REVIEW ARTICLE:

THE FUTURE OF WARFIGHTING

Stephen Biddle, *Military Power: Explaining Victory and Defeat in Modern Battle* (Princeton and Oxford: Princeton University Press, 2004)

Anne Hills, *Future War in Cities: Rethinking a Liberal Dilemma* (London: Frank Cass, 2004)

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It has become commonplace among analysts of all persuasions to insist that in recent years warfare has changed radically. Of course change in warfare is nothing new – like any human activity it is subject to the powerful influences of societal and technological change. But this is different. The shifts that these analysts point to are, they insist, *radical*. That is to say, they contend that these changes represent a fundamental altering of the *nature* of warfare.

Depending on their particular disciplinary perspectives, the actual changes pointed to by these scholars differ. For some it is the genocidal practice and ethnic politics that are increasingly at the centre of today's armed conflicts that are the most important distinctives of these 'new wars'. For others it is the advent of information warfare and the rise of the computer-geek 'info-warrior' that represents the vanguard of the revolution. Others still point to the new-found focus on human rights in warfare, and with it the rise of the applicability of humanitarian grounds for military intervention as well as the consequent decline of the sanctity of the sovereign state. Yet others point to the growing involvement of non-state actors in warfare, and argue that this portends a future in which states will no longer dominate armed conflicts. And finally (though not exhaustively) there are the proponents of the so-called Revolution in Military Affairs (RMA) who insist that recent technological advances (such as the development of precision-guided munitions,

advanced C4ISR[1] capabilities, network-centric battlefield systems, and so on) have irrevocably altered the nature of warfighting itself.

I do not here wish to attempt to assess whether all of these accounts of revolutionary change are correct. Certainly it is clear that many of these changes, as well as others, are of crucial importance in understanding warfare today. For example, the fact that about eighty percent of casualties in armed conflict are today civilians (as opposed to around ten to fifteen percent at the beginning of the twentieth century)[2], and the ever-decreasing likelihood of conventional conflicts between major national armies, are examples of important changes that should (though, sadly, all too often do not) play an important role in defence planning. But whether such changes to the broad shape of armed conflict are indeed *revolutionary* is not the focus of this paper. Instead I wish here to concentrate on the question of whether or not the world has seen a revolution in the nature of warfighting itself.

Certainly it is assumed by many of the pundits of the revolution that these broad changes to the nature of contemporary armed conflict do indeed bring with them a radical revision of the heartland of war, warfighting. For if (for example) the central goal of armed forces is no longer primarily to 'kill people and break things', then does this not radically change the nature of victory in battle, and therefore the nature of warfighting? More directly focused on warfighting are the supporters of the idea that we are seeing a revolution in military affairs in which "modern conventional weapons [have] become so accurate and so deadly that human beings [will] simply not be able to survive in appreciable numbers on traditional battlefields".[3]

In striking contrast to these prophets of change stand the authors of the two books that are the focus of this paper, Stephen Biddle and Anne Hills. Though the books focus on different topics, they are united by a common assertion that none of the broad changes in the nature of warfare in general that we have seen in recent years alter the fundamental nature of warfighting itself. In what follows I shall begin by setting out Biddle's argument, then turn to a consideration of Hills' work, and finally offer an analysis of what these authors have achieved and in what direction their work points.

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[1] Command, control, communications, computers, intelligence, surveillance and reconnaissance.

[2] See Mary Kaldor, 1999. *New and Old Wars:Organised Violence in a Global Era* (Cambridge: Polity Press), p. 100.

[3] Bevin Alexander, 2002. *How Wars are Won: The 13 Rules of War from Ancient Greece to the War on Terror* (New York: Crown Publishers), p. 3.

Mid- to high-level continental conflict – Biddle

Stephen Biddle, Associate Professor of National Security Studies at the U.S. Army War College Strategic Studies Institute, sets out in his book to answer the questions: "what causes victory and defeat in battle?; and "why do the winners win and the losers lose?" (Biddle 2004, 1). These are obviously important questions, so in order to make his investigation manageable, Biddle takes as his basic unit of analysis the operation – "a series of interconnected battles resulting from a single prior plan" (Biddle 2004, 6) – and focuses on continental conflicts, those that take place on or over major land masses.[4] He also concentrates on warfare that falls in the mid- to high-level range, thereby excluding low-intensity conflicts on the one hand and global-scale conflicts involving weapons of mass destruction on the other. While this narrowing of focus does indeed make Biddle's investigation manageable, the selected area of investigation is not arbitrary. To the contrary, Biddle argues convincingly that it is military success that falls within this range that is the best indicator of military power in general.

The parameters of his investigation thus fixed, Biddle sets out to discover just what factors account for military capability, which he defines as follows: "offensive military capability [is] *the capacity to destroy the largest possible defensive force over the largest possible territory for the smallest attacker casualties in the least time*; defensive military capability is conversely the ability to preserve the largest possible defensive force over the largest possible territory with the greatest attacker casualties for the longest time" (Biddle 2004, 6). Historically, the main approaches to measuring military capability have been those of numerical preponderance, technology (the measure favoured by RMA believers), and (to a lesser degree) force employment. Biddle, however, believes that these capability measures, at least as standardly applied, are of little value. Force employment, Biddle argues, is usually only employed (and usually only by historians) as a subjective measure of military capability, and offers little by way of predictive power. Numerical preponderance and technology as predictors of military success show little more utility. Indeed, Biddle contends that they are in fact "no better than coin flips at predicting real military outcomes" (Biddle 2004, 2). This is not hyperbole on Biddle's part. In the second chapter of the book he subjects these two central traditional measures of military capability to statistical testing by assessing their predictive power when measured against the data collected in the University of Michigan's Correlates of War (COW) dataset, which provides statistical data relating to sixteen actual wars that took place between 1900 and 1992. He concludes, for both numerical preponderance and technology, that applying these measures to the COW data produce predictions of victory that are *in fact* little better than a coin flip, and indeed sometimes perform even worse. As if that was not bad enough, Biddle also points out important theoretical concerns regarding the numerical

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[4] Conflicts that are fought primarily in the air or on the sea are therefore excluded from his analysis.

preponderance and technology approaches: "the two main views imply mutually inconsistent policies and conflicting understandings of international politics. Defence planners cannot maximise technological sophistication and numerical preponderance simultaneously" (Biddle 2004, 19).

Biddle's explanation for the shortcomings of the generally accepted approaches to analysing military effectiveness is, firstly, that the approaches used are either rigorous but too narrow, or else broad in their scope but insufficiently rigorous. To address this, Biddle's own approach is to use what he calls 'methodological triangulation', that is, employing a number of different analytical tools in an attempt to compensate for the shortcomings of each on its own. In particular, writes Biddle, "I combine close review of recent historiography with formal theory, case method, statistical analysis, and simulation experimentation" (Biddle 2004, 9). The second major shortcoming that Biddle believes accounts for the poor results of employing existing models is that there is an explanatory variable missing form the analysis. In Biddle's view, the missing factor is the proper application of the idea of force employment, or, more specifically, what Biddle calls the 'modern system' of force employment. This system, he contends, has been employed since at least 1918, but its importance has nonetheless slipped the attention of most military analysts. The result is an enormous body of literature in strategic studies and international relations has been built on weak foundations. "The modern system is a tightly interrelated complex of cover, concealment, dispersion, suppression, small-unit independent manoeuvre, and combined arms at the tactical level, and depth, reserves, and differential concentration at the operational level of war" (Biddle 2004, 3). Properly understood, this factor is the deciding one in predicting the outcome of military operations. Regarding numerical preponderance, Biddle contends that "Superior numbers can be decisive or almost irrelevant depending on the two sides' force employment. This in turn means that states' relative economic, demographic or industrial strength are poor indicators of real military power: gross resource advantages matter only if they can be exploited via modern-system force employment, and many states cannot do so" (Biddle 2004, 3). Likewise, Biddle argues, technology's value is relative to modern system force employment: "Taken together these techniques sharply reduce vulnerability to even twenty-first century weapons and sensors. Where fully implemented, the modern system damps the effects of technological change and insulates its users from the full lethality of their opponents' weapons" (Biddle 2004, 2 – 3).

Biddle dedicates the third chapter of his book to unpacking the key features of the modern system, and adds as an appendix a formal qualitative theory providing a systematic model of capability, which he derives from his discussion of the modern system. Biddle argues that the modern system is a "stable and essentially transnational body of ideas on the methods needed to operate effectively in the face of radically lethal modern weapons" (Biddle 2004, 28), which, though difficult to implement, remains the most important indicator of success on the modern battlefield. What proponents of the RMA have not realised is that the true revolution

took place in the spring of 1918 when German forces deployed the modern system in offence at the Second Battle of the Somme, the Battle of Lys River, on the Chemin des Dames, in the Allied counteroffensives at the Second Battle of the Marne, Amiens, and in the Hundred Days offensives that effectively ended the First World War. Biddle argues in detail, in chapter four, that these same techniques remain decisive today because -

> "The modern system works by exploiting properties of military technology that have changed little since 1918 and are changing only slowly today. It thus damps the effect of technological change: modern-system militaries are far less exposed to the effects of increasing lethality, speed, and sensory acuity than are non-modern-system forces. This in turn means that the modern system has actually grown more important over time: technological change is increasing the vulnerability of non-modern system forces much faster than modern-system ones, yielding an ever-growing gap in real military capability between the two" (Biddle 2004, 52).

Thus, while important, technology is not decisive in the way that advocates of the RMA think it is, and it certainly does not negate 'traditional' approaches to warfare in the way they believe – indeed, the very opposite is true. Likewise modern system force employment is the decisive factor in making preponderance valuable: "Modern weapons are so lethal that exposed, non-modern-system forces become cannon fodder. For numbers to tell requires modern-system force employment" (Biddle 2004, 52).

With laudable thoroughness, Biddle submits his modern system hypothesis to rigorous testing in chapters five through seven by assessing its predictive power against the evidence of three carefully chosen case studies, namely Operation Michael (The Second Battle of the Somme), Operation Goodwood (the failed Allied attempt to break out of the Normandy beachhead in July 1944), and Operation Desert Storm. The first two cases are chosen according to Harry Eckstein's method of critical-case analysis – "by picking cases with extreme values on the key independent variables, one creates conditions where theories should be at their strongest (or weakest), making it unusually illuminating if a theory fails to perform as expected" (Biddle 2004, 78). In Ecksteinian terms, both the successful German offensive in Operation Michael and the failed Allied breakout in Operation Goodwood qualify as 'most-likely' cases for orthodox theories of capability and 'least-likely' cases for Biddle's modern system approach.[5] Operation Desert Storm,

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[5] "A *most-likely* case is one where extreme values put a theory on its strongest possible ground – if it is going to be right anywhere it should be right here. For such cases, a valid theory should fail very rarely; if we nevertheless observer failure, this surprising result warrants a greater loss of confidence in the theory than would a single disconfirmatory observation under less ideal conditions. Conversely, a *least-likely* case is one where extreme values make the theory unusually unlikely to succeed – even if the theory were generally valid, under such

on the other hand, is not an Ecksteinian critical case, as the Coalition attackers were obviously superior in terms of all of the factors in question – numerical preponderance, technology and force employment – and so all of the theories predict the same result. The value of this case, however, is that it offers a way of comparing each theory's prediction of how and why the Coalition forces would be *expected* to break through the Iraqi defences, against what actually happened. In particular, Biddle uses this case to test how each theory fares at explaining Operation Desert Storm's most remarkable feature, the unprecedentedly low casualty rate suffered by the Coalition forces[6].

In each of the test-case chapters, Biddle begins with an explanation of why the particular operation has been chosen as a test case, and then, after giving an overview of the operation, goes on to rigorously test the predictions of each of the three competing theories against the actual outcome of the operation. In each case Biddle's theory significantly outperforms its traditional rivals, despite the fact that two out of the three cases are chosen as 'most-likely' cases for the traditional theories, and 'least-likely' cases for the modern system approach.

Not content with this small-*n* test case analysis, however, Biddle then moves on, in chapter eight, to a series of large-*n* statistical analyses, in which the data contradict orthodox preponderance and technology theories for twenty-five of the twenty-seven testable hypotheses: only two of twenty-seven hypotheses were supported by the statistical analyses. By contrast, the new theory was corroborated for eighteen of twenty-four hypotheses: in three of the twenty-four hypotheses the results were ambiguous or weakly contradictory. In only three of the twenty-four hypotheses were the results unambiguously inconsistent with the new theory's predictions (Biddle 2004, 191).

The final test Biddle subjects his theory to is that of computer simulation experimentation. Using "the most rigorously validated combat simulation available in the defence analytic community" (Biddle 2004, 181), the Janus system developed by the University of California's Lawrence Livermore National Laboratory, Biddle tests his theory and its competitors using the data collected under the 73 Easting Project.[7] Specifically, Biddle uses the simulation to test the following counterfactuals:

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unfavourable conditions it might well fail anyway. For such cases, we would expect weak theories to be overwhelmed by confounding effects; if we nevertheless observe successful prediction, this surprise would warrant a greater gain of confidence than would a single confirmation under less extreme conditions" (Biddle 2004, 78 – 79).

[6] "In less than six weeks, 795 000 Coalition troops destroyed a defending Iraqi army of hundreds of thousands for the loss of only 240 attackers" (Biddle 2004, 133).

[7] "The 73 Easting Project was a collaborative study conducted jointly by the independent Institute for Defense Analyses (IDA), the Defense Advanced Research Projects Agency (DARPA), and the U.S. Army. Its purpose was to develop a database of unprecedented detail on the conduct of a single battle (the Battle of 73 Easting [Operation Desert Storm]), then to

1. What if the Iraqis had fully implemented the modern system?
2. What if the U.S. had not had such advanced technology?

The results of the simulation showed, firstly, that had the U.S. Army's 2nd Armored Cavalry Regiment been up against a modern-system defence, it would have suffered significantly more casualties than in fact it did, despite its clear technological advantage. Secondly, the simulation showed that, when confronted with advanced technology, partial modern-system implementation is insufficient. Finally, Biddle's experiment indicated that less sophisticated or less diverse offensive technology reduces the consequences of a defender's failure to implement the modern system. Each of these conclusions stress the increased importance of modern system force employment in the face of modern technological advances, and in general the results of the simulation were once again consistent with the new theory and inconsistent with the technological-superiority explanation preferred by proponents of the RMA.

Biddle concludes his book by considering the implications of his study for scholarship and for military policy. Regarding the former he points out that military capability plays a crucial explanatory role in international relations theory, whether it be of the realist or liberal variety thereof. But the measures of military capability used are, as he has argued, deeply flawed, with the result that "The enormous International Relations (IR) literature built on notions of military capability thus faces serious empirical and logical problems" (Biddle 2004, 193). How then can IR theory be amended to accommodate Biddle's findings? He suggests three main changes that must be made: "First, analyses must disaggregate 'capability' into separate dimensions of ability to control territory, ability to inflict casualties, and ability to control duration, and specify causal effects with respect to these dimensions directly rather than conflating them… Second, analyses must distinguish offensive from defensive capability… Third, empirical analyses must reflect force employment in their measures of capability" (Biddle 2004, 194 – 195).[8]

Regarding military policy, Biddle sees six main important implications. Firstly, and most importantly for our purposes, he argues that the RMA thesis must be rejected, and that this considerable implications for military policy. This is because "traditional approaches to warfare are in fact essential for survival on the emerging battlefield – *because the emerging battlefield is a further extension of the one for which traditional approaches were designed*" (Biddle 2004, 197). Thus, while there is obviously room for change in military policy as a result of

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use modern computer simulation technology to represent that data in a "virtual re-creation" of the minute-to-minute activities of each participating tank, armoured vehicle, truck, or infantry team. … The resulting dataset offers probably the most complete and reliable depiction of any combat action in history" (Biddle 2004, 182 – 183).

[8] Biddle also offers some suggestions regarding the implications of his theory for historians, which I have left out here in the interests of brevity.

technological change, that change ought not to be radical, and the continuity of future warfare with that of the past must be recognised. Regarding defence budget prioritisation, Biddle argues that his study shows that, *pace* the RMA advocates, spending on readiness ought not to be cut back to allow for greater spending on 'transformational' technology. Furthermore, the radical restructuring of the U.S. military advocated by RMA theorists ought to be resisted. Research, development and systems acquisition ought also to respond to Biddle's analysis: "In particular, it suggests that pilot programs to explore remote surveillance against targets in wooded and built-up areas merit higher priority and accelerated development relative to other ongoing surveillance initiatives. Similarly, new precision munitions effective against dispersed targets in such terrain also warrant greater relative attention" (Biddle 2005, 205). Campaign assessment processes, too, need to be adjusted so as not to overlook the key role played by force employment. And finally, Biddle argues, military doctrine ought not to undergo the radical changes advocated in the RMA literature, but instead such change should follow the normal process of 'incremental adaptation' to changing technology and circumstances.

Biddle closes his book by considering the broad implications of his study for the future study of warfare. Most centrally he contends that his study has revealed an unacceptable lack of rigorous theoretical analysis in the study of war, and that it is crucial that this situation be rectified. His closing challenge is indeed an important one: "In the absence of an institutional home for the study of warfare, it is all the more essential that analysts in existing disciplines recognise its importance and take up the business of investigating capability and its causes directly and rigorously. Few subjects are more important – or less studies by theoretical social scientists. With so much at stake, we surely must do better" (Biddle 2004, 208).

Urban operations – Hills

We now turn our attention to a book authored by Alice Hills, a lecturer at the UK Joint Services Commission and Staff College. Where Biddle's book focuses on the nature of warfighting within a certain range (mid- to high-level continental conflict), Hills' focus is on warfighting on a particular type of terrain, namely operations on urban terrain. A central thesis of Hills' work, however, is that it is not simply a matter of differing terrain that makes urban operations unique. For while it is true that fighting in urban areas offers unique physical challenges (such as the fact that "Cities represent a complex multidimensional blend of horizontal, vertical, interior and external forms, superimposed on natural relief" in which "Ground manoeuvre becomes multidimensional" (Hills 2004, 9)), this is only one of the issues that marks out urban operations as deserving special attention. Among the other relevant features of war in cities and other urban areas are:

- Cities carry particular political significance;
- Urban areas are heavily populated, multiplying the potential for 'collateral damage';

- Issues of humanitarian aid and development are tied in with urban conflict in a uniquely close and complex manner;
- Urban environments favour asymmetrical opponents;
- Standoff-range combat is technically and morally difficult, increasing the need for close or dismounted combat, which is invariably attritional and results in higher levels of casualties;
- Logistics becomes both more difficult and more important in urban conflict, particularly in the light of the increased humanitarian demands placed on liberal participants in said conflicts;
- Local social, cultural, economic and demographic conditions are significantly more important factors in urban conflict than in other types of operations.

Furthermore, we live in an increasingly urbanised world. Hills points out that "It has been estimated that in 2015 the world's population will be 7.2 billion; that is, 1.1 billion more than in 2000. Approximately 95 per cent of the increase will be in developing countries and almost all of it will occur in cities" (Hills 2004, 16). While is has been a common goal among Western and other liberal militaries to avoid fighting in urban environments as far as possible, Hills argues convincingly that it will become increasingly more difficult to do so as more adversaries recognise the asymmetric advantages cities offer them. "Baghdad, Beirut, Belfast, Dili, Freetown, Gaza City, Grozny, Kabul, Mogadishu, Monrovia, Pristina and Sarajevo – all suggest that it will be as difficult to avoid operations in cities in the future as it was in the past" (Hills 2004, 4).

Despite this, Hills' analysis shows that warfighting in urban areas has received relatively little focused attention. Indeed, she goes as far as to claim that "There are no reliable or coherent theories of urban operations" (Hills 2004, 36). After setting the scene for her overall analysis in the first chapter of her book, Hills sets out in chapter two to give an overview of current thinking about urban operations. Focusing primarily, though not exclusively on Western thought, Hills concludes that what doctrine there is focuses strongly on tactical issues relevant to fighting on urban terrain, and most of that is extrapolated from conventional manoeuverist doctrine. Very little doctrine exists that engages with the broader, and in Hills' view more pressing, strategic problems posed by urban operations. Part of the problem, Hills argues, is that doctrine is by its very nature reactive and formal. She is therefore pessimistic about the possibility of innovative doctrine emerging that will successfully address the critical problem of "balancing tolerable levels of casualties and collateral damage with military success" (Hills 2004, 57 – 58).

Not surprisingly one of the proposed solutions to the quandaries of urban combat is to turn to transformational technology. Assessing the potential advantages of new technology in addressing the nature of contemporary urban operations is the focus of Hills' third chapter. She considers the lure of technology and such innovations as precision targeted munitions delivered by close air support,

unmanned robotic weapons systems and netcentric warfare systems. While such innovations undoubtedly are of great assistance to the urban warrior, Hills concludes that "There is as yet not evidence that technology has or can cause a fundamental shift in the nature or conduct of urban operations" (Hills 2004, 84), and that, indeed, urban combat remains little changed from what took place in the 1940's in places like Stalingrad and Berlin.

The second part of Hills' book, entitled 'Wasteland', encompasses chapters four through six. This section addresses the destructiveness of urban operations by examining three ideal 'types' or 'levels' of urban operations. Chapter four focuses on policing conducted by military forces during low-level operations, and concentrates primarily on British counterterrorism experience in Northern Ireland and peacekeeping in the Balkans, while also considering relevant experience from interventions by various nations in places like Algiers, Mogadishu, and Kabul, to mention a few. Chapter five considers enforcement operations, as typically undertaken under the umbrella of the UN or some regional security organisation. The chapter stresses the unpredictability of such operations, and offers an interesting comparison between the U.S. experience in Mogadishu and the Australian approach in Baidoa, a town in south-central Somalia, which Hills describes as 'a UN success story'. In chapter six Hills goes up one further notch and focuses on fully-fledged warfighting in urban environments. The heart of the chapter is an account of the battles that have taken place in recent times in Grozny, and Hills gleans supporting evidence for her wide-ranging conclusions from recent experiences in Kabul and Iraq. Perhaps due to a lack of focus, or perhaps (more charitably) because of the nature of the material, it is difficult to summarise what Hills concludes from these chapters. In broad terms, however, she is clearly right in saying that "These three chapters emphasise the enduring characteristics of urban operations and reinforce the historical lessons, that training and experience are of greater significance than doctrine or technology" (Hills 2004, 29).

The final section of *Future War in Cities* is entitled 'Reconstruction', and focuses on emergent trends and issues that may have an impact on strategy relating to urban operations. The first chapter in the section, chapter seven ('The Evolution of War') is an investigation into the implications for urban operations of the recent emphasis among liberal nations on notions like human security and civil society. Several questions are addressed: "What is the military utility of the liberal notions associated with expanded definitions of security? Can they make the conduct of Western operations more efficient? Could such trends shape strategic guidance? What are their implications for future urban operations?" (Hills 2004, 174). Hills' conclusion here is that, while such issues undoubtedly do and will affect political decisions about security operations, "the notion of civil society is irrelevant during war, and unhelpful as an analytic tool … In other words, civil society has no operational value, but the concerns it represents have, for various reasons, become important and may yet shape strategic guidance" (Hills 2004, 191).

Chapter eight is concerned with the vexing issue of controlling non-combatants and minimising 'collateral damage' during urban conflict. The quandary is summed up well by Hills when she writes that "Urban war traditionally destroys cities, yet it seems likely that military control of a city during policing, enforcement and post-conflict scenarios is easier if electricity, water and sewerage systems work; if public-health concerns are lower; if logistics are easier; and if populations are generally more compliant" (Hills 2004, 199). The problem of controlling populations is that of identifying the right balance between 'hearts and minds' on the one hand, and 'search and destroy' on the other. Persuasion, as Hills points out, has limits, but deploying armed force against non-combatants is morally problematic, even where those non-combatants present a serious threat (whether directly or indirectly) to military forces. Compounding the problem is the historical point, as Hills observes, that "the attacking force in almost every modern urban battle has begun operations with a strict set of ROE [Rules of Engagement] designed to limit collateral damage, but all have invariably been eased in the course of operations because minimising friendly casualties always takes precedence over the desire to avoid civilian casualties and collateral damage" (Hills 2004, 209). Once again technology – and here non-lethal weaponry comes to the fore - does not provide a straightforward answer to this problem. In Hills' view, "NLWs appear to offer a middle ground as far as control is concerned, yet it seems unlikely that they will offer significant tactical or operational advantages in the near future, and their use will not necessarily make operations easier or less destructive; they may merely make the infliction of pain more compatible with liberal consciences" (Hills 2004, 213).

The sombre message of chapter nine of *Future War in Cities* is that urban operations are intractable. This is because urban warfare is inherently brutal, and presents a range of analytic, strategic, and moral challenges to which current thinking seems to offer no solution. How, for example, can liberal nations come to terms with the fact that the most effective weapons (such as flamethrowers or their contemporary equivalents, thermobaric munitions) and tactics (such as levelling buildings with artillery or bombs in order to neutralise snipers) for urban combat run contrary to central liberal moral commitments? How will liberal nations cope with the reality that urban operations seem inescapably to involve high casualty levels?

Hills concludes her book by pulling together her central contentions in a chapter entitled 'The Logic of Urban Operations'. Her final thoughts are worth quoting at length:

> "Ultimately, urban operations deserve attention because they are the most complex of all military operations and because they engage with key emergent issues and trends. Urban operations represent a hard security challenge while offering a powerful conceptual means for generating new insights into military operations in an urbanising world. They are a reminder that, when searching for the global roles and meaningful

purposes that 'new war' articulates, we run the risk of paying insufficient attention to the unchanging nature of military force. Integrating the various aspects of urban operations is therefore important. For just as the Cold War placed security studies at the centre of the intellectual and political challenges confronting the West, so urbanisation and demographic change may mean that urban operations represent a critical issue in the twenty-first century. The West's ability to address these challenges effectively will depend to a large extent on the skill with which it understands the phenomenon of military operations within the broader context of security" (Hills 2004, 260).

Implications

What is clear from both Biddle and Hills is that, for all the talk of radical transformation in contemporary warfare, future operations are far more likely to reflect past lessons learned than anything revolutionary. In this final section of this paper I wish to consider the implications of the analyses put forward by Biddle and Hills for the South African context.

Biddle's analysis seems to me to be exactly right, and is a laudably thorough and well-researched piece of work. Its implications for South Africa are manifest, and relatively clear in their scope. Firstly it is quite obviously crucial that policy makers and defence professionals be aware of Biddle's findings, for they have evident impact on such issues as defence spending, training and the like. In particular those in positions to decide on the future of our armed forces (particularly but not exclusively the Army) must be conscious of the importance of equipping and training our military for modern system combat. The trade-offs of such a focus are important – we cannot, for example, put excessive store on new technology (such as, for example, the recently purchased Grippen multi-role combat aircraft) while neglecting such fundamentals as combined-arms training, communications and battlefield logistics. Furthermore, new hardware must be consciously assessed in the light of its utility for enabling modern system forces. Biddle's analysis also has implications for how we view the personnel complement of the South African National Defence Force (SANDF), for it is clear from what Biddle has shown that a smaller force capable of properly making use of the modern system is infinitely preferable to a large force that cannot do so. Indeed, in the light of Biddle's sobering point that modern weapons are so lethal that exposed, non-modern-system forces become cannon fodder it would be deeply *unethical* to commit non-modern-system forces to contemporary combat situations. And if our armed forces are not combat-capable, then of what use are they at all?

Apart from its implications for policy makers and defence professionals, Biddle's overall message is one that is as crucial for South African scholars as it is for scholars in the U.S. and elsewhere. Unquestionably the greatest problems facing Africa are poverty, HIV/AIDS, and war. Yet of these, armed conflict receives easily

the least amount of focused academic attention, and even where it does, the research done often rests on presuppositions drawn from research in the West that may not necessarily be relevant to African conditions. If South Africa is to be successful in playing a leading role in Africa's renaissance, then it is imperative that considerably more research funding and effort go into understanding Africa's armed conflicts and the tactics and strategies necessary to end them.

The implications of Hills' work are less straightforwardly obvious, in part because her topic of analysis is less easily reigned in, but also because, for all its merits, her study lacks Biddle's laudable clarity and sharply defined structure. Nonetheless, the implications of Hills analysis are potentially far-reaching in the South African context.

The most obvious point of application from Hills' analysis is that urban warfare demands considerably more attention than it currently receives. Given South Africa's commitment to addressing armed conflict on the continent through involvement in peacekeeping and such initiatives as the African Union Standby Brigades, and given the facts that Africa is both rapidly urbanising and host to more of the world's armed conflicts than any other region, South African academics, policy makers, defence professionals and members of civil society ought arguably to be giving urban operations more focused attention than most. What is needed is analysis of Biddle-like clarity and rigour, which must in turn be reflected in defence planning and conduct. Such analysis is likely to bring to light clear capability and training gaps that must be addressed if we are to successfully engage on urban battlefields. For example, if, as has been claimed[9], by 2020 eighty-five percent of the world's inhabitants will be found in coastal cities, then the SANDF's lack of any meaningful amphibious or littoral capability is a serious and pressing shortcoming.

That said, in recognising that urban warfare is increasingly likely in the future for South Africa's armed forces, and that the nature of such operations is potentially little changed from the brutal, bloody conflicts of the past, it seems clear to me that the most crucial first area of focus is one that seldom receives the attention it deserves, and that is the *ethical challenge* of contemporary warfare. The 'liberal dilemma' that is at the heart of Hills' analysis is precisely what makes such operations so vexing in our contemporary context. This is a topic explored in some depth by Christopher Coker in his book *Humane Warfare*[10], and his conclusions are not heartening. Coker is convinced that modern liberal states face a seemingly irresolvable pardox in the interplay between the increasingly strong humanitarian motive to intervene in today's armed conflicts on the one hand, and the inability to

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[9] See, for example, Gen. Charles C. Krulak's, 'The Strategic Corporal: Leadership in the Three-Block War' *Marines Magazine*, January 1999 (accessed at www.au.af.mil/au/awc/awcgate/ usmc/strategic_corporal.htm, 3 January 2006)

[10] Christopher Coker, 2001. *Humane Warfare* (London: Routledge).

sustain that humanitarian motive from the ironic, 'post-heroic' perspective of postmodernity.

I am, however, less pessimistic than Coker or Hills. I am convinced that a new ethical framework for today's armed conflicts can and must be found, and that for us that framework must be fully accountable to African ethical traditions, such as that of *ubuntu*. I believe that, in order to overcome Coker's paradox and Hills' dilemma, it will be necessary to restructure the relationship between warfighting and ethics. Though ethics has become increasingly important in armed conflicts (for liberal democratic forces at least), the nature of the relationship between ethics and war has not changed. Ethical principles remain conceived of as fences or boundaries that warfighters must not cross. Traditionally it is within those (ever more constrictive) constraints that lies the domain of the pure warfighter, who there has free reign to pursue victory in battle. The revolution that I believe is necessary is to put ethics at the core of warfighting itself. This will of course not be easy, and may in many cases lead to radical amendments to existing doctrines, but I am convinced that it is both possible and essential.

In this I am in disagreement with Hills' view of the irrelevance of such notions as civil society and human rights to military operations on urban terrain (and, for that matter, elsewhere as well). Hills makes her position clear when she writes that:

> "Civil society is an irrelevance in such circumstances because, assuming it exists, it is not targetable by invading (or liberating) forces. It is probable that Western forces will be required to manage non-combatants at the same time as fighting, but the stakes will be too high to allow reconstruction or developmental concerns to play a major shaping role during warfighting. Civil society cannot play the same role as cultural intelligence or psychological operations… Socio-political trends in liberal democracies may promote the value of humanitarian intervention and reconstruction, while the current conflation of conflict, security and development may mean civil society shapes strategic guidance, but neither provides practical understanding as to how cities (or the social structures underpinning them) work. And they cannot enhance understanding of how to achieve successful operations, the promotion of notions such as civil society is at odds with the fact that the success of a military force remains dependent on its ability to conduct simultaneous operations aggressively and persistently" (Hills 2004, 185).

This strikes me as a remarkably narrow and misguided view. For Hills to claim that civil society is irrelevant in urban combat because it is 'not targetable', 'cannot enhance understanding of how to achieve successful operations', and because the stakes in warfighting are otherwise too high is puzzlingly at odds with her (accurate) complaint that one of the crucial missing elements in contemporary

thought over urban operations is clear strategic doctrine. But this is exactly where concepts as human rights and civil society come into play, for in humanitarian interventions they define just what success *is*. They define what the 'stakes' are. And they therefore must of necessity play a central role in defining the warfighter's art. Humanitarian interventions follow a different logic to traditional warfare, and therefore require different doctrine. As George R. Lucas Jr. points out, "the attempt simply to assimilate or subsume humanitarian uses of military force under traditional just war criteria fails because the use of military force in humanitarian cases is far closer to the use of force in domestic law enforcement and peacekeeping, and so subject to far more stringent restrictions in certain respects than traditional *jus in bello* normally entails. It is not, for example, sufficient that humanitarian military forces (any more than domestic police forces) simply refrain from excessive collateral damage, or merely refrain from the deliberate targeting of non-combatants. In fact the very nature of intervention suggests that the international military "police-like" forces (like actual police forces) must incur considerable additional risk, even from suspected guilty parties, in order to uphold and enforce the law without themselves engaging in violations of the law".[11]

Lucas attempts to address the ethical challenge of the humanitarian use of military force by amending traditional just war theory to produce what he calls an ethic of *jus ad pacem*. My own view is that the time has come to consider alternative frameworks for defining ethical warfighting, and I believe that current work on ethics related to the concept of development offers some intriguing possibilities. Pursuing that would, however take us beyond the scope of this paper. Suffice it to say that both Biddle and Hills have presented us with critical evidence that the nature of warfighting itself has not undergone any significant revolution, and is unlikely to do so in the near future. It remains for us to devise ethics, strategies, policies and tactics that can reconcile this fact with today's humanitarian moral imperatives.

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[11] George R. Lucas, Jr., 2003. 'From jus ad bellum to jus ad pacem: re-thinking just-war criteria for the use of military force for humanitarian ends' in *Ethics and Foreign Intervention*, Deen K. Chatterjee and Don E. Scheid (eds.) (Cambridge: Cambridge University Press), pp. 72–96.