



German soldiers specializing in nuclear, biological, and chemical warfare detection and decontamination on exercise near Kuwait City, 2003.

FROM BATTLESPACE TO BATTLESPHERE

by Peter H. Denton

Introduction and Background

The current reality of warfare has outstripped our ability to describe it. In using words/phrases like ‘asymmetric’ or ‘fourth-generation’ warfare, referring to ‘the three-block war’ or ‘counter-insurgency operations’ (COINOPS), different efforts have been made to describe the changing nature of war in the 21st Century.¹ Thanks to developments in technology, tactical objectives may now be more easily achieved on the battlefield, but they are also placed within a strategic mission opaquely intended to ‘win the hearts and minds’ of a civilian population entwined in the conflict.

Given space-based weapons systems, cyber-warfare, biological warfare, electronic warfare, economic warfare, and whatever else inventive minds can create to harm their antagonists, ‘battlefield’ as a concept evokes archaic images of British ‘redcoats’ forming square to repel cavalry. There has been a growing consensus that the appropriate term should instead be ‘battlespace.’² While there are some advantages to the battlespace concept (and I have used it myself),³ it is ultimately inadequate to describe 21st Century warfare, and this is for two main reasons. First, battlespace as a concept is dimensionally inadequate. It has no necessary or identifiable boundaries. In its *weak* form, it is merely an arbitrary extension of

the battlefield concept to incorporate more (but not all) of the additional elements believed to affect some particular engagement. In its *strong* form, it requires us to consider all aspects of society and culture in terms of their potential involvement in the conduct of 21st Century warfare.

To consider the *weak* form of the concept, extending the battlefield into a larger battlespace does have some merit, as it involves air, sea, electronic, and space assets able to affect (in some fashion) specific combat operations. It means, at least in theory, that the commander can weave all these things together to create a local tactical advantage, including whatever is known about the civilian population in an area. There are, however, a wide variety of factors outside a commander’s control that can have a material effect, not only on the conduct of any specific engagement, but also on its aftermath.

Cyber-warfare is often cited as one example – what might happen if a delivery guidance system could be hijacked by the enemy, or if GPS navigation could be skewed or shut down – but there are many far less dramatic ways to disrupt technologically complex and therefore fragile combat systems.

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Outside the firefight, ‘just-in-time’ logistical systems also illustrate the vulnerability of the high-technology modern military. An entire system can be rendered combat ineffective merely by delaying the arrival of one of the essential components required for its operation.

Similarly, if the objective is to take a hill, it can be accomplished more effectively, more rapidly, and with fewer ‘friendly’ (blue) casualties and less collateral damage than ever before. Yet, maintaining control of that hill by gaining the trust of the local population is much more difficult, and it requires an entirely different set of skills. In fact, it may be argued that the weak version of the battlespace concept only works at all because it limits arbitrarily what factors may be seen to apply in theatre to the conduct and aftermath of a specific mission. The battlespace includes what we *want* it to include, for the *purposes* we choose – and the lethal assumption is that the enemy will concur with the choices we make as to its elements and its boundaries. While the so-called ‘CNN Effect’ might be a concern when combat occurs in view of the media, there is nothing vague about the firefight itself. Abstract discussions about the indefinite character and indistinct boundaries of the contemporary battlespace are quickly rendered into real problems, in real-time, on the battlefield.

“At a tactical level, therefore, problems may only escalate when operational doctrine embraces ‘the battlespace.’”

If we consider the *strong* version of battlespace, the situation just gets worse. War is potentially everywhere, involving everyone, at every moment. Peace is never an option. When you think you are at peace, it is merely the lull before you become aware of the next clever attack from some as-yet unidentified direction, or the danger posed by some as-yet unrecognized threat. In addition to being highly pessimistic about any long-term prospects for a peaceful global society,

the strong version actually contributes to social paranoia in ways that might, in fact, increase the potential for conflict. There is no act that might not be hostile; no person who might not be an enemy; no circumstance in which one’s vigilance may be relaxed. Apart from its value in describing perpetual total war undertaken by an utterly totalitarian state, it is a blunt analytical tool.

Practically speaking, in both its weak and strong forms, battlespace as a concept is dimensionally inadequate. Where does the battlespace begin and end? How does one either defend against potential enemies, or successfully attack them if the location of the conflict is only vaguely described? How does one undertake a threat assessment, when neither the direction nor form of the threat can be more than vaguely identified? How does one maintain constant combat readiness, everywhere, and at all times? On top of all these problems, if

we factor in the role of the media, of public opinion, of domestic political concerns – all of which affect the conduct of military operations in the 21st Century -- what had been ‘complexity squared’ to begin with is easily cubed or quadrupled.⁴

This leads to the second main reason for the inadequacy of the battlespace concept in depicting 21st Century warfare, namely, that it is also functionally inadequate. It does not lead to effective doctrine, to appropriate threat assessment, or to efficient procurement decisions. At a strategic level, especially, the vague and indistinct boundaries of ‘the battlespace’ make it literally impossible to develop a coherent doctrine, accompanied by adequate resources to implement it, when the boundaries of any real or potential

conflict are simultaneously so extensive and so diffuse.

Practically speaking, relying upon the concept of the battlespace to drive doctrinal development, in effect, takes doctrine ‘off the table’ when it comes both to threat assessment and to making procurement decisions. If we are unsure of whom the enemy might be, or from what direction we might be attacked; if we are uncertain whether there might even be



Analysts work in the watch and warning centre of a cyber security defence lab at the Idaho National Laboratory, September 2011.

At a tactical level, therefore, problems may only escalate when operational doctrine embraces ‘the battlespace.’ Assisting the local commander with expertise from afar may neither be helpful nor effective. Efforts to relocate ‘fire’ decisions to some command centre a long distance away, where data can be analyzed and other legal or political dimensions of the threat considered, only add a level of complexity to any firefight that may well jeopardize the outcome.

Reuters photo RTR2SOOR by Jim Urquhart

an attack; if we do not know what form any attack might take; specific threat assessment also becomes impossible. Without such an assessment, it is equally impossible to define operational requirements in ways able to overcome the inevitable organizational and political pressures involved in the procurement process. Without a definable threat, and without a clear requirement for the means to counter that threat, procurement decisions are instead likely to be made *in the moment* according to the whim of the leaders (military, political, or economic), whose individual interests are thus given priority by default. The military may end up with the right tools, in the right place, at the right time – but dangerously more by *accident* than by *design*.

While all these criticisms undermine the validity of replacing ‘battlefield’ with ‘battlespace,’ the dilemma remains that a ‘strategic corporal’ actually may make choices in combat that have global consequences. In 21st Century warfare, poor decisions by one unit, one commander, even one soldier, might dramatically shift the balance of force in such a way as to undermine the intentions, efforts and sacrifices of many others. This is because war is no longer confined to the battlefield, nor are the efforts of those engaged in combat necessarily what determine the outcome of any conflict.

Therefore, I propose, as an alternative, the idea of ‘the battlesphere.’ It provides us with the conceptual and analytical tools required for the development of doctrine and tactics appropriate to the changing conditions of 21st Century warfare.

The Battlesphere

To begin with a definition, *the battlesphere is the dynamic operational sphere surrounding a particular conflict which is bounded in all directions by its causal effects.* Included within that sphere are the dynamic relationships of the geographical, logistical, tactical, strategic, and human elements involved. The battlesphere is not the only sphere that needs to be defined, however. Two other spheres – the *ecosphere* and the *ethnosphere* – are interrelated with the battlesphere in the manner of a dynamically intersecting three-dimensional Venn diagram.

Thus, what I am proposing is a theoretical model with three main constituent elements. The primary advantage of using the sphere is the external boundary that it entails; there is a definable limit to our consideration, unlike the indistinct limits of the battlespace. A dynamic sphere allows those boundaries to grow and shrink, depending upon what goes on

within that sphere to make this happen. Spheres are also not linear or hierarchical; every point on its surface is equidistant from the centre, regardless of direction. It is a graphic reminder of the need to consider all dimensions of our actions, not the ones that present themselves to us most strongly at the time because of our own biases or interests. Understanding 21st Century warfare in terms of spheres is one way to counter tendencies to oversimplify our options and their effects because it requires us to consider whole systems, not merely linear, causal event chains.



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The wealth of literature emerging on non-combat dimensions of warfare in the 21st Century continues to increase. Ranging from theory pieces with examples drawn from specific conflicts, to analysis of specific conflicts that lead to observations on the theory of war,⁵ such wealth demonstrates the problem more than it proposes any unifying, broad-spectrum response. A conceptual framework is missing. If there are lessons to be learned from the experience of Iraq and Afghanistan, they need to include the development and application of doctrine to create such a conceptual framework. ‘Battlespace’ might depict more dimensions of 21st Century warfare than ‘battlefield,’ but it creates as many new problems as it solves.

Within each of the three spheres, there exists a multiplicity of sub-systems and smaller spheres. Depending upon our interests and abilities, we are able to focus on any of them, either in isolation or in combination, provided there is an awareness of the overall sphere within which they fit. Spheres also may be understood as varying in intensity the further from the central point or event one moves – like concentric, spherical waves moving out from the source equally in all directions. Such a model also incorporates the passage of time, with the initiating event being what creates the sphere of ensuing effects.

The Echosphere

It will help to begin with the most material of the spheres, the *ecosphere*. It was the term coined to capture *the dynamic relational sphere within which all organic and inorganic systems are to be found on earth*. The ecosphere thus includes the *geosphere* (earth beneath our feet), the *hydrosphere* (the water all around us), the *atmosphere* (the envelope of air we breathe) and the *biosphere* (the so-called web of life comprised of all living things). While each sphere has distinct characteristics, it is obvious that none exists without the others if we are considering the Earth itself as a whole. Within the hydrosphere, for example, it is possible to identify and analyze all the hydrological processes involved in a local system. Given that hydrology is affected by geology, the interactions between hydrosphere and geosphere can also be mapped in terms of the intensity of their relation – the more the overlap and for longer, the greater the intensity. Given that hydrosphere and atmosphere also intersect, what happens closest to the surface of the split between air and water will have the greatest intensity in terms of their relation – what happens deep in the ocean or high in the atmosphere may have some bearing on the interface, but it will not be as significant as a wind blowing over a lake.

It is therefore not difficult to conceptualize the intersection of the battlesphere and the ecosphere. Warfare of whatever sort takes place in a physical context. Everything from its munitions or means is a product of the ecosphere. The fighting takes place in the ecosphere, and everything from the effects on animals and vegetation, to the rearrangement or destruction of the physical surroundings, to the contamination of air or water, are easily seen as interactions with the ecosphere. So also are the people affected by or involved in the fighting. Afterwards, the effects may linger in the form of contamination – dioxins in Vietnamese water systems, unexploded munitions in the fields of France, radioactive soil from nuclear test sites, anthrax in the soil of a Scottish island, anti-personnel mines scattered across the fields of Afghanistan, or bones in the fields of Stalingrad – all these are the aftermath of war.

The preparations for war are equally evidence of this interaction between battlesphere and ecosphere, for things made into the materiel of war are not made into something else. Societies that opt for war spend their resources on it, rather than on other things, and the ecosphere is affected as a result. Seeing the battlesphere expanding out from its starting point, we are able to visualize and conceptualize the extent to which it engages the ecosphere through its physical overlap. Distance from the centre point

is a measure of declining intensity, either in terms of geography or chronology (the passage of time). The most extreme and extensive forms of warfare involve a larger interaction with the ecosphere. For example, global thermo-nuclear war would obviously be represented as a total over-lapping of ecosphere and battlesphere.

At the other end of the scale, the same action can have larger or smaller consequences in terms of the size of the battlesphere it creates. Killing a soldier with a knife might be an action with immediate and small-scale effects; killing a sentry quietly to allow for an invasion to take place that precipitates a war – or ends one – is a sphere of effects much larger than the first, even if the initial action is identical. The ‘old saw’ about how a kingdom was lost for the want of a horse-shoe nail is an example of how larger scale systems effects can follow from causes that might otherwise be seen as insignificant.

In every situation, we need to consider the system effects of the alternatives presented. Such consequentialist decision-making is obviously not a new idea. What is needed, however, is a conceptual model that allows for the three-dimensional mapping of potential outcomes, so that effects-based analysis comes closer to accurately representing the dynamic systems involved. We cannot afford the history of 21st Century warfare to become the same narrative of unintended consequences we find characteristic of earlier times. Considering the dynamic range of possible interactions included within the concept of the battlesphere enables a more coherent and consistent appreciation of the options involved. Thus, in terms of choices among alternatives, whether a battle takes place, using what tools, involving what personnel, all affects the size of the battlesphere and the intensity of its overlapping interaction with the ecosphere. Collateral damage, as well as intentional damage, needs to be assessed, not only in terms of human casualties, but also in terms of its physical and environmental consequences, both short-and-long-term.



A Royal Marine with the Unmanned Vehicle Robot *Testudo*, at the launch of the Defence Technology Plan in London, February 2009.

Reuters photo RTXC3RH by Luke MacGregor

For example, the tactical objective may be to stop an armored vehicle. The choice could be between an attack helicopter armed with depleted uranium ammunition; a precision guided munition that would also damage the roadway; some means of disabling the electrical system that renders the vehicle into an inert lump of metal; or sugar in the gas tank. The sphere of effects of each action is of a different size, even though the objective remains the same and is accomplished by all three possible tactics. Bounding the effects with a sphere that progresses chronologically, we could see the effects at D+10 minutes, D+10 hours, and D+10 years. We could also create a sphere relating the relative cost of the initiative, or its stealth, or its long-term consequences for the attitudes of the locals toward our intervention. In any of these instances, we can choose the parameters or boundaries of the effects, ascertain them, and then decide among alternatives which (for strategic as well as tactical reasons) have the most preferable outcome.

From the perspective of sustainability, war-planners and warriors alike need to consider, not only the immediate environmental impact of their choices, but also the long-term ecospherical implications. There is little point to ‘winning’ a conflict at a cost that is unacceptable in terms of its effects on the ecosphere. Ecospherical costs should be part of any calculation as to the means of achieving an objective. In 21st Century warfare, Pyrrhic victories should be avoided in ecospherical as well as in human terms.

In the days when the mission was to take and control territory, there was little point to destroying it first. The neutron bomb remains (theoretically) the ultimate capitalist weapon, presumed to be able to kill the people and leave their coffee shops intact. If the objective is to control a population, however, the conflict must also not kill or injure so many that an eventual peace is impossible or render unlikely their return to a normal existence. Thus, the desire to deny a resource to the enemy may lead to its destruction if there is no other way, but (in the longer term) this is counter-productive. Certainly, the scorched earth approach denies resources to an approaching enemy, but in the days when such tactics involved burning crops in the field, the following year the fields

could still be replanted. The use of chemical or biological agents to accomplish the same thing today may have much longer-term consequences – and the effects of nuclear weapons may linger for thousands of years.

When the consequences are local, however catastrophic they might be, there is the chance for the ecosphere to recover as a whole from whatever took place. When the battlesphere expands to include a larger portion of the ecosphere, the resilience of the system is compromised, and recovery will take longer, or (potentially) might not happen at all.

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The effects of military activities around the world upon climate change, and especially, upon global warming, from the manufacture to the use in practice and operations of military equipment, are therefore significant. If, in a global context, we are reaching a critical point in terms of greenhouse gas emissions, a large-scale conflict that involved a spike in combustion (everything from the inevitable fires, to the increase in aircraft sorties) could tip the ecosystem into an unrecoverable position. Nor is scale necessarily the only consideration, as a smaller but more intense conflagration might have the same global consequences. If we recall the oil fields of Kuwait, set on fire by the forces of Saddam Hussein in 1991, imagine the ecosystem effects of a nuclear explosion in a similar place, or a serious conflict fought elsewhere in a major urban area. In each instance, the core elements and the expanding dimension of a discernible boundary – in terms of its relevance to practice or event – can be identified. The key element is doing something—the battlesphere only interacts/intersects with the ecosphere when something measurable is actually done.



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The ecosphere has been observed to contain a series of interrelating spheres. As the current multiplication of military acronyms indicates, so also does the battlesphere. The 'command and control' (C2) structures developed (and targeted) during the 1991 Gulf War have become 'command, control, communications, computers, intelligence, surveillance and reconnaissance' capabilities (C4ISR). This reflects the changing face of 21st Century war, just as A-10 Warthogs have been replaced by remote-controlled *Predator* drones, and government press releases are supplemented by Tweets from combat or Facebook from the front lines.

Subsumed within the battlesphere, therefore, are the technological, doctrinal, cultural and social spheres relating to each of the antagonists. If we consider these elements as incapable of existing without the others and interrelating with each other in an ongoing and dynamic fashion, such an analytical approach gives us a better idea of the elements that are contained within this particular system. Unlike the indefinite concept of the battlespace, however, the battlesphere provides a boundary to the consideration of how these elements are interrelated (chronological or geographical) and with what intensity.

In a 21st century conflict, one side might use weapons systems requiring enhanced, high-technology munitions, with all the expensive design, manufacturing, delivery and deployment systems that are involved. The other side might use local, low-technology, renewable and simple weapons easily found at hand – *Predators* and thermal imaging versus rocks and birdcalls. How those systems are used and to what end creates other systems, each with their own means of development and delivery. Yet, the two cultures themselves – one focused upon minimizing risk and casualties, while the other one focused on glorifying risks and heroic death – create other opportunities for articulating the subsystems of the battlesphere in very different ways. We need to find a way to accommodate these elements as well.

By now, the additional dimension of the problem in terms of both ecosphere and battlesphere should be apparent: how do we understand the ideas, beliefs, even the feelings that may not directly and immediately cause us to do things, but which develop the background, context, and motivations for what we choose to do? How do we incorporate into our analysis the way in which events are interpreted and given meaning by the individuals and the communities which are affected?

We need a set of metrics that allows for more than merely the mapping of physical effects. We also need an analytical tool that does this in a way that avoids the vague and ominous observations too often associated with the battlespace.

While wary of the Ptolemaic trap of adding more epicycles until the model of interrelating spheres finally matches observations, there is a third such sphere to include – the *ethnosphere*.



A US Air Force *Predator* drone.

Reuters photo RTR2RFX/USAF handout

The Ethnosphere

The ethnosphere is what the Canadian anthropologist, ethno botanist, explorer, and photographer Wade Davis called web of cultural and social interactions that make us 'human.' It is "... the sum total of all thoughts and intuitions, myths and beliefs, ideas and inspirations brought into being by the human imagination since the dawn of consciousness."⁶ Extend that definition, in terms of the sociology of knowledge that would regard this consciousness as impossible without being embodied in some form of communication or practice, and the ethnosphere becomes *the totality of human motivations toward personal, social and cultural activities and the practical expression of what they mean.*

If the ecosphere defines where we live and the battlesphere what happens when we fight, the ethnosphere defines not only who we are, but how we answer that question, especially in our interactions with each other and with the planet. From the start, I should observe that the ethnosphere does not necessarily exist, any more than does the battlesphere or the ecosphere. The issue is not whether any of these three exist, but whether – individually as concepts, and collectively as a framework – they make sense of what we know and are therefore useful for guiding wise decisions. It is their *operational value*, not their *existential character*, which should concern us.

Apply method to the analysis of the planet on which we live, and the web of interrelations is helpfully labeled the ecosphere. Apply method to the analysis of all the material elements of 21st Century warfare, and these may just as helpfully be labeled the battlesphere. But within both of these spheres, there are non-material elements that have real and evident influence upon what humans choose to do.

Analyze what is meant by the ecosphere and you very quickly come up against what people understand about 'nature' and the human relation to the planet. When sound reasoning about changing behavior to combat climate change encounters religious perspectives that say God gave us the planet to do with as we please, reason too often beats a hasty retreat. Forced to choose between preserving the last animal of an endangered species and providing food for a human who can 'pay the tab,' with little hesitation, you will find that dinner is served.

Analyze what is meant by the battlesphere, and you will come up against ideas about race, ethnicity, religion, history, prejudice, fear, security, honour, vengeance, and a host of other feelings that lie behind why violence takes place. When sound reasoning about a peaceful settlement comes up against ignorance and fear, peace is a 'tough sell.' Forced to choose between co-existing with an old enemy or taking a chance on annihilation, you will find people with little hesitation 'rolling the dice' with their lives. If barriers to sustainability are social and cultural rather than scientific or technological, as I would argue is the case, then the struggle for a sustainable future takes place in the *ethnosphere*, not the *ecosphere*. If the barriers to world peace are at least as much social and cultural as they are political or economic, 'winning hearts and minds' is therefore also a struggle that takes place primarily in the *ethnosphere*, not in the *battlesphere*.

It is, first of all, what we think and believe that shapes what tools we have to hand in the ethnosphere, tools that are analytical, evaluative, predictive, or explanatory, and that incorporate whatever we understand about ourselves and the universe in which we live. Acting upon what we think or believe brings the ethnosphere into contact with both the ecosphere and the battlesphere. How strongly we believe or think something increases the overlap between the ethnosphere and the other two spheres, because the intensity of our feeling leads to the motivation and persistence with which we act on it or fight because of it.⁷



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“By itself, any idea we have exists first in our personal sphere within the larger ethnosphere...”

By itself, any idea we have exists first in our personal sphere within the larger ethnosphere; it is only when we talk about it to others, or act upon that idea by ourselves or in a group, that it has currency in the world and creates its own sphere of effects. The boundary of those effects may be identified and measured just as surely as anything more material that is part of either the ecosphere or the battlesphere. Yet, it is only when our own ideas intersect with those of other people -- what happens when we communicate them to others, what happens when we try to enact them in the world around us -- that there is also any kind of feedback that enables us to judge their ultimate validity.

If the ecosphere is comprised of a variety of spheres within its bounds, so also the ethnosphere is comprised of those smaller spheres that constitute all of us thinking, as individuals, and as groups. A group made up of people who share an equivalent set of values, words, and ideas will overlap each other's ethnosphere almost totally. This creates a more intense relation between people, but in the absence of external validation from other people, or confirmation of the validity of ideas from interaction with the ecosphere, the relation may be entirely misguided, and the ideas incorrect. They still persist, however, in the ethnosphere. The ethnosphere, as an operational concept, explains the persistence of ideas that should otherwise be eliminated from our life together because of their absurdity in real terms. All evidence to the contrary, there were still cavalry enthusiasts after the Great War of 1914-1918, just as there are still people today who plan for a 'winnable' nuclear war. All evidence to the contrary, there are still intelligent and responsible people who believe climate change is not taking place, and there will continue to be water and food for a global population rapidly approaching any reasonable measure of global limits.



Charge of Flowerdew's Squadron, Lord Strathcona's Horse (Royal Canadians), Moreuil Wood, 30 March 1918, by Sir Alfred Munnings.

Century warfare, but it does not enable us to find a way of avoiding or resolving conflicts. The battlesphere results from our inability to resolve the issues *generated by and located within* the ethnosphere.

Consider two groups, each of which requires a resource (such as water) to survive. Who they are, as a group, involves an overlap between their identity and the ecosphere. The spheres generated by the two groups are overlapped at the source of the water both of them require. They might negotiate an answer, because the ethnospheres of each group values peace, co-existence, and generosity. Or, as too often is the case, if violence and power are valued, or fear is the dominant emotion, one side initiates a fight, and a battlesphere is generated as a result, the results of which are likely catastrophic for all.

Intersect the personal ethnospheres of two people with different ideas, and the result may either be understanding, as the areas of overlap are identified, or conflict, as each tries to persuade the other to abandon the ideas initially held. Similarly, the practical validity of ideas is tested by intersection with the ecosphere, not by refusing to use or to share them, as knowledge is measured against experience. It is the ideas and beliefs that are not intersected which create or perpetuate the conditions for a conflict. They persist, not because they have been validated, but only because they have not been challenged, either by intersection with the ideas of others, or by intersection with the practical world of the ecosphere. Existing only in the mind – or in the *shared* mind of those who agree not to allow such an intersection either with competing ideas, or with the physical world – such ideas may be both heritage and hazard.

The ethnosphere may be a well of past accumulated wisdom, whose relevance appears in the history of a community only occasionally, and is drawn upon as needed. But such dissociation from the practical requirements of daily life is also a hazard, because humans need to live ‘in the flesh,’ as well as ‘in the mind,’ and therefore, the ethnosphere inevitably intersects with the ecosphere as we act in some way upon what we believe.

Thus, while the battlesphere is descriptive of conflicting relations, it does not generate them. It is the result of the inability to resolve differences, not the reason for them. It allows us to understand the consequences of our actions, to see the range of effects among the choices involved in 21st

Sustainability in the 21st Century requires us to find other ways to resolve the overlapping of interests and needs, rather than through fighting. It pushes us to look for other means of avoiding conflict that resolve differences or emerging conflicts, other than by going to war when all sides, in the end, will lose. It also means that the most dangerous antagonists are those with literally no future to lose – considering the esteemed French political scientist Dominic Moïsi’s analysis of the geography of emotion, if people have no hope and no future, and they think ‘the enemy’ has both, then this is a recipe for disaster for everyone.⁸

“Total War is the overlap of ecosphere and battlesphere – a world – wide conflict.”

Thus, I suggest the three-sphere dynamic is more than a better way to understand and manage the inevitable conflicts of the 21st Century. It points to where our work most needs to be done, in understanding and managing the ethnosphere toward a sustainable future for everyone, not in some competition to be the last culture, the last group, or the last individual still standing at the end of it all.

Total war is the overlap of ecosphere and battlesphere – a world-wide conflict. Yet, in an operational context, it will only involve an intersection with the ethnosphere in terms of those values and beliefs that have created or will perpetuate the war. If one is fighting a total war, values apart from doing whatever it takes to win become irrelevant. But, if the ethnosphere and the ecosphere were overlapped, instead – if values and beliefs were shared across the planet in the absence of competition and conflict – this would also constitute the conditions for total peace. It would also engage all our resources, intellectual and spiritual, in *relating to* and *grappling with* the problems



Future soldier in advanced armour.

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the ecosphere presents for a sustainable future.

There will always be difference, but if that is seen as variety and diversity, and not as threat, then shared values of working toward a sustainable future for everyone would minimize the resulting conflict -- and any battlesphere would be minimal in size, in response.

Conclusion

The ecosphere has definite, discernible parameters, and it enables us to understand what sustainability requires for life on earth. The battlesphere, in terms of identifying the parameters of conflict and its effects, enables us to identify and understand the consequences of 21st Century warfare in all its dimensions – physical, social, cultural, environmental and psychological. Intersect these two spheres, and we can measure the effects of conflict upon whether there will be a sustainable future for anyone, winner or loser. Yet, ultimately, the problems we face and whatever solutions there might be are to be found in the ethnosphere. After all, we are human. Understanding what that means is at the heart of whatever future we choose to create, just as it has always been.



NOTES

- For example, Thomas X. Hammes, *The Sling and the Stone: On War in the 21st Century* (St. Paul, MN: Zenith Press, 2006), and Rupert Smith, *The Utility of Force: The Art of War in the Modern World* (2005; rpt. New York: Vintage, 2008). See also Tim Blackmore, *War X* (2005; Toronto: University of Toronto Press, 2006).
- There is no specific origin to the term, but for an early discussion, see Stuart E. Johnson and Martin C. Libicki, (eds.), *Dominant Battlespace Knowledge* (1996; rpt. Honolulu: University Press of the Pacific, 2003), especially Paul Bracken, "The Significance of DBK," p. 64.
- Peter H. Denton, (ed.), *Believers in the Battlespace: Religion, Ideology and War* (Kingston, ON: CDA Press, 2011). The concept of the battlesphere was first discussed in Chapter 5.2, "Peace for our Time," pp. 216-219. See also "Believers in the Battlespace." in the *Canadian Military Journal*, Vol. 9, No. 1 (Fall 2008), pp. 100-101.
- For commentary on the implications of the 'battlespace,' see Bernd Horn's "Complexity Squared: Operating in the Future Battlespace," in the *Canadian Military Journal*, Vol. 4, No. 3 (Autumn 2003), pp. 7-16; and Ian Hope's guest editorial in the *Canadian Army Journal*, Vol. 10 No. 1 (Spring 2007), pp. 5-9.
- There are many examples out of the experiences of Iraq and (for Canada) Afghanistan. See Rory Stewart and Gerald Knaus, *Can Intervention Work?* (New York: Norton, 2011). An emerging genre of 'futuretech' and war, such as P.W. Singer, *Wired for War: the Robotic Revolution and Conflict in the 21st Century* (Penguin, 2009), needs to be read with caution – see my "The End of Asymmetry: Force Disparity and the Aims of War," in the *Canadian Military Journal*, Vol. 7, No. 2 (Summer 2006), pp. 23-28, reprinted in Emily Spencer (ed.), *The Difficult War: Perspectives on Insurgency and Special Operations Forces* (Toronto/Kingston: Dundurn/CDA Press, 2009), pp. 43-52.
- Wade Davis, *The Wayfinders: Why Ancient Wisdom Matters in the Modern World* (Toronto: Anansi, 2009), p. 2.
- More and more authors are exploring what I consider the intersection between battlesphere and ethnosphere – the attitudes, values, and beliefs that lie behind the conflict itself. Chris Hedges, *War is a Force that Gives Us Meaning* (New York: Anchor, 2003); Samantha Nutt, *Damned Nations: Greed, Guns, Armies and Aid* (Toronto: McClelland and Stewart, 2011); Noah Richler, *What We Talk About When We Talk About War* (Fredericton, NB: Goose Lane, 2012); John Horgan, *The End of War* (San Francisco: McSweeney's Books, 2012); and Joshua S. Goldstein, *Winning the War on War: the Decline of Armed Conflict Worldwide* (New York: Dutton, 2011). For an intersection of the battlesphere, the ethnosphere and the ecosphere, see Christian Parenti, *Tropic of Chaos: Climate Change and the New Geography of Violence* (New York: Nations Books, 2011).
- Dominique Moisi, *The Geopolitics of Emotion: How Cultures of Fear, Humiliation and Hope Are Reshaping the World* (New York: Doubleday, 2009).