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RESEARCH

Democratic Peace, Intelligent Belligerence: Evolutionary Psychological Foundations of Interstate Wars

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Abstract

If the democratic peace explains the avoidance of interstate wars, what (besides the absence of democracy) explains their occurrence? Theoretical developments in evolutionary psychology suggest that nations with higher average intelligence may be more likely to resort to interstate wars as a means of resolving international conflict, but that national IQ has no effect on the occurrence of civil wars. This is because civil wars are evolutionarily familiar while interstate wars are evolutionarily novel. The analyses of the Correlates of War data confirm these predictions, and show that, net of economic development, democracy, and world-system status, national IQ has a significantly positive effect on the frequency and scope of interstate wars, but has no effect on the frequency and scope of civil wars. The positive effect of national IQ on interstate wars is larger and more consistent than the negative effect of democracy. Thus intelligent belligerence appears to be a more robust principle in international relations than democratic peace.

Keywords The Savanna principle · The Savanna-IQ interaction hypothesis · General intelligence

It is evident that war – both interstate and civil – has a tremendous impact on the quality of life and wellbeing of all residents of the nations and regions affected by it, both combatants and civilians. Such impact is almost entirely negative. Thus understanding the causes of wars is an important part of understanding what determines quality of life. If the impact of wars on the quality of life of the citizens is almost entirely negative, why does war occur? Why do nations wage wars?

In political science, one of the traditional explanations of interstate wars is the democratic peace proposition (Altman et al., 2021; Rathbun et al., 2025; Ray, 1998; Tan, 2024), which suggests that democracies are less likely to wage wars than authoritarian states are and that democracies do not engage in wars with each other. There are two, mutually exclusive versions of the democratic peace proposition. The first, "dyadic" (Huth & Allee, 2002) or "separate" (MacMillan, 2003) version states that democratic nations are peaceful *only* toward other democracies, while at the same time just as belligerent toward non-democracies as authoritarian states are. In this version, peace (the avoidance of war) requires the interaction (both in the statistical and diplomatic sense) of two democracies. In the second, "monadic" version (Huth & Allee, 2002), democratic nations are uniformly more peaceful and less belligerent toward all other nations (democratic or otherwise) than authoritarian nations are. In this version, peace between two democracies is the result of the additive (rather than interactive) effect of the less belligerence of democratic states, and a war between a democracy and a non-democracy occurs mostly because the latter starts and escalates the conflict.

If the democratic peace explains the absence of wars, what (besides the absence of democracy) explains their occurrence? What factors increase the probability that a nation will engage in interstate wars? What features do belligerent nations have in common? And what (if anything) does evolutionary psychology contribute to international relations in general and our understanding of interstate wars in particular?

Evolutionary psychology has influenced many areas in the social sciences in the last four decades. Its influence extends, not only to the core fields of psychology and anthropology, but also to the neighboring fields of economics (Cosmides & Tooby, 1994; Li, 2026; Rogers, 1994;

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Wisman, 2026), sociology (Horne, 2004; Schnettler, 2026; Simpson, 2003), criminology (Daly & Wilson, 1988; Joyner-Carpanini, 2026; Schwartz et al., 2019), demography (Bock, 1999; MacDonald, 1999; Peñaherrera-Aguirre & Woodley of Menie, 2026), history (Betzig, 2002; Morris, 2022), and public policy (Browne, 2002, 2023; Crawford & Salmon, 2004). With a few notable exceptions (Johnson et al., 2006; Orbell et al., 2004; Rubin, 2002; Zyla & Lopez, 2026), however, political science tends to lag behind this trend. In particular, the field of international relations remains largely untouched by evolutionary psychology. Perhaps because of its origin in psychology and emphasis on sex and mating, its relevance to international relations, which focuses on the most macro issues of relationships between and among nation states, may seem remote. This began to change, however, with the publication of Bradley A. Thayer's *Darwin and International Relations: On the Evolutionary Origins of War and Ethnic Conflict* (2004), Valerie M. Hudson and Andrea M. den Boer's *Bare Branches: Security Implications of Asia's Surplus Male Populations* (2004), Dominic D. P. Johnson's *Overconfidence and War: The Havoc and Glory of Positive Illusions* (2004) and *Strategic Instincts: The Adaptive Advantages of Cognitive Biases in International Politics* (2020), Peter Turchin's *War and Peace and War: The Rise and Fall of Empires* (2007) and *Ultra Society: How 10,000 Years of War Made Humans the Greatest Cooperators on Earth* (2015), Stephen Peter Rosen's *War and Human Nature* (2005), Brian C. Rathbun's *Right and Wronged in International Relations* (2023), Jeremy Garlick's *Evolution in International Relations* (2025), Ming Wan's *Evolutionary Theory in International Relations* (2026), and W. Julian Korab-Karapowicz's *Political Realism: An Evolutionary Theory of International Relations* (2026). Some scholars in international relations are beginning to realize potentially important contributions that evolutionary psychology can make in the study of international relations.

In this paper, I seek to follow others and make a contribution to international relations from an evolutionary psychological perspective. In particular, I offer an evolutionary psychological perspective on interstate wars. I derive two specific hypotheses from the perspective and subject them to empirical tests, using the Correlates of War data (Small & Singer, 1982). The data analyses strongly support both hypotheses.

The Savanna Principle

Adaptations, physical or psychological, are designed for and adapted to the conditions of the environment of evolutionary adaptedness, not necessarily to the current environment (Tooby & Cosmides, 1989). This is easiest to see in the case of physical adaptations, such as the vision and color recognition system.

What color is a banana (Kanazawa, 2012, pp. 23–25)? A banana is yellow in the sunlight and in the moonlight. It is yellow on a sunny day, on a cloudy day, on a rainy day. It is yellow at dawn and at dusk. The color of a banana appears constant to the human eye under all of these conditions, despite the fact that the actual wavelengths of the light reflected by the surface of the banana under these varied conditions are different. Objectively it is not the same color all the time. However, the human eye and color recognition system can compensate for these varied conditions because they all occurred during the course of the evolution of the human vision system, and can perceive the objectively varied colors as constantly yellow (Cosmides & Tooby, 1999, pp. 17–19).

So a banana looks yellow to the human eye under all conditions, *except in a parking lot at night.* Under the sodium vapor lights commonly used to illuminate parking lots, a banana does not appear natural yellow. This is because the sodium vapor lights did not exist in the ancestral environment, during the course of the evolution of the human vision system, and it is therefore incapable of compensating for them. Fans of the 1989 movie *The Abyss* may recall a scene toward the end of the movie, where it is impossible for a diver to distinguish colors under artificial lighting in the otherwise total darkness of the deep oceanic basin. Regular viewers of the TV show *Forensic Files* and other real-life crime documentaries may further recall that eyewitnesses often misidentify the color of cars on freeways at night, leading the police either to rule in or rule out potential suspects incorrectly. This happens because highways and freeways are often lit with sodium vapor lights and other evolutionarily novel sources of illumination, which distort colors to the human eye.

The same principle holds for psychological adaptations. Pioneers of evolutionary psychology (Crawford, 1993; Symons, 1990; Tooby & Cosmides, 1990) all recognized that the evolved psychological mechanisms are adapted to the conditions of the ancestral environment, not to those of the current environment. Kanazawa (2004a) systematizes these observations into what he calls the Savanna Principle: *The human brain has difficulty comprehending and dealing with entities and situations that did not exist in the ancestral environment.*

The Savanna Principle can explain why some otherwise elegant scientific theories of human behavior, such as the subjective expected utility maximization theory or game theory, often fail empirically, because they posit entities and situations that did not exist in the ancestral environment. For example, many players of one-shot Prisoner's Dilemma

games make the theoretically irrational choice to cooperate with their partner, possibly because the human brain has difficulty comprehending completely anonymous social exchange and absolutely no possibility of knowing future interactions (which jointly make the game truly one-shot). Neither of these situations existed in the ancestral environment, but they are crucial for the game-theoretic prediction of universal defection.

As another illustration of the Savanna Principle, individuals who watch certain types of TV shows are more satisfied with their friendships, just as they are if they had more friends or socialized with them more frequently (Kanazawa, 2002). This may be because realistic images of other humans, such as television, movies, videos and photographs, did not exist in the ancestral environment, where all realistic images of other humans *were* other humans. As a result, the human brain may have implicit difficulty distinguishing their "TV friends" (the characters they repeatedly see on TV shows) and their friends, and may respond similarly to both. This finding (Kanazawa, 2002) has led to the birth of a burgeoning subfield of social psychology known as parasocial relationships or social surrogacy (Bond, 2021; Derrick et al., 2009; Gabriel et al., 2018; Jin et al., 2026; Lotun et al., 2024; Saucier et al., in press). Gabriel et al. (2018) explain the election of Donald J. Trump as U.S. President in terms of parasocial relationships by attributing it to the fact that millions of American voters watched him weekly on The Apprentice for many years. A year later, an overwhelming majority of voters in Ukraine elected Volodymyr Zelensky, who played the role of the Ukrainian president on a TV show for four years, to (real) Ukrainian presidency.

Evolution of General Intelligence

General intelligence refers to the ability to reason deductively or inductively, think abstractly, use analogies, synthesize information, and apply it to new domains (Gottfredson, 1997; Neisser et al., 1996). The concept of general intelligence poses a problem for evolutionary psychology. Evolutionary psychologists contend that the human brain consists of domain-specific evolved psychological mechanisms, which evolved to solve specific adaptive problems (problems of survival and reproduction) in specific domains. If the contents of the human brain are domain-specific, how can evolutionary psychology explain general intelligence?

Kanazawa (2004b) proposes that what is now known as general intelligence originally evolved as a domain-specific adaptation to deal with evolutionarily novel, nonrecurrent problems. The human brain consists of a large number of domain-specific evolved psychological mechanisms to solve recurrent adaptive problems. In this sense, our ancestors did not really have to think in order to solve such recurrent problems. Evolution has already done all the thinking, so to speak, and equipped the human brain with the answers in the form of appropriate psychological mechanisms, which engender preferences, desires, cognitions, and emotions, and motivate adaptive behavior in the context of the ancestral environment.

Even in the extreme continuity and constancy of the ancestral environment, however, there were occasional problems that were evolutionarily novel and nonrecurrent, which required our ancestors to think and reason in order to solve. To the extent that these evolutionarily novel, nonrecurrent problems happened frequently enough in the ancestral environment (different problem each time) and had serious enough consequences for survival and reproduction, then any genetic mutation that allowed its carriers to think and reason would have been selected for, and what we now call "general intelligence" could have evolved as a domain-specific adaptation for the domain of evolutionarily novel, nonrecurrent problems. From this perspective, general intelligence may have become universally important in modern life (Gottfredson, 1997; Herrnstein & Murray, 1994; Jensen, 1998) only because our current environment is almost entirely evolutionarily novel.

This theory suggests, and available empirical evidence confirms, that more intelligent individuals are better than less intelligent individuals at solving problems *only if* they are evolutionarily novel but that more intelligent individuals are *not better* than less intelligent individuals at solving evolutionarily familiar problems, such as those in the domains of mating, parenting, interpersonal relationships, and wayfinding (Kanazawa 2004b, 2007). Further consistent with the theory, at the macro level, the average intelligence of a population appears to be a strong function of evolutionary novelty of its environment as well as annual mean temperature (Kanazawa, 2008).

Savanna-IQ Interaction Hypothesis

The logical conjunction of the Savanna Principle and the theory of the evolution of general intelligence suggests a qualification of the Savanna Principle. If general intelligence evolved to deal with evolutionarily novel problems, then the human brain's difficulty in comprehending and dealing with entities and situations that did not exist in the ancestral environment (proposed in the Savanna Principle) should interact with general intelligence, such that the Savanna Principle holds stronger among less intelligent individuals than among more intelligent individuals. More intelligent individuals should be better able to comprehend and deal with evolutionarily novel entities and situations than less

intelligent individuals are, but general intelligence should not affect individuals' ability to comprehend and deal with evolutionarily familiar entities and situations.

There has been accumulating evidence for this *Savanna-IQ Interaction Hypothesis* (hereafter the Hypothesis) (Kanazawa 2010a, b). First, individuals' tendency to respond to TV characters as if they were real friends, first discovered by Kanazawa (2002), is limited to those with below-median intelligence (Kanazawa, 2006a); individuals with above-median intelligence do not become more satisfied with their friendships by watching more television. Second, more intelligent individuals are better able to understand the evolutionarily novel conditions of complete anonymity and impossibility of knowing future interactions implicit in the game theoretic prediction of defection in one-shot Prisoner's Dilemma games, and are thus more likely to defect in such games (Kanazawa & Fontaine, 2013).

Third, less intelligent individuals have more children than more intelligent individuals do, even though they do not want to, possibly because they have greater difficulty effectively employing evolutionarily novel means of modern contraception (Kanazawa, 2005). Another indication that less intelligent individuals may have greater difficulty employing modern contraception effectively is the fact that the correlation between the lifetime number of sex partners and the number of children is positive among the less intelligent but negative among the more intelligent. The more sex partners less intelligent individuals have, the more children they have; the more sex partners more intelligent individuals have, the fewer children they have.

Fourth, more intelligent individuals stay healthier and live longer than less intelligent individuals do possibly because they are better able to recognize and deal with evolutionarily novel threats and dangers to health in modern society (Deary et al., 2004; Gottfredson and Deary, 2004; Kanazawa, 2006b). Consistent with the Hypothesis, however, general intelligence does not affect health and longevity in sub-Saharan Africa, where many of the health threats and dangers are more evolutionarily familiar than elsewhere in the world.

Finally, more intelligent individuals are more likely to acquire and espouse evolutionarily novel values (such as liberalism, atheism, and, for men, sexual exclusivity) than less intelligent individuals are (Kanazawa, 2010a). Consistent with the Hypothesis, general intelligence does not affect the acquisition and espousal of evolutionarily familiar values (such as those in marriage, children, family, and friends). At the aggregate level, nations with higher average intelligence are more liberal, less religious, and more monogamous than nations with lower average intelligence (Kanazawa 2009a). More intelligent individuals in the US and the UK are more likely to espouse evolutionarily novel globalism and less intelligent individuals are more likely to espouse evolutionarily familiar nationalism (Kanazawa, 2021). More intelligent parents are more likely to resort to the evolutionarily novel institution of paid daycare by and with strangers (Kanazawa, 2022). More intelligent supervisors are more likely to understand the evolutionarily novel prohibition of romantic and sexual relationships in the workplace (Kanazawa, 2025).

Evolutionary Psychological Foundations of Interstate Wars

Tooby and Cosmides (1988) argue that, under specific conditions, evolved psychological mechanisms for coalitional warfare and aggression may be selected to motivate humans to engage in intergroup conflict. van Vugt et al. (2007) build on Tooby and Cosmides' (1988) work and propose the "male warrior hypothesis." They contend, and their experimental evidence confirms, that men become more cooperative with each other when faced with intergroup conflict than when such external threat is absent, whereas women's level of cooperation with each other does not vary as a function of intergroup conflict. Such a psychological mechanism of men can motivate intergroup aggression and facilitate coalitional warfare.

From an evolutionary psychological perspective, Thayer (2004, pp. 97–115) argues that the root cause of interstate wars and ethnic conflict may be the evolutionary need to acquire and defend material resources, and that the cause of wars among humans may therefore be no different from that among other primate species (such as chimpanzees). In contrast, Hudson and den Boer (2004, pp. 207–277) suggest that it may be in the state leaders' self-interest in maintaining internal social order to send and expend "bare branches" (mateless young men) in imperial wars and foreign expeditions. They predict that contemporary China may be on the verge of waging an interstate war because of its extremely high sex ratio. In the two decades following the publication of their book, however, Hudson and den Boer's prediction has not come true. Instead, China reduced the sex ratio by eliminating their one-child policy in 2015.

Both Tooby and Cosmides (1988) and van Vugt et al. (2007) explore the cognitive and motivational foundations of direct (mano a mano) fighting, where a group of men fights another group of men. While their theories may help explain the behavior of individual soldiers in actual combat situations, they may have little to do with what prompts a nation state to declare and wage interstate wars against another. Modern interstate wars are initiated, declared, orchestrated, conducted, and fought by modern, bureaucratic states and their organized armies, not by men or

groups of men. A group of men cannot effectively wage an interstate war against a nation unless they first channel their aggression through legislatures, political parties, presidents, prime ministers, aristocracies, royal families, or dictatorships, *all of which are evolutionarily novel.*

As Friedman (1999, 2002) points out, however, this changed in 2001, at the dawn of the third millennium. Now a group of "super-empowered angry men" can directly wage a war against a superpower like the United States, without the support of a nation state. In this sense, the current global war, which Friedman (2002, pp. 33–35) calls "World War III," is more the first global civil war in history than an interstate war (like the first two World Wars). The current global war is largely waged by men and groups of men, not by nation states.

Because states are evolutionarily novel, *interstate wars* are by definition also evolutionarily novel, and the Savanna Principle suggests that the human brain may have difficulty comprehending them. In contrast, civil wars happen when groups of men organize themselves and rebel or fight. Unlike interstate wars, the initiation and declaration of civil wars do not require that men channel their aggression through the bureaucracy of the modern states. Any group of men can violently express their anger and dissatisfaction, rebel, and fight at a lower level of aggregation than the nation state.

Consistent with this reasoning, Kanazawa (2009b) finds that, while democracy decreases the frequency and scope of interstate wars, as predicted by the monadic version of the democratic peace proposition, it does not decrease the frequency and scope of civil wars. In contrast, polygyny increases the frequency and scope of civil wars, but not of interstate wars. By allowing some men to monopolize all women, polygyny creates a shortage of reproductive women. In the ancestral environment, a lack of available reproductive women was probably a frequent cause of intergroup conflict (Chagnon, 1988, 1997; Goodwin, 1997; White & Burton, 1988). The fact that the degree of polygyny (and thus the relative scarcity of reproductive women) increases the frequency and scope of civil wars but not interstate wars seems to suggest primordial origins of civil wars; men fight in order to gain reproductive access to women. Coupled with the finding that democracy decreases interstate wars but not civil wars, it appears that interstate wars and civil wars may have different causes and origins. This is possibly because civil wars are evolutionary familiar whereas interstate wars are evolutionarily novel.

If civil wars are evolutionarily familiar and interstate wars are evolutionarily novel, then the Hypothesis suggests that more intelligent individuals are more likely to recognize interstate wars as a means of resolving international conflict than less intelligent individuals are. In contrast, general intelligence should have no effect on individuals' tendency to recognize civil wars as a means of resolving intergroup conflict. At the aggregate level, this suggests that nations with higher average intelligence resort to interstate wars more frequently and more extensively than nations with lower average intelligence. In contrast, the average intelligence of a national population should have no effect on the frequency and scope of civil wars within nations.

How Intelligent is War?

One might suggest that more intelligent populations ought to be able to *avoid* wars and resolve international conflict peacefully. This prediction follows if interstate wars have a net cost rather than a net benefit for the states. Offensive realism in international relations (Labs, 1997; Mearsheimer, 2001) suggests, however, that the structure of the world system makes it inevitable that great powers of the world want to get as much power as possible, with hegemony as the ultimate goal, and that war is therefore both inevitable and necessary. Thayer (2004) argues from an evolutionary perspective that it is necessary for nation states to resort to war in order to acquire and defend their resources. Liberman's (1996) case studies show that conquest of industrial societies by ruthless oppressors pays in narrowly economic terms, by benefiting the conquerors through the exploitation of seized industrial economies for their own purposes. It therefore appears reasonable to suggest that resort to arms in international conflict may have a net benefit rather than a net cost for the states under some (albeit not all) circumstances.

How does Average Intelligence of the Population Translate to the Decision to Wage Interstate War?

There are two extreme models of political decision making. Collective decisions of the state may reflect either the desires of the entire population broadly or the interests of the political elites narrowly. The true nature of the political decision making probably lies somewhere between these two extreme models, and it may also vary from nation to nation. Democratic nations probably lean more toward the pluralist decision making, whereas authoritarian nations probably lean more toward the elitist decision making.

If the political decision making, including the decision to wage interstate war, reflects the desire of the entire population, then it is straightforward to posit how the average intelligence of a population affects the decision to wage interstate war. The Hypothesis suggests that the more intelligent the population on average, the more likely it is that the citizens recognize the evolutionarily novel interstate war as a means to resolve international conflict, and the more likely it is that the state, reflecting the desire of the populace, wages such a war.

If political decisions are made solely or primarily by political elites, then it is not obvious how the average intelligence of the population at large affects such decisions. If, however, roughly the same proportion of the population in each nation becomes political elites, and if the political elites on average are more intelligent than the rest of the population, then the higher the average intelligence of the population, the higher the average intelligence of the political elites. For example, if the top 10% of the population in each nation forms the political elite, affecting the decisions of the state, then, given that intelligence is always distributed normally, the correlation between the average intelligence of the population and the average intelligence of the political elites will be 1.0. In this scenario, the higher the average intelligence of the population, the higher the average intelligence of the political elites, and the more likely it is that such elites would recognize the evolutionarily novel interstate war as a means to resolve international conflict. Note that the exact proportion of the top end of the distribution of general intelligence from which the political elite comes – whether it is 0.1% or 50% – does not alter this conclusion, and the correlation between the average intelligence of the political elite and the average intelligence of the general population is always close to 1.0 – *as long as* such a proportion does not vary widely from nation to nation.

As long as the proportion of the population who becomes political elite does not vary widely by nation, or as long as such variance is random with respect to any other important factor, then the average intelligence of the population is still expected to affect the state's decision to wage interstate war according to the Hypothesis, whether such decisions reflect the desires of the population broadly or those of the political elite narrowly. Of course, a nation's decision to wage interstate war always involves numerous historical and geopolitical factors; however, some of these historical and idiosyncratic precedents of interstate war should be distributed randomly across nations. Thus controlling for relevant factors (such as the nation's geopolitical position and economic development), average intelligence of a population should be expected to have a positive effect on the likelihood of interstate war.

On the other hand, if political decisions of authoritarian states are made by a small number of political elites while those of democratic states are made by the population at large, then it follows that political decisionmakers in authoritarian states are on average expected to be more intelligent than political decisionmakers in democratic states. While average intelligence of a population is higher in democratic nations than in authoritarian nations (Vanhanen, 2003), such small national differences may not be sufficient to offset the large difference in intelligence between political elites and the general population. This may potentially explain why democratic states are less belligerent, as predicted by the democratic peace proposition. *Intelligent belligerence may therefore explain democratic peace.*

An evolutionary psychological perspective on interstate war therefore suggests the following hypotheses:

H_1 *The average intelligence of a population has a significantly positive effect on the frequency and scope of interstate wars.*

H_2 *The average intelligence of a population has no effect on the frequency and scope of civil wars.*

I will put these two hypotheses to an empirical test below.

Empirical Analysis

Data

I use Small and Singer's (1982) Correlates of War data, which are among the most comprehensive and highest-quality data on interstate and civil wars during the period 1816–1980. They list all the interstate and civil wars, selected by carefully stated criteria for inclusion and exclusion, and their quantitative indicators such as the number, duration, and total battle deaths. Then they later summarize these data for each nation. The Correlates of War data have been used extensively by major studies in the democratic peace literature (Bremer, 1992; Clauset, 2018; Quackenbush, 2025; Rummel, 1983).

The Unit of Analysis

My unit of analysis throughout is the nation state, which are members of what Small and Singer (1982, pp. 38–43) define as the *interstate system.* To be a member of the interstate system before 1920, a political entity must be recognized by both Britain and France, and have a population of at least half a million. After 1920, it must be recognized by at least two major powers (see below), and have a population of at least half a million or be a member of the League of Nations or the United Nations.

In addition to the interstate system, Small and Singer define two other systems of nations. For the period 1816–1919, the *central system* consists of nations which are "active and influential in European-centered diplomacy" or the "European state system," which nonetheless includes such non-European nations as the United States, Japan, and China (Small & Singer, 1982, pp. 43–44). Small and Singer no longer makes a distinction between central and peripheral systems after 1920. Finally, for the entire period

(1816–1980), Small and Singer (1982, pp. 44–45) specify the smallest subset of nations, the *major power system*, but do not explicitly define it, other than to say that "all students of world politics use, or appreciate the relevance of, the concept of "major power."" At any rate, it consists of the United States (1899–1980), the United Kingdom (1816–1980), France (1816–1940, 1945–1980), Germany (1816–1918, 1925–1945), Austria-Hungary (1816–1918), Italy (1816–1919), China (1950–1980), and Japan (1895–1945).

Wars

A war is a military conflict with at least 1,000 battle deaths in total (or per year in the case of extra-systemic wars; see below) among all the participant system members. A system member qualifies as a participant in a war if it sustains at least 100 battle deaths or deploys at least 1,000 combat troops (Small & Singer, 1982, pp. 54–57).

Small and Singer (1982) define three different types of wars: *Intra-systemic* wars, fought between two or more members of the interstate system ($n=67$); *extra-systemic* (imperial or colonial) wars, fought between a member of the interstate system and its colony or other nonmember ($n=51$); *civil* wars, fought within a member of the interstate system ($n=160$). In my analysis of interstate wars below, I include both intra- and extra-systemic wars ($n=118$, even though Small and Singer use "interstate wars" specifically as a synonym for intra-systemic wars only). In my analysis of civil wars, I include Small and Singer's civil wars.

Dependent Variables

For both interstate and civil wars, Small and Singer (1982, Table 10.1) use 10 quantitative indicators.

1. Total battle death (in 1,000s).
2. Battle deaths per 10,000 population.
3. Battle deaths per war month (month during which the war is fought).
4. Battle deaths per war.
5. Battle deaths per system year (year during which the nation is a member of the interstate system).
6. War months per war.
7. Total number of wars.
8. Total war months.
9. Number of wars per system year.
10. Total war months per system year.

I use these 10 indicators of "national war experiences" as my dependent variables for my analysis of both interstate and civil wars.

Independent Variable

National IQ For a measure of average intelligence of a national population, I use data on national IQ from Lynn and Vanhanen (2006), which is an updated and expanded edition of Lynn and Vanhanen (2002). Lynn and Vanhanen (2006) compile a comprehensive list of national IQs of 192 nations in the world (all the nations with a population of at least 40,000), either by calculating the mean scores from a large number of primary data or carefully estimating them from available sources.

In the 2006 edition, Lynn and Vanhanen increase the number of nations with measured (as opposed to estimated) national IQ from 81 to 113, and the total number of nations in their data from 185 to 192. They also address the criticisms leveled against their national IQ data presented in their 2002 book. First, they demonstrate the validity of the national IQ estimation procedure (as do Kanazawa (2006b), Rindermann (2007), and Templer and Arikawa (2006)), by showing that the correlation between the estimated national IQs of 26 nations in the 2002 book and their subsequently measured values in the 2006 book is 0.9230 (Lynn & Vanhanen, 2006, pp. 53–55). Note that Lynn and Vanhanen (2006, p. 55) report a correlation of 0.913 across 25 nations. However, their Table 4.2 (p. 54) inadvertently omits Cameroon. If one includes Cameroon in the calculation, the correlation increases slightly to 0.923.

Second, Lynn and Vanhanen establish the reliability of the construct of national IQ by showing that the correlation between two extreme scores (the highest and the lowest) across 71 nations for which two or more IQ scores are available is 0.92. The correlation between the second highest and the second lowest scores across 15 nations for which five or more scores are available is 0.95 (Lynn & Vanhanen, 2006, pp. 61–62).

Third, they underscore the validity of the construct of national IQ by showing that the correlation between national IQ and national scores on tests of mathematics and science range from 0.79 to 0.89 ($ps < 0.01$). Correction for measurement errors, by assuming the reliability of 0.95 for national IQ and of 0.83 for test scores, produces a corrected correlation of 1.0 between national IQ and educational achievement (Lynn & Vanhanen, 2006, pp. 62–66).

There have been a lot of emotional and political objections to the national IQ data, for their potentially unsavory political implications. However, as Kanazawa (2012, pp. 38–40) explains in detail, there is absolutely nothing unsavory, let alone "racist," about the national IQ data. Recent meta-analyses and meta-meta-analysis (meta-analysis of meta-analyses) of the national IQ data demonstrate, beyond

any doubt whatsoever, their extremely high statistical validity and reliability, effectively rejecting all of the critics' politically motivated criticisms of the national IQ data (Peñaherrera-Aguirre & Woodley of Menie, 2026).

The national IQ data have since been occasionally updated, most recently in 2019 (Lynn & Becker, 2019). The 2019 national IQ data have been thoroughly validated by Warne (2023), and correlate very highly (r = .853) with the 2006 version that I use in my analyses below. As a result, apart from a few indicators of civil wars that the 2019 national IQ affects, the results for international wars are identical to the results presented below, if I use the 2019 national IQ data, for both the Bollen and Vanhanen measures of democracy (see below).

Control Variables

Democracy I use two alternative measures of democracy, derived from Bollen (1993) and Vanhanen (2003). Bollen (1993) uses confirmatory factor analysis to construct a latent dimension of liberal democracy from eight empirical indicators, such as freedom of the media and citizens' political rights. He constructs a liberal democracy index, which continuously varies from 0 (complete authoritarianism) to 100 (complete democracy), for 153 nations.

Vanhanen's (2003) index of democratization is constructed from two components. Electoral competition measures the success of smaller parties in parliamentary and/or presidential elections, measured by subtracting from 100 the percentage of votes won by the winning party. Political participation measures the voter turnout, by calculating the percentage of the total population who vote in an election. The index of democratization for each nation is computed by multiplying the electoral competition and political participation scores and dividing the product by 100. It therefore varies from 0 (complete authoritarianism) to 50 (complete democracy).

While Bollen's measure of liberal democracy is more frequently used (Muller, 1995; Simpson, 1990), Vanhanen's measure has the advantage of being available for a much larger number of nations (in fact all nations in the world; n = 192) (Lynn & Vanhanen, 2006, pp. 327–333, Appendix 3). The correlation between Bollen's and Vanhanen's measures of democracy is not exceedingly high (r = .6348). Another measure of democracy more often used in political science, Polity IV (Marshall & Jaggers, 2005), is highly correlated with both Bollen's (r = .5724) and Vanhanen's (r = .5003) measures. As a result, all substantive conclusions below will be exactly the same if I used Polity IV as if I used Bollen's measure.

Economic Development Because both national IQ and democracy are correlated with economic development (r = .6495 with national IQ; r = .5336 with Bollen's measure of democracy; r = .6541 with Vanhanen's measure of democracy), I control for nation states' economic development, measured by GDP per capita. Data on GDP per capita are available from the United Nations (http://unstats.un.org/unsd/demographic/products/socind/inc-.eco.htm).

World-System Status Because a nation can only engage in interstate wars or experience civil wars within its borders if it is a member of Small and Singer's (1982) interstate system, I control for the number of years that a nation is a member of the system, except for dependent variables which are already standardized for system years. It serves as a measure of "risk exposure." In addition, because a nation's position in the world system may affect its likelihood of waging interstate wars or (less likely) of experiencing civil wars, I also control for the number of years that a nation is defined as a central system nation and a major power by Small and Singer (1982).

Appendix Table 5 and 6 present the bivariate correlations between the main predictors (national IQ, democracy (Bollen and Vanhanen), and GDP per capita) with each of the 10 dependent variables, separately for interstate wars and civil wars.

Results

Table 1 presents the results of a regression analysis of interstate wars, when I use Bollen's measure of democracy. In support of Hypothesis 1, national IQ has a positive effect on all ten indicators of interstate wars, and nine of them are statistically significant (at at least $p < .05$). Standardized regression coefficients for national IQ suggest that it has moderate to large effects on the frequency and scope of interstate wars, and some of the effects are substantively large. For example, controlling for democracy, economic development, and world-system status, a 10-point increase in national IQ increases the total battle deaths by 119,000 over the entire period (1816–1980), 1,200 per month at war or 36,000 per war. The same increase in national IQ increases the total number of months at war by 11 months or six months per war.

Consistent with the monadic version of the democratic peace proposition, Bollen's measure of democracy has a negative effect on all ten indicators of interstate wars, and five of them are statistically significant. The comparison of standardized coefficients for national IQ and democracy suggests that *the positive effect of national IQ on the*

Table 1 National IQ significantly increases the frequency and severity of interstate wars, net of GDP per capita (Measure of democracy = Bollen)

	Dependent variable									
	Total battle deaths (1000s)	Battle deaths per 10,000 population	Battle deaths per war months	Battle deaths per war	Battle deaths per system year	War months per war	Total number of wars	Total war months	Number of wars per system year	Total war months per system year
National IQ	11.8736*	2.5508	.1214***	3.6435***	.1772***	.6404***	.0411*	1.1199*	.0011***	.0375***
	(5.4097)	(3.4236)	(.0261)	(.6742)	(.0403)	(.1704)	(.0161)	(.4743)	(.0002)	(.0089)
	.1674	*.0805*	*.4025*	*.5077*	*.3431*	*.3874*	*.1361*	*.1591*	*.3913*	*.3995*
Democracy	-3.8270*	-.7301	-.0226**	-.4661*	-.0354**	-.0340	-.0089†	-.1367	-.0001	-.0034
	(1.6112)	(1.0197)	(.0078)	(.2008)	(.0128)	(.0508)	(.0048)	(.1413)	(.0001)	(.0028)
	-.1618	*-.0691*	*-.2244*	*-.1948*	*-.2055*	*-.0617*	-.0884	*-.0582*	*-.0731*	*-.1077*
GDP per capita	-.0090†	-.0029	-.0001*	-.0017*	-.0001*	-.0002	-.0000†	-.0003	-.0000*	-.0000
	(.0053)	(.0034)	(.0000)	(.0007)	(.0000)	(.0002)	(.0000)	(.0005)	(.0000)	(.0000)
	-.1317	*-.0960*	-.2117	*-.2482*	*-.2007*	*-.1224*	*-.1004*	*-.0473*	-.2269	*-.1572*
Central system	2.6943	-1.3571	.0080	.1056	.0036	-.0641	.0326***	.5537*	.0002	.0007
	(2.5589)	(1.6194)	(.0123)	(.3189)	(.0176)	(.0806)	(.0076)	(.2244)	(.0001)	(.0039)
	.0873	*-.0984*	*.0613*	*.0338*	*.0161*	*-.0891*	*.2478*	*.1807*	*.1224*	*.0175*
Major power	23.7411***	1.4950	.0733***	1.2645***	.1450***	.0159	.0861***	1.8828***	.0005***	.0111**
	(2.3359)	(1.4783)	(.0113)	(.2911)	(.0185)	(.0736)	(.0070)	(.2048)	(.0001)	(.0041)
	.6852	*.0966*	*.4972*	*.3608*	*.5749*	*.0197*	*.5835*	*.5475*	*.3833*	*.2430*
System member	-.4096	2.1246*	-.0031	-.2119	———	.0749†	.0148***	.2813*	———	———
	(1.3615)	(.8616)	(.0066)	(.1697)		(.0429)	(.0041)	(.1194)		
	-.0241	*.2802*	*-.0431*	*-.1234*		*.1893*	*.2048*	*.1670*		
Constant	-685.5736	-183.8792	-7.6660	-236.1587	-11.3562	-42.8300	-2.4824	-75.2582	-.0625	-2.3842
	(408.0361)	(258.2254)	(1.9664)	(50.8543)	(3.1581)	(12.8527)	(1.2170)	(35.7766)	(.0183)	(.6955)
R^2	.5438	.0841	.4139	.3075	.4552	.1663	.7763	.6440	.3546	.1978
n	150	150	150	150	150	150	150	150	150	150

Main entries are unstandardized regression coefficients.
(Entries in parentheses are standard errors.)
Entries in italics are standardized regression coefficients.
* $p < .05$ ** $p < .01$ *** $p < .001$ (two-tailed).

frequency and scope of interstate wars is always larger than the negative effect of democracy.

Unexpectedly, economic development has a negative effect on the frequency and scope of interstate wars. GDP per capita has a negative effect on all ten indicators of interstate wars, and six of them are statistically significant. Net of national IQ, democracy and world-system status, wealthier nations engage in fewer and less extensive interstate wars than less wealthy nations.

While national IQ, democracy, and economic development are positively correlated with each other, national IQ increases, and democracy and economic development decrease, a nation's engagement in interstate wars. With the exception of battle deaths per 10,000 population, the model explains a large proportion of variance in the indicator of interstate wars; for example, it explains nearly 80% of the variance in the total number wars for the period 1816–1980.

Table 2 presents the results of the same regression analysis with Vanhanen's measure of democracy. The substantive conclusions drawn from Table 2 are virtually identical to those drawn from Table 1. Once again, national IQ has a positive effect on all ten indicators of interstate wars, and nine of them are statistically significant. Like Bollen's measure, Vanhanen's measure of democracy has a negative effect on all ten indicators of interstate wars, but only three of them are statistically significant. Once again, the comparison of standardized coefficients shows that *national IQ consistently has a much larger effect on the frequency and scope of interstate wars than democracy does.* Economic development has a negative effect on all ten indicators of interstate wars, and seven of them are statistically significant. Results presented in Tables 1 and 2 collectively provide strong support for Hypothesis 1. Nations with higher average intelligence engage in interstate wars more frequently and more extensively than nations with lower average intelligence do.

Table 3 presents the results of a regression analysis of civil wars, when I use Bollen's measure of democracy. Consistent with Hypothesis 2, national IQ does not have a significant effect on any of the ten indicators of civil wars; eight of the coefficients are positive, two are negative. Further, replicating an earlier finding (Kanazawa 2009b), democracy does not reduce the frequency and scope of civil wars at all. Seven of the coefficients for democracy are negative, while three are positive; none of them are statistically significant. As with interstate wars, economic development has a negative effect on the frequency and scope of civil wars. It has a negative effect on all ten indicators of civil wars, and five of them are statistically significant. Results presented in Table 3 provide unequivocal support for Hypothesis 2.

Table 4 presents the results of the same regression analysis with Vanhanen's measure of democracy. In this analysis, national IQ has a significantly positive effect on four of the ten indicators of civil wars (total battle deaths in 1,000s, total number of wars, total war months, and number of wars per system year). Standardized coefficients for national IQ show that its effects on civil war are at most moderate. Support for Hypothesis 2 with Vanhanen's measure of

Table 2 National IQ significantly increases the frequency and severity of interstate wars, net of GDP per capita (Measure of democracy = Vanhanen)

	Dependent variable									
	Total battle deaths (1000s)	Battle deaths per 10,000 population	Battle deaths per war months	Battle deaths per war	Battle deaths per system year	War months per war	Total number of wars	Total war months	Number of wars per system year	Total war months per system year
National IQ	11.6975*	2.8767	.1180***	3.5953***	.1837***	.5506***	.0449**	1.0066*	.0011***	.0361***
	(5.3643)	(3.1589)	(.0308)	(.7825)	(.0415)	(.1598)	(.0166)	(.4733)	(.0002)	(.0086)
	.1650	*.1004*	*.3257*	*.4328*	*.3507*	*.3674*	*.1629*	*.1575*	*.4281*	*.4271*
Democracy	-2.5555	-1.5436	-.0394	-1.5788*	-.0808*	-.2214	-.0189	-.5501	-.0002	-.0142†
	(5.0977)	(3.0019)	(.0293)	(.7436)	(.0407)	(.1518)	(.0158)	(.4498)	(.0002)	(.0084)
	-.0375	*-.0560*	*-.1130*	*-.1975*	*-.1602*	*-.1535*	*-.0712*	*-.0894*	*-.0966*	*-.1749*
GDP per capita	-.0124*	-.0034	-.0001*	-.0017*	-.0001**	-.0002	-.0000*	-.0005	.0000*	-.0000†
	(.0050)	(.0029)	(.0000)	(.0007)	(.0000)	(.0002)	(.0000)	(.0004)	(.0000)	(.0000)
	-.1802	*-.1205*	*-.2003*	*-.2129*	*-.2245*	*.1430*	*-.1145*	*-.0753*	*-.2018*	*-.1961*
Central system	2.1218	-1.0544	.0216	.4192	.0107	-.0386	.0243**	.4072†	.0001	.0028
	(2.4928)	(1.4679)	(.0143)	(.3636)	(.0171)	(.0742)	(.0077)	(.2199)	(.0001)	(.0036)
	.0662	*-.0814*	*.1319*	*.1117*	*.0452*	*-.0569*	*.1953*	*.1410*	*.1251*	*.0725*
Major power	24.9788***	2.0168	.1027***	1.8769***	.1616***	.0175	.0731***	1.5648***	.0005***	.0095*
	(2.2156)	(1.3047)	(.0127)	(.3232)	(.0177)	(.0660)	(.0069)	(.1955)	(.0001)	(.0037)
	.7220	*.1443*	*.5806*	*.4630*	*.6324*	*.0240*	*.5434*	*.5016*	*.3659*	*.2296*
System member	-.3819	2.0038**	-.0068	-.2154	———	.1048**	.0185***	.4144***	———	———
	(1.2676)	(.7465)	(.0073)	(.1849)		(.0378)	(.0039)	(.1118)		
	-.0209	*.2709*	*-.0722*	*-.1004*		*.2710*	*.2598*	*.2511*		
Constant	-756.1769	-210.0194	-7.6148	-232.8663	-12.1377	-36.2632	-3.0005	-69.8055	-.0645	-2.2589
	(393.5968)	(231.7804)	(2.2591)	(57.4103)	(3.1115)	(11.7224)	(1.2175)	(34.7255)	(.0174)	(.6452)
R^2	.5748	.0971	.4639	.3411	.5008	.1559	.7309	.5929	.3332	.1772
n	176	176	176	176	176	176	176	176	176	176

Main entries are unstandardized regression coefficients.
(Entries in parentheses are standard errors.)
Entries in italics are standardized regression coefficients.
* $p < .05$ ** $p < .01$ *** $p < .001$ (two-tailed).

Table 3 National IQ has no significant effect on the frequency and severity of civil wars, net of GDP per capita (Measure of democracy = Bollen)

	Dependent variable									
	Total battle deaths (1000s)	Battle deaths per 10,000 population	Battle deaths per war months	Battle deaths per war	Battle deaths per system year	War months per war	Total number of wars	Total war months	Number of wars per system year	Total war months per system year
National IQ	4.5522	-.0055	-.1012	.0036	.0308	.0704	.0174	.6929	.0003	.0035
	(2.7857)	(.0629)	(.1942)	(1.0345)	(.0420)	(.1694)	(.0115)	(.4777)	(.0002)	(.0105)
	.1775	*-.0092*	*-.0583*	*.0004*	*.0767*	*.0455*	*.1426*	*.1522*	*.1492*	*.0342*
Democracy	-.4586	.0066	-.0523	.1592	.0071	-.0052	-.0034	-.0719	-.0000	-.0017
	(.8297)	(.0187)	(.0579)	(.3081)	(.0133)	(.0505)	(.0034)	(.1423)	(.0001)	(.0033)
	-.0536	*.0333*	*-.0903*	*.0508*	*.0531*	*-.0101*	*-.0831*	*-.0474*	*-.0671*	*-.0513*
GDP per capita	-.0036	-.0001	-.0000	-.0007	-.0001†	-.0003†	-.0000*	-.0009†	-.0000*	-.0000
	(.0027)	(.0001)	(.0002)	(.0010)	(.0000)	(.0002)	(.0000)	(.0005)	(.0000)	(.0000)
	-.1470	*-.1313*	*-.0193*	*-.0803*	*-.1861*	*-.2033*	*-.2282*	*-.2002*	*-.2705*	*-.1573*
Central system	-.4170	-.0253	.0210	-.3336	-.0021	-.0018	-.0118*	-.2391	.0000	.0002
	(1.3177)	(.0298)	(.0919)	(.4893)	(.0183)	(.0801)	(.0054)	(.2260)	(.0001)	(.0046)
	-.0374	*-.0978*	*.0279*	*-.0816*	*-.0118*	*-.0027*	*-.2231*	*-.1207*	*-.0040*	*.0055*
Major power	1.7931	-.0177	.0402	1.0168*	.0145	.0089	.0030	.0067	.0000	.0009
	(1.2029)	(.0272)	(.0839)	(.4467)	(.0193)	(.0732)	(.0050)	(.2063)	(.0001)	(.0048)
	.1431	*-.0611*	*.0474*	*.2216*	*.0740*	*.0118*	*.0500*	*.0030*	*.0437*	*.0184*
System member	.7748	.0600***	-.0058	.1709	———	.0729†	.0177***	.4038**	———	———
	(.7011)	(.0158)	(.0489)	(.2604)		(.0426)	(.0029)	(.1202)		
	.1262	*.4222*	*-.0140*	*.0760*		*.1970*	*.6067*	*.3706*		
Constant	-308.5556	.6348	14.0521	17.8130	-1.0980	1.9367	-1.2090	-47.0854	-.0052	.3290
	(210.1137)	(4.7435)	(14.6509)	(78.0303)	(3.2881)	(12.7772)	(.8664)	(36.0291)	(.0152)	(.8235)
R^2	.0748	.1204	.0176	.0485	.0223	.0580	.3012	.1362	.0640	.0281
n	150	150	150	150	150	150	150	150	150	150

Main entries are unstandardized regression coefficients.
(Entries in parentheses are standard errors.)
Entries in italics are standardized regression coefficients.
* $p < .05$ ** $p < .01$ *** $p < .001$ (two-tailed).

democracy is not as strong or unequivocal as with Bollen's measure. However, as noted above, using Polity IV as the measure of democracy provides unequivocal support for Hypothesis 2. Taken together, results presented in Tables 3 and 4 collectively provide moderate support for Hypothesis 2. The average intelligence of a national population does not seem to affect the frequency and scope of civil wars within the national borders.

Table 4 National IQ has no significant effect on the frequency and severity of civil wars, net of GDP per capita (Measure of democracy = Vanhanen)

	Dependent variable									
	Total battle deaths (1000s)	Battle deaths per 10,000 population	Battle deaths per war months	Battle deaths per war	Battle deaths per system year	War months per war	Total number of wars	Total war months	Number of wars per system year	Total war months per system year
National IQ	6.4761*	.0216	-.0437	.1742	.0544	.1745	.0268*	1.0859*	.0004*	.0113
	(2.5106)	(.0574)	(.1782)	(.9517)	(.0394)	(.1534)	(.0104)	(.4273)	(.0002)	(.0098)
	.2826	*.0404*	*-.0282*	*.0207*	*.1517*	*.1251*	*.2435*	*.2657*	*.2329*	*.1247*
Democracy	-6.5079**	-.0766	-.1456	-.7878	-.0662†	-.3427*	-.0294**	-1.2293**	-.0005**	-.0227*
	(2.3858)	(.0545)	(.1693)	(.9044)	(.0387)	(.1458)	(.0099)	(.4061)	(.0002)	(.0096)
	-.2951	*-.1490*	*-.0977*	*-.0974*	*-.1917*	*-.2551*	*-.2776*	*-.3125*	*-.3051*	*-.2610*
GDP per capita	-.0020	-.0000	-.0000	-.0003	-.0000	-.0002	-.0000*	-.0005	.0000*	-.0000
	(.0023)	(.0001)	(.0002)	(.0009)	(.0000)	(.0001)	(.0000)	(.0004)	(.0000)	(.0000)
	-.0890	*-.0815*	*-.0229*	*-.0339*	*-.1074*	*-.1303*	*-.1980*	*-.1369*	*-.2094*	*-.0977*
Central system	-.1835	-.0174	.0148	-.3436	.0054	.0175	-.0096*	-.1526	.0001	.0021
	(1.1667)	(.0267)	(.0828)	(.4423)	(.0163)	(.0713)	(.0048)	(.1986)	(.0001)	(.0041)
	-.0177	*-.0722*	*.0211*	*-.0905*	*.0333*	*.0277*	*-.1930*	*-.0826*	*.0594*	*.0513*
Major power	1.1935	-.0218	.0281	.8200*	.0092	-.0124	.0017	-.0513	.0000	-.0002
	(1.0370)	(.0237)	(.0736)	(.3931)	(.0168)	(.0634)	(.0043)	(.1765)	(.0001)	(.0042)
	.1067	*-.0835*	*.0372*	*.1999*	*.0527*	*-.0183*	*.0309*	*-.0257*	*.0208*	*-.0034*
System member	.9969†	.0615***	-.0022	.2662	———	.0865*	.0178***	.4244***	———	———
	(.5933)	(.0136)	(.0421)	(.2249)		(.0363)	(.0025)	(.1010)		
	.1685	*.4458*	*-.0055*	*.1227*		*.2401*	*.6250*	*.4023*		
Constant	-419.7298	-.6819	9.1509	11.0492	-2.2365	-4.1399	-1.7600	-69.2794	-.0115	-.1486
	(184.2115)	(4.2084)	(13.0745)	(69.8307)	(2.9596)	(11.2579)	(.7610)	(31.3534)	(.0138)	(.7367)
R^2	.1085	.1441	.0167	.0479	.0375	.1021	.3407	.1879	.1075	.0613
n	176	176	176	176	176	176	176	176	176	176

Main entries are unstandardized regression coefficients.
(Entries in parentheses are standard errors.)
Entries in italics are standardized regression coefficients.
* $p < .05$ ** $p < .01$ *** $p < .001$ (two-tailed).

There are a few mostly European nations that simultaneously have relatively high mean population intelligence and have historically fought many interstate wars, such as the United States, the United Kingdom, France, Germany, and Russia. However, the results presented above are not influenced by any such outliers or influential observations. Results presented in Table 1 and 2 above remain identical if I exclude these five nations from the sample.

Conclusion

Theoretical developments in evolutionary psychology, in particular, the Savanna-IQ Interaction Hypothesis (Kanazawa, 2010a, b), suggest that nations with higher average intelligence may be more likely to resort to the evolutionarily novel means of interstate wars as a means of resolving international conflict than nations with lower average intelligence. The analysis of the Correlates of War data strongly supports this hypothesis. Net of democracy, economic development, and world-system status, national IQ has a statistically significant and substantively large effect on the frequency and scope of interstate wars, regardless of whether I use Bollen's (1993) or Vanhanen's (2003) measure of democracy.

At the same time, the Hypothesis suggests that national IQ may have no effect on the frequency and scope of evolutionarily familiar civil wars within national borders. This hypothesis is perfectly supported when Bollen's measure of democracy is included in the model ($n = 150$), and largely supported when Vanhanen's measure is included ($n = 176$). Empirical support for Hypothesis 2 (for the null effect of national IQ on civil wars) is slightly weaker than that for Hypothesis 1 (for the positive effect of national IQ on international wars).

Both Bollen's and Vanhanen's measures of democracy have a largely negative effect on the frequency and scope of international wars, consistent with the monadic version of the democratic peace proposition, but its negative effect is not as strong or consistent as the positive effect of national IQ. While the democratic peace has been called "the first law of international relations" (Levy, 1988, p. 662), the empirical analysis presented above suggests that national IQ has a stronger and more consistent effect on the quantitative indicators of interstate wars than democracy does. Intelligent belligerence may possibly be a contender for the second law of international relations.

There could potentially be alternative theories of frequency and scope of interstate wars based on other perspectives like life history theory and cultural multilevel selection theory (Turchin, 2025). However, such alternative theories must first be clearly formulated and articulated to allow testable hypotheses before they can be empirically tested side by side with the current theory based on evolutionary psychology. To my knowledge, there are currently no such alternative theories. Further, such alternative theories, in

addition to explaining the frequency and scope of interstate wars, must also be able to account for their correlations with the average intelligence of the population uncovered in the empirical analyses above. I wait further theoretical development in this direction.

The present study has one significant limitation. The Correlates of War data that I use in the empirical analysis above summarize a nation's total war *experience*, and do not distinguish between wars that nations *initiate* and those in which they *respond* to foreign attacks. The Hypothesis suggests that more intelligent populations are more likely to initiate interstate wars, because they are more likely to recognize them as a potential means for resolving conflict with other nations, but that they are no more likely to respond militarily to attacks from other nations. However, it may be difficult empirically to separate the effect of national IQ on war initiation and war response, because nations tend to attack their neighbors rather than faraway nations, and neighboring nations tend of have similar levels of national IQ (Kanazawa, 2008; Lynn & Vanhanen, 2002, 2006). The Hypothesis would nevertheless predict a positive effect of national IQ on war initiation, but its null effect on war response. This prediction awaits further empirical tests.

Appendix

Table 5 Bivariate correlations between the main predictors and the dependent variables Interstate wars

	Dependent variable									
	Total battle deaths (1000s)	Battle deaths per 10,000 population	Battle deaths per war months	Battle deaths per war	Battle deaths per system year	War months per war	Total number of wars	Total war months	Number of wars per system year	Total war months per system year
National IQ	.210**	.105	.273**	.269**	.265**	.271**	.344**	.320**	.362**	.262**
Democracy (Bollen)	-.017	-.021	-.085	-.095	-.070	.047	.162*	.189*	.064	.009
Democracy (Vanhanen)	.123	.028	.118	.055	.077	.079	.240**	.212**	.180*	.057
GDP per capita	.091	-.009	.098	.058	.064	.057	.205**	.200**	.139	.044

* $p < .05$ ** $p < .01$

Table 6 Bivariate correlations between the main predictors and the dependent variables Civil wars

	Dependent variable									
	Total battle deaths (1000s)	Battle deaths per 10,000 population	Battle deaths per war months	Battle deaths per war	Battle deaths per system year	War months per war	Total number of wars	Total war months	Number of wars per system year	Total war months per system year
National IQ	.117	.029	-.095	.003	-.023	-.026	.132	.101	-.083	-.097
Democracy (Bollen)	-.104	.041	-.108	.047	-.007	-.042	-.035	-.027	-.149	-.117
Democracy (Vanhanen)	-.089	-.062	-.118	-.054	-.137	-.165*	-.088	-.118	-.260**	-.223**
GDP per capita	-.033	-.075	-.091	-.031	-.111	-.147	-.105	-.092	-.234**	-.172*

* $p < .05$ ** $p < .01$

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Data Availability I use Small and Singer's (1982) Correlates of War data, which are among the most comprehensive and highest-quality data on interstate and civil wars during the period 1816–1980. They list all the interstate and civil wars, selected by carefully stated criteria for inclusion and exclusion, and their quantitative indicators such as the number, duration, and total battle deaths. Then they later summarize these data for each nation. The Correlates of War data have been used extensively by major studies in the democratic peace literature (Bremer, 1992; Clauset, 2018; Quackenbush, 2025; Rummel, 1983).

Declarations

Competing Interests The authors declare no competing interests.

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