The years of counterinsurgency operations in Iraq and Afghanistan have given our leaders the flexibility of mind to deal with megacities.

[David Paschal, US Army, retired]

It seems to have become obligatory to introduce any article on 21st-century urbanization with a flood of milestones past or pending. They better reveal just how quickly the earth has and continues to urbanize. Common knowledge: in 2008 or thereabouts the planet reached the point where over half its population lived in urban areas. Less well known: at that point more of earth’s residents lived in built-up areas than there were people in the world forty years before. The United Nations (UN) reports that of the 512 worldwide cities with a population of one million or more in 2016, 31 were megacities (defined as having a population of at least ten million). By 2025 the 600 largest cities in the world are expected be home for a quarter of the world’s population and generate 25 percent of its GDP. The number of megacities will approach 40 that year.

There is little reason to believe that this growth will slow any time soon. Unlike in earlier centuries during which plagues regularly purged urban populations, cities now feature better health care, more regular accessibility to food, and resultantly lower child mortality and higher life expectancy than is generally the case in the countryside.

That urban areas can provide both tinder and spark for urban unrest is a historic given as past protests in Tiananmen Square in Beijing (1989); during Hong Kong’s 2014 Umbrella Revolution and Euromaidan Revolution in Kiev the same year; and rallies in late 2016 Seoul attest. Proximity of wealth and poverty, government failure to provide services, and large numbers of educated but unemployed can further fuel flames where they are themselves not ignitors. The larger the city, the more plentiful the fuel and the more numerous the potential sources of spark. Further cause for concern: the coincidence of population density and vulnerability to the worst of Mother Nature’s temper suggests unrest or war need not be what motivates future urban undertakings. The United Nations notes that 82 percent of cities in 2014 were in areas facing “high risk of mortality” associated with cyclones, floods, droughts, earthquakes, landslides, or volcano eruptions.

### Why 10 Million Fails as a Standard

The 2nd-century Greek writer Pausanias questions whether a settlement can be reckoned a city if it has no offices for magistrates, no gymnasium, no theatre, no civic centre (agora), no public water fountain…. Others have constructed a trait list that focuses on rather more abstract qualities…such features as craft specialization, use of writing, and social stratification.

[Robin Osborne and Andrew Wallace-Hadrill, “Cities of the Ancient Mediterranean”]

In contrast to Europe and North-east Asia, the mega-cities of South East Asia do not rank among the world’s command and control centres.

[Howard Dick and Peter J. Rimmer, “South East Asia and Australia”]

Does an urban area of ten million inhabitants inherently differ significantly from one with but nine million? Does a city undergo a dramatic transformation when the population count clicks from 9,999,999 to 10,000,000? Probably not. Defining such an important phenomenon so unhelpfully hinders understanding of the world’s largest urban areas. A recent initiative to instead describe challenges associated with cities, towns, or parts thereof as “dense urban terrain” (DuT) or “dense urban areas” (DUA) seeks to avoid the limitations associated with the 10-million-
population definition. The approach has value when military or civilian concerns are primarily tactical. Yet focusing on the density of urban terrain alone—or only those portions of an urban area with extraordinary densities—leaves many characteristics of the planet’s largest urban agglomerations unrecognized, characteristics that present challenges and opportunities while being fundamental to local, national, regional, and international interrelationships. ("Dense urban terrain" and "dense urban area" are terms thus far lacking doctrinal definitions. "Areas characterized by closely-packed mammane infrastructure and high population density" will suffice for our understanding here.) Even less helpful than the 10-million definition are those seeking to exhaustively list all features distinguishing megacities from other urban areas, lists that cannot but fail either to be incomplete or so extensive as to make the definition effectively useless.\[x\]

Unfortunately, megacities are extraordinarily complex. They are also home to myriad wicked problems. Both suggest a coalition, aid organization, or military force seeking to conduct activities there will find they severely task even the most dynamic and adaptive managers. These are not environments amenable to deterministic problem solving (that of the "If A, then B" type; for example, "If the urban area has a population of ten million, then it is a megacity.")

**Megacities as Complex Adaptive Systems and Homes of Wicked Problems**

The unhelpfulness of this simple linear thinking is due to megacities being both very complex in their makeup and a source of myriad wicked problems. Complex adaptive systems are "dynamic systems able to adapt in and evolve with a changing environment [in which] change needs to be seen in terms of co-evolution with all other related systems."\[xi\] Characteristics of complex adaptive systems particularly relevant to our consideration here include:

- **Distributed control:** No single centralized control mechanism governs system behavior. Despite the system—in our case the megacity—having overall coherence, its functioning cannot be explained merely as the sum of individual activities or parts. One thus cannot be sure how an action or decision regarding one aspect of the system will influence other, related parts.\[xii\]

- **Sensitive dependence:** Complex adaptive systems are sensitive to initial conditions. Minor differences or small changes in those conditions can have a profound impact on parts of the system as well as the system as a whole. Long-term prediction is therefore thought to be impossible.\[xiii\]

That many of the situations facing leaders and managers during contingencies in large urban areas are wicked problems serves only to worsen potential difficulties. Wicked problems:

- inherently have no "right" or "correct" solution [and are] resistant to resolution. Because of complex interdependencies, the effort to solve one aspect of a wicked problem may reveal or create other problems. There is no definitive formulation of a wicked problem. Solutions to wicked problems are not true-or-false, but better or worse, and every solution to a wicked problem is a "one-shot operation" because there is no opportunity to learn by trial and error.\[xiv\]

Wicked problems also depend on one’s perspective: what is a wicked problem for one individual or group might be of no concern or pose no difficulties for another with different concerns. Further, as the nature of a wicked problem is revealed only as one wrestles with it, traditional approaches for defining their elements, conducting analysis, and finding a solution do not work. Were all this not enough, there is a subclass of wicked problems known as super wicked problems characterized by (1) limited time to deal with them, (2) absence of an overall, single central authority, and (3) a Heisenberg-type situation in which those attempting to solve the problem are also influencing its character, all conditions with which military, disaster relief, and political leaders are aware.\[xv\]

The implications for planners are obvious, particularly in terms of one of their most effective tools: backward planning. If every minute change in starting conditions can have dramatic effects on outcomes, then employing backward planning covering more than very short periods or severely constrained conditions assumes great risk. More positively: dealing with complex adaptive systems and wicked problems should favor organizations capable of more sophisticated planning, decision-making, and operational control. Such organizations may be no better at prediction than others, but these capabilities mean they should have superior forecasting capabilities and agility during execution.\[xvi\] Likewise, the decentralization of authority and encouragement of initiative inherent in mission command means that organizations able to exercise it effectively should be better able to handle undertakings in megacities.\[xvii\] So too, individuals at ease with ambiguity and possessing of that ability to grasp pith amidst chaff will be better suited to those tasks (what Clausewitz called coup d'oeil).\[xviii\]

**A Definition of Megacities for the Practitioner**

The definition of "city" must not be absolute, but starts from the premise that individual cases vary and do not demonstrate all the characteristic features.\[xix\]

-- David Stone, "Economy"

Population alone may be a poor guide to how cities rank on a world scale.\[xx\]

-- Howard Dick and Peter J. Rimmer,

"South East Asia and Australia"

That a population of 10 million falls short of what is needed to help in understanding the nature of the world’s largest urban areas should not surprise. The definition of "city" remains a source of debate. It has changed over time. The presence of walls initially distinguished Chinese cities from towns and villages, early authors initially referring to the first in terms of "persons within walls"\[xxi\] while later Chinese would look to social-economic factors in the definitions.\[xxii\] David Stone, quoted at the opening of this section, observed that in other regions it was the performance of non-agricultural functions [that] distinguished a city from the surrounding countryside.\[xxiii\] Archaeologist Augusta McMahon concluded, "absolute size is insufficient for urban identification. Power hierarchy and socio-economic heterarchy are more useful features" when considering Mesopotamia’s earlier cities.\[xxiv\]
Another element adding to the difficulty of establishing a usable description is the problem of multiple understandings for "urban area." Demographia’s definition of urban area ["lighted area that can be observed from an airplane (or satellite) on a clear night"] helps us understand that relying on the political boundaries of a city, the larger political division of which it is a part (e.g., the City of Los Angeles plus the rest of Los Angeles County), or the like do not represent the true expanse of 21st-century urban masses. Jakarta, Indonesia provides an excellent example. Failing to rank in the top 25 in the United Nations list of "largest urban agglomerations" in 2015 (with an estimated population of 10.3 million) given the organization’s reliance on local definitions, the Demographia definition sees Jakarta’s 2016 population of 31,320,000 ranking second worldwide only to Tokyo. [xxv] The benefit of the Demographia definition is that it provides practitioners with a better sense of an urban area’s population and physical reach. Those conducting major military undertakings in the past never confronted anything remotely related to such scale. Manila in 1945 and Seoul in 1950 both had populations of roughly one million. Baghdad in 2003 housed some five million persons, Kabul less than three million. Today’s largest urban areas in many cases also demonstrate what are perhaps unexpected growth patterns. Approximately 60 percent of 1950 Manila’s population lived in what was considered the city’s downtown core. That core saw an increase of only some 700,000 as Manila grew from one to over twenty million. [xxvi] Today’s megacities tend to present vast expanses of terrain often including several geographically-separated, densely-packed clusters of high rise buildings, each of which would have done many a mid-20th-century city proud as city center.

A useful megacity definition must recognize those features’ amorphous, dynamic, and individual natures. Complexity and those wicked problems ensure that any definition will deny us sharp delineation. Attempting to address these several requirements:

A megacity is an urban area of extraordinary population size, geographic spread, complexity, and similarly exceptional characteristics, to include influence with at least national and regional scope.

The above makes it only too clear that what comprises a megacity is not rigidly fixed. Nor are the challenges and opportunities it will offer constant across organizations operating within its confines.

Megacities: Challenges and Opportunities

Challenges

Complex, congested, home to myriad wicked problems, dense, populous, and influential: characteristics of megacities to be sure, but some are likewise found in urban areas that do not qualify for the status. One might therefore ask why we should concern ourselves with another category of megalopolis. Are not megacities simply urban areas with more of what those smaller have? If so, simply extrapolating approaches for smaller cities should suffice. We will find, however, that megacities differ from their less robust kin sufficiently to merit special consideration. The difference is indeed sometimes merely a matter of “more,” one of scale. In other instances, there are elements perhaps related to but less directly reliant on size alone. With these differences come both challenges and opportunities.

First to a sampling of difficulties associated with megacities. In terms of scale, the number of hides, mobility corridors, ethnicities, interest groups, means of communication, and many other factors increases with population size and geographic spread, increasing complexity and the nature of wicked problems. This can be true even in cases lacking confrontation with an adversary. Consider a notional case requiring quarantine of all within a single urban location of an area of five city blocks on a side, each block being 100 meters in length. In smaller urban areas with well-defined breaks between urban and rural, the size force needed to isolate the affected area might well be within a local government’s capabilities, this even as some parents concerned with their children’s survival logically (if unhelpfully) and others attempt to escape the affected area. This is particularly true should that government’s officials be able to rely on additional support from external jurisdictions. Now envision increasing the size of the area from five to twenty-five blocks. (See the map of Lower Manhattan in Figure 1 for a sense of scale.) The challenge would quickly overwhelm most local authorities given the numbers of streets, alleys, subway and utility tunnels, and elevated railways, roads, and pedestrian walkways (among other features); the need to keep individuals both in and out of the quarantine area; and ever-present routine demands elsewhere in the city. Were this increase in the boundary (which increases linearly from two kilometers to ten) not challenge enough, consider the additional area (which increases by the squared factor of twenty-five from the original 0.25 km² to 6.25 km²) and corresponding increase in population occupying below, surface, and above ground locations. The larger the urban area, the more likely such contamination would spread via its transportation system both within the built-up area itself and more widely, to include regionally and internationally given the greater interconnectedness of megacities. Arguably, this would notably be the case in countries where one city dominates in terms of population; political sway; and economic, social, or other influence, what Mark Jefferson referred to as primate cities – those that stand “alone in a different order of magnitude and significance from those of all other cities in its country.” [xxvii]

Ironically, the notional quarantine situation described here might be considered a best case situation for it inherently assumes very early detection of contamination. (Perhaps the most comparable recent event was the 1995 Tokyo subway sarin nerve agent attack by the Aum Shinrikyo cult.) [xxviii] Determination that illnesses are biological agent or chemical attack induced could take days or weeks.

Figure 1: 500m and 2,500m on Side Notional Quarantine Areas in Lower Manhattan[xxix]
Ten Million is Not Enough: Coming to Grips with Megacities' Challenges and Opportunities | Small Wars Journal

The above would pose problems even enough within a single jurisdiction. Most major urban areas include multiple political and functional spheres (e.g., police precincts and fire districts) entities. The City of Los Angeles, for example, is home to a few million people. It has its own government, a Los Angeles Police Department, and many other organizations one would expect of so large a built-up area. The megacity that includes the political entity that is the City of Los Angeles encompasses more than three times the City’s population and seemingly innumerable additional communities that include Burbank, Santa Monica, Pacific Palisades, Malibu, and Long Beach with their own governments. There is to the north in California a megacity containing three major political entities (San Francisco, San Jose, and Oakland) and many others between and around that trio. Even presuming complete cooperation, non-conflicting laws and regulations, past exercises practicing regional responses to emergencies, and standardized infrastructure (e.g., uniforming threading on fire hydrants, compatible communications equipment) – all of which are by no means a given – coordination of assets and orchestration of activities across boundaries would challenge even the most experienced leaders and staffs. Yet further complexity is introduced given that megacities not infrequently encompass elements of several states or provinces (think New York City or Jakarta) or countries (Singapore and Johor Bahru, the latter among other nearby Malaysian urban areas).[xxx]

Focusing on a single government having to coordinate police efforts, for example, quickly reveals that there are not only many city, town, and village forces, but also others representing one or more counties; state police; and federal representatives such as the Federal Bureau of Investigation (FBI), Border Patrol, and organizations such as the Coast Guard whose responsibilities include significant policing responsibilities. Synchronizing these many parties’ efforts means establishing and maintaining open lines of communication at a minimum. It will very likely also entail exchanging liaison personnel (each with their own communications equipment); finding space to house these personnel; powering and locating their equipment and vehicles; manning overarching coordinating bodies; establishing links to inform other parties with overlapping or complementary responsibilities (e.g., military units, fire departments, health services, and mayors’ offices, to provide but a small sample); and much else. While liaison between jurisdictions has been the accepted practice in the past, the number of functional areas requiring orchestration during future major catastrophes in megacities may instead be better handled by creation of sub-coalitions, each a component of a larger, overarching body.[xxx]

The sheer physical expanse of megacities presents challenges of its own, an expanse often involving far more underground and above-ground infrastructure than found in smaller urban areas. Ground movement may have to cross tens of miles of densely, restricted terrain before reaching a location in need of relief or target meriting attention. We need only think back to October 1993 Mogadishu to realize that reliance on air mobility in lieu of ground transport incurs significant risk in environments where possible air defense positions are myriad and concealment ubiquitous. As megacities are the elephants in the urban zoo, an organization attempting to address the challenges of any such area – movement-related or otherwise – should adhere to the guidance that such beasts can be consumed only one bite at a time. This means that any campaign – humanitarian, combat, or otherwise – is almost inevitably going to involve widely dispersed elements each of whose bites is geographically separated from others. That dispersion may involve separation of coalition members by tens of kilometers. (e.g., the distance from Ventura, California in the north of the Los Angeles megacity complex to Irvine in the south is over 180 kilometers.) Coordinating and provisioning – even monitoring – these dispersed assets will pose major control and logistics challenges, ones made more difficult by the problems imposed when tall structures, underlying terrain, or electromagnetic sources impede communications. Such large, densely populated expanses cast doubt on the applicability of an oil spot approach to stabilizing an area.[xxxii] Control of megacity communities will be continually contested barring extraordinary numbers of security forces and presence of large population sectors supportive of the friendly force. Enemy, criminal, or other nefarious parties familiar with the terrain are likely to ooze into vacated sectors as coalition representatives move into other areas. This is all the truer given the availability of social media as a means of coordinating activities. Faced with able adversaries or large-scale lack of popular support, the most any force can hope for is some degree of superiority of influence in given communities or amongst some population segments.[xxxiii]

Success potentially compounds rather than lessens challenges at hand. Reading Eric Hoffer’s classic The True Believer suggests a conundrum in this regard. Hoffer posits that the truly destitute pose little threat of unrest as their daily existence is dedicated to finding the next meal, drink, or other life essential.[xxxiv] Provide a modicum of relief from the hand-to-mouth existence, however, instill hope in those otherwise thinking the future hopeless, and you have created tinder ready to fire should someone provide the spark. Not meant as an argument against working to improve lives during future operations, Hoffer’s premise offers a caution the implications for which any organizations dealing with megacity populations’ relief or humanitarian aid should be prepared. Preparedness should therefore not be limited only to considerations of pulling population segments from survival’s edge.

The above tinder is even more dangerous when there are those present who are familiar with ways to strike a spark. Universities are often concentrated in a megacity. The result is large numbers in the volatile demographic of well-educated and often jobless young males. Middle Eastern countries are particularly prone to his combination, Egypt notable even in that group. Cairo [with a population of 19 million (20% of Egypt’s population), status as capital of Egypt, and considerable regional influence both in the Middle East and North Africa] is Africa’s most populous urban area.[xxxv] It is also home to many educated at government expense. Nearly 87% of the country’s unemployed are between fifteen and twenty-nine years of age; of those, individuals with a college degree are ten times more likely not to have a job.[xxxvi] Little wonder that this frustrated, educated, and tech-savvy group – and Cairo – were so influential during the country’s Arab Spring.

The hyper-influence and interconnectedness of megacities means that anyone leading an operation must be especially alert to the possible consequences of decisions and activities. The sensitivity of complex adaptive systems to initial conditions has been referred to as the “butterfly effect,” the analogy being that a butterfly flapping its wings influences development of a storm hundreds of miles distant. (Last we think it has no equivalent during conflicts, strategist Colin Gray would seek to disabuse us, noting, “All military activity in war has some strategic effect.”)[xxxvii] When it will develop, where it will develop, how strong it will be, and even whether such a storm will develop is virtually impossible to predict.[xxxviii] It is no less difficult to determine the extent to which those wings influenced a storm if one occurs (once again highlighting the limitations of backward planning). Megacities’ extensive interrelationships mean that the second, third, and higher order effects of even a seemingly inconsequential action could have worldwide in addition to local impact. To use a somewhat extreme but effective example, the September 11, 2001 attacks on New York and Washington, D.C. had worldwide financial, economic, social, diplomatic, and political implications that resonated for months after the event. The same would not have been true had the hijackers struck less influential urban areas. Training for military and civilian leaders at the tactical, operational, and strategic levels must account for this high degree of interconnectedness. So too must approaches to planning. Not doing so increases the risk of an ill- advised decision or tactical action having negative consequences that span oceans.

A Sampling of Megacity Opportunities

Megacities offer opportunities as well as challenges not evident in less complex urban areas. Tax, police, health, economic, and other data will be at hand in many cities today even when it is not so for a country’s rural areas. And it or other resources potentially provide invaluable benefits in time of war or other disaster. Cell phone data has proven particularly helpful, having been used in Africa to track malaria outbreaks for example.[xxxix] Larger urban areas can more often provide “big data” to an extent that smaller and less extensively networked city clusters cannot. The US National
Syndromic Surveillance Program (NSSP) provides a way for health officials to detect onset of an epidemic or biological agent attack. Now able to monitor populations in much of the world, early systems monitored only the San Francisco-San Jose-Oakland area or District of Colombia region. Essence, the software and algorithms underlying NSSP, analyzes data from medical sources (e.g., doctors, nurses, pharmacists) in the service of such detection.[x] The more data provided, the greater the likelihood of early recognition (given that analytic capabilities are up to the task), meaning megacities should be particularly valuable in this regard. The navigation aid Waze provides a much different but similar example. Waze not only provides guidance on shortest driving routes. It is interactive, meaning that users input traffic conditions, hazards, and other information that Waze then uses to direct a driver along the most efficient route when the shortest becomes otherwise. Thus the habitual home-to-work pathway is replaced by another should there be an accident or other cause of delay on the standard transit. The more input, the better the service Waze provides. This author has found Waze works very well in San Francisco, Washington, D.C., or Tel Aviv. It is helpful but less so in Canberra, Australia, a capital of less than half a million. Lesser traffic density means new roads, altered intersections, a highway blockade, or other condition is made known to Waze less quickly. Larger numbers of people and greater density otherwise offer intelligence collectors similar benefits. Given a sufficiency being willing to provide information, the number of eyes available to a collector expands an organization’s reconnaissance resources, a situation more effective when the hands associated with those eyes have access to social media platforms.

Megacities are also more likely to have resources essential to effective emergency response. Liberian Patrick Sawyer collapsed on arrival in the Lagos, Nigeria airport on July 20, 2014. Authorities soon determined that Sawyer had brought the Ebola virus to one of the world’s largest megacities, Lagos having an estimated population of 30.6 million. They quickly recognized he – and passengers with him on the aircraft – were potential agents of a medical disaster. However, that Lagos was so large an urban area meant appropriate management, emergency response personnel, and medical facilities were on hand (this despite an ongoing doctor’s strike). The capital was also a “wired city,” an element fundamental to the disease being interdicted with only twenty infected and a total of eight deaths. Other megacities are likely to have similar in-place procedures and resources lacking in smaller urban areas. Even preparations for dissimilar events have potential to assist under such conditions. Provisions for action in the aftermath of a major earthquake, for example, should have value during responses to other disasters, e.g., a major terrorist attack.[xlii]

**Conclusion**

The unprecedented terrorist attack that France experienced in 2015…. After decades that had seen war kept at bay, our population has once again become a target in need of protection. But our population might also be the best weapon to oppose the enemy…. Material strength is not enough. The moral strength of the nation has an important role to play.[xliii]

> -- Jean-Yves Le Drain, “Who is the Enemy?”

To get harmony in music, each instrument must support the others. To get harmony in battle, each weapon must support the other…must come into the concert at the proper place and at the proper time.[xliv]

> -- George S. Patton, “The Musicians of Mars”

It’s a poor sort of memory that only works backwards.[xlv]

> -- Lewis Carroll,

*Through the Looking Glass*

That London qualified as a megacity even in 1939 would seem to be assured given our knowledge of its population, place at the center of the British Empire, and Jefferson’s additional description as a city where

> the finest wares are always to be found there, the rarest articles, the greatest talents, the most skilled workers in every science and art. Thither flows an unending stream of the young and ambitious in search of fame and fortune, and there fame and fortune are found. London is the kingdom’s market for all that is superlative in intellectual and material productions. Its supereminence as a market runs parallel to its supereminence in size. It is the primate city of the United Kingdom.[xlvi]

The author went on to write, “in Denmark the less-than-a-million capital, Copenhagen, has won greater relative primary. It is nine times as large as Denmark’s second town.”[xlvi] It too, then was a primate city. It remains so today with a population of nearly 1.3 million in early 2016 and national influence corresponding to that size. The second most populous urban area in the country, Aarhus, boasted but 265,000 residents.[xlvi] Yet neither in 1939 nor today does Copenhagen qualify as a megacity, lacking as it does sufficient resident numbers, complexity, and influence beyond the country’s borders.

Their influence via interconnectedness means some megacities are becoming semi-autonomous. Granted, cyber connectivity has not rendered physical location mute as a factor in that influence. Traditional benefits inherent in being a port city or location along a major inland byway remain. Yet one need only call for computer tech support to find the individuals rendering assistance speak from cities half a world away, urban areas no longer completely reliant on airfields, ports, rivers, or highways thanks to internet, telephone, and other links. The earliest cities of Mesopotamia were as vital to the state as were those urban areas reliant on the state in return. Cities have often survived even as a state or empire of which they were a part was relegated to history books. Seoul, Tokyo, Manila, Cairo, Jakarta, and Lagos to note but a small sample are megacities with vital interests distant from their own countries’ borders. Those cities and others to which they are connected have far more to lose in war than they could gain. At what point might we see a coalition of megacities combining their influence to prevent wars or aid in another’s recovery in the aftermath of conflict?[xlvii] Would it be possible that in the case of military operations in a primate city – megacity or otherwise – that the local and national influence inherent in that status might provide economic, political, or other means to meddle the actions of parties elsewhere in the country? The concentration of resources in megacities would lend themselves to such an approach, with financial and other benefits being bestowed, maintained,
or withheld depending on a given party’s willingness to support the host nation government, coalition, or city interests; benefits far harder to otherwise acquire given the eminence of the urban area. Megacity roles as hosts to various communications infrastructures would similarly lend themselves to providing or denying access to specific mediums and transmitting information of value to a citizenry in times of disaster.

A caution is also in order here. During coalition operations in the Balkans during the last decade of the previous century, a high-profile member of the media broadcast from a capital city, decrying the urban population’s suffering. Other parts of the country were under greater duress, but the urban-centric media focus caused undue attention—and aid—to be granted the city in question. A megacity will be the media hub during wartime or disaster. The population concentration and political, economic, social, and other influencers present in such urban areas will have a gravitational pull on resources that should be resisted when needs elsewhere require.

Conflicts in recent decades have increasingly made it apparent that there is demand for military leaders adept at more than combat skills alone. Eisenhower was admired less for his tactical acumen than his talents in the realms of strategy and coalition maintenance. Publications touting the essentiality of the soldier-governor during counterinsurgency became commonplace in the opening decade of the current millennium; skills in this regard demonstrated during the Malayan Emergency by British General Gerald Templer received no little attention as a model for later contingencies. Recognized…but too little acted on. To what extent have staff colleges, second-year programs such as that at the School of Advanced Military Studies or School of Advanced Warfighting Studies, and war colleges adapted their curricula to incorporate educations better preparing tomorrow’s senior leadership for megacity requirements? Undertakings therein will surely demand what samurai considered fundamental to not only combat effectiveness but the warrior spirit essential to that efficacy: bubun, James McClain describing it as “a yin-yang combination of literary and military accomplishments.”[xlix] Though 21st-century military leaders need not emulate the cultivation of writing poetry or landscape painting so admired in those men, they can look to their commitment to the pursuit of knowledge underlying effective administration thought no less important than proficiency with sword and bow.[li]

Patton’s brief but effective “The Musicians of Mars” briefly quoted at the beginning of this section carries lessons for both soldier and civilian leaders wishing to ready themselves for what lies ahead. Their task of orchestration will be far more difficult than when the instruments at hand include only the tools of combat. Success during any major megacity undertaking will require symphonic coordination of assets civilian and military; government, nongovernmental, inter-governmental, and commercial; national and multinational; local, regional, and national; professional and volunteer.

Dealing with the consequences of megacities will demand coup d’oeil of a quality even Clausewitz would have found daunting. Our definition reinforces the existence of responsibilities perhaps not apparent at first glance. The savvy leader may at times be able to shield subordinates from the most demanding consequences of operating in a city. We noted earlier that what is a megacity for those conducting one mission might be otherwise for an individual or organization undertaking another. The battalion commander tasked with securing an inner-megacity facility may not need to account for the vastness of population, extreme complexity, or other characteristics inherent in that urban entity. So too might the NGO representative providing medical care to only a neighbourhood escape the consequences of having to deal with the nuances of the urban areas’ culturally-dictated care idiosyncrasies. The savvy relief coordinator or coalition commander confronting a megacity-wide responsibility—or large bite of that elephant—can perhaps tailor the missions and responsibilities for some subordinates, thereby relieving them of megacities’ more burdensome challenges even while those at higher echelons confront them.

The insights necessary to achieving this allocation of duties will come only to the readied mind. The time for preparing leaders and organizations is nigh. It is worth noting an insight provided by Horst Rittle and Melvin Webber while doing so: “One cannot understand the problem without knowing about its context.”[lii] A population of ten million is alone insufficient context.

End Notes

[i] David Paschal conversation with Dr. Russell W. Glenn, October 24, 2016, Fort Eustis, VA.


Even definitions relating to urban areas often differ. The authors of Demographia provide the definition we will use here: “An urban area is best thought of as the ‘urban footprint’ – the lighted area that can be observed from an airplane (or satellite) on a clear night.” Demographia World Urban Areas, 11th edition, 2015, 2, http://www.demographia.com/db-worldua.pdf (http://www.demographia.com/db-worldua.pdf) (accessed January 28, 2016), 3-4.


A concise and effective discussion of the difference between prediction and forecasting is available from the Pacific Northwest Seismic Network, albeit in terms of a particular topic:

A prediction of an earthquake needs to state exactly where and when the event will happen with enough specifics to be useful for response planning purposes. For example, the statement "there will be an earthquake tomorrow at 7:45 AM" is almost certainly going to be correct somewhere in the world, but it has no value as a prediction. Similarly, saying that there will eventually be a large earthquake on a very active fault is useless; while it is true, almost nothing can be done with this information. Without a specific date or location, a statement cannot be a prediction. Currently, no one can predict where or when big earthquakes will occur to meet these criteria. However, seismologists have gotten much better at forecasting earthquakes. On a sunny Monday afternoon, meteorologists may forecast a wet weekend ahead, and can add an estimate of how certain they are that their forecast will be accurate; i.e. "we forecast a 60% chance of rain on Saturday."


Mission command can be defined as “the practice of assigning a subordinate commander a mission without specifying how the mission is to be achieved” [from Land Warfare Doctrine 1, The Fundamentals of Land Power (Canberra: Australian Army, 2014), 45]. The US Army and US joint definitions are more verbose without adding substantively to the Australian offering, the former being “the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander’s intent to empower agile and adaptive leaders in the conduct of unified land operations…” [It] emphasizes centralized intent and dispersed execution.” Army Doctrine Reference Publication (ADRP) 6-0, Mission Command (Washington, D.C.: Headquarters, Department of the Army, May 17, 2012), 1-1. “Mission orders” are in turn defined on page Glossary-3 of the same publication as “directives that emphasize to subordinates the results to be attained, not how they are to achieve them.”


Augusta McMahon, “Mesopotamia,” in The Oxford Handbook of Cities in World History, ed. Peter Clark, Oxford: Oxford University Press, 2016, 31. Ha is the abbreviation for hectare, an area of measure defined as 10,000 square meters.


Note that while the New York City urban area greatly exceeds 10 million in population, the megacity of Singapore that includes several Malaysian urban entities likely numbers well under 7 million.

While undeniably a major catastrophe, the events of September 11, 2001 by no means are an upper limit to the magnitude of challenges the US or a coalition might face either during an international or domestic disaster.


Ten Million is Not Enough: Coming to Grips with Megacities’ Challenges and Opportunities

Categories: urban operations (/taxonomy/term/495) - urban areas (/taxonomy/term/801) - megacities (/taxonomy/term/496)


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