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Social evolution of international politics: From Mearsheimer to Jervis

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Abstract
I advance an endogenous explanation for the systemic transformation of international politics and offer to neatly resolve the debate between offensive realism and defensive realism through a social evolutionary approach. I contend that international politics has always been an evolutionary system and it has evolved from an offensive realism world to a defensive realism world. Consequently, offensive realism and defensive realism are appropriate grand theories of international politics for two different historical epochs. Different grand theories of international politics are for different epochs of international politics, and different epochs of international politics actually need different theories of international politics. Because international politics has always been an evolutionary system, non-evolutionary approaches will be intrinsically incapable of shedding light on the evolution of the system. The science of international politics must be a genuine evolutionary science and students of international politics must 'give Darwin his due'.

Keywords
defensive realism, evolutionary science, grand theory, offensive realism, social evolution

> To Charles Darwin, on the 150th anniversary of his *Origin of Species*
> 'Give Darwin his Due' (Philip Kitcher, 2003)

Introduction

In the past century, debates between major grand theories of international politics (e.g. realism, neoliberalism) have, to a very large extent, shaped the development of study of international politics as a science. From these inter-paradigmatic debates, two important themes have emerged.

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First, except for a few notable voices (e.g. Mearsheimer, 2001: 2; Waltz, 1979: 66), most scholars would agree that the international system has experienced some kind of fundamental transformation, although they may disagree on what had caused the transformation (e.g. Ruggie, 1983; Schroeder, 1994: xiii; Wendt, 1992, 1999). Second, some fundamental differences divide the different grand theories, and these differences often are derived from some hidden assumptions, not from deductive logic.

These two themes, I argue, are inherently connected and can only be adequately understood together. This article advances an explanation for the systemic transformation of international politics and offers a neat resolution of one of the debates through a social evolution paradigm.

I underscore that an offensive realism world (Mearsheimer's world) is a self-destructive system and it will *inevitably and irreversibly* self-transform into a defensive realism world (Jervis's world) over time exactly because of the imperative of an offensive realism world for state behavior.[1] In an offensive realism world, a state must either conquer or be conquered. This central mechanism of seeking security through conquest, together with three other auxiliary mechanisms, will eventually transform an offensive realism world into a defensive realism world. Due to this transformation of the international system, offensive realism and defensive realism apply to two different worlds rather than a single world. In other words, each of these two theories explains a period of human history, but not the whole. Different grand theories of international politics are for different periods of international politics, and different epochs of international politics actually need different grand theories of international politics.

Before I proceed further, three caveats are in order.

First, although I focus on the evolution from Mearsheimer's world to Jervis's world and the debate between offensive realism and defensive realism, my exercise is *not* another effort to restate the realism case. My central goal, to repeat, is to advance a social evolution paradigm, or, more precisely, a social evolution paradigm toward international politics. I am *not* endorsing offensive realism or defensive realism, in the theoretical sense.[2] Rather, I am interested in offering a neat resolution of the debate between the two realisms.

Second, despite focusing on the evolution from Mearsheimer's world to Jervis's world, I am *not* suggesting that the evolution of international politics starts from Mearsheimer's world and stops at Jervis's world. I focus on the evolution from Mearsheimer's world to Jervis's world and the debate between offensive realism and defensive realism because it is a more convenient launch pad for my thesis. Most students of international politics are familiar with the historical evidence of this evolutionary phase but are less familiar with the empirical evidence for the making of Mearsheimer's world because the evidence will be mostly anthropological and archeological (e.g. Cioffi-Revilla, 1996; Snyder J, 2002; Thayer, 2004).[3] The same social evolution paradigm, however, can explain the making of Mearsheimer's world and can offer important insights into — although not predict — the future of international politics.[4]

Finally, just because international politics has evolved from an offensive realism world to a defensive realism world does not mean that offensive realist states cannot exist in a defensive realism world (think of Iraq under Saddam Hussein). It merely means that the system has been fundamentally transformed and it will not go backwards.

The rest of the article is structured as follows. Section 1 briefly introduces the social evolution paradigm. Section 2 recalls the debate between offensive realism and defensive

realism, making it explicit that an implicit assumption that the fundamental nature of international politics has remained pretty much the same has been the critical cause why this debate could not be resolved. Sections 3 and 4 together present the case that international politics had evolved from an offensive realism world to a defensive realism world. Section 3 identifies 'to conquer or be conquered' — the imperative for state behavior in an offensive realism world — as the fundamental mechanism behind the transformation. Section 4 underscores selection against offensive realist states, negative learning that conquest is difficult, and the rise and spreading of sovereignty and nationalism as the three auxiliary mechanisms behind the transformation. Section 5 explores the implications of a social evolution paradigm for theorizing international politics and managing states' security. A brief conclusion follows.

The social evolution paradigm toward social changes

A systematic statement on the social evolution paradigm can only be offered elsewhere. This section briefly introduces the social evolution paradigm, focusing on the aspects that are most relevant for the discussion below.[5]

Evolution and the evolutionary approach

The evolutionary approach deals with systems populated by living creatures. These systems inevitably undergo changes through time. The process of change proceeds in three distinctive stages: variation (i.e. mutation), selection (i.e. eliminating and retaining some phenotypes/genotypes), and inheritance (i.e. replication and spreading of some genotypes/phenotypes). The process runs infinitely so long as the system exists.

Two distinctive characteristics of the evolutionary approach are most relevant for the discussion below.

First, the evolutionary approach neither completely proves nor predicts specific evolutionary outcomes because evolution allows accidents (e.g. the earth hit by an asteroid) and mutations are randomly generated.[6] The strength of the evolutionary approach lies in that it provides a *coherent and complete* explanation for the wonders of life, whereas non-evolutionary or partially evolutionary approaches cannot. The evolutionary approach is elegant — all it needs is the single mechanism of variation–selection–inheritance.[7] The evolutionary approach also subsumes all other micro- or middle-level mechanisms (e.g. punctuated equilibrium): the evolutionary approach, as Daniel Dennett (1995: 62) put it, is 'a universal acid' that dissolves everything.

Second, the evolutionary approach is *not* directional. Evolution may look directional (in hindsight), but the 'directionality' is caused by the random mechanism of variation–selection–inheritance. Moreover, the seemingly directional nature of changes may come as the unintended consequences of micro-level forces interacting with accidents.

Natural (biotic) evolution versus social evolution

Two systems — the biotic world and human society — are the natural domain of the evolutionary approach: these two systems can only be adequately understood with an evolutionary approach. While the evolution of the biotic world and the evolution of human

society share some fundamental similarities, they also harbor fundamental differences, and the fundamental differences between the two systems can be traced to the emergence of a new force at play in social evolution. Unlike biological evolution where only material forces are at play, social evolution has a whole new force — the ideational force — at play. The presence of ideational force in social evolution gives social evolution all the fundamental new characteristics that biological evolution does not possess.

Most prominently, while objective reality in the biotic world is all material, objective reality in human society is more than material: the objective world of human society consists of not only material but also ideational parts, and some social realities (e.g. professors) cannot exist without a contribution from ideational forces. Of course — and this must be emphasized unequivocally — *no* social realities can exist without contribution from material forces: ideational forces alone cannot create social reality. As such, a social evolution paradigm toward social change must be both materialistic and ideationalistic, although it must give material forces the ontological priority (Searle, 1995: 55–6).[8] Moreover, a social evolution paradigm brings material forces and ideational forces into an *organic* synthesis: material forces and ideational forces interact with each other, rather than function independently, to drive social changes.

Hence, a social evolution paradigm rejects a purely materialistic approach or a purely ideationalistic approach for understanding human society. A purely materialistic approach is obviously untenable because human beings invent ideas. A purely ideationalistic approach will not do either, because even if one insists that an idea matters — and ideas do matter — one still needs to explain how that idea comes to exist, spread, and matter. Unless one is prepared to accept infinite regression, one has to look at the material world for explaining how and why an idea comes to exist, spread, and matter.[9] The social evolution paradigm thus triumphs over not only purely materialistic or purely ideationalistic approaches, but also approaches that do not synthesize the two types of forces organically.

Bringing material forces and ideational forces into an organic synthesis also means rejecting the urge to assign precise or even rough weight to material forces and ideational forces in shaping our history, an urge that has been implicitly or explicitly demanded in the heated debate between constructivism and realism.[10] Although the social evolution paradigm gives material forces the ontological priority over ideational forces — that is, material forces came before ideational forces — it does not imply that ideational forces have played a less significant role than material forces in the whole human history or that material forces trump ideational forces all the time. The approach merely stresses that material forces came before ideational forces and that ideational forces cannot operate totally independently from material forces.

The presence of both material forces and ideational forces also means that social evolution is Lamarckian nested in Darwinism (Hodgson, 2001). Specifically, in the ideational dimension within social evolution, inheritance of acquired characteristics or Lamarckian inheritance — in the form of (learned) ideas or behaviors — not only becomes possible but also becomes a critical force in driving social changes.

The social evolution paradigm explains a system's transformation as well as its relative stability, again with a single mechanism. A social system generally depends on endogenous forces at the micro-level to drive changes at the macro-level. As a result, for most of the time, a system is relatively stable unless it encounters a powerful external shock

(e.g. an asteroid hits the earth). Because micro-level changes accumulate within a system, however, the system can be transformed when micro-level changes accumulate to a threshold level. The social evolution paradigm thus endogenizes a system's transformation by grounding it upon forces at the micro-level: actions and interactions among units (agents) within the system can lead to the system's transformation.

Finally, just as Darwinian evolution is 'the universal acid' for understanding biotic evolution, the social evolution paradigm is also 'the universal acid' for understanding social evolution. For instance, some of the mechanisms singled out below have been recognized as major causes of systemic transformation of international politics separately, but the social evolution paradigm integrates these mechanisms into a unified framework. The social evolution paradigm also subsumes and integrates other micro- and middle-level mechanisms that have been uncovered for understanding international politics such as the struggle for survival, strategic behavior, selection, learning, socialization, and so on (see below).

The offensive realism–defensive realism debate

From the inter-paradigmatic debates of grand theories of international politics, an important division inside the realism camp also emerged. Offensive realism and defensive realism, despite starting from the same set of bedrock assumptions of realism, arrive at fundamentally divergent conclusions about the nature of international politics (Glaser, 1994/5; Mearsheimer, 2001; Taliaferro, 2000/1).

Offensive realism believes that international politics has always been an offensive realism world — an anarchy populated mostly by offensive realist states. Because an offensive realist state seeks security by intentionally decreasing others' security, *international politics is almost completely conflictual*. In contrast, defensive realism believes that international politics has been a defensive realism world — an anarchy populated mostly by defensive realist states. Because a defensive realist state does not seek security by intentionally decreasing others' security, international politics is not completely conflictual despite being fundamentally conflictual.[11]

As recognized by many, if the two realisms start from the same bedrock assumptions of realism yet arrive at fundamentally divergent conclusions about the nature of international politics, then there must be some auxiliary — although sometimes implicit — assumptions that make the differences (Brooks, 1997: 455–63; Taliaferro, 2000/1: 134–43). Because the two realisms' fundamental differences arise from their differences in assumptions, they cannot be resolved by logic deduction. Rather, these differences can only be resolved by 'an empirical duel' that can determine which theory's assumptions fit better with empirical evidence: does history provide more justifications for offensive realism's assumptions or more justifications for defensive realism's assumptions? (Brooks, 1997: 473).

Recognizing that the differences between them are differences in assumptions that can only be resolved by an empirical duel, proponents of the two realisms have tried hard to prove their favored grand theory to be a better theory on the empirical battleground. Strikingly, they have self-consciously decided that if they are going to do a 'duel,' they are going to do it fair-and-square: they are going to do it on the same empirical battleground, or the same history era. Thus, proponents of the two realisms have almost exclusively looked at the modern Great Power Era for supporting empirical evidence, with

only passing mention of other historical periods.[12] Here, an assumption that different theo-
ries of international politics can resolve their differences *only* by looking at the same
historical period is evident.

By assuming that different theories of international politics can resolve their differ-
ences *only* by looking at the same historical period, both camps have implicitly assumed
that the fundamental nature of international politics has *not* changed that much since the
beginning of human history. Consequently, both camps believe that the whole history of
international politics *should and can* be adequately explained by a single (good) grand
theory (i.e. their preferred grand theory). This belief is the ultimate cause why the debate
between the two realisms could not be resolved.[13]

The next two sections offer a social evolutionary resolution of the debate between the
two realisms: the two realisms are appropriate grand theories for two different historical
eras or two different worlds because international politics had evolved from an offensive
realism world to a defensive realism world.

From Mearsheimer to Jervis: The fundamental mechanism

In an offensive realism world in which most, if not all, states are offensive realist states,
a state can achieve its security only by reducing others' security.[14] Consequently, other
than internal growth and armament, a state has to expand and conquer in order to achieve
its security (Mearsheimer, 2001: Ch. 2). This logic of the offensive realism world — 'to
conquer or be conquered' — is the fundamental mechanism that will drive the transfor-
mation of an offensive realism world into a defensive realism world. Moreover, this
fundamental mechanism has no viable replacement.[15]

As states pursue conquests and some conquests succeed, two interrelated outcomes
become inevitable: the number of states decreases, and the average size of states — in
terms of land, population, and material wealth — increases.

These two interrelated outcomes dictate that all surviving states in the system will have
accumulated more resources in terms of land, population, and wealth. Because more land
means more defense depth, more population means more men for fielding a larger army,
and more wealth means more resources for improving the military and buying allies when
necessary, increase in these three factors contributes to an increase in a state's defense
capability. Because defense is usually easier than offense, conquest overall becomes more
difficult. This holds even though a state's increased power may make it more likely to
pursue conquest, because it will still have to face more powerful opponents.[16]

If so, as states act according to the central logic of offensive realism — seeking security
through conquest — for a sustained period of time, their actions will gradually but
inevitably make the central logic increasingly difficult to operate.

A cursory look at the macro-history of international politics easily confirms that the
number of states had decreased greatly and the average size of states had increased greatly.
According to one estimate, there were 600,000 independent political entities in 1000 BC
(Carnerio, 1978: 213). Today, there are only about 200. According to another estimate, human
population had increased from one million in one million BC to 50 million in 1000 BC, and
to 1.6 billion in 1900 (Kremer, 1993: 683). Because the land surface on earth since the last Ice
Age has remained largely unchanged, fewer states occupying the same surface area must
mean more territory and more population for each state. Most importantly, conquest has been

the *indispensable* mechanism behind this process of reducing the number of states and increasing the average size of states (Carnerio, 1978; Diamond, 1997).

To further substantiate my central claim, I offer a more detailed examination of two international sub-systems — ancient China and post-Holy Rome Empire Europe.[17] I show that in both systems, the number of states had indeed decreased and the average size of states had indeed increased greatly due to wars of conquest. As a result, the rate of state death in both systems had decreased greatly, indicating that conquest had indeed become more and more difficult.

Ancient China (1046/4 BC to 1759 AD)

Ancient Chinese history (recorded) has the unique feature of going through cycles of fragmentation to unification, and each episode of state death can be conveniently demarcated as the period between fragmentation and (re)unification. Ancient China thus experienced five major episodes of state death (Table 1).

The first episode lasted from 1046/4 to 221 BC.[18] Between 1046 and 1044 BC, the Zhou tribe, which was a major tribe within the Shang Kingdom, initiated the attack against Shang by commanding an alliance of more than 800 tribes (Sima, 1997 [~91–87 BC]: 82).[19] In 221 BC, the state of Qin eliminated all other states in the system and founded the first unified empire in Chinese history. In this episode of 825 years, more than 800 independent political entities were eliminated, and the rate of state death was more than 97 state deaths per century.

The Qin dynasty lasted barely 20 years and was replaced by the Han dynasty. The (Eastern) Han dynasty went into an implosion in 184 AD. In 190 AD, a major war between two rival factions of warlords erupted and China entered its second episode of state death. At the beginning of this episode, there were about 25 major warlords (Luo, 1999 [~1330–1440]). In 280 AD, the state of Jin, which replaced the state of Wei with a coup, eliminated the last remaining rival state Wu in the system. In this episode of 91 years, about 24 states were eliminated, and the rate of state death was about 26.7 state deaths per century.

In 316 AD, (Western) Jin was attacked by the Huns and the Chinese core plunged into fragmentation again, and it was not until 589 AD that the Sui dynasty was able to unify the Chinese core again. The Sui dynasty was again short-lived (lasting from 581 to 618 AD), and a stable unification was not achieved until 668 AD under the Tang dynasty. In this episode of 353 years, 28 states were eliminated, and the rate of state death had decreased to 7.9 state deaths per century.[20]

The Tang dynasty imploded from 875 to 884 AD and finally collapsed in 907 AD, and China entered its fourth episode of state death. This episode of state death would last until 1276 AD when Genghis Khan's Mongol army finally conquered China. In this episode of 370 years, 20 states were eliminated and the rate of state death had decreased to 5.4 state deaths per century.

The Mongol Yuan dynasty was replaced by the Ming dynasty in 1368. In 1583, the Manchus, which would eventually found the Qing dynasty, began its long drive toward the conquest of China and finally eliminated all the other states in the system in 1759.[21] In this episode of 177 years, seven states were eliminated and the rate of state death had decreased to 3.9 state deaths per century.

Table 1. Pattern of state deaths in Ancient China, 1045 BC to 1759 AD[a]

Period	Western Zhou to Qin	Post-Eastern Han to Western Jin	Easter (Dong) Jin to Tang	Post-Tang to Yuan	Post-Yuan to Qing
Time frame	1045 to 221 BC	190 to 280 AD	316 to 668 AD	907 to 1276 AD	1583 to 1759 AD
Number of states at the beginning	>800	>25	29	21	8
Total territory controlled by all the states at the beginning (million km^2)	~1	~5	~6.5	~7.5	~11
Years of the period (years to eliminate all other states in the system)	825	91	353	370	177
Rate of state death (states eliminated per century)	>97	>26.7	7.9	5.4	3.9
Average time (years) needed to eliminate a state	~1.03	~3.79	~12.6	~18.5	~25.3

[a]The details of the calculations are available upon request from the author. The data presented in Tables 1 and 2 can be manipulated to obtain other results (e.g. the percentage of states eliminated in different periods), but those results do not jeopardize the central conclusion that the rate of state death had steadily decreased.

Post-Holy Roman Empire Europe, 1450–1995 AD

For convenience, I focus on Continental Europe and exclude the littoral states (e.g. the British Isles).[22] Thus, the European international system denotes the area between the British Channel in the west and the Urals in the east, and between the Iberian Peninsula in the south and Norway in the north. Excluding the littoral states has minimal influence on the results due to the overwhelming weight of the remaining Continental states.

I chose 1450 AD as the starting point of my inquiry for two reasons. First, the Holy Roman Empire became highly fragmented in the 15th century and its domain began to resemble a genuine anarchy. Second, states in the modern Weberian/IR sense began to emerge around the mid-15th century and state deaths caused by war began to play a prominent role in shaping European politics.

The whole time span from 1450 to 1995 is divided into five major phases: 1450–1648, 1648–1815, 1815–1919, 1919–45, and 1945–95. Except for the last phase, each phase contained at least one major war that had caused many state deaths (Table 2).

The first episode of state death in post-Roman Empire Europe lasted from 1450 to 1648. At the beginning of this episode, there were more than 581 independent political entities. Major causes of state death in this episode included the unification of France and the Netherlands, the expansion of Sweden and the Austria-Habsburg Empire, the expansion of the Ottoman Empire into Southeast Europe, and the Thirty Years War. By the end of the Thirty Years War (1648), the number of states in the system was reduced to about 260. In this episode of 199 years, more than 321 states were eliminated, and the rate of state death was about 161 state deaths per century.

The second episode lasted from 1648 to 1815. Major causes of state death in this episode included the Napoleonic Wars, the expansion of Prussia, and the expansion of Austria. In this episode of 168 years, the number of states in the system was reduced from about 260 to 63, and the rate of state death was about 117 state deaths per century.

The third episode lasted from 1815 to 1919. Major causes of state death in this episode included the unification of Italy and Germany and World War I. In this episode of 105 years, the number of states in the system was reduced from 63 to 30, and the rate of state death was about 31 state deaths per century.

The fourth episode lasted from 1919 to 1945. In this episode, the major cause of state death was the Soviet Union's annexation of East European states after World War II. In this episode of 27 years, the number of states in the system was reduced from 30 to 25, and the rate of state death was about 19 state deaths per century.

The final episode lasted from 1945 to 1995. Major causes of state death in this episode included the (re)unification of Germany, the collapse of the former Soviet Union, and the disintegration of the former Yugoslavia Federation and the former Czechoslovakia

Table 2. Pattern of state deaths in post-Roman Empire Europe, 1450–1995 AD

Period	1450–1648	1648–1815	1815–1919	1919–45	1945–95
Number of states at the beginning of each period	~581	~260	~63	30	25
Number of states at the end of each period	~260	~63	30	25	35
Years of the period	199	168	105	27	51
Number of states eliminated in the period	~321	~197	33	5	4[a]
Rate of state death (states eliminated per century)	~161	~117	~31	~19	ND
Average time (years) needed to eliminate a state	~0.62	~0.85	~3.18	5.4	ND

[a] These state deaths have actually led to an increase in the number of states in the system. As such, it is not really meaningful to calculate rate of state death for this period.

Republic. Other than the case of German unification, however, state deaths in this episode actually led to the (re)birth of many states. Moreover, none of the four state deaths was caused by wars of conquest and expansion. As a result, the number of states in the system actually increased from 25 to 35.

Summary: state death and the evolution of the international system

Although the two international systems examined above had evolved in different space and time, they had gone through a similar evolutionary path. In both systems, the number of states had decreased greatly and the average size of states had increased significantly,[23] precisely because states in the two systems had been operating according to the logic of offensive realism (i.e. security through conquest and expansion). As a result, both systems eventually reached the same outcome that conquest had become increasingly difficult (although conquest did succeed from time to time), reflected in the steadily decreasing rate of state death.

The conclusion is also supported by evidence from more recent history. After Westphalia, no major attempts at empire-building on the European Continent had ever succeeded. Napoleon and Hitler came really close, but a powerful counter-alliance eventually overwhelmed them. Indeed, in the Great Power Era, only one attempt toward achieving regional hegemony through conquest — the continental expansion by the United States — had actually succeeded.[24] Arguably, the success of the United States was largely due to its unique geographical environment: there was no crippling counter-alliance to counter the United States even though it behaved aggressively (Elman, 2004).

The evidence strongly suggests that as states in an offensive realism world operate according to the imperatives of an offensive realism system, they will also make the logic of offensive realism increasingly inoperable. The offensive realism world is a self-destructive system: precisely because states act according to the logic of an offensive realism world, the world will be transformed. The inherent dynamics of the offensive realism system eventually leads to the system's own demise.

From Mearsheimer to Jervis: Three auxiliary mechanisms

The last section highlights states' pursuit of conquest and expansion according to the logic of the offensive realism system as the fundamental mechanism behind the transformation of an offensive realism system into a defensive realism system. This section focuses on three auxiliary mechanisms — all of them depend on and build upon the outcome engineered by the fundamental mechanism — that will further cement the world into a defensive realism system.[25]

Selection against offensive realist states

At the beginning of an offensive realism world, there may be other types of states (e.g. defensive realist states) in the system. Yet, as the system evolves, only offensive realist states that have attempted and succeeded in conquest could have survived in the system, and other types of states will either be quickly eliminated or socialized into

offensive realist states. Thus, for much of the time of an offensive realism world, only one type of state — the offensive realism type — can exist in the system.

By the time that the offensive realism system reaches its late stage — that is, after the number of states has been greatly reduced and the average size of each state has greatly increased — some states would have accumulated sufficient defensive power against a potential aggressor. As a result, these states can survive mostly on defensive strategies, *if they choose to*. And if some of these states do choose to survive mostly on defensive strategies, then a new type of state — the defensive realism type — emerges in the offensive realism system.[26] Once the system becomes populated by two types of states — an offensive realism type and a defensive realism type — a new selection dynamics becomes possible within the system.

In this late stage of an offensive realism world in which most states have accumulated more power to defend themselves either alone or by forming alliances, conquest becomes more difficult. Moreover, if a state pursues expansion but fails, it will be severely punished by the victors. As a result, more likely than not, offensive realist states will be punished — sometimes severely.

In contrast, while defensive realist states may have to fend off aggression from time to time, they will more often end up in a better position than aggressors, not only because they are more likely to defend themselves successfully but also because they do not have to endure the punishment for losing a war of conquest.

Hence, as the offensive realism systems evolves to its late stage, selection within the system will increasingly go against offensive realist states and favor of defensive realist states. The foundation of this shifting of selection pressure is the increased size of states through the elimination of states.

The negative spreading of ideas: Conquest is getting difficult

If states are strategic actors, then they must also be learning actors: states will learn and adopt ideas that are deemed to be good for their interests and reject those that are deemed to be bad for their interests, *in the long run*.[27]

When conquest has become quite difficult in the late stage of the offensive realism world, a state that pursues conquest is more likely to be severely punished than to be rewarded. If so, one can expect that this state (and other states) will gradually learn the hard lesson that conquest is getting more difficult and rarely pays from its own and other states' experiences of having failed in pursuing conquest. Coupled with the selection pressure against offensive realist states, one can expect a majority of the states to eventually learn the lesson that conquest is getting more difficult at some point, even if the learning process may be slow and non-linear.[28]

As a result, the system of states will gradually become a system populated mostly by states that have largely given up the option of conquest as a means toward security because they have learned the lesson that conquest is difficult and no longer pays. Such a world does not preclude the possibility that some states may remain offensive realist states and some new offensive realist states may still pop up from time to time. Because even these offensive realist states will more often than not be severely punished, however, one should expect that most of them too will eventually learn the lesson.

Further, after a period of time of spreading via negative learning, the idea that conquest is no longer easy can then spread via positive learning. The net result of this whole learning process is a change of belief among states — from one that conquest is easy and profitable to another that conquest is no longer easy and profitable.

Finally, after the idea that conquest is no longer easy and profitable is generally accepted among states, the notion that security via defensive strategies is superior to security via offensive strategies logically becomes the next idea to spread among states. This positive spreading of the idea that security via defensive strategies is superior to security via offensive strategies reinforces the change of beliefs among states — from a belief that conquest is easy and profitable and offensive strategy is a better way toward security to a new belief that conquest is no longer easy and profitable and defensive strategy is a better way toward security.[29]

This rise and spread of ideas, first through negative and then positive learning, is *not* a purely ideational process. Instead, it has a firm foundation in *objective* social reality, and this objective foundation was provided by the repeated failures of conquest and the selection against offensive realist states, which was in turn underpinned by the decreased number of states and increased average size of state.

Only with more and more objective cases of unsuccessful conquest will states gradually learn that conquest has indeed become more difficult and it hardly pays in a world of bigger and harder targets. Only after the idea that conquest is easy has been largely disproved (or the idea that conquest is difficult has been proved) can the idea that conquest is difficult spread via positive learning.

The rise and spread of sovereignty and nationalism

The third auxiliary mechanism behind the transformation from Mearsheimer's world to Jervis's world has been the rise and spread of sovereignty and nationalism, the twin ideational pillars of the defensive realism world.

Many have argued that the gradual rise and spread of sovereignty after the medieval period has played a critical role in transforming the offensive realism world into a more benign defensive realism world (e.g. Ruggie, 1983: 273–81; Spruyt, 2006 ; Wendt, 1992: 412–15). Yet, none of them has explained why sovereignty rose and then spread after the medieval period, but not before.[30]

Sovereignty is essentially a judicial recognition of the norm of coexistence within the state system (Barkin and Cronin, 1994: 111). Hence, acceptance of coexistence as a norm is the first step toward sovereignty. Acceptance of co existence as a norm, however, critically depends on coexistence as a reality, and this reality can only be provided by the increasing difficulty of conquest and expansion. In a world in which conquest is easy, it will be impossible for the norm of coexistence to rise and then spread. As such, sovereignty can only rise after many states recognize the futility of conquest. Counterfactually, why would states respect each other's sovereignty if they can easily conquer each other? Indeed, before World War I, the norm in international politics was the 'right to conquest.' The 'right to conquest' became de-legitimatized only after World War II, with respecting other states' sovereignty gradually becoming the new norm concurrently (Fazal, 2007: Ch. 7; Korman, 1996).

The rise of sovereignty provides the objective foundation for nationalism to rise and then spread because nationalism critically depends on the occupation of a core territory.[31]

The rise and spread of nationalism further cements the system of states into a defensive realism system.

First, consistent with prospect theory (Levy, 1997), a population that takes the state as its own cherished property will be more willing and determined to defend the state (than to grab somebody else's territory). Nationalism thus makes conquest less likely to succeed initially. Moreover, even if the conquest succeeded initially, occupation would be more difficult because a more nationalistic population will be less willing to obey the new master. The net result is to make the whole enterprise of conquest more difficult and thus less rewarding (Edelstein, 2004), in spite of the fact that nationalism might have indeed contributed to the outbreak of many wars (Van Evera, 1994).

Second, because offensive alliances that are geared for conquest and expansion usually cannot form and sustain themselves if parties in the alliance cannot first agree how to divide the potential spoils of conquest, and yet nationalism makes dividing and trading territory more difficult (Jervis, 1978: 205), nationalism makes offensive alliances more difficult to form and sustain. Because an offensive realist state will be less likely to initiate conquest without allies, the net result from this interaction between nationalism and the dynamics of offensive alliances makes offensive alliances more difficult to form, thus again making conquest more difficult and less likely to be pursued in the first place.

Summary

The three auxiliary mechanisms, by building upon the outcome engineered by the fundamental mechanism outlined in the last section, have all played indispensable although auxiliary roles in transforming an offensive realism world into a defensive realism world.[32] Together with the fundamental mechanism, they have gradually but firmly transformed an offensive realism world into a defensive realism world. This conclusion is also supported by more recent developments.

After World War II, violent state death virtually ceased: a phenomenon that had no historical precedence (Fazal, 2007; Zacher, 2001). After World War II, the number of states in the international system has not decreased, but has actually increased. Most evidently, many weak states and small buffer states that would have very little chance of survival in an offensive realism world (e.g. Bhutan, Luxemburg, Singapore) survive today (Fazal, 2007). After World War II, once a country gained *de jure* independence and was recognized by the international community, respect for that country's territorial integrity is the norm and to annex that country — or even part of it — will not be accepted by the international community (Zacher, 2001).[33] Conquest has become not only more difficult, but also increasingly, if not fully, illegitimate in the international system.

For much of human history, most wars were wars of conquest. By eliminating conquest as a principal cause of war, the evolution from an offensive realism world into a defensive realism world has also eliminated many wars. To paraphrase John Mueller (1989), war of conquest and expansion has been becoming or already is obsolete.[34] All these developments suggest that international politics has firmly evolved from Mearsheimer's world into Jervis's world. Our world today is really a much less dangerous world for states' survival than it used to be.

Theoretical and policy implications

I have offered a social evolutionary account for the transformation from an offensive realism world to a defensive realism world.

I reject those theses that cannot imagine transformations in international politics and believe that international politics will be permanently stuck in the offensive realism world.[35] International politics has always been an evolutionary system and the fundamental nature of the system can be transformed even if some features of the system (e.g. anarchy) remain the same.

My thesis improves upon those theses that seek to understand the making of the offensive realism world but say nothing about the possibility of its evolution into a different world (e.g. Mercer, 1995; Thayer, 2004). It also betters those theses that identify different types of anarchies but do not fully explain how one type of anarchy has been transformed to another type of anarchy (e.g. Wendt, 1992, 1999).

Finally, my thesis improves upon those that offer only a partial explanation of the transformation from one type of anarchy to another type of anarchy. Many have emphasized the prominence of norms and ideas in governing international politics without explaining how those ideational forces originate and come to dominate international politics in the first place (e.g. Kratochwil, 1989; Mueller, 1989; Spruyt, 2006). Others do say something about how those ideational forces arise and spread, but either do not include the objective/material world in their historical narrative or do not ground those ideational forces upon the objective/material world, and thus do not offer an endogenous explanation for the origin and spread of ideas (e.g. Adler, 2005; Buzan, 1993: 340–3; Crawford, 2002; Onuf, 1989; Ruggie, 1983; Wendt, 1992: 419, 1999: Chs 6 and 7).

For instance, Wendt argues that the three anarchies can only be sustained by self-reinforcing behaviors, and thus can only be transformed by exogenous changes in ideas and practices: the cause of transformation was purely ideational, according to Wendt (1999: Ch. 6). For Wendt (1992: 418–22), a specific precondition for the transformation from the Hobbesian world to a Lockeian world is that 'there must be *a reason* to think of oneself in novel terms' (419; emphasis added), yet he never explains why states would want to change their ideas and practices, other than heeding exogenous (i.e. Wendt's) preaching.

In contrast, in the social evolutionary framework, states will change their ideas and practices without having to heed exogenous teaching: the transformation of ideas and practices is endogenously driven. Rather than merely emphasizing the impact of ideas behind the transformation, I provide an objective foundation for the rise and spread of the ideas. I show that the gradual reduction in the number of states and increase in the average size of states provides the objective foundation for the rise and spread of several powerful ideas and that the rise and spread of those ideas in turn cement the transformation of the system from an offensive realism world into a defensive realism world.

If my social evolutionary interpretation of the transformation of international politics is sound, then it should have important implications for understanding international politics (and social changes in general). Below, I shall merely emphasize the approach's two immediate implications for international politics, leaving its wider implications for understanding social changes to be dealt with elsewhere.

An evolutionary resolution of the debates among grand theories

If international politics has been an evolutionary system and the system has undergone fundamental changes, then systemic theories — no matter how sophisticated — are inherently incapable of understanding the whole history of international politics. Systemic theories are adequate only for understanding a particular system within a specific time frame. This, I contend, has been the ultimate cause why past debates on the three major grand theories of international politics — offensive realism, defensive realism, and neoliberalism — cannot be resolved.[36]

All three grand theories are systemic theories, but not evolutionary theories. More importantly, in these debates, proponents of these three major grand theories all strive to prove that their favored theory is the better, if not the best, theory for understanding international politics, thus implicitly striving toward the goal of explaining the whole history of international politics with a single grand theory. This belief in a better or best grand theory of international politics for the whole history of international politics is underpinned by the (implicit) assumption that the fundamental nature of international politics has remained roughly the same. As such, these debates have been implicitly trying to impose non-evolutionary theories upon an evolutionary system.

This assumption that the fundamental nature of international politics has remained roughly the same is wrong. International politics has always been an evolutionary system, and its fundamental nature has undergone transformational changes despite the fact that some of its properties (e.g. anarchy) persist. As such, to impose a single grand theory on the whole history of international politics cannot be but doomed from the start.[37]

Once we grasp the ultimate cause why the debates among the three grand theories have not been resolved, a resolution becomes evident: *different epochs of international politics may require different grand theories of international politics*. In other words, the three different grand theories may be for three different epochs of international politics.[38]

To begin with, offensive realism does not seem to fit well with the history of the Great Power Era. Offensive realism predicts that every great power will seek expansion and conquest until achieving regional hegemony because expansion and conquest is conducive to security. Yet, as Mearsheimer himself admitted, all but one major attempt of expansion in the Great Power Era failed and their perpetrators were severely punished. If so, then to predict (and recommend) that great powers will continue to pursue expansion is to demand that great powers strive toward the impossible and act against their own interests, thus violating realism's assumption that states are strategic actors. Indeed, offensive realist states among great powers have become increasingly rare since the late 19th century (Schweller, 2006: 104).[39]

In contrast, defensive realism seems to fit with the history of the Great Power Era much better. Defensive realism predicts that conquests will be difficult and empires will not last, and much of the history of the Great Power Era seems to show that this has indeed been the case (Kupchan, 1994; Snyder, 1991; Walt, 1987).

From the preceding discussion it becomes clear that the reason why defensive realism fits better with the history of the Great Power Era than offensive realism is simply that international politics had begun to evolve toward a defensive realism world by the time of the Great Power Era. By then, the number of states had decreased significantly and the

average size of states had increased significantly. Thus, defensive realists have been looking at the right period of history for their theory by focusing on the Great Power Era. In contrast, because international politics had begun to evolve out of the offensive realism world and toward a defensive realism world by the time of the Great Power Era, offensive realists have been looking at the wrong period of history for their theory by focusing on the Great Power Era.

If so, then while both offensive realists and defensive realists have strived to draw from and explain the history of the Great Power Era, they should actually look at two different historical periods for supporting evidence. Offensive realists should look at the pre-Great Power Era, whereas defensive realists should look at the Great Power Era. Consequently, while the two realisms can be unified *methodologically*, they should not be unified because they are *ontologically incompatible*: they are from (and for) two different historical periods.[40]

The relationship between neoliberalism and defensive realism is a bit more complex. Robert Jervis (1999: 45, 47) rightly pointed out that 'the disagreements between neoliberalism and [defensive] realism have not only been exaggerated, but they have also been misunderstood … and their differences have been at least partly due to their tendency to focus on two different domains: Neoliberalism tends to focus on issues of international political economy and environment, whereas realism is more interested in international security.'

Jervis, however, failed to notice an even more outstanding contrast between neoliberalism and defensive realism. Whereas defensive realism has tried to examine a long period of history of international politics (from Westphalia or 1495 to today) and realism in general has claimed to apply to an even longer stretch of history (from ancient China and Greece to today), neoliberalism has rarely ventured into the terrain of international politics before World War II: almost all of the empirical cases that neoliberalists claim to support their theory have been from the post-World War II period.

Neoliberalism's self-consciously imposed temporal restriction is fundamental — it speaks of something critical about neoliberalism loud and clear. Although neoliberals have also implicitly tried to prove that neoliberalism is valid across the entire history of international politics, they have long conceded the temporal limit of neoliberalism: neoliberals have known all along that while their theory is useful for understanding the post-World War II world, it is largely irrelevant for understanding the pre-World War II period.

Neoliberals are right to concede the temporal limit of their theory. A neoliberalism world can only evolve from a defensive realism world, but cannot possibly evolve directly from an offensive realism world. In an offensive realism world in which the logic is 'to kill or be killed', attempts to pursue cooperation will be generally suicidal, and there will be no repeated cooperative interactions.

Only in a defensive realism world, in which the logic is 'to live and let live', would cooperation finally become a viable means of self-help.[41] Moreover, only in a defensive realism world can ideas and norms that emerged from repeated cooperative interactions have a chance of being solidified into institutions. Repeated or institutionalized cooperation as self-help requires an objective foundation, and that foundation could only be provided by the transformation of the offensive realism world into the defensive realism world. Because the transformation was not firmly completed until after World War II, it is no wonder that neoliberals have self-consciously restricted their inquiries to the post-World War II era.

International politics has always been an evolutionary system and the nature of the system has undergone fundamental changes. As such, different epochs of international politics really do need different grand theories of international politics.

Consequently, the increasingly unproductive enterprise of proving that one grand theory is a 'scientifically' superior theory than another should give way to the more productive enterprise of refining individual grand theories within different historical eras. Indeed, it is impossible to know which grand theory is a scientifically superior theory without first specifying the specific historical epoch that the theory claims to explain. Theories of international politics are not timeless.

Seeking security under anarchy: Past, present and future

Our recognition that international politics has firmly evolved from an offensive realism world into a defensive realism world not only has important implications for theorizing international politics, but also important implications for states seeking security in the present and the future.

Immediately after the Cold War, there was a mini-debate about the future of Europe between Mearsheimer and Van Evera. Starting with offensive realism, Mearsheimer (1990) boldly predicted that Europe's past would be its future because the stabilizing bipolarity had collapsed. In contrast, starting with defensive realism, Van Evera (1990) argued that Europe would not go back to the future.

Our discussion should put the Mearsheimer–Van Evera debate firmly to rest. Although we may not be able to teleologically predict the future,[42] we can confidently proclaim that international politics will not go back to the 'nasty, brutish, and short' world of offensive realism or go through (long) cycles, because an evolutionary system simply does not go backwards or through cycles. As a result, offensive realism cannot possibly be a good guide for states' security strategies today. Defensive realism should be a better guide for states' security strategies today because we are living in a defensive realism world.

Because international politics has always been an evolutionary system and its nature has undergone fundamental transformations, states need different grand theories of international politics to guide their security strategies in different epochs of international politics. A state that follows offensive realism may have prospered in the offensive realism world of the past; but it will be severely punished in today's defensive realism world if it continues to follow offensive realism. In contrast, a state that follows defensive realism may well have perished in the offensive realism world of the past; but it will most likely prosper in today's defensive realism world. A state that follows neoliberalism has a similar fate as that of a defensive realist state, although it may perform better than the latter in the future. Since World War II, the world seems to have been evolving to be more norm-based and institutions-based, although power still matters a great deal.

Because different theories of international politics are for different epochs of international politics, being able to provide a good explanation of a past epoch of international politics should not automatically give a theory the claim that it is a better or the best theory for guiding states' security policies in the present or the future. A theory that can explain our past well may well be a good theory 'scientifically,' but it may not be a good guide to our present or future. More specifically, Mearsheimer was right, but is wrong and will be wrong: his policy prescriptions will produce disasters in today's and tomorrow's world. In contrast,

Jervis was wrong — his policy prescriptions would be suicidal in an offensive realism world — but he has been right and may remain right for a while. Finally, Keohane was wrong — his policy prescription too will be suicidal in an offensive realism world — but might have become more right after World War II and may become more right in the future.

As such, when a state decides to adopt a particular grand theory of international politics for guiding its policies, the state cannot decide solely on the theory's scientific merit — it must first determine what kind of world it is living in and whether a theory is the right theory for its world. It would be a grave mistake to guide policies in one epoch with a grand theory from and for anther epoch *even if* the chosen grand theory is a good theory 'scientifically.'

Conclusion: International politics as evolutionary science

I advance a social evolution paradigm to international politics and offer a social evolutionary resolution of the debate between offensive realism and defensive realism. I argue that international politics has firmly evolved from an offensive realism world to a defensive realism world, and I underscore the fundamental mechanism and three auxiliary mechanisms behind this profound transformation.

Since the Waltzian systemic-structural revolution, students of IR have embraced systemic theories wholeheartedly, and all major grand theories of international politics are systemic theories. Yet, systemic theories are merely dynamic theories (i.e. things are constantly interacting with each other and things do change within the system), but not evolutionary theories because they do not tell us how a system can evolve into a different system (Ruggie, 1983: 285). Without an evolutionary element embedded in it, a systemic theory of international politics can only hope to understand a system's dynamics but not how a system evolves into a different system. As a result, systemic theories cannot offer an adequate understanding of international politics across time and space — only social evolutionary theories can do so.

Consequently, international politics must become an evolutionary science and students of international politics must 'give Darwin his due.'[43] To paraphrase Hermann Muller (1959) (although with a more hopeful note), 150 years without Darwinism in the science of international politics are enough.

Notes

1 'Offensive realism world' and 'defensive realism world' are heuristic labels for denoting fundamentally different historical epochs. The two worlds roughly correspond to Wendt's Hobbesian anarchy and Lockeian anarchy (Wendt, 1992). By 'inevitably,' I merely mean that *given all things*

in place (e.g. the growth of population, the perfection of weapons), the transformation would have been inevitable. By irreversibly, I mean that the system will not go backwards, although some actors may retain outdated ideas and practices.

2 Elsewhere, I show that both realisms are incomplete paradigms and need a more coherent and consistent statement (Tang, 2008a, 2010).

3 For other incomplete treatments on the making of Mearsheimer's world with an evolutionary flavor, see Mercer (1995) and Wendt (1992).

4 Elsewhere, I also show that the social evolution paradigm can be deployed to explain states' behaviors and behavioral changes (Tang, 2008b).

5 In the IR literature, Hendrik Spruyt's explanation for the rise of the sovereign territorial state in Europe comes closest to the social evolution paradigm advocated here (Spruyt, 1994), but he does not offer a systematic statement on the social evolution paradigm. For good reviews on evolutionary thinking (but not social evolutionary thinking) in IR, see Kahler (1999) and Sterling-Folker (2001).

6 Mutations in social evolution may be less random than mutations in natural evolution.

7 In contrast, a creationism explanation needs numerous designs to explain why birds have feathers and why chameleons can camouflage. This characteristic of the evolutionary approach makes it more akin to theories in social sciences than to theories in natural sciences, where a theory's predictive power is crucial.

8 I prefer the dichotomies of materialism–materialistic vs ideationalism–ideationalistic over the dichotomy of materialism vs idealism because idealism can also mean 'utopianism.'

9 Constructivism's taking an almost purely ideationalism stand is thus untenable. For a penetrating critique of constructivism's extreme ideationalism, see Palan (2000). To ground ideas upon the objective and material world is not to reduce ideas to biology, chemistry, or physics.

10 When criticizing Wendt (1999), Keohane (2000: 128–9) called this urge 'primitive.' Within a system, it is often difficult to assign weight to individual factors (Jervis, 1997: Ch. 2).

11 Elsewhere, I show that the fundamental difference between the two realisms really centers on their differences in how to cope with uncertainty over others' intentions and the fear derived from this uncertainty (Tang, 2008a). I prefer the dichotomy of offensive realist state vs defensive realist state because it is more rigorous than other commonly used dichotomies (e.g. revisionist state vs status quo state, power-seeker vs security-seeker). I also explicitly argue that the right yardstick to differentiate offensive realist states from defensive realist states is their different preferences on strategies rather than their different preferences over outcomes or goals. I define the two types of state, provide the rationales for adopting this dichotomy, and address other differences between the two realisms in greater detail elsewhere (Tang, 2010a: Ch. 1). For the distinction between preference on strategies and preferences over outcomes, see Powell (1994).

12 Levy (1982) puts the beginning of the modern Great Power Era around 1495.

13 This is so despite the fact that the historical facts in the modern Great Power Era generally support defensive realism's interpretation of history (Snyder GH, 2002; see below).

14 For simplicity, I use 'states' to denote all independent political entities (e.g. tribes, chiefdoms, states, empires, and warlords). Conquest and expansion were definitely more prevalent before the coming of the state as defined by anthropologists (Diamond, 1997: 291; Keegan, 1993: 91).

15 I thus challenge my thesis' critics to identify alternative explanations that do not have to rely on this fundamental mechanism to drive the transformation of the offensive realism world into a defensive realism world.

16 Conquest becoming more difficult does not mean that conquest cannot succeed. My assertion that defense is usually easier than offense is not underpinned the widely known but deeply flawed offense-defense theory (ODT). I address ODT in greater detail in Tang (2010b).

17 These two systems are selected for their (relatively) complete historical record. For two recent studies of the two systems that emphasize the differences between the two systems, see Hui (2005) and Kang (2005). The differences between Hui's finding and mine are partially due to the fact that she examines a shorter time frame and focuses on 'great powers.' The dynamics uncovered here should also apply to other parts of the world (i.e. Africa, South and North America, the South Asia subcontinent): if their evolution had not been cut off by European colonialism, these parts of the world would have experienced the same evolutionary path as the two systems examined here. A comparative study that tests the balance-of-power theory at the global level with a very long time frame (from 900 BC to 1600 AD) indirectly supports my claim here (Wohlforth et al., 2007). The study shows that in most ancient international sub-systems, empire and hegemony were not only possible but also often robust, thus implying that conquest was relatively easy. The study also suggests that the prevalence of *de facto* balance-of-power among states might have arisen only fairly recently (i.e. post-1600). Such a result also is consistent with my argument that the defensive realism world did not come into existence until fairly recently (e.g. after the 17th–18th centuries), perhaps first in the European system.

18 State death actually started much earlier. I choose 1046/4 BC as the starting point because the war between Zhou and Shang was clearly recorded in written history and its timing has been firmly established by recent archeological research.

19 During the spring–autumn period that followed the war between Zhou and Shang (770–476 BC), more than 180 tribes were recorded in historical texts. I thus take Sima Qian's record of more than 800 tribes at the beginning of Zhou as quite credible. The number of states eliminated in this episode can only go up if those tribes that were loyal to the Shang Kingdom are also counted. Another ancient historical text, *Lu Shi Chun Qiu* (Lu's Annals), put the number of states under Shang at 3000, and the number of states at the beginning of Zhou at 1800. For an earlier discussion, see Cioffi-Revilla and Lai (1995).

20 From this episode on, the number of states in the system is calculated from Tan et al. (1991).

21 The seven states eliminated include Ming, which was briefly replaced by a rebel in 1644.

22 I include Sardinia and Sicily because they were eventually absorbed into modern Italy. Within Continental Europe, I exclude several mini-states that remain constant in the system (e.g. Monaco). I calculate the number of states in the system from three primary resources: Barraclough (1978) *The Times Atlas of World History* (*TAWH*), Braubach et al. (1978) *Gebhardt Handbuch der Deutschen Geschichte* (Gebhardt Handbook of German History, or *GHGH*), and Euratlas (www.euratlas.com). See Table 2.

23 I do not argue that the evolution of the two systems had been linear (i.e. the number of states had steadily decreased and the average size of states steadily increased). Indeed, the two systems had experienced periods of reversal (i.e. the number of states increased in some periods of time). The recent increase in the number of states in the European system supports the argument that it had evolved from an offensive realism world into a defensive realism world (see below).

24 The five attempts at conquest toward regional hegemony identified by Mearsheimer (2001) include Imperial Japan, Napoleonic France, Wilhelmine Germany, Nazi Germany, and the United States. Other major failed attempts at continental conquest in Europe include Spain's expansion under Philip II and France's expansion under Louis XIV.

25 While the third auxiliary mechanism (sovereignty and nationalism) was singled out before (e.g. Ruggie, 1983), it was not presented as part of an overarching explanation. More importantly, an objective foundation for the rise of sovereignty and nationalism was missing (see below). By listing the three mechanisms as auxiliary mechanisms, I am not suggesting that they are dispensable or minor but merely that they cannot operate without the results engineered by the fundamental mechanisms. One can enlist additional mechanisms (e.g. military technology) that have played a role in the transformation, but they are secondary and can be subsumed by the social evolutionary framework.

26 These defensive realist states can be treated as mutants in the biological sense. At the late stage of the offensive realism world, some states can choose to become defensive realist states (see below).

27 Being strategic depends on learning because being strategic means making decisions after acquiring and processing information, and acquiring and processing information is a learning process. The small literature on learning in international politics has largely focused on the process and consequences of learning within a relatively short time frame. For a good review, see Levy (1994).

28 Such a learning process is negative learning. Negative learning means learning from one's own and others' failures, while positive learning means just the opposite. After the rise of constructivism, positive learning has received most attention in the literature. Yet, because human beings tend to continue to do what used to work due to inertia, negative learning may have played an equally important role as positive learning has in the accumulation of knowledge. Learning first through negative and then positive learning itself is a social evolutionary process (Popper, 1979: 261–5).

29 A good indicator for this auxiliary mechanism may be the frequency of war in the two systems through time. Such a calculation, however, will require a major undertaking. Claudio Cioffi-Revilla and his colleagues were perhaps moving toward building a dataset for wars in ancient systems (e.g. Cioffi-Revilla, 1996; Cioffi-Revilla and Lai, 1995), but not much progress has been reported in the literature since the mid-1990s.

30 I do not deal with the diffusion of the sovereignty norm from Europe to other parts of the world. The large literature on state formation in Europe mostly focuses on why and how a particular form of state (i.e. sovereign territorial state) eventually came to dominate in the system (e.g. Spruyt, 1994; Tilly, 1990). This literature assigns an important role to competition among units (e.g. war, regulating and profiting from internal and international trade) for driving the evolutionary process. My interpretation complements this literature by providing a foundation for this process to operate.

31 Thus, nationalism came after sovereignty, although there have been continuous tensions between sovereignty and nationalism as these two ideas co-evolved (Barkin and Cronin, 1994). The literature on the origin and spread of nationalism and its impact is voluminous. For some of the most important works, see Anderson (1983), Gellner (1983), and Smith (1986).

32 I offer two possible demarcation lines for delineating the two worlds: World War II (a conservative take) and Westphalia (an optimistic take). Alternatively, one can take Westphalia to symbolize the budding, while World War II the maturation of Jervis's world.

33 Neither Indonesia's annexation of East Timor nor Iraq's invasion of Kuwait gained international recognition. The only exception might have been India's annexation of Sikkim in 1975. For a more detailed discussion, see Korman (1996) especially Ch. 7.

34 My thesis is less sweeping than Mueller's thesis that major war is becoming obsolete because I only claim that war of conquest has been becoming obsolete. I do not exclude the possibility

that major war is also becoming obsolete. Mueller's thesis is of course a purely ideationalist thesis, and he did not provide any grounds for why states now 'dislike' wars. For a more recent discussion on the waning of major wars, see the collection of essays in Vayrynen (2006).

35 Waltz (1979: 66) put it starkly: 'The texture of international politics remains highly constant, patterns recur, and events repeat themselves endlessly.' See also Mearsheimer (2001: 2).

36 I consider these three theories to be legitimate grand theories of international politics because they roughly capture three distinctive eras of international politics: a world that we had experienced; a world that we have been experiencing; and a world that we may be making (see below). The English School is essentially similar to neoliberalism. I do not consider constructivism to be a legitimate grand theory because it is more an epistemological position and it is almost purely ideational.

37 This is not to deny that debates among the grand theories have advanced our understanding of international politics significantly.

38 Of course, different grand theories can arise in the same epoch because different individuals can have quite different interpretations of the same set of facts.

39 Schweller noted the puzzle that few states have been offensive realist states lately, but offered a non-evolutionary explanation.

40 Mearsheimer (2006: 110) also rejects the possibility of unifying the two realisms, without justifying his position.

41 Mearsheimer (2001: 51–3) emphatically denies that cooperation is a viable means of self-help in his offensive realism world, barring temporary alliances when facing a common threat. Both Jervis (1999: 50, 71–2) and Glaser (1994/5: 60, 67) implicitly or explicitly argued that a defensive realist state should seek extensive cooperation *only* when facing a fellow defensive realist state but not an offensive realist state. Elsewhere, I show that whether cooperation other than temporary alliance when facing a common threat is possible, is a fundamental divergent point between offensive realism theories on the one side, and all non-offensive realism theories on the other side (Tang, 2008a).

42 An evolutionary approach cannot be teleological because evolution allows (exogenous) accidents. Wendt (2003) boldly predicted that international politics would inevitably move toward a 'world state.' I address the possibility of a world state elsewhere, again with a social evolution paradigm.

43 Philip Kitcher (2003) coined the phrase, 'giving Darwin his due.'

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