear that a comprehensive understanding of the local environment, including political, sociocultural, and socio-economic aspects in granular detail, is crucial to success in contemporary conflicts. Several years into the fight in Afghanistan, our intelligence system was still operating in a top-down mode, satisfying higher headquarters with intelligence focused primarily on the insurgent order of battle, not on the more relevant political, social, or economic systems.[19]

Our intelligence community is adapting to the challenge. But our understanding of the human environment is more than just an intelligence function or challenge. Commanders and operators need to grasp the complexities of this environment as well. Our efforts to gather and lock in the lessons from this last decade should be expanded to achieve this. Clearly, the renewed emphasis on the human domain as a shortfall in our approach to war and warfare has been underscored by the many initiatives undertaken in Iraq and Afghanistan. The Army has made strides in employing Human Terrain Teams and other non-doctrinal sociocultural innovations as a means of supporting commanders with this challenge in current conflicts, but they have not been institutionalized.[20] We need to examine the utility and institutionalization of many of these lessons and incorporate them as needed in our repertoire and doctrine. Framing the human domain and defining the doctrinal, structural, intellectual, and programmatic components towards the Human Domain would facilitate that necessary development.

Although the recognition of the Human Domain has occurred primarily because of a decade of irregular wars, it is just as important that the Joint Force also understand the increasing importance of the human element in conventional conflicts. While sustained conventional war appears to be less likely in the near-term, the high impact of such conflicts means it is essential the Joint Force improve its understanding of the human element to maximize its effectiveness across the range of military operations. Failure to account for the human component reduces war to a mathematical exercise based on servicing targets, or worse, a doctrine with little appreciation for its linkage to policy. We must incorporate a greater understanding of the Human Domain into the Joint Warfighting community as part of its pathway to creating Joint Force 2020.

Current Joint Force Development Initiatives

While we have made progress in applying lessons from a decade of irregular conflict, we have made less of an effort to fully adjust or absorb insights from the cognitive and physical segments of the human domain. Numerous assessments and white papers from the Joint Warfighting community raise relevant concerns about how the human components are being considered in joint force development. First, as noted in a recent Joint Staff report titled A Decade of War, our ability to operate in current conflicts was limited by shortfalls in our approach to key command and intelligence functions.

Because the traditional intelligence effort tended to focus on enemy groups and actions, it neglected “white” information about the population that was necessary for success in a population-
This conclusion supports a more comprehensive orientation not just away from the traditional Order of Battle intelligence towards the “human terrain,” but a more comprehensive understanding of the clash of human forces across all domains in the operating environment.

Next, the Chairman has addressed this oversight in his Strategic Guidance for the development of Joint Force 2020. He has emphasized greater interdependency between our domain-centric Service structures and concepts. While not explicitly calling for greater recognition of the human domain, many of the Chairman’s key initiatives address the human capabilities of the Joint Force. “This Joint Force must excel at many missions while continuously adapting to changing circumstances. It means building and presenting forces that can be molded to context—not just by adding and subtracting, but by leaders combining capabilities in innovative ways.” In his White Paper on Joint Professional Military Education (JPME), the Chairman further reinforced the need to exploit education as a means of achieving his vision of tomorrow’s Joint force.

Even more specifically, in his Foreword to the Capstone Concept for Joint Operations (CCJO), General Dempsey noted that competitive advantage in the near future would most likely come from innovations in training, education, personnel management, and leadership development. These are the means of shaping our human capabilities and may offer greater effectiveness than imagined, especially in period of reduced resources. The Capstone Concept clearly emphasizes opportunities for increased force effectiveness in terms of leadership development, training and education, and personnel management—all human factors which work across all domains.

Several Joint Concepts and the Joint Operational Access Concept (JOAC) have increasingly emphasized the potential inherent in “cross domain synergy” as a source of competitive advantage. The application of force capabilities from the aerospace domain to solve challenges in the sea domain is one example where current Joint force development efforts are targeted. The Joint Operational Access Concept in particular emphasizes Cross Domain Synergy which it defines as “the complementary vice merely additive employment of capabilities in different domains such that each enhances the effectiveness and compensates for the vulnerabilities of the others—to establish superiority in some combination of domains that will provide the freedom of action required by the mission.”

Other scholars at National Defense University have argued for a new strategic or conceptual framework related to the traditional domains. They noted that our approach in force development is domain-centric. This construct they argue does not properly account for the complexities of domain interrelationships. We agree, but think that the complexities are even more dynamic. Instead, we contend that we should extend their conception further and argue that such geo-physical “stovepipes” only capture the importance of the cyber domain but overlook the central domain interrelationships, that of human interaction across all the domains. If war is a clash of wills, we need to ensure our efforts are focused on creating the capabilities needed to shape that clash towards our objectives. Thus, our understanding of the complexities of contemporary conflict should examine the human environment and devote resources to researching its conceptual utility and its components.

If the express mission of a military intervention is to influence the attitudes and behavior of human actors, the joint community must enhance our doctrinal representation of the operational environment and
account for the psychological, socio-economic, cognitive, and physical aspects of human activity in that environment. The importance of this domain is starting to emerge in the land forces triad.[27] But we should also be investing in the maturation of the capabilities needed to enhance the ability of the entire Joint Force of 2020 to conduct globally integrated operations, and successfully operate and maneuver in the human domain within the battlespace and exploit cross-domain synergies to the fullest to achieve victory.

Conclusions and Recommendations

War is the ultimate test of ideas and institutional readiness. A decade of war has exposed the flaws of single domain prejudices rather than historical experience and battlefield conditions. That decade demonstrates, as Colin Gray once noted, that “the human dimension of war and strategy has a way of triumphing over technology and cunning plans.”[28] Isolated silos of excellence and single domain prejudices should be in our rear view mirror. We have learned that even a global superpower cannot afford to approach war with anything less than a holistic understanding of the conditions it faces, with comprehensive and integrated approaches.

The Human Domain construct offers the best ongoing paths of research for Joint Force development. But this construct must combine all the actors in the environment (Blue, Red, Green and White players). By doing so, our strategies will undoubtedly become more comprehensive and more representative of contemporary conflict.

Recommendations:

We offer a number of recommendations. First, DOD should consider identifying and aggregating program activities related to the Human Domain (both conceptually and as a framework for investment) in the upcoming Quadrennial Defense Review to ensure balanced Guidance for the Development of the Force inputs and resource portfolios. With severe budget cuts coming up, human capital programs could quickly become casualties to resource pressures.

Second, the Joint Warfighting community should consider the utility of a Joint Concept for Human Domain to further drive his key initiatives into Joint Force 2020 capabilities. The central idea within the concept would be the attainment of cross-domain synergy by exploiting the human domain vice just technology. In this regard, Cross Domain Synergy would be defined as “the complementary vice merely additive employment of capabilities across different domains, including the human domain, such that each enhances the effectiveness and compensates for the vulnerabilities of the others. The purpose of operating across domains is to establish and sustain positional advantage and freedom of maneuver as required by the mission.”

Finally, if a Joint concept is not warranted, the Human Domain construct could still be established to refine and aggregate the various human dynamics-related aspects of Chairman’s joint force development guidance and impact the next iteration of the Capstone Concept for Joint Operations. We need to ensure we consider human dynamics to achieve the innovative approaches required to implement “globally integrated operations” and cross-domain synergy and other situations where creative thinking will be needed for an unpredictable and complex world.

Absent this reconceptualization and associated recommendations, it is not clear that the intellectual foundation or resources for research, education, and leader development focused on these tasks will be sustained, and that our traditional focus on technological solutions will remain dominant in our joint combat development efforts, talent management, and leadership development. Formalizing the concept of the Human Domain should ensure that historical, behavioral and social science research is recognized and
resourced. It will also focus resources on enhancing the resilience and moral preparation of our warriors. Without this conceptualization and focused effort, the path to Joint Force 2020 will be harder and less adaptive than the Chairman has called for. To succeed, Joint commanders must be able to successfully maneuver in the most decisive domain, and that is the Human Domain.


[2] The inclusion of a human dimension has been previously recognized by some in the U.S. military. It is considered central by the Marine Corps, Marine Corps Doctrinal Publication 1, *Warfighting*, (Washington, DC, 1995), 13–14. “No degree of technological development or scientific calculation will diminish the human dimension in war. Any doctrine which attempts to reduce warfare to ratios of forces, weapons, and equipment neglects the impact of the human will on the conduct of war and is therefore inherently flawed.”


[10] The Army’s major contribution in is area begins with U.S. Army Training and Doctrine Command’s
Cyberspace has a physical and non-physical element. It is physical in that physical infrastructure exists in the form of computers, hardware, networks, and links. But it is also non-physical since cyberspace has a cognitive element, and it both stores and connects ideas and imagery between individuals and societies writ-large.


Lieutenant General George Flynn, A Decade of War: Enduring Lessons from the Past Decade of Operations (Suffolk, VA: Joint Chiefs of Staff, June 15, 2012).

Chairman’s Strategic Direction to the Joint Force (Washington, DC: Department of Defense, February 6, 2012), 7.

Joint Education White Paper (Washington, DC, Joint Chiefs of Staff, June 25, 2012).

Capstone Concept for Joint Operations: Joint Force 2020 (Washington DC: Joint Chiefs of Staff,
September 10, 2012), iii.


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