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Preventing Global War

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Abstract

The theory of long cycles in global politics predicts that the global polity, an emerging property of the world system, is moving, over the long run, toward higher degree of organization, and that the approaching macro-decision (succession to global leadership and new global agendas) may probably avoid the turmoil of global wars that has marked the previous five cycles.   However some chance remains that in the process of competition for global power, major conflict (or conflicts) of world-wide impact might actually erupt in the next generation. In the light of theory this paper examines conditions and scenarios that might reduce such chances, thus favoring the emergence of a non-global war-like trajectory for the political process.

1.0   Long cycle theory and its predictions

The title of this paper, "Preventing global war", signals the review of an important global problem, that of understanding and mastering the possibility that global politics might, some day in the near future, break out into violent conflicts of horrifying proportions. Some might argue that such a possibly catastrophic outcome should not be debated, and should be tabooed, on the ground that the mere discussion of it might help to bring it about.   Others believe that such a topic needs to be relegated to the sub-rational realm, such that even a possibility of it might never emerge in rational decision-making.

This presentation adopts the view that the subject needs to aired in public discussion so as to improve the chances that global war will not in fact recur, perhaps banned forever from the experience of the world system. The review of this problem will be carried out from one special vantage point, that of a research program that has become known to scholars as 'long cycle theory'.   What are long cycles of global politics about?

1.1   Long cycles and global wars

The research program may be said to have been launched with a paper presented to the Tenth World Congress of the International Political Science Association in Edinburgh in 1976, and published as "The Long Cycle of Global Politics and the Nation-state"(Modelski 1978).   The paper introduced to the literature the concept of a (phased) political long cycle of some one hundred years in length , each cycle moved forward by a 'world power' exercising 'global leadership'[1] (since 1500, Portugal, the Dutch Republic, Britain -twice, the United States). The ensuing succession was seen marked by repeated confrontations with "challengers", culminating in "global wars", defined as (generation-long) "conflicts that determine the constitution of the global political system". That paper was, of course, building on the work of earlier scholars, in particular Quincy Wright, and Arnold Toynbee,   but it was only the beginning of a long adventure.

 By the end of the 1980s the long-cycle research program had yielded a number of publications on these themes, including theoretical and collaborative (Modelski 1988, and ed. 1987, with Japanese input), documentary (Modelski and Modelski 1988), and empirical-statistical studies (Modelski and Thompson 1988) supporting the existence of regularities in global politics and placing it in the context of other historical-structural approaches (Thompson 1988).   Nuclear deterrence theory was subjected to a critique from a long cycle perspective (Modelski and Morgan 1985).   A paper on "Long Cycles and Global War" appeared four years later (Modelski and Thompson 1989).   Most important perhaps was the insight that long cycle competition was not about "world domination" but about the emergence and the constitution of the global political system.

In the course of further developing the theory, it became clear that each long cycle is a four-phased process, and that the same process might be viewed from two perspectives, either systemic, or learning. In the *systemic* perspective, the generation-long phases begin with world power (say US 1945-75), go to delegitimation, followed by deconcentration (2000-), and global war.   In the (evolutionary) *learning* sequence, the focus is on the processes of learning and selection, starting with agenda-setting (1975-2000), going on to coalition-building (2000- ~2030), and macrodecision (that selects new

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[1] Sometimes also referred to as 'global primacy', or 'hegemony' (Greek for leadership).   "Global leadership" is a term specific to long cycle theory; primacy, or hegemony do not readily resonate with the experience of Portugal and/or the Dutch Republic that may nevertheless be described as a leadership exercise in global system-building (cf. Devezas and Modelski 2008).

global leadership and reforms the political structure with a new agenda), to be implemented in the phase to follow. The learning perspective clarifies a key point about global wars: viewed as a learning process, the long cycle does not "need" a global war but makes it possible to envisage that the 'selective', macro-decision, phase assumes a non-violent form, more akin e.g. to an electoral process.

In the 1990s, the scope of the research grew to cover, at first the entire millennium of the modern era (from 1000 onward), and then the past five thousand years of world system development. Political long cycles were shown to co-evolve with the rise and decline of leading economic sectors (Modelski and Thompson 1996). It also became clear that global wars were a feature, not of world politics in general but of a rather distinct segment of that experience, from late fifteenth century onward (see Appendix for some basic data on five global wars 1492-1945), and that they need to be seen in the context of an evolutionary process, the emergence of a global political system (of which each long cycle is one phase).

In that context, the long cycle is a mechanism that has driven global political evolution for the past millennium and continues to do so, but has passed through two periods, that of (1) preconditions (and failure of world empire), and (2) formation of a global nucleus, before entering the third one, that of global organization, since about 1850. The characteristic institution of period (2) was that of global leadership, and it continues into the preparatory phases of period (3). Successive iterations of global leadership have produced increasing increments of global order that have been the products chiefly of global war settlements (see "Five global wars, "outcomes" column) but were weakly institutionalized. The global political system is now in the second of the preparatory phases, but not as yet the (third), decisive, phase of the 'formation of global organization". On this broader canvas, global wars appear as a time-bound form, an aspect of a long transition "from leadership to organization" (Modelski 1999).

By the 2000's the long cycle attracted attention in China (Cui 2007). Work has continued on firming up the understanding of the 'cascade of evolutionary processes" that make up world system evolution, and of which the long cycle of global politics is an essential element. Analysis has shown that such processes co-evolve (as long cycles do with waves of economic innovation, and also democratization), that shorter-range processes nest within longer-term ones (as long cycles nest within global political evolution), and that all these processes are self-similar, each replaying the four-phased evolutionary learning algorithm, albeit at different scales. The inter-relationship of these processes is governed by a power law, a signature of self-organization. (Devezas and Modelski 2003). All this may appear rather abstract, but the theoretical structure, subject of a number of-empirical tests, does lend conviction to the forecasts that may transpire in relation to the topic of this paper.

1.2 Five global wars

'Global war' is a theoretical term of long cycle theory[2]. It connotes a macro- decision for the global system taking a violent form of a conflict for political ascendancy to a position of global leadership that, in a spectrum of global institutions, stands mid-way between

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[2] To be distinguished from the term "Global War on Terror", used by United States' Department of Defense since 2003 to describe the wars in Afghanistan, Iraq, Horn of Africa etc., but discontinued by the Obama Administration that has focused on Al Queda. The global war on terror was not a substitute for global war.

world empire and global organization.   The Appendix to this paper briefly cata logs the salient characteristics of these conflicts, of which five have been identified in the historical record between 1492 and 1945.   The listing reveals the commonalities, but also shows developmental trends that deserve emphasis. Here are the noteworthy characteristics of these event-sequences.

Global power alignments: In each case, all global powers (as defined by their investment in naval capabilities) were engaged in the conflict.   The challengers were continental powers, with imperial - and some naval - aspirations; the winning side was that of maritime-oriented nation-states and their allies.   England/Britain was a key participant in all five cases, most of the time, it also was able to hold on to its global leadership position for two 'terms of office'.

Triggers: were various, against a background of tension around the question of ascendancy. Imperial aspirations, or the liquidation of empires was a cause of friction (as in the case of Spain, France and Germany, also the Ottomans in the Balkans, or Austria-Hungary in the Balkans). Territorial isssues mattered. Regional issues tended to escalate to global levels.

War theater   in each case, warfare occurred on more than one continent; starting with the Italian wars that, via the role of Venice and Egypt, were linked with events in the Indian Ocean, and leading up to World Wars I and II that were clearly multi-continental. While Europe has been the main theater, with the Low Countries at the very center of it, most recently emphasis has been shifting to Asia.

Outcomes: each conflict produced a leading power for the global political system, with a primary role in the settlement the war, and in fashioning the rules for intercontinental trade, and relations, I.e. global leadership, but not world empire.   Each such 'world power", part of the "democratic lineage" of republican, parliamentary, liberal states tending toward democracy, made its own contribution to fashioning the emerging global polity, by creating international institutions for it.   In turn, the increased institutionalization of the global system made it likely that the role of global leadership would be more narrowly circumscribed.

Global war duration: The global wars of the past half-millennium each lasted for about the length of a generation (the replacement interval, of some 25 to 30 years).   That does not mean that warfare was continuous.   In the most recent case, the "inter-war period" (1919-39) was marked by general peace, though also regional wars - as in China, Spain, etc).   But not until the questions at issue, the composition and the agenda for new, or renewed, global leadership was settled, was the conflict ended.

The interval between global wars   might thus be expected to extend over three generations, or three phases of the long cycle (world power, delegitimation, deconcentration in the systemic mode). But it has been getting longer.   While the average, for four cases, is 80 years (see Table 1 below), the most recent interval, between 1815 and 1914, was one of 99 years,

Table 1. Intervals between five global wars

	1515 - 1580	1609 - 1688	1713 - 1792	1815 - 1914	1515 - 1914
Interval					

No. of years	65	79	79	99	80 (average)

1.3 Long cycle risk assessment

A macro-decision has two elements: procedural, and substantive.   Major war is one such procedural characteristic, an election is another. Examples of substantive (structural) change are installing new global leadership, or choosing new agendas for global problem solving. The five cases just reviewed illustrate both of these elements. In a contribution to a "Handbook of War Studies" Modelski and Thompson wrote nearly a generation ago (1989:48-9) that "the theory of long cycles does not view another global war as inevitable" but they affirmed "that an evolutionary learning process does, from time to time, require macrodecisions and … these macrodecisions can be either violent or non-violent".

Not much has changed since. At this time of writing (2010), 65 years since the end of the last global war, the world system still has not had the experience of another such great conflagration. But in the long-cycle "calendar" the onset of another macro-decision is approaching fast. It might be as close as 15 years (2025, that would make it the average interval, at 80 years) or somewhat longer, more nearly that of the last time elapsed, 99 years. That pre-World War One experience of an extended interval could have been an outlier, created by a sense of rising tensions that, for a time, made it possible to deescalate mounting crises (over Morocco, German naval build-up, Balkans, Near East) and led far-sighted obervers to advocate a search for alternatives (William James, 1910, Norman Angell, 1910, German historians, mindful of historical precedents, warning against provoking Britain).   The financial crisis of 2008-9 looks like a herald of approaching change.   The imminence of the onset of macro-decision may also be a function of the rising quality and capacity of global institutions that might facilitate changes without violence. All in all, an interval closer to 15 than to 39 years seems more likely.

In the context of long-cycle theory predictions, the possibility of averting global war that may be looming on the horizon resides in changing the procedural element in a non-violent direction while preserving the opportunity for systemic adjustment and structural change in the form of reviewing performance, changing leadership, and adjusting agendas.   The procedural element in turn affects substantial issues (as a fall in the probability of war reduces - without eliminating - the salience and character of the forces of global reach). The matrix of opportunities for the next phase of long cycle (LC) 10 (long cycles may be numbered for the modern era, since about 1000) is laid out as in Table 2, as follows:

Table 2: Matrix of oportunities for macrodecision (in long cycle 10).

Procedural Substantive	Global war	No global war
Structural change	1. Like 1914-1945 (LC 9)	4. Preferred outcome
Status quo	2. Disaster	3. Frozen order

The spectrum of opportunities ranges from, as an example, (1) the World Wars of the 20th century that, while costly and destructive, nevertheless ushered in substantial and needed changes, in world politics and economics.   But a repetition of that combination of global war with hopes for systemic transformation (as in 2) appears to hold nothing less than prospects for total disaster.   Scenario (3), that of no global war, and no structural change, is one of a world of "frozen order" refusing to adapt, possibly an empire; an unlikely recipe for a stable future.   The preferred a"The best guarantee of global security is conflict prevention.'
UN Secretary-General Ban Ki-moon,   Munich, February 2011.
lternative is (4) that combines the possibility of a world that allows for competition, and for new initiatives but has distanced itself from memories of persistent and wide-spread global conflict (while possibly even tolerating continuing - non-nuclear and diminished - violence at the regional or local levels), while managing competition on a non-violent basis.

Long cycle risk assessment suggests that higher probability[3] should attach to scenario (4).   That trajectory while clearly competitive and therefore also conflictual may prevail if only because all the other alternatives are so unattractive.   Such an up-beat prediction relies on the knowledge that the long cycle is an evolutionary process that not only allows for adaptation but also organizes it in tandem with those that co-evolve with it. That process is currently (2010) in the phase of coalition-building, in conditions of a democratic transition (to majority status), an information age founded upon an array of new technology, and a movement of world opinion away from viewing major warfare or nuclear armaments as 'normal' features of international coexistence. The glue of global solidarity may be congealing from the existential threat to human survival stemming from the possible use of nuclear weapons, or from climate change.   But these influences might also be tempered by the fact that global institutions fully and uniquely capable of responding to these threats have yet to take shape, and may not do so for some time.

Conversely, long cycle theory assigns lower risk to scenarios (1), (2) or (3) .   The first of these, a simple replay of the world wars, seems unlikely because such crucial but also obviously flawed events, as global wars in conditions of nuclear arms, are now coming to be regarded as unthinkable.   The second, too, raises the specter of nuclear devastation and is so awful that it generates little serious discussion.   The third offers little but stagnation, possibly in the shadow of empire(s).   All in all, the risk factors for global war have receded in the past two decades but they cannot be regarded as non-existent.

As far as one can tell, neither the United States, nor the Chinese defense establishments envisage the possibility of a global war in the foreseeable future.   The United States' Quadrennial Defense Review of 2006 had no mention of such a contingency, being all about the 'long war' on terror. The 2010 review endorsed nuclear deterrence but no more than hinted at possible future conflicts, seen to hinge on whether "rising powers fully integrate into the global system". According to the 2010 Department of Defense report on China's "military and strategic developments": "while remaining focused on Taiwan, China will, by 2020, lay the foundation for a force capable to

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[3]. Can probabilities be assigned to the occurrence or non-occurrence of global war in the next few decades?   The sequence of five global wars just discussed might yield a sixth case. Furthermore, estimates may be made of the relative strength of trends and/or processes that may foster or hinder such an event, or event-sequence. .Such probability rises as the postulated transition to the macro-decision phase draws nearer.   Section 2 gives examples of such trends.

accomplish broader regional and global objectives".

China's long-range posture has been, so far, in line with the "Twenty-four character strategy" laid down by Deng Xiaoping c.1991, (apparently in response to the collapse of the Soviet Union): "observe coolly/ secure our position/ cope with affairs calmly/ hide our capabilities/ bide our time/ maintain a low profile/ never claim leadership".   This last phrase, *never claim leadership.* may in long cycle perspective be the most interesting: it seeks to avoid placing China in the position of *challenger* that has been the hallmark of earlier global wars. (A later addition to the "24", "make some contribution", also points to the awareness of the necessity to seek engagement for a "harmonious" world.)

That is not the only instance of Chinese leaders formulating a coherent global strategy on the basis of historical experience.   In November 2003 the Politbureau held special sessions to study the "rise of great powers", and these were followed by similar discussions of "China's peaceful rise" at lower levels of party organization. In the discussions that ensured, critics observed that the historical record of the rise of great powers is fraught with wars and wondered if China was following the same route. "Peaceful rise" soon morphed into President Hu's "harmonious world".

In late 2006 Chinese Central Television broadcast a 12-part documentary program prepared by the team of historians that had earlier briefed the Politbureau. The series depicted "the experience of nations and empires [China] had once condemned", Portugal, Netherlands, Britain, the United States etc., (all long cycle powers), putting much stress on economic development.   In 2007, in critique of long cycle theory, a member of a PLA (Peoples Liberation Army) think tank (Cui 2007), affirmed that China's rise in sea power is not incompatible with the "perpetual peace of humanity" that is "irreversible".

As of 2010, the full implications of China's "peaceful rise" are yet to be spelled out. Some observers wonder, though, if, Deng's "24" 'hide and bide' strategy is still in force; The 2006 White Paper laid down a three-step strategy for modernizing national defense: "the first step is to lay a solid foundation by 2010; the second is to make major progress around 2020, and the third is to basically reach the goal of building informatized armed forces and being capable of winning informatized wars by the mid-21st century". While maintaining only a minimal nuclear deterrent, China has been widely noted to be placing emphasis on building up sea power, not only launching a large submarine force and developing missiles capable of striking carriers at long distances, but also apparently planning, for the next decade, a force of multiple operational aircraft carriers with support ships.   It is also fielding an independent (apparently dual-use) space program maintaining numerous satellites, and aimed at a manned moon mission by 2017 and the completion of a Mir-class space station by 2020. All this would indicate that its military power is yet to peak, apparently in the second quarter of this century.

That is why, in the light of all considerations, long cycle theory affirms a residual possibility that, in the phase of deconcentration (multipolarity) and because of weak institutionalization at the global level, systemic inertia might yet break the thin thread holding up the sword of Damocles suspended over humanity.   A bid for regional security that others view as hegemony might, unwittingly and as in the past, set off a global confrontation.   As noted, in the long cycle timetable, the formative phase of robust global organization is expected basically in the next cycle (LC 11), sometime early in the

22nd century.   In the meantime, nation-states remain the weightiest part of multi-level (global, regional, national, and local) governance, and accident, miscalculation, or madness, or reliance on faulty memories or irrelevant precedents might unleash unanticipated, and disastrous, consequences.

Students of world politics, such as John Mueller (1989) have urged a strong case for the "obsolescence of major war".   They argue that major war (or is it all wars? that is not always clear) might disappear from human practice and become abnormal, just as slavery, or dueling, that are now seen as abhorrent, are now unthinkable, and have faded away, not so long ago.   War that before 1914 was thought to be virtuous and ennobling is no longer so regarded, and prestige and status accrue to economic performance.   If major war is unthinkable, then maybe scholars should avoid discussing it, and decision-makers might let it slip from conscious thought and never consider embarking on such? A more recent examination of these arguments appears in *The Waning of Major War*, edited by Raimo Vayrynen (2006).

These are powerful ideas, but they do not cover all of the ground.   Mueller dismisses the thought that war needs to be replaced, in the manner of William James, "by some sort of moral or practical equivalent". But he refuses to
recognize that past global wars have had formative consequences for global politics, and that such a function must continue to be performed, albeit in new forms.   In any event, so long as some states retain their nuclear arsenals, and other try to emulate them, the possibility of major war is not entirely unthinkable. The accession to nuclear power status of India, Pakistan, North Korea, and such a prospect for Iran, has been greeted by wide popular acclaim by their respective publics.

2.   Some possible substitutions

The question is: what might replace global war?   What aspects of recent world politics might be so labeled?   What emergent process might be recognized as trending in that direction, offsetting systemic inertia and the thought that "war has always been part of human existence'?

This section features brief discussions of three such lines of thought, and actual or possible action: the concept of "democratic peace", the "Global Zero" action plan that aims at a "world without nuclear weapons", and the implications of plans for "planetary defense".

2.1 "Democratic Peace"

In recent years, the proposition that 'democracies rarely if ever fight each other' has gained wide acceptance among scholars, and has even had an impact on policy-making. It is supported by empirical research on wars of the last two centuries that has shown that "democratic dyads' are markedly less violent.   This is not to be confused with the claim that democracies are pacifist or do not fight wars well because when they do fight, as in recent global wars, they tend to prevail.

An original source for this line of argument are propositions first advanced by Immanuel Kant in an essay penned in 1795 in which he declared that a conjunction of three conditions, republican regimes, a federal structure, and commerce, would tend to bring

about a condition of 'Perpetual Peace'. It is noteworthy that these conditions also now known as the 'Kantian peace' are quite close to the long cycle and its co-evolutionary processes that make up the emergence of the global polity
by a process of self-organization (Modelski 1991, 2010).

For estimating the strength of 'democratic peace' it is necessary to look not just at 'democratic dyads', or even at the formation of a community of democracies but at the status of democracy at the systemic level.   For a condition in which say, one half of the world population lives in democracies will tend toward maintaining peace for that segment of humanity but not necessarily for the other half. To act as a factor decisively influencing the coming macro-decision, it would be necessary for the world system to reach a condition of overwhelming majority for democracies, accounting for, say, 90 per cent of the world population.   On current estimates, represented in Table 3 below, such a condition is unlikely to be attained until later, after the middle of this century.   That would suggest that 'democratic peace' cannot be counted on for averting global war in the current cycle.

Table 3: Predictions for a democratic world

Author	90 % democratic (population) (year)	100 % democratic (population) (year)	Method
Modelski and Perry (1991)	By 2075		Logistic innovation-diffusion model, POLITY data for 1800-1986
Doyle (1997)		By 2050-2100 (Liberal republics)	Arithmetic, data for 1800-1990
Rummel (2006)	By 2071	By 2096	Polynomial regression, Freedom House data, 1900-2000
Rummel (2006)	Expect it by the middle of the century; but due to speed-up (critical mass) might make it in second quarter of the century		Personal judgment

2.2 "Global Zero"

Almost as soon as the two nuclear bombs exploded over Japan in the closing act of the last global war, plans began to be drawn up for taming, and even abolishing this new weapon.   The Acheson-Lilienthal committee (1946) drew up a proposal (that became the substance of the Baruch Plan) under which "no nation would make nuclear bombs" and all "dangerous" activities would be managed by an international authority.   In 1961, President Kennedy launched a design for "general and complete disarmament" that

called (in the McCloy-Zorin joint statement) for the elimination of all nuclear stockpiles and of all means of delivery of weapons of mass destruction.   The Non-Proliferation Treaty of 1968 that was the main outcome of that initiative, continues to bind all its parties "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament…".   The NPT set the stage for the strategic limitation (START) talks that brought, i.a. the US-USSR "Agreement on the Prevention of Nuclear War" (1972). Soon after attaining power, Mikhail Gorbachev, in a letter to President Reagan, broached a proposal "for the complete liquidation of nuclear weapons throughout the world … before the end of the present century", a proposal that was seriously discussed but failed of adoption at the Reykjavik summit (1986).

The end of the Cold War reduced tensions, and brought such a significant decline in the both the Russian and the American stockpiles of nuclear weapons (roughly halving them) that the urgency of the problem appeared to recede.   But in the new century, continuing critiques of nuclear deterrence, the fear of terrorists acquiring such weapons, and rising problems of proliferation (North Korea, Iran, etc) gave new life to plans for abolishing nuclear weapons. [4] That is why President Obama's Prague speech (April 2009) declaring that the United States seeks "the peace and security of a world without nuclear weapons" (and carefully qualified: "perhaps not in my lifetime") was not really such a radical departure but a continuation of a long line of practical statecraft.   It was followed by a meeting with President Medvedev, the signing of the New Start treaty with Russia, and the launching of the "Global Zero" initiative: "an international, non-partisan effort …dedicated to achieving the phased, verified elimination of all nuclear weapons". Part of the Initiative is the Global Zero Commission of 23 members[5] that drew up a plan for a step-by- step process to achieve the goals of "global zero". Key elements of that action plan, adopted at the "Global Zero Summit" in Paris (February 2010), feature in Table 4 below.

At this time, Global Zero appears to be carefully thought out, well-staffed, and in tune with important segments of the interested public. In contrast to grandiose plans for 'general and complete' disarmament, it seems to have assimilated lessons from decades of arms control experience by choosing a narrower target, nuclear arms only, In contrast to earlier insularity, when schemes (e.g. the Baruch Plan) were launched without any external input, or arms talks were confined to Soviet-American contexts. Global Zero has from the outset established a multilateral support system founded upon an appeal to world opinion.

Table 4: Outline of the "Global Zero" process 2010-2030.

Phase 1 2010 - 2013	Following the conclusion of a START replacement accord, negotiate a bilateral US-Russian accord to reduce warhead totals to 1,000 each (by 2018); By ratification of US-Russia accord, all other nuclear weapons countries freeze total of their warheads, and commit to multilateral negotiations.

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[4]   Sparking the contemporary debate was a January 2007 *Wall Street Journal* article by W. Perry, G. Schultz, H. Kissinger and S. Nunn , "A world free from nuclear weapons". A review of the issues is G. Perkovich and J.M. Acton's (eds) *Abolishing Nuclear Weapons: A debate* (2009).

[5] Made up of American (5), Russian (5), Chinese (3), Indian (3), Pakistani (2), Japanese (2), French (1), UK (1), and German (1) political and military figures..

Phase 2 2014- 2018	In a multilateral framework, US and Russia cut warheads down to 500 (by 2021; while others freeze until 2018, and proportionately cut by 2021. Establish comprehensive verification and enforcement,(no notice, on-site). Strengthen safeguards on civilian nuclear fuel cycle.
Phase 3: 2019-2023	Negotiate legally binding global zero accord, for all nuclear capable countries, for a phased, verified, and proportionate reductions of all nuclear arsenals to zero warheads by 2030.
Phase 4 2024 - 2030	Complete the phased, verified, proportionate dismantlement of all nuclear arsenals to zero total warheads by 2030, and continue the comprehensive verification and enforcement system prohibiting the development and possession of nuclear weapons.

Source; "Global Zero Action Plan, February 2010" at http://static.globalzero.org/

The United Nations Security Council endorsed the goal of "a world without nuclear weapons" in September 2009. The Nuclear Posture Review of the United States Department of Defense (released April 2010) is guided by that same idea (that "will not be achieved quickly"). An unprecedented Nuclear Security Summit convened in Washington in May of that year. NATO's Strategic Concept for the coming decade (adopted November 2010 in Lisbon) committed the alliance to the goal of "creating the conditions for a world without nuclear weapons" but also reconfirmed the centrality of nuclear deterrence "as long as there are nuclear weapons in the world".

This is an ambitious start to an ambitious project, but also one that is only just starting in earnest and has yet to show an effective track record. The New Start treaty, that may be thought of as a foundation stone for "Global Zero", is relatively modest, and provides for a cut in each side's warheads from 2,200, to 1550. It reduces the number of deployed delivery vehicles (strategic missiles, submarines, bombers) to 700, with another 100 in reserve, from a current level of about 850 for the United States, and 565 for Russia. It also reestablishes a system of mutual inspections. It was ratified by the US Senate (December 2010) by a vote of 71:26, but only after a prolonged and arduous debate.

The debate revealed a growing divide between Democrats and Republicans on what the nuclear agenda should be about. What was thought to be a bipartisan issue turned out not to be not quite so. Leading Republican senators launched a serious of criticisms of perceived flaws of the treaty, in respect of missiles defenses, tactical nuclear weapons, verification etc. Some even began to question the legitimacy of the goal of a "nuclear-free world" itself. Onward, what one headline summarized as an "uphill climb for Obama" was likely to get "steeper".

Will motivated leadership persist for two more decades? Years of tough politicking, deals, and negotiations lie ahead, not only domestically among the nuclear powers - some of which, of only recent vintage - but also with all (some forty) nuclear-capable states all of whom must be brought into the system of inspection and enforcement. And if enforcement will be needed, then wars might also be in prospect.

In a long cycle perspective, Global Zero seems as if timed toward completion at the exact moment when the global political system will be entering upon the time of macro-decision. But might it in fact make the world safe for conventional warfare? It certainly would dismantle nuclear deterrence that has been in place for more than half-century

and, some have claimed, has helped to secure systemic peace. In the view of others that claim is doubtful and unverified, and the world would be better off without it. In long cycle terms, the general (global-level) peace so far among the major powers since 1945 has been entirely unsurprising, as first argued in 1985.

The critics of Global Zero have found their voices in the Senate debate, calling the project, "a fantasy", a "utopian dream", if not outright "dangerous". Its advocates claim, on the other hand, that it stands for "an idea whose time has come". For all we know, it might come just in time to avert a devastating conflict. All things considered, it might yet succeed. And if it does, it would be an achievement of major proportions, easily the greatest and most complex project of political reconstruction and global cooperation in humanity's experience. But surprises are likely to be in store, and even if it did succeed in its proclaimed goals it would have to be accompanied (as it might be) by innovative structural change that has yet to be spelled out..

2.3 "Planetary defense"

The parting shots of World War II were heard not only over Japan, but also over missiles fired against London. Just like nuclear questions, those concerning space became prominent only since the end of the last global war in 1945 and, building on the development of rockets, they immediately assumed a competitive character. The Soviet Union launched Sputnik, the first man-made satellite into earth orbit in 1957, claiming it was evidence of the superiority of the Soviet system. The United States' Apollo mission landed humans on the Moon in 1969, and evened out the score. The Soviets were unable to match that success, but they did proceed to build the first space station, Mir 1 (with a ten-year life cycle). Meanwhile, satellites became a powerful aid to telecommunications world-wide, becoming a vital industry.

With the end of the Cold War, space questions assumed more of a cooperative character. By 1994, the space agencies of the United States, Russia, Europe, and Japan, each of which was making plans for a space station, joined forces to construct an international installation, to serve as a research laboratory, and possibly to be used as a test bed for missions to Mars and the Moon. By 2000, the ISS (International Space Station) had become operational. Its cost, that is estimated at up to $150 billion over 30 years, may make it one of the greatest public projects undertaken ever. With a permanent crew of about half-dozen, it has hosted astronauts from 15 countries, and the participation of Brazil, Italy, South Korea and India (in addition to Canada) was being discussed in 2010 (but China's joining was, as of 2009, reportedly meeting with US objections, announcing plans for an independent station by 2020).

Imaginative writing has long suggested that invasions of "aliens from space" might do wonders for human solidarity. More recently, it has been proposed that the dangers from outer space come not from "little green men" but from Nature: from "near-earth objects' (NEOs) , the asteroids and comets that are the products of cosmic evolution, some of which might impact our planet.

An asteroid initially thought to have a diameter of 350 m was first observed in July 2004. Its discoverers gave it the name Apophis, a Greek term for an ancient Egyptian enemy of Ra, Apep, a serpent that dwells in darkness. Initial calculations of its orbit suggested a small probability that it might impact earth in 2029. More refined observations the following year determined that that was unlikely but they did open another window, for

2036, when Apophis would pass through a 'gravitational keyhole' that could lead to an impact (of small probability).   Further observations foresaw another encounter, in 2068.[6]

Earth scientists and others who follow these matters have been aware for some time of the dangers looming in the skies from extra-terestial objects and in response to these concerns a conference for "Protecting the Earth from Asteroids"
(see Table 5) convened in the Los Angeles area early in 2004 under the sponsorship of the American Institute of Aeronautics and Astronautics, and the Aerospace Corporation (a federally funded research and development center).   The conference report declared the risks of a collision to be "small but very real" considering that several hundred of NEOs of a size greater than one km are now known and that any one would be likely to wreak havoc. It was only a few months later that the asteroid Apophis was observed, and initial calculations suggested a close approach.   The second meeting, in 2005, in Washington, DC, carried on the theme of "Planetary Defense" with a broader backing from several major space agencies. Attention focused on conceptual problems of soft deflection of a threatening object, and the necessity for international cooperation. The third meeting, in 2009, transferred the responsibility for hosting the series to an international body, the International Academy of Astronautics.   A fourth one is scheduled for 2011, in Bucharest, Romania.   From an initially chiefly American enterprise, the project has gradually morphed into a wider international undertaking, marked by an approach that is hard-headed and non-alarmist.

Table 5:   Planetary Defense Conferences 2004-2011

	Sponsors	Committees, Participants	Focus/Outcome
2004, February Los Angeles, CA "Protecting Earth from Asteroids"	American Institute of Aeronautics and Astronautics (AIAA), Aerospace Corp.	Organizing Com.: 16 (inc. ESA 2, India 1). 140 participants	Issued white paper: "risk small but very real"; raise NASA funding from $4m;
2007, March Washington DC	AIAA, NASA, ESA, ISRO (India), Japan Space Agency, Aerospace C. Space Studies Institute, GWU, etc.	Steering Com.: 31, Inc. US 23, UK:4, Italy:2, India:1, Russia:1	"Future impacts by asteroids and comets are a certainty" and threaten "even ending civilization and humanity's existence"
2009, April Granada, Spain	International Academy of Astronautics (IAA), ESA (European Space Agency), ISRO, Aerospace Corp.,	Planning Com.:39 Inc. US ~20, Co-chairs: W. Ailor. Aerospace C. R. Tremaine-Smith UK	Emphasis on Apophis; student participation
2011, May 9-12, Bucharest, Romania "From Threat to Action"	IAA, ESA, Romanian Space Agency, Aerospace Corp.	Co-Chairs: W. Ailor, R. Tremaine-Smith; Com.: 37, nc. Romania 2, India 1, China:1.	Emphasis: Apophis, inc.: "organizing, coordinating, and managing an international effort"

Sources: http://www.aero.org/conferences/planetrydefense/; www.esa.int/SPECIALS/, accessed August 16, 2010
.The concept of "Planetary Defense", in conjunction with the Apophis asteroid deserves

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[6]   "99942 Apophis" accessed on Wikipedia, August 16, 2010.

interest in the present context on two grounds.   For one, in defense of easily understood common interests it could lead to the establishment of a basis for long-term cooperation in space on a broad and gradually world-wide foundation. US legislation passed in 2010 that authorizes an unmanned government mission to an asteroid by 2025 is justified in part by planetary defense considerations.

Second, the timing of the asteroid's approaches, 2029, 2036, 2068, makes them largely coincide with the expected macro-decision of the long cycle (~2030 - ~2060).   The perception of a common interest in averting a looming threat and the practical necessities for cooperation in space would likely contribute to smoothing the path toward a non-violent decision for political change.   It might also divert attention and resources from planning for a war in space and would also make inconceivable a threat to the existing, and increasingly dense, network of satellites of various kinds that would become one of the first casualties of a major military conflict, creating a vast ocean of debris in space, and havoc on earth.

3.0   Two "no-global war" scenarios

This brief discussion of three possible "substitutes" for global war makes it plain that these are, at best, only partial solutions to the problem.   Democratization may yet, by itself, produce general peace over the course of the century but may not weather easily the vicissitudes of the nearer future, for instance, if the Chinese model of economic growth without democracy appears more compelling.   "Global zero" is an ambitious project that is well-targeted but demanding single-minded pursuit over a period of two or more decades, and that is hard work.   And "planetary defense" could be more the dream of science fiction writers than an expensive project of uncertain returns.

Long cycle theory is open to two scenarios for averting global war: (1)   fostering 'engagement' and the continued expansion of the multiple networks of cooperation that now extend world-wide, such that the possibility of global war is seen as unthinkable; (2) bringing about, and consolidating, a condition wherein united democracies carry such enormous weight that war against them becomes unthinkable.   These two scenarios correspond to the risk assessment discussed in section 1.3: the first echoes the higher probabilities attached to the no-global war trajectory, the second reflects the lower probabilities suggested by the possibility of systemic war.

3.1   Engagement in global problems

Global war may be averted if, in coming decades, global political structures are duly "refreshed" and looming global problems, are competently managed, with the assent of major powers and world opinion. The problems must be efficiently diagnosed, prioritized, and placed into public agendas in order to garner the necessary support. Priority global problems of the current long cycle (LC 10) dovetail with global political evolution that has now reached the phase of consensus-building. That is, a consensus for the formation of a democratic community is forming as the support base for an institution- and rule-based global political system.

Long cycle theory makes it plain that global politics is not just about selection for global leadership (or, more loosely, about who's No.1?) but also about policy agendas and solutions for global problems.   Obviously, these are related questions, in as much as

some candidates for global leadership (those with imperial ambitions) also stand for some well known agendas. In principle each candidacy should be evaluated first of all in terms of its agendas and the problems most likely to be attempted by it.   Agendas need to be seen to serve the public interest if they are to command wide approval.

The summation of the chief characteristics of the five global wars of the past half-millennium found in the Appendix includes, in its last column a brief reference to the outcomes and agendas of those major conflicts. In three cases, the post-global war global system was 'refreshed' with a new occupant in a leadership position while in the case of Britain a second 'term of office' materialized albeit on a new basis after shedding what historians have called its "first empire" in America, and executing an 'industrial revolution'. It is quite possible that a similar "renewal" might occur in the current cycle (LC 10), given the United States' current leadership in the information sector, its modernized, and 'informatized' military forces, and its role in advancing democratization.

Aside from questions of succession the outcomes of the five global wars also bore on matters of agendas, and the "platforms' the parties to these wars were "running' on.   In the case of Portugal, the agenda was clear, the construction of an
oceanic pathway to Asia and building a new trade route, thus laying the foundations of a global system.   That was the 'platform' for which support was sought from the crowned heads of Europe in 1499 (Modelski and Modelski 1988:56-7) and it was implemented by 1515.   For the most recent global wars, those of 1914-45, the principal statements of war aims were President Wilson's "Fourteen Principles" (1918), and Roosevelt-Churchill's "Atlantic Charter of 1941. Such declarations of broad aims and general principles were important because they embodied a claim that the goals being pursued went beyond national interests, narrowly defined, and had more general appeal, and universal interest, something that served as rallying grounds for wider coalitions.

What might be a 'platform' of a candidate for global leadership in the coming decades? One part of such a platform might be the nuclear question.   It stands for an existential problem of a high order and has implications not only for the United States and Russia - known to hold the great bulk (90+ p.c.) of nuclear arsenals - but also for near-nuclear states such as Japan, Germany, or Brazil, that at this time have the capacity but not the political will to go nuclear but might change policies in the future, and finally for the many other countries, e.g. in Europe or in the Middle East or East Asia that might become the victims of nuclear hostilities.   To the last in particular, Global Zero might hold an especial appeal.   It is a project of broad significance but one that cannot succeed without at least the acquiescence of all nuclear-weapon and nuclear-capable states.

On an equally serious note, there also is that well-publicized issue of climate change, likewise bearing the imprint of a potentially existential threat. Like the nuclear issue it affects numerous parties all over the globe, even if some areas may be less exposed to it than others.   Coordination problems are immense, as shown by the difficulties encountered at the Copenhagen meeting in 2009, but quite a few states are making the necessary investments and scoring advances in alternative energy technologies.

An even more interesting, if hypothetical and less likely, plank for a global platform could be drawn from "planetary defense".   If a large enough asteroid were found hurling toward earth, and a space power, or a coalition of space powers (otherwise qualified, and perhaps jointly with non-state actors), were to devise a successful scheme for averting catastrophe, that might go some way toward defining the necessary attributes of

new leadership[7].

On all previous occasions global wars were fought on the issue of imperial ambition and territorial aggrandizement (in defense of power balances). At such times, small but independent states usually sought protection, and often found it, at first in Europe, and more recently elsewhere, among powers of the oceanic-liberal persuasion. There are no empires at turn of the 21st century, but there are imperial memories (or legacies) that continue to influence the policies and public attitudes e.g. of China, or of Russia. Territorial issues have almost vanished from the European area but they do linger elsewhere, where e.g. ocean space could be appropriated for a variety of national purposes. Climate change is exposing the polar regions to potentially fierce competition.

Engagement is the key to global leadership, at least in certain defined spheres. It may take such forms as participation in UN peace-keeping, earthquake, flood or tsunami disaster relief, contributions to international development projects, or counter-piracy operations. Apparently heeding the injunction "make some contribution" China's armed forces have enhanced their capabilities "for the delivery of international public goods" (2010 US Department of Defense China Report). China's Defense White Paper for 2006 listed participation in 21 UN peace-keeping operations, 13 of which were still continuing, as well as numerous exchanges. These were positive signs, even if observers noted problems with transparency.

The method of selection (or re-selection) is at this stage uncertain but must occur either within or without the UN framework. A recent example of a problem-solving mechanism at the global level has been the employment of an existing (non-UN) forum for discussing financial issues (formed in 1999 at the level of finance ministers and central bankers) to respond to the financial crisis of 2007-08. A series of meetings was set in motion at the Summit (heads of state/government) level, convening first at the invitation of the United States in Washington in late 2008, followed by semi-annual meetings in London, Pittsburgh, Toronto, and Seoul. From 2011 the summits will continue annually, supplanting the G-8 system, as the principal forum for the review of financial and economic issues.

The G-20 is, of course, broader than the G-8 that was seen as an assembly of rich Western countries; it importantly includes i.a. China, India, and Brazil, as well as the European Union (EU),[8] and is said to represent 85 p.c. of the world's GDP, 80 p.c. of world trade, and two-thirds of the world population. It is effectively, weighted in a majority-democratic direction. Its work so far has helped to calm the situation but the group has been criticized for being self-appointed, losing momentum, and failing to represent the views of the nearly 150 other UN members that have not been included

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[7] The path of risk where Apophis (diameter now estimated at 270m) might impact in 2036 leads across large parts of southern Russia, and might also produce a large tsunami off the West Coast of the United States. Roscosmos announced (2009) that it will study designs for deflection methods. These include gravitational tractor, kinetic effects, and nuclear bomb. NASA maintains a "Near Earth Object Program" web site on neo.jpl.nasa.gov/.

[8] That means that Europe is represented twice: having Britain, France, Germany, and Italy individually at the table, as well as the EU as such. The EU has a total of 27 members states. The 2010 G-20 meetings included "outreach sessions" with the chairs of the African Union, ASEAN, and NEPAD (New Partnership for African Development).

(directly and/or indirectly).

3.2 Democracies united

Global war might be averted if the world's democracies are so successful in their endeavors, and so powerful in their unity that no other power would dare to confront them or allow a regional conflict to escalate to the global level.

The conditions of such unity might now be within sight.   For as many observers maintain, in a number of dimensions, the world of democracies has been significant as a "majority party" for quite some time.   Democratic countries now comprise over one half of the world's population (with the United States and the European Union (EU) accounting for about 12 p.c., and India - close to 20 p.c. of the world total), and they count over one-half of the members of the United Nations. They have been the sources of innovation in leading industrial sectors and make up over two-thirds of the annual output of the world economy (with the US, and the EU each contributing about 20 p.c.). NATO is a powerful military alliance, such that Russian strategic doctrine now includes reliance on tactical nuclear weapons to offset an inferiority in conventional forces in the European theatre, a neat reversal from the post-1950 situation when NATO planning drew on US nuclear strength to neutralize the Soviet tank armies in East Germany. Democracy to-day is the preferred source of legitimacy for social structures, even if the democratic label is often appropriated on false pretenses. Democracies, finally, are the major sources of debates that define world problems. Only three members of the new G-20 Group
just mentioned do not currently rate as democracies: China Russia, and Saudi Arabia). The rise of China might qualify that picture but does not change it in the medium term.

That being the case, in the past decade, a number of commentators have raised questions about the possibility of a union of democracies.   Among others, Robert Jervis has revived Karl Deutsch's concept of 'security community' originally meant for the Atlantic area, and has argued (2002) that the United States, West Europe, and Japan - that he calls the 'leading powers' now form such a community among members of which "war is literally unthinkable" and "will not occur in the future".
In the 2008 US Presidential campaign, Senator John McCain declared that, if elected, he would sponsor the creation of a "League of Democracies", linking more than 100 democratic nations, to work together for "peace and liberty", as a supplement to the United Nations. Advocates of a 'concert of democracies' argued that it would 'ratify and institutionalize the 'democratic peace'.

These proposals have not been implemented.   To assess their feasibility, Theodore Piccone (2008) reviewed the record of an organization of a more modest scope, the "*Community of Democracies*", an inter-governmental body founded in 2000 in Warsaw at a conference, attended by some 120 delegations, that was convened on the initiative of US Secretary of State Albright and Poland's Foreign Minister Geremek, to "consolidate and strengthen democratic institutions, …jointly to cooperate to discourage" threats to democracy, and to support "emerging democratic societies".

The *Commuity of Democracies*, has since met fairly regularly (in Seoul 2002, Santiago 2005, Bamako 2007, Lisbon 2009, Vilnius 2011) mostly issuing general declarations. But in the overall judgment of Piccone, the organization has "little to show for the effort".

At Bamako, it decided to establish a permanent secretariat, in Warsaw, but with few resources. Between general meetings it is led by a Convening Group, that meets monthly in Washington.   That group was originally composed of seven members: the United States, Poland, India, Chile, the Czech Republic, Mali, and South Korea, and has now expanded to number 17, including I.a. Italy, Mexico, and South Africa but what is most notable about this "clumsy and non-transparent" body is the absence of Britain, France, Germany, and/or Japan.

A new development has been the Democracy Caucus established at the United Nations that backed the creation, in 2005, of a voluntary UN Democracy Fund with over $95m in pledges; by 2009, some $58.7m for 204 projects "to support democratization throughout the world" had been channeled though it   But, overall, Piccone calls the Caucus "largely moribund". Another novel development has been the institution, for meetings from 2007 onward, of an "Invitation Process" by an independent International Advisory Board, that would vet the democratic credentials of states to be invited to the meetings. For the 2007 meeting, the Board recommended that 54 countries, including Pakistan, Russia, and Singapore, be not e invited, but the Convening Group declined 28 of these decisions, and i.a. brought Russia in in an 'observer' status, but did disinvite Pakistan and Singapore.

What are the reasons for this mixed performance? According to Piccone, most European governments either participated reluctantly or outright opposed the initiative because they feared it represented "the start of a US campaign to undermine the UN, to isolate China and/or block the ascension of Europe". "The White House's cloaking the war of Iraq as a crusade for democracy in the Middle East …was probably the main culprit for the failure of the CD to get off the ground". Fears were aroused that this might be a campaign of "the West" for "invading sovereignty in the name of promoting democracy".   And another major concern was that this move might spark a new cold war.

The experience of the *Community of Democracies* so far suggests that even if more than one-half of the world might be thought to be democratic, that part cannot be treated as a monolithic bloc. Two conceptual issues help to clarify this problem: (1) a community is not an alliance, and democracy means more than a functioning electoral system; (2) global political leadership does not translate smoothly into community guidance, or support.

The *Community of Democracies* is not an alliance with a clear and specific purpose; it is an intergovernmental, hence political, organization operating in the context of a diffuse-character, general purpose, social association with membership of multiple loyalties. It brings together a pool of possible cooperators but does not guarantee cooperation on any one aim.   The glue binding communities are common memories, membership, ceremonies, and language.   Moreover, global leadership, that is a political office, does not automatically translate into a position of community guide.   When weighty questions arise, such as participation in warfare, that might be urged by political leadership, they might not reflect the legitimacy of the issues involved, and the merits and justice of rival claimants. Support is hard to garner for a preventive war, but is more likely to come forth in case of unprovoked aggression (other things being equal).

In short, the unity of democracies is not to be taken for granted, and needs to be earned, even by beacons of democracy, by the quality of their societies, and the justice of their

policies. Democracies hold formidable assets when entering international competition: they inhabit a zone of peace, they are stable communities open to new ideas, their economies sponsor innovation-based global lead industries, and their political systems work. But they cannot be expected to march in lockstep, and they might be subject to divisive campaigns. A community of democracies might be a powerful engine of cooperation - possibly up to averting a global shootout, but it also calls for great care, consumes a lot of energy, and requires regular maintenance, if it is to serve the cause of global "democratic peace". On the other hand, a strong alliance would likely comprise both democracies and non-democracies.

4. Avoiding global war is not enough

Avoiding global war is not enough if all it brings about is a postponement, pushing the problem farther into the future, 'kicking the can down the road', as it were.   Merely postponing a major eruption in a highly interconnected world by skilful negotiations or grudging concessions is possible but is not really desirable for the long term because it delays averting it, for good, by fashioning necessary adaptations in a world system that is changing in a number of directions.

Theory suggests that the coming phase of the long cycle is one of 'macro-decision', that will bring about a selection or re-selection to global leadership, and a renewed agenda for global politics.   It is conceivable that the office of global leadership will be redefined in a narrower sense of care of global problems but its institutionalization on a firmer basis is uncertain.   Much will depend on the way solutions are found to such global problems as managing structural change, abolishing nuclear weapons, adapting to climate change, and/or meeting extra-planetary dangers.   All these problems admit of cooperative solutions, and should they foster broad areas of engagement, then global war might become truly unthinkable.

Bibliography

Cui, Jian-shu   (2007)   Cyclical Logic in the Transition of Hegemony", on
http://faculty.washington.edu/modelski/Cyclicallogic.html

Devezas, T. and G. Modelski   (2003)   "Power Law Behavior and World System Evolution: A millennial learning process",   *Technological Forecasting and Social Change*, 70, 819-859.

--------------   (2008)   "The Portuguese as system-builders" at pp. 30-57 of *Globalization as Evolutionary Process*, G. Modelski, T. Devezas, and W.R. Thompson eds.   London: Routledge.

Doyle, M. W.   (1997)   *Ways of Peace and War, N*ew York: Norton

Jervis, R. (2002) "Theories of war in an era of Leading-Power peace" *American Political Science Review*, 96(1), March, 1-14.

Modelski, G. (1978) "The Long Cycle of Global Politics and the Nation-state" *Comparative*

Studies in Society and History, 20(2), April,

------------- (1987) *Long Cycles in World Politics*, London: Macmillan.

------------- (1990) Is world politics evolutionary learning? *International Organization*, 44(1), Winter, 1-24..

------------ (1999) "From Leadership to Organization: The Evolution of Global Politics" at pp. 11-39 of V. Bornschier and Ch. Chase-Dunn eds. *The Future of Global Conflict*, London: Sage.

------------ (2010) Emergence of a global polity, *Encyclopedia of Life Support Systems, (*eolss.org*)*

----------- and Sylvia Modelski eds. (1988) *Documenting Global Leadership*, London: Macmillan.

Modelski, G. and P. Morgan (1985) "Understanding Global War" *Journal of Conflict Resolution,* 29(3), September, 391-418.

Modelski, G. and G. Perry (1991) "'Democratization from a Long-term Perspective", at pp. 19-36 of N. Nakicenovic and A. Gruebler eds. *Diffusion of Technology and Social Behaviour,* Berlin: Springer.

Modelski, G. and W.R. Thompson (1988) *Sea power in global politics 1494-1993*, London: Macmillan.

----------- (1989) "Long cycles and global war" at pp.23-54 of M.I. Midlarsky ed. *Handbook of War Studies*, Boston: Unwin.

Mueller, J. (1989) *Retreat from Doomsday: The Obsolescence of Major War.* New York: Basic Books.

Piccone, T.J. (2008) "Democracies in a League of their own? Lessons Learned from the Community of Democracies" *Brookings Foreign Policy Paper,* Number 8, October.

Rummel, R. (2006) "The Democratic Peace Clock" at www.hawaii.edu/powerkills/DP.Clock.HTM

Thompson, W.R. (1989) *On Global War: Structural-Historical Approaches to World Politics,* Columbia: University of South Carolina Press.

Vayrynen, R. ed. (2006) *The Waning of Major War: Theories and Debates*, London: Routledge'

Wright, Q. (1941/1965) *A Study of War*, Chicago: University of Chicago Press, 2nd ed.

Appendix: Five global wars: basic data

Global wars	Global power alignments* Challenger#	Other participants	Trigger	War theaters	Agendas/ Outcome
World Wars I and II 1914-1945 LC 9	Germany#, (Japan) v. Britain, France, Russia/USSR, USA	Austria-Hungary, Italy	Imperial decay; (Ottoman, Hapsburg); Belgian neutrality; German claims	Europe: East and West West Asia and Africa, China, Japan, Southeast Asia	US global leadership; United Nations System Atlantic Charter
French Revolutionary and Napoleonic 1792-1815 LC 8	France #, (Spain) v. Britain, Russia	USA, Prussia, Austria	French revolution, French attack on Dutch Republic	Europe: West and East, North Africa, North America	Britain's global leadership renewed, Concert of Europe,
Wars of Grand Alliance, Spanish Succession 1688-1713 LC 7	France # (Spain) v. Britain, Dutch Republic	Austria, Sweden (Great Northern War 1700-21)	French moves in Germany; England's "Glorious Revolution;	Low Countries, Germany, North America, Baltic Sea	Britain's global leadership; Balance of power in Europe
Dutch-Spanish 1581-1609 LC 6	Spain # v. Dutch Republic, England, France		Dutch independence, Spain's aggrandizement	Low Countries, Atlantic, East Indies	Dutch global leadership, International Law; freedom of the seas
Italian and Indian Ocean wars 1492-1515 LC 5	Portugal, Spain, (England) v. France,	Hapsburgs, Venice, Gujerat	French thrust into Italy, Portugal's entry into Asian trade;	Italy, Low Countries, Indian Ocean	Portugal's global leadership (network of, (fleets, bases, alliances); Treaty of Tordesillas partitions ocean space

*   **Global powers as listed in Modelski and Thompson (1988), p.98, Table 5.1.**
     Bracketed names: participating for part of the time.   LC 5-9: long cycle numbers