

Realism, reckless states, and natural selection

International Relations
1–22

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DOI: 10.1177/00471178221136993

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Abstract

Why is daredevil aggression like Russia's war on Ukraine such an important factor in world politics? Neither offensive nor defensive realists give a fully satisfactory answer. This paper maintains that the problem lies in their shared assumption that states pursue security. Tracing neorealism's roots in evolutionary economics, and hence indirectly in biological theories of natural selection, I argue that many policies are compatible with state survival. What is hard is surviving *as a great power*. States that rise to that rank, and remain there, behave as if they sought to maximize their influence, not their security. This Darwinian competition selects in favor of states with expansionist institutions and ideologies. Failing to recognize this phenomenon risks conferring a spurious legitimacy on imperialism. At the same time, neorealists have also committed a fallacy familiar to biologists: assuming that traits enhancing group fitness are selected even when they diminish fitness in intragroup competition. Whereas interstate competition selects in great powers for traits that promote influence-maximization, with the spread of democracy, intrastate competition increasingly selects for security-seeking. Yet the former process sometimes still dominates the latter, above all in authoritarian great powers.

Keywords

democratic peace, evolution, imperialism, multilevel selection, neorealism, structural realism

If states' main aim is security, why are some great powers so reckless?¹ Neorealists hold that aggressive efforts to accumulate power often backfire, with coalitions forming against overweening states. Would-be hegemonies have been repeatedly defeated.² Nevertheless, risk-acceptant aggressors play a leading role in international politics, from Napoleonic France and Hitler's Germany to Putin's Russia today.³

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Defensive realists often attribute risky aggression to ideas or domestic politics. Jack Snyder and Christopher Layne cite a combination of interest group politics and misguided ideology.⁴ Stephen Van Evera notes the pernicious effects of militarism, social imperialism, and ‘hypernationalism’ in early 20th-century Europe.⁵ Critics attack such accounts, which invoke factors exogenous to neorealist theory, as ad hoc and degenerative.⁶ Offensive realists have a simpler explanation: aggressive expansion often increases states’ security. John Mearsheimer considers even Hitler’s and Japan’s efforts to conquer their regions gambles that were *ex ante* rational in view of the security that regional hegemony can provide.⁷ This cure for the theoretical problem is worse than the disease. To treat Hitler’s foreign policy as a rational attempt to increase German security is preposterous.⁸ So long as neorealism assumes that states pursue security, all versions will struggle to explain the high-stakes gambling of great powers.

This paper challenges that assumption. Many neorealists simply postulate security-seeking, but in Kenneth Waltz’s *Theory of International Politics*, it is derived from the logic of natural selection. Just as firms must earn profits or risk bankruptcy, Waltz maintains, states must promote their security or risk decline and destruction.⁹ In so arguing Waltz drew inspiration from economic theories modeled on evolutionary biology. Some firms, these theories held, survive, and prosper, because they are already suited to their economic environments. Others emulate successful competitors, or succeed through trial and error. Profit-maximizers survive while others fail, and profitable policies come to prevail in the market.¹⁰ Employing parallel logic, Waltz holds that states whose policies promote state survival tend to survive and prosper, and that these policies predominate in the international system. Yet a problem in the reasoning soon became apparent: few states, especially since the Second World War, are destroyed. How stringent can selection be?¹¹ Moreover, neorealism aims to explain the dominant practices in the system. It is the great powers that give international relations their shape, yet there is no reason to assume that traits that maximize states’ survival chances are those that maximize their chances of becoming and remaining great powers.

This paper rebuilds Waltz’s evolutionary reasoning, showing that its logic implies that great powers tend to maximize influence, not security. My argument, like Waltz’s, is strictly analogical: unlike some analysts, I make no effort to show that state behavior is affected by genetic natural selection.¹² Rather, since Waltz reasons by analogy from evolutionary arguments in economics – shown in his references to ‘selection’, ‘survival’, and ‘death rates’¹³ – his theory ought to be consistent with natural selection theory. Like animal populations in nature, or firms in a marketplace, states face competition. Waltz assumes that international competition selects for traits that help them survive. One problem with this approach is that it captures only half of the biological conception of fitness, which depends on both an organism’s survival chances and its ability to reproduce.¹⁴ Another is that in contrast to animals, few states nowadays ‘die’. Survival is easy: states as varied as Norway, Niger, and North Korea manage it. Neorealism’s focus, however, is on the great powers – which set the tone of international relations – and surviving *as a great power* is hard.¹⁵ States that become and remain great powers behave as if they sought to maximize their influence.

This Darwinian competition often selects for traits promoting risky and aggressive behavior. The policies of Napoleon and Bismarck did not maximize their countries’

survival chances, but their states became for a time the dominant actors in European international politics. By the same token, today's leading powers are more aggressively competitive than security requires. To a large extent this reflects beliefs rooted in these countries' histories which cannot be explained within the conventional neorealist framework. But if states with expansionist policies are likely to rise to the top, then we should expect great powers to subscribe to ideologies promoting them. These actors need not consciously pursue influence – as Joseph Schumpeter put it, had a 7th-century Arab been asked his motives, '[h]e would have said: "I fight because Allah and his Prophet will it."' Yet most great powers hold such beliefs, since states that do are more likely to be successful imperialists.¹⁶

That can explain why great powers are often more expansionist than security calls for, but why are they more belligerent in some eras than in others? For this, we must look to natural selection at the domestic level. Domestic politics can confer an internal selection advantage on traits that increase or diminish the propensity to expand. Drawing on recent work in biology and economics, this paper incorporates international and domestic selection processes in a simple model of multilevel selection. Interstate competition selects in favor of influence-maximization, but with the spread of democracy intrastate competition selects increasingly in favor of security-seeking. Citizens in liberal states place a premium on security; politicians who survive electoral competition reflect these preferences. The result has been a trend toward defensive realist behavior.¹⁷ Alas, some leading powers remain in the grip of imperialist ideology.

Neorealism and economic natural selection theory

Realism seeks to explain patterns in international relations, particularly 'war's dismal recurrence through the millennia'.¹⁸ Hans Morgenthau argued that these patterns had their roots in human nature, particularly the lust for power. This not only explained 'astounding continuity' in states' foreign policies, but also allowed the analyst to reconstruct and predict individual leaders' policies.¹⁹ By the 1970s, however, more and more scholars were questioning whether governments could be treated as rational or unitary actors. 'Neo-realism', Barry Buzan observes, 'was the counter-attack in this intellectual joust'.²⁰ By substituting structural pressures for rational calculation, Waltz could argue that states followed the dictates of realism even without rational decision-makers. In so doing, neorealism followed the lead of evolutionary reasoning in economics. Waltz's commentators have sometimes assumed that he drew on the neoclassical theory of the firm.²¹ In fact, the economic literature on which he drew was a reaction to *problems* with neoclassical theory that paralleled those later encountered by realism.

In the second quarter of the 20th century, evidence accumulated against the assumption that firms sought to maximize profits in a rational fashion. Some questioned whether under monopolistic competition and oligopoly, firms were capable even in principle of assessing marginal revenue and marginal costs. Critics noted that decisions were typically made by more than one person, and that managers were likely to have more goals than just profit-maximization.²² Like international relations scholars two decades later, economists found themselves confronted with theory and evidence that decision makers neither could nor did make the calculations that their theories assumed.

In response they developed theories modeled on evolution in the biological sciences. 'By backing away from the trees—the optimization calculus by individual units', Armen Alchian urged in 1950, 'we can better discern the forest of impersonal market forces. This approach directs attention to the interrelationships of the environment and the prevailing types of economic behavior which appear through a process of economic natural selection'.²³ These theories yielded powerful predictions without assuming that the actors were unitary, rational, or pursuing a particular outcome. 'In the field of biology', observed Stephen Enke,

we do not make the mistake of attributing outstanding analytical ability to those houseflies that find themselves inside a warm house on a cold night. We realize that flies that are just as clever are dying outside. Those entrepreneurs who survive are those who took a satisfactory course of action (not necessarily the best) for some reason (not necessarily the correct one).²⁴

Along with Milton Friedman, Alchian and Enke drew explicitly on natural selection logic, which neorealism assimilated at one remove. Remarkably, none is cited in *Theory of International Politics*, but their influence is unmistakable.²⁵ Waltz compares states with firms in a market. Policies conducive to survival and expansion come to prevail through two mechanisms: competition and socialization. Competition weeds out the unfit; with socialization, actors imitate the successful. Business firms may 'blunder along', Waltz observes, '...and rely on the market selector to sort out the ones who happen to operate intelligently from those who do not'.²⁶ A similar selection process occurs in international relations. Like Enke, Waltz disavowed the assumption that states rationally pursue security. States that survived and flourished would tend to be those that put expedience before ideology, limited their dependence on other states, and eschewed cooperation when partners would gain more. Others would 'fall by the wayside'.²⁷ This reasoning allowed Waltz to dispense not only with rationality, but also with classical realism's attribution of state egoism to a fallen human nature – instead, selfish policies helped states survive.

Most of Waltz's successors have abandoned his evolutionary logic in favor of assuming that states rationally pursue security, a view Waltz himself sometimes seemed to adopt.²⁸ This assumption, however, seems unmotivated. Natural selection might in principle explain why states behave *as if* they were rational – those that do not will tend to be eliminated. But why would we expect states actually to *be* rational?²⁹ Attempts to ground such claims on the rational choices of individual leaders are likely to run afoul of the logic of collective action, since the interests of rulers may diverge from those of their states.³⁰ History, moreover, offers many examples of policies motivated not by security but rather by honor, economic interest, ideology or rulers' personal preferences. Actions such as the Melians' defiance of the Athenians are an anomaly for theories like Mearsheimer's that treat states as rational security-maximizers, but not for Waltz, who expects only that imprudence will be punished, sometimes resulting in states' disappearance from the system.³¹

Nevertheless, it is unclear why the system should select for behavior that promotes security. Few states 'die' nowadays, and of those that do, few are destroyed from outside.³² Many foreign policies are compatible with survival.³³ Even in earlier centuries,

far from being ‘trapped in an iron cage where they ha[d] little choice but to compete for power’,³⁴ Sweden, Spain, Portugal, and the Netherlands dropped out of great power competition, yet survived while stronger states collapsed.³⁵ Moreover, if neorealism seeks to explain the forces shaping international relations, it must focus on the most influential actors, as Waltz recognizes,³⁶ yet there is no guarantee that what maximizes states’ survival chances will also make them influential.³⁷

Fitness in international relations

In biological theories of natural selection, fitness is commonly defined as the propensity to survive and reproduce in a given environment.³⁸ Fitter individuals proliferate, and with them the traits—observable characteristics—contributing to fitness. Economic natural selection theory holds that fitter firms will tend to earn greater profits: they have, in Alchian’s words, a ‘higher probability of survival and thus tend to become the dominant surviving type’.³⁹ Similarly, neorealists infer that states with traits enhancing their survival chances come to predominate, and that those traits shape international relations.⁴⁰

These analogies between natural ecosystems and social ones have two weaknesses. First, biological fitness depends on the propensities both to survive and to reproduce. Alchian and Waltz focused on the first at the expense of the second. Second, selection pressure in nature is harsh. In contrast, critics of economic natural selection theory warned from the start that it assumed unrealistically fierce competition. ‘[T]here is nothing in the reproductive processes of firms that would ensure that more firms would constantly be created than can survive’, wrote Edith Penrose in 1952, ‘and certainly from observations of the real world we can hardly assume that competition is so intense. . . that only the best adapted firms can survive’.⁴¹ The objections apply *a fortiori* to neorealism. Compared with firms, as Waltz himself observes, modern states are seldom destroyed.⁴² Even if IR scholars have underestimated the rate at which states are killed off,⁴³ it is far lower than in biological evolution. The ‘birth’ of new states has vastly outstripped their destruction.⁴⁴ Moreover, death has taken the form expected by theories of ‘punctuated equilibrium’: long periods of low mortality, interrupted by waves around the Franco-Prussian and world wars.⁴⁵ ‘In the case of states’, observes John Setear,

evolution by punctuated equilibrium emphasizes the role of geography and downplays the prominence of fine-tuned foreign policies. France is a great power, but it fell to Germany in World War II—as did virtually every nation in continental Europe, whether by conquest or alliance. Did Switzerland and Sweden, for example, conduct their foreign policies with so much more aplomb than Belgium and Norway that the latter deservedly fell prey to German aggression while the former did not?⁴⁶

Waltz’s response to such objections is that differences in fitness still explain which traits become influential. In oligopolistic competition, firms seldom go bust, but ‘[t]heir fortunes nevertheless rise and fall’. The same is true of great powers.⁴⁷ The fittest, Waltz observes, ‘more often rise to the top and are likelier to stay there’.⁴⁸ This is a good reply. To understand what shapes the international system, it makes sense to focus on its leading actors.⁴⁹ Implicitly, however, Waltz’s response redefines fitness not as the propensity to

survive, but the propensity to rise to and remain at the top. It also suggests two differences from biological natural selection. First, in biology, the prevalence of a trait is defined by the number of organisms that carry it.⁵⁰ But in economics and international relations, it also depends on the carrier's size. Thus through economic natural selection 'profitable firms will grow and unprofitable ones will contract, and the operating characteristics of the more profitable firms therefore will account for a growing share of the industry's activity'.⁵¹ Moreover, we are often less interested in which traits are widespread than in which are influential. Corner shops outnumber Walmarts, yet giant firms define oligopolistic markets. More states resemble Romania than Russia; still, states like Russia do more to shape international relations than all others combined.⁵²

If the goal is to determine which traits shape international politics, we must adopt a definition of fitness different from that in biology: Fitness is *expected influence over international relations*. Let us call it fitness_{IR}. Why not just say power – the traditional realist variable? Influence is closely connected with power, but they are not the same. Power, in Robert Dahl's famous definition, involves the *ability* to exercise influence: 'A has power over B to the extent that he can get B to do something that B would not otherwise do'.⁵³ If actors have this ability but do not use it, their influence will not be as great. The United States' power in the interwar era far outstripped its influence. The latter is more important for understanding international outcomes in this period. Moreover, to say an actor is 'powerful' normally implies the deliberate exercise of influence. Some actors exert great influence with no more aim of doing so than Mrs O'Leary's proverbial cow, or in ways quite other than they intend. As Anthony de Crespigny remarks, 'we would not say that a poet or scientist exercises power if he influences the way in which people versify or carry on research without intending to do so'.⁵⁴ In the last two decades, the United States has exercised more influence than power in the Middle East. An adequate theory of international relations must take such unintended effects into account. The present argument does not assume that states have any particular aims – just that states that become and remain great powers will tend to behave as if they were pursuing influence.

In biology, as already noted, fitness depends on the propensities to survive and to reproduce. Expected influence captures both propensities, because it is associated with states' probability not only of surviving as great powers, but also of reproducing their traits. Social organisms can reproduce in two ways. One is 'having babies' – as when firms create subsidiaries or states found colonies. The other is 'having students' – actors that copy the trait.⁵⁵ Having students matters more in international relations than having babies, because great powers' babies seldom become great powers themselves. The United States – Britain's baby – is the only indisputable example.⁵⁶ Traits spread more often through what Alchian calls imitation, and Waltz, socialization.⁵⁷ Other things being equal, states that are more likely to be imitated have greater expected influence and are fitter_{IR}.

Sometimes other things are not equal. Modern nationalism multiplied the influence of Napoleonic France, enabling it to conquer half of Europe. France had 'students' – notably Germany – that copied the trait.⁵⁸ A unified, nationalistic Germany then eclipsed France. Did French nationalism increase France's influence, or decrease it? The answer is 'both'. The relevant comparison is a biological trait – such as altruism in the face of

danger – that reduces the individual's survival chances but raises the chance that the trait will survive among offspring. The total impact depends on the balance between the effects. Natural selection theory is ultimately concerned not with traits' effects on individuals, but with the propensity of the traits themselves to survive and spread.⁵⁹ French nationalism's greatest influence may have been in paving the way for the nationalistic German state.

On average, over the long term, the fittest_{IR} states exercise the greatest influence over international relations. This may sound like circular reasoning,⁶⁰ but it is not. Fitness depends on the propensity to survive and reproduce, not the results. The race is not always to the swift. If one gazelle is fleet and another is a plodder, we should not infer that the second was fitter just because the first was caught and eaten.⁶¹ By the same token, firms are not fitter merely because they turn a profit. A state is not fitter_{IR} if it exerts influence in a particular instance by dumb luck.⁶² Rather, fitness_{IR} consists in *expected* influence.⁶³ This will usually be reflected in overall patterns, but not by definition. Fitness, moreover, supervenes on other properties. Both in animals and in states, it does not consist in a single trait or set of traits, but arises through many combinations. To say that state A is fitter_{IR} than state B invites examination of what explains A's fitness. From case to case, different traits do the causal work. The concept of fitness allows us to integrate them in a higher-order explanation.⁶⁴ Frequently, we identify these traits through abductive reasoning. We can also reason deductively.⁶⁵ Logic suggests that successful firms will often forego profits if in so doing they hurt their rivals more than themselves,⁶⁶ and that leading states will focus on relative rather than absolute gains.⁶⁷ These hypotheses can be evaluated against empirical evidence.

Some may object that since influence is relative to particular relationships, it makes no sense to speak of states as fitter_{IR} or less fit_{IR} as a whole.⁶⁸ But this is not so. Consider baseball teams. Team A may consistently beat team B, Team B beat team C, and team C beat team A. Each team's ability to win depends solely on bilateral relationships. Nevertheless, the team is fittest_{BASEBALL} that has the best chance of winning the most games over the season.⁶⁹ One species may be fitter in bilateral competition with another, while remaining less fit than the first overall.⁷⁰ The same is true of states. The fittest_{IR} states are not those with the most influence possible, but those with more than others. 'As in a race', Alchian observes, 'the award goes to the relatively fastest, even if all the competitors loaf'.⁷¹

Traits that increase fitness in the short term can undermine it in the long run. John Beatty and Susan Finsen give the example of fecundity, which might increase an organism's surviving offspring, but lead subsequently, if reproduction outstrips food supply, to a population crash.⁷² In foreign policy, as in biology and economics, some traits increase an actor's influence in the short run while diminishing it in the long run.⁷³ Offensive realists attribute influence to military build-ups and territorial expansion, whereas defensive realists hold that these often backfire by provoking balancing. Both may be right – for different time periods. Hypernationalism enabled Germany and Japan to mobilize resources in the 1930s, but eventually led to self-encirclement and defeat.⁷⁴ By increasing these states' fitness_{IR} in the short run, it contributed to the period's conflictual international politics. By decreasing it over the long run, it ensured that international relations did not stay that way.

The competition for influence

The foregoing analysis explains the frequency of risky expansion among great powers. Mearsheimer maintains that ‘survival is every state’s primary goal’, since ‘[i]f a state does not survive, it cannot pursue any other goals’.⁷⁵ That is like saying that every firm’s primary goal must be to stay in business. A risk-averse firm may reduce its danger of bankruptcy, but also foreclose its chance to grow. Similarly, policies that raise states’ survival chances may not increase their expected influence. Expansion has often been a prerequisite for becoming a great power. Those with the greatest influence are those that go on pursuing it even after survival is ensured.⁷⁶ As a result great powers, in Waltz’s words, ‘lead troubled lives’.⁷⁷

Consider the paths followed by Sweden and Prussia/Germany after the 17th century. Sweden dropped out of the great power game and enjoyed three centuries of relative tranquility. This increased its security but removed it from the movers and shakers. Prussia rose to great influence, and experienced ongoing struggle, culminating in two bids for European hegemony and Germany’s partition. For security, Sweden is the better model.⁷⁸ For influence maximization, we will look to Berlin. Germany’s choice was captured in the younger Moltke’s complaint during the 1911 Moroccan crisis that unless the country took a stronger stand, it might as well become a client of Japan: ‘we shall then be in a position to make money without interference and develop into ninnies’.⁷⁹ These were not the words of a statesman whose priority was security. Over the centuries, views like Moltke’s promoted Prussia’s climb up the international heap. It may sound perverse to say that the Kaiserreich was fitter_{IR} than Sweden. But that is because we usually associate fitness with well-being. Influence, security, and prosperity do not always go hand in hand.⁸⁰

Some traits contributing to fitness_{IR}, such as abundant coal and steel reserves, are material. Some are institutional, affecting mobilization and employment of resources. A third type are volitional, shaping not what states can do but what they *want*. All three enhance influence, but the last matters most for risk-acceptance. Germany’s and Japan’s rising influence in the 1930s was due in part to a volitional trait – hypernationalism – that caused them to punch above their weight.⁸¹ Institutional and material changes help explain the United States’ rise to great power at the end of the 19th century,⁸² but without the will fully to exploit them, it punched below its weight until the 1940s. Washington began to behave like a normal great power after constructing the corresponding ideology – and further institutions – during World War II.⁸³ Influence, to be sure, comes through both ‘hard’ and ‘soft’ power.⁸⁴ Metternich’s Austria influenced Europe chiefly by non-military means,⁸⁵ as does Germany today. Aggression has not been the only source of influence – just one of the most important.

Darwinism explains the way animal populations behave, not the behavior of individual animals. By the same token, Waltz maintained that his theory could not predict individual states’ foreign policies.⁸⁶ Here he paralleled Alchian and Enke, who held that profit-maximizing would prevail in the market, so long as competition was harsh enough, but that firms lacked enough information to maximize deliberately.⁸⁷ Natural selection theory predicted ‘the types of. . .firms which would have higher probability of survival and thus tend to become the dominant surviving type’, Alchian insisted, not ‘which

particular firms would survive and what adjustments each particular firm ought to make'. 'To regard it as a theory of individual behavior', he warned, 'is fatal'.⁸⁸ Waltz's insistence that neorealism could not be a theory of foreign policy – in contrast to Mearsheimer and other realists – is easier to understand once we see that he relies on natural selection logic, not the rational actor assumption.⁸⁹

Nevertheless, no selection can occur unless actors' traits are reasonably stable. Otherwise, their bearers would enjoy no consistent advantage. In biological natural selection, continuity is provided by genes. Natural selection theorists in the social sciences have conceived of organizations' 'genes' as routines and institutions.⁹⁰ In states, plausible candidates for this role are enduring material resources, along with strategic culture – defined broadly as beliefs, conceptions, and preferences about international relations – and the institutions embodying them.⁹¹ Institutionalization ensures reproduction of ideas and procedures – including leadership selection⁹² – creating continuity in behavior. Theories of strategic culture have been regarded as rivals to neorealism because they reject 'ahistorical, acultural' assumptions of rationality.⁹³ But Waltz and the economic tradition on which he drew claimed only that successful actors behaved *as if* they were rational. Business firms, wrote Friedman, might be guided by 'habitual reaction, random chance, or whatnot'. Those that behaved so as to maximize profit would survive; those that did not would be weeded out.⁹⁴ Waltz similarly insisted that rationality 'means only that some do better than others – whether through intelligence, skill, hard work, or dumb luck'.⁹⁵

Dumb luck cannot underpin fitness. But enduring traits may – without actors deliberately pursuing it.⁹⁶ Great powers are often driven by ideological convictions that make them behave as though they sought to maximize influence. Many such beliefs are sincere, as Schumpeter emphasized, even among the ruling elite.⁹⁷ Thus Bradley Klein notes that the United States' strategic culture legitimates a militarized foreign policy and intervention around the world, all the while 'enabling [the] populace to remain thoroughly, indeed morally, convinced of its overwhelmingly defensive nature'.⁹⁸ Recently Mearsheimer has complained that the United States is 'addicted to war', resulting in follies like NATO expansion and the war on Iraq. The collapse of its Soviet rival set America free to do as it pleased, and 'remaking the world in its own image is baked into its DNA'.⁹⁹ For Mearsheimer – who assumes that states are rational security-maximizers – such behavior is anomalous, and he falls back on an ad hoc second-image explanation. My account remains structural: states with this DNA are more likely to become and remain great powers. Without an expansionist strategic culture, the United States would not occupy its present position, and Mearsheimer would be discussing the foolish behavior of another great power instead. Nor is Russia's reaction to American actions a mystery. Given its large nuclear deterrent, it is hard to see how NATO or the EU threatened Russian survival such that snatching the Crimea was needed, much less full-scale war against Ukraine.¹⁰⁰ But Western actions did threaten Moscow's influence, and conceivably its great power status. As a state that owes its long survival as a great power to imperialist ideology and institutions, Russia unsurprisingly cut up rough. This is not to suggest that the theory explains particular US and Russian actions, but it does imply that great powers should be prone to such behavior.¹⁰¹

The foregoing argument raises a puzzle. Neorealists have often noted the tendency of coalitions to form against over-mighty states. On the assumption that states seek security, this is easy to explain: those that side with an aggressor risk becoming its next victim.¹⁰² But joining revisionists should more often be a good gamble for increasing influence, even when this is not the conscious aim.¹⁰³ Why is bandwagoning not more widespread?

Multilevel selection theory

A key issue in evolutionary theory is the level at which selection occurs. In the mid-20th century, when Alchian, Enke, and Friedman were writing, many believed that competition favored traits such as altruism that benefited some groups of animals relative to others, improving their members' survival chances. Invoked sparingly by Darwin, such explanations were common among naturalists by the 1960s, at which point they came under attack. The problem is that actors who put individual interests ahead of group interests should survive and reproduce more successfully, and proliferate.¹⁰⁴ Economic natural selection theory and Waltzian neorealism are also theories of group selection, in which traits that prevail confer competitive advantage on groups, not their individual members. The tension between individual and group selection has become a recognized problem in evolutionary economics. A recent analysis argues that firms will have an advantage whose employees 'work long hours, accept low status and low salaries, cooperate with each other, share resources, accept hierarchy, obey their bosses, volunteer for extra duties, and never help or move to rival firms' – who behave, in short, much like the model patriotic citizen. Individuals, on the other hand, are apt to increase their influence by looking out for number one. Even if the firm does worse, egotistical members do better.¹⁰⁵

Most neorealists have yet to appreciate this problem.¹⁰⁶ Structural theories, Waltz observes, imply similar behavior in 'realms that are different in substance but similar in structure'.¹⁰⁷ Yet while Waltz scorns theories that expect states to risk their survival for the sake of international peace,¹⁰⁸ he expects leaders to risk political survival for the sake of national security – or rather, he seems not to recognize that the two could come into conflict. Dismissing worries that leaders of new nuclear states will come under domestic pressure to adopt risky nuclear policies,¹⁰⁹ Waltz retorts that 'hardy political survivors' like Saddam Hussein will not commit suicide by using nuclear weapons, or allowing others to do so.¹¹⁰ What he overlooks is that if risky policies are required for support at home, then those are what political survivors will do – or be replaced by others.¹¹¹

Theorists in evolutionary biology and economics have responded to the tension between group and individual selection by developing multilevel selection theory. MLS theory holds that selection occurs both within and between groups. 'These interacting layers of competition and evolution', David Sloan Wilson and Edward O. Wilson observe, 'are like Russian matryoshka dolls nested one within another'.¹¹² Selection proceeds at each level in parallel; which process dominates varies from case to case. Thus with firms, 'if selection among groups is frequent and severe, we may expect an increased alignment of individual and group interests resulting in successful firms with hard working, groupish, highly committed employees. At the other extreme, if selection among groups is rare and weak, we may expect increased conflicts of interests resulting in inefficient firms and lazy, self-interested workers'.¹¹³

Both group selection and individual selection shape international relations. As with firm loyalty, nationalism helps states extract effort and resources from populations. The French Revolution and Napoleonic Wars proved it was a force multiplier. Nevertheless, so long as nationalism menaced dynastic legitimacy, European monarchs were wary of invoking it. Actors who sought to do so were removed or side-lined. Nationalism increased fitness_{IR} but put nationalists at a disadvantage in domestic politics. The latter effect dominated the former, and nationalism in the system remained low. By the late 19th century, with the spread of liberalism and governments' discovery of how to co-opt national sentiment, nationalism became a source of influence both abroad and at home. Group and individual selection were now in harmony, and intense nationalism and competition for influence characterized European politics, culminating in two world wars.¹¹⁴

This argument may seem to resemble theories on which leaders, seeking to survive in office, balance international and domestic pressures.¹¹⁵ But it does not assume that officials are playing a 'two level game',¹¹⁶ or any game at all. This allows it to capture ideological influences that rationalist accounts overlook. Consider Thucydides' account of the Peloponnesian War. The commander Nicias, it is true, deliberately balances external and internal pressures when he leaves Athenian forces in Sicily: '[S]ooner than perish under a dishonorable charge and by an unjust sentence at the hands of the Athenians, he would rather take his chance and die, if die he must, a soldier's death at the hand of the enemy'.¹¹⁷ But Thucydides does not show all Greeks calculating in this way. Instead, they have a variety of motives. Under Pericles, patriotism, coupled with an imperialist strategic culture, gives Athens a group selection advantage, and its influence expands. After Pericles' death, 'private interests and ambitions' prompt actions that increase individuals' political fitness but reduce Athens' fitness_{IR}, leading to its decline and defeat.¹¹⁸ In this case, intragroup selection results in policies that reduce both Athens' survival chances and also its expected influence. But with the spread of democracy, domestic competition increasingly selects for policies that reduce fitness_{IR} but promote security.

Security-seeking versus fitness_{IR}

Most neorealist explanations of the long great power peace since 1945 cite bipolarity, nuclear deterrence, changes in domestic societies, or some combination of the three.¹¹⁹ A puzzle arises for the first two accounts if great powers pursue influence, not security. Nuclear deterrence may prevent war, but why have we not observed intense rivalry and brinkmanship in Western and Central Europe since the end of the cold war, as Mearsheimer predicted?¹²⁰ Balancing against Russia cannot explain their absence until recently. Domestic politics explanations are powerful, but ad hoc within conventional neorealism.¹²¹ Multilevel selection theory offers an integrated account of why two-thirds of Europe now enjoys a democratic peace.

Both domestically and internationally, the most influential actors determine political outcomes. But traits maximizing expected influence in intergroup and intragroup competition can diverge. International competition selects for traits promoting fitness_{IR}. Domestic competition selects for leaders who give their selectorates – the 'winning coalitions' that choose the leadership – what they want.¹²² Much of the time this is security. Because most people value what they already have over what they could gain, they

reward leaders who balance aggressors, rather than jumping on their bandwagons.¹²³ Moreover, human beings, as Hobbes recognized, are more vulnerable than states, giving them an incentive to support leaders whose policies preserve peace at home.¹²⁴ This gives a domestic selection advantage to politicians of a moderate, security-seeking disposition. Peace-loving states enjoy no comparable advantage in the international arena. All states are to some extent security-seekers, due to individual selection.

Cultural and institutional change since the early 20th century, notably democratization, have reinforced this tendency.¹²⁵ Because democratic citizens themselves pay for wars in blood and treasure, they are likely to oppose them unless they are waged against weak adversaries or believed essential for security. War must be sold in liberal capitalist states as defensive, Schumpeter notes, with ‘concrete advantages for all classes. . . to be expected’.¹²⁶ Greater openness to the outside world, a freer ‘marketplace of ideas’, and political pluralism render liberal states less vulnerable to nationalist mythmaking.¹²⁷ Liberal societies privilege moneymaking over military glory, and are less prone to conceive of the state as a person whose rights and honor must be defended at the expense of citizens’ well-being.¹²⁸ As a result, security-seeking politicians enjoy a pronounced individual selection advantage.

This means democracies will forego some wars that would increase their influence. One might think that this would undermine their fitness_{IR}. Just as less profitable firms lose market share, democracies would lose influence to influence-maximizing rivals.¹²⁹ Security-seeking would predominate within democracies, but authoritarian states would dominate international relations. Why has this not occurred?

Here it is illuminating to consider how democracies’ equivalent in the marketplace – labor-managed firms (LMF) – survive competition. Conventional capitalist firms resemble authoritarian states whose leadership depends on, and is responsible to, a rentier upper class. The firm seeks to maximize profits in the interest of its owners. Shareholders are likely to accept some policies risking bankruptcy if they maximize expected returns. Incentives can embolden managers who might otherwise fear losing their jobs. In contrast, employees have their jobs and savings on the line, without the same advantages. Firms owned and managed by their workers, Samuel Bowles and Herbert Gintis argue, can be expected to prioritize firm survival – in our terms, to be security-seekers.¹³⁰ While these claims are controversial,¹³¹ evidence suggests that LMF give greater priority to preserving employment, and may also give more weight to workplace safety.¹³²

Shouldn’t deviating from profit-maximization leave democratic firms at a competitive disadvantage? Paralleling Waltz’s claims about socialization, Rosa Luxemburg argued that under capitalism LMF must adopt the same exploitative methods as their competitors or go broke.¹³³ Yet the paucity of LMF seems to result from a low rate of formation, not lower productivity or higher mortality.¹³⁴ Analysts have suggested explanations resembling arguments for political democracy. Employees sharing in an enterprise’s earnings should be more motivated to contribute to its success and to ensure that co-workers do likewise. Fewer resources must be devoted to top-down monitoring. Participatory decision making promotes information-sharing and strengthens loyalty and morale.¹³⁵ ‘A longstanding belief runs as follows: firms must maximize profit, or behave as if they do’, writes Gregory Dow,

because otherwise they will be driven out of the market by other firms that do maximize profit, or behave as if they do. . . . This idea is contradicted by what we know about LMFs, which (a) respond to market shocks in ways that deviate from profit maximization but (b) often survive for many decades in competition with [their capitalist] rivals. It seems likely that these observations can be explained by LMF productivity advantages, at least in those industries where both firm types exist.¹³⁶

Just as democratic firms deviate from maximizing profits, democratic great powers deviate from maximizing influence. During the Cold War, Western hawks and some realists feared that they would be ‘driven out of the market’. But while the Soviet Union competed harder, it did so from a smaller material base. Western democracies enjoyed the same productivity advantages as those ascribed to democratic firms.¹³⁷ Their greater resources compensated for weaker efforts to expand their influence. With the spread of democracy, individual selection has led more and more states to behave as defensive realism predicts, due to a system-wide change in domestic political structure.¹³⁸ Far from being ad hoc, this explanation fits neatly into a unified theory of multilevel selection. ‘Students of international politics’, Waltz wrote 25 years ago, ‘will do well to concentrate on, and make use of, separate theories of internal and external politics until someone figures out a way to unite them’.¹³⁹ This paper has shown how to do so.

Playing at the top table

‘Reasoning by analogy is helpful’, Waltz observed in *Theory of International Politics*, ‘when one can move from a domain for which theory is well developed to one where it is not’.¹⁴⁰ Neorealism’s roots in evolutionary economics – and thus indirectly in natural selection theory – give it great explanatory power. But for analogical reasoning to succeed, the right theories must be chosen, and the proper analogies drawn. This paper has argued that Waltz went wrong in two ways. First, he assumed that the counterpart of profit-maximization in the international domain was security-seeking. Second, he assumed that the dominant selection mechanism was group selection – a view repudiated in biology for half a century, and increasingly in economics.

Neorealism’s reliance on natural selection reasoning encouraged the assumption that international competition selects for traits promoting survival, leaving it struggling to explain risk-acceptant great power behavior. But Darwinism is a theory of why some traits come to predominate. Giant firms are the apex predators of oligopolistic markets; great powers, those of IR. Firms that claw their way to the top maximize profits; states that do so maximize their international influence.

Consider the following analogy: You enter the Casino at Monte Carlo and discover people playing for high stakes. Now and then somebody wins big. More often, they leave with empty pocketbooks. You are nonplussed. Clearly, there are more reliable ways to make a living. You might think that that the gamblers have been tricked. You might try to argue that the odds are really in their favor. More likely, you conclude that they’re not there to earn a secure income. People with that priority don’t go to casinos. In any case, you needn’t know their motives to predict their behavior. It is enough to know that nobody gets to play at the top tables who refuses to stake big.¹⁴¹ The same goes for

playing at the top table of international politics. It is a game for high rollers, played for big stakes.

At the same time, Waltz's focus on group selection obscured individual selection within states. No modern theory of natural selection can afford to make this mistake. It is striking that while realists debate whether domestic factors can override international ones, the corresponding debate in evolutionary biology concerns whether group selection *ever* trumps individual selection.¹⁴² The spread of democracy has given an individual selection advantage to security-seeking in much of the world.

Nevertheless, leading states, especially non-democracies, remain more expansionist than security requires. Schumpeter believed that imperialism had once been adaptive but had become atavistic, as were the beliefs that produced it.¹⁴³ It might seem that this describes Russia, whose imperialism helped it to survive the cutthroat environment of early modern Europe,¹⁴⁴ but is now causing dangerous conflict with the West. Unfortunately, aggressive expansion, even when it decreases states' security, can still increase short-term fitness_{IR}. Take US support for NATO expansion, which Waltz and Mearsheimer both condemn for needlessly provoking Russia.¹⁴⁵ It reduced America's security by estranging a state with thousands of nuclear weapons, yet increased its expected influence. Russia's invasion of Ukraine increased its short-term expected influence even more.

Neorealism's equation of fitness_{IR} with security risks conferring a spurious legitimacy on such folly. Mearsheimer writes that 'States *should* behave according to the dictates of offensive realism, because it outlines the best way to survive in a dangerous world'.¹⁴⁶ This could easily be taken as a rationale for expanding NATO, even if Mearsheimer would deny that it follows from his theory.¹⁴⁷ Though he does not maintain that Russia's reckless assault on Kharkiv and Kyiv increased its security, for Mearsheimer, this is just 'the way great powers behave'.¹⁴⁸ All too often, that is true. Great powers are prey to all manner of imperialist ideologies that keep them among the world's movers and shakers, even as they harm themselves and others. The worst cases are dictatorships like Putin's myth-ridden regime.¹⁴⁹ With these Schumpeterian insights, realism, often criticized for valorizing the status quo, can return to its mid-20th century practice of speaking truth to power.¹⁵⁰

Acknowledgements

I thank Catherine Gegout, Ben Holland, Miles Kahler, Kostas Kostagiannis, Kyriaki Nanou, Kevork Oskanian, Benoît Pelopidas, Bettina Renz, Jack Snyder, Selim Yilmaz, the editors of *International Relations*, and audiences in Antwerp, Athens, Baltimore, Moscow and Newcastle. The suggestions of the anonymous referees were exceptionally helpful.

Funding

The author received no financial support for the research, authorship, and/or publication of this article.

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114. Otto Pflanze, 'Nationalism in Europe, 1848-1871', *Review of Politics*, 28(2), 1966, p. 131; Henry A. Kissinger, 'The White Revolutionary: Reflections on Bismarck', *Daedalus*, 97(3), 1968, pp. 901–5; Posen, 'Nationalism'; Schweller, *Unanswered Threats*, p. 14.
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116. Robert D. Putnam, 'Diplomacy and Domestic Politics: The Logic of Two Level Games', *International Organization*, 42(3), 1988, pp. 427–60.
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124. Thomas Hobbes, *Leviathan* (Harmondsworth: Penguin, 1968; originally published 1651), chapter 13.
125. Van Evera, 'Primed for Peace', pp. 18–29.
126. Schumpeter, 'Sociology of Imperialisms', pp. 5, 66–75, quoted passage at p. 5; Snyder, *Myths of Empire*; Bueno de Mesquita et al., 'Institutional Explanation'; Schweller, *Deadly Imbalances*, p. 76; Schweller, *Unanswered Threats*; cf. Sebastian Rosato, 'The Flawed Logic of Democratic Peace Theory', *American Political Science Review*, 97(4), 2003, pp. 594–7.
127. Van Evera, 'Primed for Peace', p. 27; Snyder, *Myths of Empire*.
128. Schumpeter, 'Sociology of Imperialisms', pp. 69–70; Escudé, *Foreign Policy Theory*, chapter 2. Escudé also maintains that short time horizons encourage despotic rulers to privilege the exercise of short-term influence over economic development that would increase the state's long-term power (pp. 55, 126). Jack S. Levy, in contrast, suggests that democracies may have shorter time horizons ('Preventive War and Domestic Politics', *International Studies Quarterly*, 52[1], 2008, pp. 1–24).
129. The absence of domestic constraints permits so-called rogue states, like great powers, to exercise disproportionate influence over international politics at the expense of their inhabitants' security (see Escudé, *Foreign Policy Theory*, pp. 49–50). Contrary to conventional wisdom, however, 'rogues' do not appear to be particularly aggressive. See Mary Caprioli and Peter F. Trumbore, 'Rhetoric Versus Reality: Rogue States in Interstate Conflict', *Journal of Conflict Resolution*, 49(5), 2005, pp. 770–91.
130. Herbert Gintis, 'Financial Markets and the Political Structure of the Enterprise', *Journal of Economic Behavior & Organization*, 11(1), 1989, pp. 311–22; Samuel Bowles and Herbert Gintis, 'A Political and Economic Case for the Democratic Enterprise', *Economics & Philosophy*, 9(1), 1993, pp. 75–100; see also Chris Doucouliagos, 'Institutional Bias, Risk, and Workers' Risk Aversion', *Journal of Economic Issues*, 29(4), 1995, pp. 1102–3.
131. Gregory K. Dow, *Governing the Firm: Workers' Control in Theory and Practice* (Cambridge: Cambridge University Press, 2003), pp. 196–9, 255–6; Gregory K. Dow, 'The Theory of the Labor-Managed Firm: Past, Present, and Future', *Annals of Public and Cooperative Economics*, 89(1), 2018, p. 79.
132. Doucouliagos, 'Institutional Bias', p. 1103; Dow, 'Theory of the Labor-Managed Firm', p. 74; cf. John P. Bonin, Derek C. Jones and Louis Putterman, 'Theoretical and Empirical Studies of Producer Cooperatives: Will Ever the Twain Meet?', *Journal of Economic Literature*, 31(3), 1993, pp. 1300–1.
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134. Bonin et al., 'Theoretical and Empirical Studies', p. 1316; Henryk Flakierski, 'Market Socialism Revisited: An Alternative for Eastern Europe?', *International Journal of Sociology*,

- 25(3), 1995, p. 47; Dow, *Governing the Firm*; Virginie Pérotin, 'What do we Really Know About Worker Co-operatives?', in Anthony Webster, Linda Shaw and Rachel Vorberg-Rugh (eds), *Mainstreaming Co-operation: An Alternative for the Twenty-First Century?* (Manchester: Manchester University Press, 2016), pp. 254–5; Dow, 'Theory of the Labor-Managed Firm'.
135. Doucouliagos, 'Institutional Bias', pp. 1099–1100; Flakierski, 'Market Socialism Revisited'; Dow, pp. 47–50; Dow, *Governing the Firm*, pp. 240–5; Bruno Jossa, 'Alchian's and Demsetz's Critique of the Cooperative Firm Thirty-Seven Years After', *Metroeconomica*, 60(4), 2009, pp. 693–7.
136. Dow, 'Theory of the Labor-Managed Firm', p. 78.
137. David A. Lake, 'Powerful Pacifists: Democratic States and War', *American Political Science Review*, 86(1), 1992, pp. 24–37.
138. Fazal (*State Death*, pp. 57–8) denies that democratization explains declining state deaths. As evidence, she notes an increase in the number of enduring rivalries by about 35 percent in the postwar era. Fazal seems to overlook that the number of states has grown by a much greater proportion, a consideration she elsewhere takes into account (Fazal, *State Death*, pp. 78, 180). A 35 percent increase suggests that enduring rivalries are becoming proportionately less frequent. Between democracies they are very rare. See Paul R. Hensel, Gary Goertz and Paul F. Diehl, 'The Democratic Peace and Rivalries', *Journal of Politics*, 62(4), 2000, pp. 1173–88.
139. Waltz, 'International Politics is not Foreign Policy', p. 57.
140. Waltz, *TIP*, p. 89.
141. On 'selectional' explanations in Darwinian reasoning, see Sober, *Nature of Selection*, pp. 149–50.
142. Elliott Sober and David Sloan Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour* (Cambridge, MA: Harvard University Press, 1998); Pinker, 'False Allure'.
143. Schumpeter, 'Sociology of Imperialisms', pp. 64–9.
144. Wohlforth, 'Russian-Soviet Empire'.
145. Waltz, 'Structural Realism', p. 38; Mearsheimer, *Great Delusion*.
146. Mearsheimer, *Tragedy*, p. 11; emphasis in original.
147. Stephen Sestanovich, 'Faulty Powers: Who Started the Ukraine Crisis?', *Foreign Affairs*, 93(6), 2014, pp. 174–5; Andrey A. Sushentsov and William C. Wohlforth, 'The Tragedy of US-Russian Relations: NATO Centrality and the Revisionists' Spiral', *International Politics*, 57(3), 2020, p. 445. Mearsheimer claims that regional hegemons like the United States cannot attain global hegemony due to the 'stopping power of water' (*Tragedy*, pp. 83–4). This claim has been widely criticised (e.g., Pashakhanlou, 'Drawing Board', pp. 216–7).
148. Isaac Chotiner, 'Why John Mearsheimer Blames the U.S. for the Crisis in Ukraine', *New Yorker*, 1 March 2022, available at: <https://www.newyorker.com/news/q-and-a/why-john-mearsheimer-blames-the-us-for-the-crisis-in-ukraine> (accessed 18 March 2022).
149. Snyder, *Myths of Empire*.
150. See William E. Scheuerman, *The Realist Case for Global Reform* (Cambridge: Polity Press, 2011).

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