



Geopolitics as Theory: Historical Security Materialism

DANIEL DEUDNEY
Johns Hopkins University

Despite its previous centrality in Western political science, materialist arguments in contemporary theories of security politics are neglected and attenuated due to several political and intellectual developments. The extensive geopolitical literature of the late 19th and early 20th centuries was theoretically unsophisticated, deterministic and reductionist, but it was, along with classical Marxism, a branch of a broader attempt to historicize earlier materialist arguments in response to the industrial and Darwinian revolutions. In order to reformulate geopolitics as a more conceptually robust and sophisticated theory, I employ a generalized version of the apparatus of Marxian historical (production) materialism to construct geopolitics as *historical security materialism*. In this model, the *forces of destruction*, constituted by the interaction of geography and technology, determine the *security functionality* of different *modes of protection*. Two competing modes of protection, the *real-state* and the *federal-republican*, distilled from realist and republican (proto-liberal) security practices, entail differing forms of arms control and patterns of institution-building (*asymmetrical binding vs co-binding*), and in turn generate differing political structures (anarchy and hierarchy vs republics and states-unions). The security viability of these modes and their attendant structures is hypothesized to vary across three different sets of forces of destruction (early-modern, global-industrial and planetary-nuclear). Simple security, the absence of violence applied to bodies, can result either from the presence of a violence-poor material context, or the presence of political restraints on violence. Real-state practices and structures are security functional in material contexts characterized by low violence volume and velocity and dysfunctional in material contexts of high violence volume and velocity, while the converse is true for federal-republican practices and structures. The role of ancillary concepts of contradiction, reification and idealism is suggested and an agenda for further conceptual work and empirical research is outlined.

KEY WORDS ♦ geopolitics ♦ historical materialism ♦ Marxism ♦ republicanism ♦ security ♦ technology

Introduction

The idea that the material environment of geography and technology significantly shapes security politics is one of the most obvious in political science. Human beings are fragile corporeal entities in continuous, intimate and inescapable intercourse with the material world, and therefore any realistic theory of security politics must incorporate some version of material factors, even if only implicitly or crudely. Not surprisingly, geopolitical theorizing about the relationship between material contexts and security politics is also among the oldest and most central lines of argument in the 2500 year project of Western political science. To the extent that early analysts of politics made causal propositions attempting to *explain* variations in human political outcomes across space and in the relations between different political societies (as opposed to deductive natural law and natural right arguments), they relied heavily on material, particularly geographic factors.

Geopolitical theory emerged in two waves, early naturalism and global geopolitics, the latter of which grew out of the former in the late 19th century under the impetuses of the Darwinian and industrial revolutions. In the first wave, naturalist arguments about the security-political implications of geography appear in most of the major thinkers in political theory from the Greeks through the Enlightenment, and appear very prominently and at times systematically in Aristotle and Montesquieu, the two writers (along with Machiavelli) most widely recognized as the founders of political science. The second major body of geopolitical literature, the global materialist analyses from the late 19th and early 20th centuries produced by Alfred Thayer Mahan, Friedrich Ratzel, Halford Mackinder, Frederick Jackson Turner, H.G. Wells, Karl Haushofer and others gave greater explicit recognition to technology and change than had its naturalist predecessors, and was focused on the global-scope system of power and security relationships created by the technologies of the industrial revolution interacting with the largest geographical features of the earth.¹ Contrary to the contemporary identification of geopolitics with realism, both bodies of early geopolitical theory gave prominent attention to the relationships between material context and liberal forms of political associations ranging from city-state republics to large federal unions.²

Despite their obvious importance and long history, material factors have a fragmentary and attenuated presence in contemporary international and security theory. Of course, Marxism makes an important materialist argument, but one whose focus on production is a step removed from security politics. Realism, in its currently dominant version of neorealism, is often castigated for its excessive materialism, and does contain one central

materialist variable — the distribution of power.³ Nevertheless, the prominence, overall conceptual richness and theoretical sophistication of materialist argument in contemporary international and security theory has declined due to a combination of political and intellectual developments. The association of the materialist geopolitics of the late 19th and 20th centuries with the disaster of Nazi Germany discredited geopolitics (Kristof, 1960; Livingstone, 1993). The association between Marxism and the Soviet Union made materialism suspect in the postwar ‘American social science of international relations’. The main thrust of the post-World War II ‘behavioral revolution’ was away from materialist approaches, and the recent surge in institutionalist, constructivist and postmodern theory has drawn the attention of theorists even further away from materialist lines of argument.

Despite its substantive senescence, the term ‘geopolitics’ has enjoyed a ghostly afterlife, becoming ubiquitously used while being largely drained of substantive theoretical content, and is used in so many ways as to be meaningless without further specification. Most contemporary usages of the term geopolitics are casual synonyms for realist views of international strategic rivalry and interaction.⁴ Beyond this, geopolitics is used to refer to the political branch of the discipline of geography and the arguments of non-materialist postmodern geographers.⁵

The atrophy and attenuation of materialist geopolitical lines of argument in theorizing about security-political relationships has several significant implications. First, international theory now lacks the conceptual apparatus to grasp the security-political implications of major changes in the material context such as the advent of oceanic navigation, industrialism, nuclear weapons and the opening of orbital space as a terrain for strategic interaction. While many sophisticated treatments of such major developments have been produced by International Relations theorists, such analyses remain a series of ad hoc insights in the absence of a general conceptual framework for analyzing the security-political consequences of material contexts. Second, the absence of a framework for analyzing the consequences of material contexts beyond the distribution of capability has meant that realist theories are able to make hypotheses about the operation of state-systems, but not about the larger and more fundamental question of why there are state-systems, and why the scope of state-systems has changed so dramatically over time. Third, in the absence of a robust materialist geopolitical theoretical framework, international theorists have lost sight of the many strong arguments relating non-statist republican and federal security-political arrangements to material contexts. As a result, the phrase ‘geopolitical realism’ has become vaguely redundant, while the expression ‘geopolitical liberalism’ seems largely oxymoronic, and the lines of debate

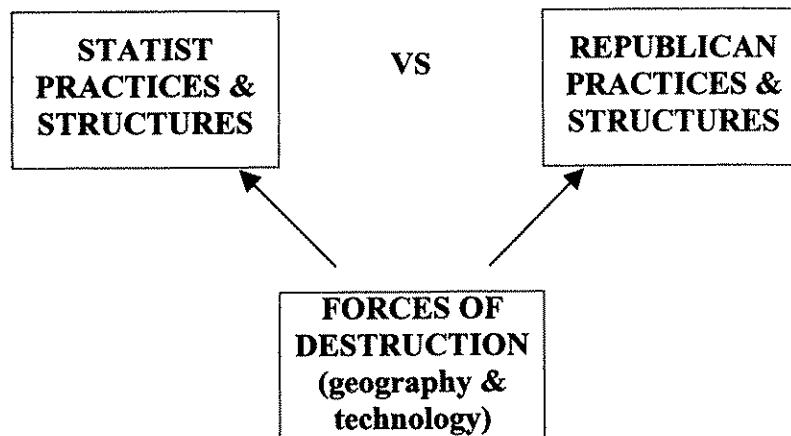
between liberal and realist theory have assumed the adequacy of realist materialism and the absence of a liberal materialist line of argument.

The Argument

The aim of this article is to sketch the essential features of a more conceptually robust geopolitical model for theorizing about the relationships between material contexts and security-political arrangements, both statist and non-statist. My strategy is to reformulate the inchoate arguments of earlier geopolitics as *historical security materialism* constructed from a generalized version of the conceptual apparatus of Karl Marx's historical materialism of productive forces and relations. Marx's argument and global geopolitics are neighboring branches of historicist materialism that emerged in the 19th century from the trunk of older naturalist materialism in response to the inability of earlier naturalist theory to explain variations across time. The earlier naturalist theory had been an intertwined set of arguments about both productive and destructive material contexts, but the branches of 19th century historicist materialism became more discrete and specialized. Of these branches, global geopolitics, while focused primarily on destructive capabilities and their security implications, was conceptually inchoate and unsophisticated, laced with loose biological analogies, and prone to extreme reductionism and determinism. In contrast, classical Marxism, while focused almost exclusively on productive forces and relations, developed a highly sophisticated conceptual apparatus that avoided the reductive treatment of social structures and maintained human agency, constrained by contexts, at its center.

Given these genetic similarities and developmental differences, the essential move of this article is to borrow from Marx's conceptual apparatus to reformulate geopolitics as a theoretical framework in which changing forces of destruction (constituted by geography and technology) condition the viability of different modes of protection (understood as clusters of security practices) and their attendant 'superstructures' of political authority structures (anarchical, hierarchical and federal-republican). This apparatus enables us to pose a fundamental question — in which material contexts are which modes of protection security functional? In short, I propose to cast geopolitics as the arbiter of the relative viability of competing statist-realist and liberal-republican approaches and arrangements (see Figure 1). In answer to this question I advance an initial hypothesis that security functionality is determined by the interaction between the changing volume and velocity of violence capability present in different material contexts and the differing abilities of the competing modes to restrain violence.

Figure 1
Geopolitics as Arbiter of Realism and Liberalism



The argument proceeds in two main steps. The first part sketches the main precepts of naturalist theory and its evolution into historicist materialism, and summarizes the conceptual apparatus of classical Marxian historical production materialism. The second part outlines the main conceptual apparatus of geopolitics recast as historical security materialism, describes the main features of competing realist and liberal modes of protection, and provides a hypothesis on their changing security functionality over time. The conclusion articulates a further research agenda emerging from the argument.

1. Historical Materialism

Materialist security arguments appear in two substantial clusters — a line of naturalist argument beginning with the Greeks and culminating in the Enlightenment, and a second body of global geopolitical analysis produced in the late 19th and early 20th centuries. Because the second emerges out of a crisis and reformulation of the first, it is necessary to examine early naturalism in order to understand its crisis and the direction of its reformulation as historicist materialism.

From Naturalism to Historicist Materialism

Until the industrial revolution, Western political thought centered its attention on 'nature'. While the mainstream of Western political theory

advanced deductive 'natural law' and 'natural rights' arguments, the mainstream of Western political science (i.e. efforts to explain political outcomes) focused upon nature in the sense of the material environment as a causal factor. The origins of naturalist political science coincide with the Greek invention of political science and such theorizing reached its zenith in Montesquieu's synthesis of Enlightenment political science.⁶ The basic claim of naturalist political science is that fundamental differences among human societies are the product of the different natural environments (most notably climate, soil fertility, resources, population, topography and land-sea interactions). The heart of this approach is the simple insight that material environments produce constraints and opportunities that significantly affect the performance of the very basic functional tasks of economic production and protection from violence that are of universal importance in human life. Natural contexts are understood to effect, either directly or indirectly, a broad range of outcomes at the individual, group, and inter-group levels. The Scottish legal theorist John Millar, writing in the late 18th century, stated the essentials of this kind of materialism when he observed that 'differences in situation . . . have a prodigious influence upon . . . pecukiar [sic] systems of law and government' which in turn produce 'correspondent habits, dispositions, and ways of thinking' (Millar, 1781: 2-3). The propositions of naturalist political science encompassed variables that have subsequently been divided among the social sciences of psychology, anthropology, geography, sociology, economics and political science, and its political arguments dealt with variables now parcelled into both comparative and international political science. Given the breadth of these arguments, the term 'geopolitics' is too narrow — the dependent variables in naturalist political science are not confined to the political, and the independent variables are only geographical in the broadest sense of the term.⁷

Although not cast in the terminology of modern social science, the basic nature of the causal relationship between material contexts and political outcomes is functional — form (i.e. political arrangements) follows function. These theories rest on the simple assumptions that the physical world is not completely or even primarily subject to effective human control, and that these realities impede or enable vital and recurring human goals. Because humans conceive and carry out their projects in differing material environments, the various ways in which these environments present themselves to humans heavily shape the viability of human projects. The functional dimension of such theories stems from the positing of minimalist anthropological naturalist assumptions about naturally given human needs and capacities. Political arrangements can then be assessed as functionally adaptive or maladaptive in specific material contexts. Politics is thus conceived as occurring 'between two natures' — the natural or intrinsic

features of humans as biological organisms and the variable 'nature' of the material environment.

During the 19th century naturalist political science entered into a major intellectual crisis, was significantly recast with conceptual innovations derived from the Darwinian revolution, and broke into several distinct branches. Two major limitations of naturalist theory precipitated these changes.

First, early naturalistic theories of politics lacked the ability to explain historical change. Nature was commonly conceptualized in either static or cyclical terms and change was only understood in terms of cyclical patterns. But because nature seemed to change only rarely and slowly, naturalist theories were unable to explain differences across time in politics located in the same place. Beginning in the late 18th and accelerating in the 19th century, historical change, evolution and revolution became central topics of investigation in both the natural and social sciences (Bowler, 1983; Sanderson, 1990). In the human sciences, the dominant tendency was to look for the source of change in the development of human institutions and culture rather than in the physical environment. What might be termed the 'natural-social science' (natural causes of social outcomes) of early theory gave way to the 'social-social science' (social causes of social outcomes) that continues to dominate Western social science.

But many theorists, inspired by Darwin, sought to modify naturalist theory rather than to discard it. One approach conceptualized historical change as the result of improved adaptations to a static material environment. A second approach, present in much of Marxism and geopolitics, located the source of historical change in changes in the material context that stimulated or evoked new adaptations from human societies.⁸ Their central move was to incorporate changing technology into their conceptualization of the physical environment, thus enabling them to locate the driver of change in human arrangements in the nature exogenous to human control that was changing via technological development. This notion of 'nature changing through technology' underpinned the new historicist materialist project of explaining historically variable political outcomes by reference to changing material contexts.

A second major problem with early naturalist theory was its weak understanding of how material environments shaped political outcomes. Early naturalist theorists discerned correlations between different material environments and different security-political arrangements, but their conceptualization of causal mechanisms was primitive. The idea of natural selection in Darwin's theory of biological evolution offered a new and more plausible model of how material environments shaped political outcomes. Although Darwin's famous formulations 'the survival of the fittest' and

'competition for survival' suggested that natural selection was primarily a violent struggle between competitors, the core idea of natural selection is the functionalist notion that organisms survive by being better fitted to the constraints and opportunities of their environment.⁹ Applied to human society and politics, the idea of evolutionary change through natural selection gave rise to functionalism as an explanatory argument. Although social science functionalism comes in many variants, the basic idea is that the persistence of a particular social or political arrangement can be explained by its superior fit with the constraints and opportunities of the context within which it must operate.¹⁰

Marxism and Historical (Production) Materialism

By far the most conceptually elaborate versions of late 19th century historicist materialism are to be found in Marxism. Marxian theories exist in great variety, but in Karl Marx's own writings, which are themselves diverse and subject to great interpretative controversy, one finds a core cluster of arguments, generally known as 'historical materialism', that are concisely summarized in the preface to his *Contribution to the Critique of Political Economy* (Marx [1859] 1970). Although Marx was neither the first nor the last to advance arguments that were historical or materialist, he developed a theoretical vocabulary that crystallized a cluster of distinctive concepts and propositions that together marked a great increase in the sophistication of materialist theory. Nine concepts are essential — (1) species being; (2) praxis; (3) the forces of production; (4) modes of production; (5) a superstructure of political, social and cultural relations; (6) determination; (7) contradiction; (8) idealism; and (9) reification. At the risk of some simplification, it is worthwhile to sketch briefly these key concepts and their relationships.

First, there is Marx's philosophical anthropology, his assumptions about human nature or *species being*, which are simple and lopsidedly economic — man is first and foremost a producing and consuming being. However, humans are not simply more sophisticated animals, because they engage in *praxis*, an active, consciously purposive and intrinsically social practical activity. But humans are fated to pursue their practical activity within contexts, both material and social structural, that are very constricting and vary greatly over time: 'Men make their own history, but not in circumstances of their choosing' (Marx, [1852] 1969: 15).

Focused on economics, Marx identifies the *forces of production* as the ultimately decisive material reality of human life.¹¹ Composed of nature and technology embodied as productive capability (machines and other forms of real capital), the forces of production were originally very primitive, but have

been successively developed as embodiments of human labor and as means to satisfy human wants. Marx relentlessly insisted upon the ultimate primacy of material conditions, and claimed that his theory of socialism was the first truly 'scientific' one. Men had dreamed of socialism since the beginning of history, but its realization was a real historical possibility only in a material context of the developed industrial forces of production.

The second main component of Marx's model is the *mode of production*, whose viability is conditioned by the material context, and whose operation generates and depends upon distinct social and political arrangements. A productive mode (from Latin 'modus' for way or manner) is a cluster of interrelated productive practices. For Marx capitalism as a mode of production is characterized by the practices of production for the market and exchange. Marx identifies slave, Asiatic, feudal, capitalist and socialist modes of production, and seems to argue that each fits a particular stage in the development of the forces of production.¹² In one of his most quoted and analyzed (and criticized) passages, Marx observes that 'The hand mill will give you a society with the feudal lord, the steam mill a society with the industrial capitalist' (Marx, [1847] 1963: 92).¹³ Thus, the central nexus of Marx's historical materialism is the relationship between productive forces and modes.

Together the forces and modes of production constitute what Marx called the base or infrastructure, which he contrasted with the *superstructure* of political, social and cultural relations (Plekhanov, [1908] 1969; Williams, 1977). Different modes of producing generate, and in turn depend upon, different institutional structures, ideologies and related ideational phenomena, an insight now known as 'structuration' (Giddens, 1979). In the capitalist mode of production, buying and selling generates and depends upon economic structures such as money and banks, property laws and courts, and corporations, and generates and depends upon individualistic ideologies and acquisitive 'selfish' identities.

In Marx's scheme, the superstructure is in an ultimately dependent relationship upon the infrastructure, but not every aspect of a superstructure can be reduced to or is fully determined by the features of the base. Although Marx's argument has often been characterized as deterministic, what he means by determination is less a claim about strict and tight causality than a claim about how the limits of viability of particular modes and their attendant superstructures are defined, conditioned and limited by their material context (Williams, 1977). Marx's claim that the forces of production 'determine' the modes of production amounts to the proposition that technological opportunities and constraints create functional imperatives that determine the basic viability of different modes.

As a theorist of historical development, Marx is particularly interested in conceptualizing change between succeeding forces, modes and superstructures, a process characterized by the emergence of *contradictions* and their resolution (Schaff, 1957). To say that there is a contradiction is to say that there is a fundamental disjuncture between a particular set of forces and a particular mode, and its attendant superstructure. The core notion here is that change does not occur smoothly and incrementally, but rather that tensions and misfits grow in severity until they are resolved, often violently,¹⁴ by a revolutionary change that brings into dominance a mode and a superstructure more fitted to the material possibilities and constraints.

Much of Marx's energies were devoted to attacking 'bourgeois' (or in today's terminology, liberal democratic and capitalist) theorists such as Hobbes, Locke, Rousseau, Kant and Hegel as 'idealistic' because they improperly gave autonomy to social relations which were in reality fundamentally conditioned by material forces (Marx and Engels, [1845] 1965). Because the term 'idealism' already has so many connotations, it is useful to refer to this phenomenon as *formalist idealism*, which occurs when social arrangements are analyzed without reference to material context and function. Finally, Marx speaks of the process of *reification*, which occurs when humans do not recognize that the social relations are actually the product of human labor and practices, but are falsely imputed to have a 'thing-like' or even natural existence (Berger and Luckmann, 1966: 89).

Thus simply sketched, Marx's historical materialism is clearly distinct from ontological materialism, ethical materialism and dialectical materialism, with which it is often confused.¹⁵ This simple sketch has glossed over a large number of conceptual difficulties and disputes, and altogether ignores the many different directions that Marx's many followers have pursued. However, the very simplicity of this sketch serves to highlight the extent to which Marx incorporated into one model a diversity of ideas that are often taken to be inconsistent or antagonistic with one another. Insights of materialism and human nature are combined with a structuralist image of human agency as a free but contextually constrained force in history, and with the constructivist claim that political practices generate political structures.¹⁶ It is also striking, as many have noted, that Marx's general model seems to have very little to say directly about politics. Although Marx wrote a great deal about political events, and Lenin, Gramsci and others developed versions of Marxism assigning more autonomy to politics, Marx seems to see the state as 'the committee of the ruling class' and liberal or 'bourgeois' democracy as essentially derivative of the rise of the capitalist class in the context of the emergence of the capitalist mode of production.

Despite the convention of referring to Marx's argument as historical materialism per se, it should be noted that there are many competing, non-

Marxian, versions of historical production materialism. During the 18th century, theorists in the Scottish Enlightenment such as Adam Ferguson, John Millar and Adam Smith advanced sophisticated stage arguments about how different systems of productive relations were correlated with different sets of productive capabilities.¹⁷ In the 20th century a variety of authoritarian and liberal versions of historical production materialism have been advanced by theorists such as James Burnham, Clark Kerr and Daniel Bell (Kumar, 1978). What all of these disparate theories have in common is that they periodize history on the basis of different stages in the material conditions of production, and posit that the viability of different economic, political and cultural systems is determined by their fit with these material contexts.

On the topic of violence and security, the arguments of Marx and his followers are scattered and underdeveloped, with the main line of argument being that violence is a superstructural phenomenon. Although Marx's co-author and benefactor Frederick Engels wrote a great deal about military issues, he treats developments in violence capability as being fundamentally derivative of developments of the forces of production (Engels, [1878] 1947; Neumann, 1944; Semmel, 1981). Indeed, a major line of criticism holds that Marxism is deficient as a general theory of history because its account of violence, the state and interstate relations is so inadequate (Giddens, 1985).¹⁸ The leading contemporary schools of Marxist International Relations theory remain focused on capitalism and do not contain developed treatments of security issues (Wallerstein, 1974; Cox, 1987; Gill, 1993; Rosenberg, 1994).

2. Historical Security Materialism

The branch of post-Darwinian historicist materialism that deals most directly and extensively with security politics is the extensive global geopolitical literature produced in the late 19th and early 20th centuries on the relationship between world politics and the material forces unleashed by the industrial revolution. Although these theorists offer many valuable insights into the emergent global security system, their general theoretical framework is either implicit, inchoate or highly naturalistic (Wittfogel, [1929] 1985). For example, the major work of influential theorist Friedrich Ratzel was entitled *Anthropogeographie*, and it explored human life as determined by the interplay of human nature ('anthropo') and geography. Global geopolitical theorists commonly naturalized social and political formations in addition to emphasizing the importance of human nature and the natural-material environment. For example, Rudolf Kjellén, the Swedish professor who actually coined the term 'geopolitik,' refers to great powers as 'forms of

life' and 'sensual-rational organisms' (cited in Dorpalan, 1942: 54). These organic and naturalistic Darwinian analogies were marshalled to justify a wide range of competitive bellicist and cooperative pacific political agendas (Crook, 1994).

Geopolitics as Historical Security Materialism

In order to capture the insights of geopolitical argument and reformulate them in a more conceptually sophisticated and theoretically useful form, I propose to frame the main line of geopolitical argument as *historical security materialism*, or *historical protection materialism* (*security materialism* for short). The basic move is suggested by John Herz:

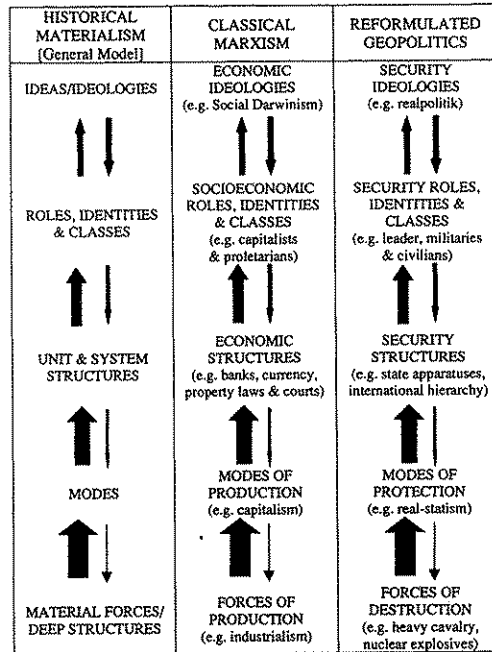
Marxism maintains that political relations and developments form the 'super-structure' over the system and the development of the means of *production*. Within the sphere of international relations, it might be said that political developments constitute a superstructure over the system and the development of the means of *destruction*. (Herz, 1951: 200)¹⁹

It is important to emphasize — I argue not that geopolitics is a variety of Marxism, but rather that both Marxism and geopolitics are varieties of historical materialism. The fundamentals of geopolitics as historical security materialism can thus be schematized in parallel with Marx's historical production materialism (see Figure 2).

First, the philosophical anthropology of security materialism, its assumptions about human nature, are simple and frequently emphasized by many realists — humans are by nature vulnerable to corporeal destruction, and providing security from violence is the minimum precondition for the pursuit of all other ends.²⁰ In short, humans must remain alive before they can pursue all other aims. In the pursuit of this naturally rooted fundamental aim humans are not mechanical or natural automatons, but rather engage in consciously purposive practical activities. But humans are condemned to seek security in circumstances — both socially produced and natural material — not of their own choosing. Security practices and the political structures they generate stand or fall as viable providers of security not by the will or wish of the human agents that produce them, but by their fit with the constraints and opportunities of the material environment within which they must function. Human security praxis thus occurs 'between two natures', the fixed nature of humans as a species, and the historically variable 'nature' of the material environment.

In the pursuit of security, the *forces of destruction* are the decisive material reality. As with the forces of production in Marxism, the forces of destruction are the driving and variable factor in security materialism. The forces of destruction are composed of the interaction of nature, particularly

Figure 2
Marxism and Geopolitics



geography, and technology, as both the revelation of natural possibilities, and as embodied destructive capability. As with the forces of production, the forces of destruction were originally very primitive, but have been successively developed.

Despite the 'geo' in geopolitics, such theories are as much about technology as geography — 'In discussing geography, geopoliticians at best have been talking about the technologies of communications, or transport, or weapons' (Wohlstetter, 1968: 243; see also Sprout, 1963). Thus, combinations of particular geographies and technologies together constitute the material context. Furthermore, communication and transportation are as integral to the forces of destruction as are specifically destructive technologies in shaping both the velocity and volume of violence available in particular material contexts.²¹

A central feature of all historical materialist arguments, whether Marxian or geopolitical, is the claim that history can be periodized into segments or stages in the basis of distinct material contexts. To say that a materialist

theory is 'historical' means that the shaping materialist forces vary from period to period in fundamental ways. Unfortunately, the heterogeneity of history ensures that such periodization is a complex and problematic undertaking. The material forces, whether of production or destruction, are rarely neatly limited to one period, but can often be present in others in less developed form. Furthermore, the material environment is often constituted by a heterogeneity of geographic and technological features, which impose conflicting constraints and opportunities. Many disagreements among historical materialists stem from divergent interpretations of the material forces of a particular period.

Despite these problems, it is possible to identify four broad periods characterized by distinct forces of destruction. Working from the present into the past, there is a clear distinction between the *planetary-nuclear* forces of destruction salient for the last half century, and the *global-industrial* forces of destruction that characterized the roughly one hundred years between the middle of the 19th and middle of the 20th centuries.²² For the periods prior to the industrial revolution, divisions and nomenclatures are less well established.²³ But there appears to be a fairly clear and significant distinction between the roughly half millennium of the early modern period marked by the 'gunpowder revolution' and the advent of oceanic transport, communication and navigation capabilities, and the long period stretching back to the agricultural revolution. Thus four main phases of the forces of destruction, each defined by the presence of an ensemble of technological and geographic factors can serve as the working framework for a reformulated geopolitical model — (1) *Pre-modern* (to 1500) composed of horses and camels, sails and oars, and bows and catapults; (2) *Early modern* (1500–1850) composed of horses and camels, ocean sailing and navigation, and gunpowder; (3) *Global-Industrial* (1850–1945) composed of steel ships powered by coal and oil, airplanes, telegraphs and radio, and high explosives; and (4) *Late Global or Planetary-Nuclear* (after 1945) composed of jet airplanes, rockets and missiles, satellites and nuclear explosives.

Different stages of the development of the forces of destruction are associated with different *modes of protection*, which are constituted by distinct security-political practices and structures. I propose to conceptualize the two most important modes of protection as *real-statism* and *federal republicanism* (to be discussed at length in the next section).

Together the forces of destruction and the modes of protection constitute the base or infrastructure which is distinct from, and which determines, the superstructure of political, social and cultural relations. In the security materialist model, as in classical Marxism, the superstructure is in an ultimately dependent relationship to the infrastructure, but not every aspect of a particular superstructure can be reduced to, or fully explained by, the

constraints and opportunities posed by the base of material destructive conditions. Although many varieties of Marxism, geopolitics and realism have been cast in highly deterministic language, the relationship between the material conditions, modes and superstructures in the security materialist model can be cast in terms of functional viability — material conditions determine whether particular modes and superstructures are security viable, but material conditions do not determine whether or not security-seeking agents will pursue — or successfully generate — practices and structures that are security viable in particular material contexts.

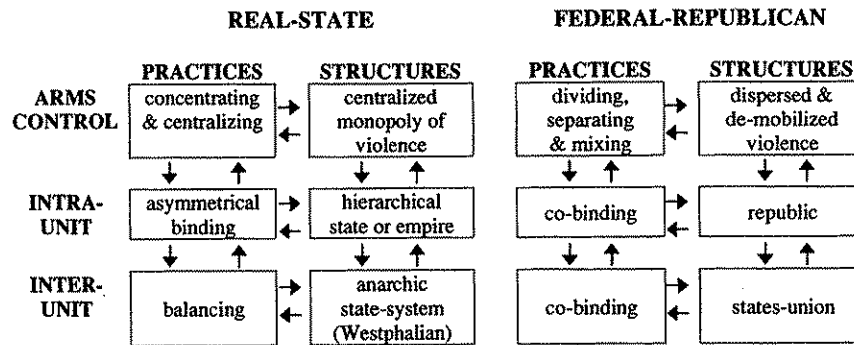
The concept of contradiction can also be usefully employed in the security materialist model (Deudney, 1997). Security materialism, like Marxism, conceptualizes the process of historical change as discontinuous. Once brought into existence, security practices and structures tend to persist whether or not the material contexts in which they were viable still remain, thus producing situations in which security systems are in contradiction to their material contexts.²⁴ In the security materialist model the most important form of contradiction occurs between obsolescent modes and emergent material contexts. Similarly, the concept of reification can be employed in security materialism to grasp the tendency for humans to confuse the structural products of their particular security praxis, such as the state, as timeless and natural thing-like entities.

Real-Statist and Federal-Republican Modes of Protection

Because the most pivotal relationship in historical security materialism is between material forces and protective practices with their attendant structures, much hinges upon the conceptualization of modes of protection. Leaving aside the possibility of feudalism as pre-modern security mode, it is possible to identify two distinct modern modes of protection — the *real-state mode of protection*, a distillation of statist and realpolitik security practices, and the *federal-republican mode of protection*, a distillation of liberal and proto-liberal republican security practices. Modes of protection, like modes of production, are clusters of related practices not reducible to any one component: Real-state and federal-republican modes may exist in hybrid forms (as do feudal, capitalist and socialist modes of production), but their essential features can best be grasped by considering them in pure form (see Figure 3).

At their core, modes of protection are about how violence capacities and authorities over violence capacity are institutionally regulated — or unregulated. As such, they vary with regard to how violence capacities are controlled and how both internal (or domestic) and external (or international) violence threats are addressed. The sustained operation of these

Figure 3
Modes of Protection



practices in turn generates structures (patterns of political authority), which support and reinforce these practices.

Although most realists tend to disparage 'arms control', realpolitik and statist approaches to security have always been centrally concerned with controlling arms in a particular manner. The real-state arms control practice of centralization and concentration seeks to produce the classic attribute of a 'state', a centralized monopoly of violence in a circumscribed territorial space (Weber, 1946: 78), in order to avoid what for realists is the most enduring and significant security threat, the unit-level anarchy of civil war and revolution etched so vividly in the realpolitik world-view by Thucydides' account of the civil war in Corcyra and by Hobbes's account of religious civil wars culminating in the Thirty Years War in Germany.²⁵ Real-state arms control entails popular disarmament and military subordination. Concentration at the center of a polity requires pacification at its periphery, and the historical process of state-building in Europe and elsewhere has involved a long and often violent process of disarmament and pacification of autonomous feudal lords, communal militias, mercenaries and dueling aristocrats (Kiernan, 1986; Thomson, 1994). Once monopolized, violence capacity must be continuously subordinated and disciplined to ensure that military instruments are closely responsive to central will and direction (Huntington, 1957).

The second central practice of the real-state mode of protection is what can be termed *asymmetrical binding*²⁶ leading to the establishment of hierarchical authority structures. Although contemporary definitions of the 'state' have been drained of much of their earlier structural substance, the establishment of an internal political hierarchy has traditionally been the

central project of *realpolitik* and its absolutist and monarchical precursors. Real-state practices of arms control and asymmetrical binding are intimately related and mutually reinforcing.

The third central component of the real-state mode is *balancing* which is intended to respond to external security threats (Gulick, 1967; Waltz, 1979; Walt, 1987). Although internal real-state practices aim to avoid internal anarchy through the creation of an internal hierarchy, external real-state practices aim to avoid external hierarchy (subordination to imperial rule) through military counterpoise and thus reinforce and reproduce external anarchy. The familiar practices of *realpolitik* balance of power enshrined in the tradition of realism presuppose and in turn reinforce and reproduce internal hierarchical structures of authority and centralized monopolies of violence (Tilly, 1985).

Contemporary international theory tends to assume that concern with security from violence is primarily, or even uniquely, realist. But an alternative, less historically prevalent set of security practices and attendant structures exists within the liberal tradition and its republican precursors that has concerned the exercise of the 'federative' power to constitute 'republics' understood as governments of mutual restraint.²⁷ This federal-republican mode of protection is composed of a set of arms control and authority constituting practices that are present in the ancient and early modern republican and constitutionalist struggle to restrain internal hierarchies and in the more recent histories of federal unions, liberal internationalism and interstate arms control (Deudney, 1996; Henrickson, 1997/8).

The arms control practices of federal-republicanism seek to prevent both the concentration of violence capacity and the unregulated situation of anarchy. This dual goal is achieved by sustaining and regulating an internal balance of violence capacity with militias, small 'standing armies' and extensive arrangements of divided, separated and concurrent authority over violence employment (Halbrook, 1984).

Unlike the Janus-faced character of real-state practices, the federal-republican practice of *co-binding* seeks to deal with both internal and external security threats. Co-binding occurs when institutional links are established between actors (individual and group) that symmetrically reduce their autonomy vis-a-vis one another. Internally, federal-republican co-binding entails the delegation of circumscribed authorities to governmental organs arranged with mechanisms of mixture, separation, balance and Constitutions, thus avoiding both anarchy and hierarchy. Externally, federal-republican practices replicate this move on a larger scale, co-binding with other political societies to produce an arrangement of mutual restraints, what James Madison termed a 'compound republic' or a 'states-union', thus

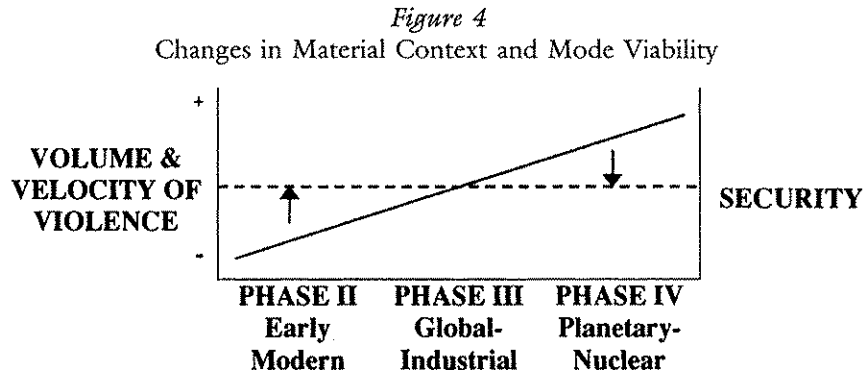
avoiding both external anarchy and hierarchy (Forsyth, 1981; Elazar, 1987; Ostrom, 1987).

Although this brief sketch of the real-state and federal-republican modes of protection has emphasized constitutive practices and the structures they generate, it is important to note that each of these modes entails a rich superstructure of identities, ideologies and discourses. As critics (Ashley, 1984; Rosenberg, 1994) have observed, classical realism was primarily a body of practical knowledge composed of manuals, dictums and stylized historical models that aimed to equip and socialize state operatives, and much of earlier republicanism had a similar practical cast. The real-state mode presupposes and seeks to produce obedient subjects while the federal-republican mode entails citizens acting according to elaborate sets of norms (cast in the vocabulary of 'virtues'). Similarly discursive assertions about the ultimate locus and appropriate forms of sovereignty divide these modes, with real-statists emphasizing undivided internal sovereignty and mutually recognized autonomy ('Westphalian sovereignty') (Bull, 1977; Hinsley, 1986; Buzan, 1993a; Krasner, 1995/6), and federal-republicans emphasizing internal popular sovereignty and external pooled, divided and circumscribed patterns of legitimate authority.

Security, Violence Restraint and Mode Viability

Having outlined the conceptual apparatus of geopolitics reformulated as historical security materialism, it is now possible to advance a hypothesis concerning a fundamental question of security politics — in which material contexts are real-state and federal-republican modes of protection viable as providers of security? Given the previously stated assumption of the human nature based telos of security from violent political death, security practices and their attendant structures must be judged as functional and dysfunctional in relationship to this end.

The key to relating material contexts to security viability is restraint on violence. In the broadest terms, security results from the presence of restraint on violent power, and insecurity results from the absence of restraint on violent power.²⁸ Given this, there are logically only two possible sources of restraint — either in the limits posed by the material context, or in socially constructed limits generated by security practices and their attendant political structures. By examining the ways in which different material contexts provide — or fail to provide — restraints, and the ways in which different modes of protection and their attendant structures provide — or fail to provide — restraints, it is possible to produce a rough and broad understanding of which modes are viable in which contexts (see Figure 4).



- PHASE II: Real-State Mode Viable
- PHASE III: Mixed Viability
- PHASE IV: Federal-Republican Mode Viability

The broad pattern of the development of the forces of destruction exhibits a strikingly linear pattern — as the forces of destruction have evolved in four broad periods from the spear, bow and arrow to the nuclear ballistic missile, the overall levels of violence capacity have evolved from being violence-poor to being violence-rich (Brodie and Brodie, 1973). Cumulatively across these four periods, both the velocity and the volume of violence capacity have grown enormously.

As the material context has changed, the security viability of different modes of protection has also changed. Speaking in very broad terms, the real-state mode of protection and its attendant anarchical and hierarchical structures were security functional in violence-poor material contexts, but are of decreasing viability in violence-rich material contexts. Conversely, the federal-republican mode and its attendant structures were misfitted to violence-poor material contexts, but are increasingly fitted to violence-rich material contexts. To understand why this is so, it is necessary to consider the ways in which these different protection modes and their attendant political structures restrain — or fail to restrain — violence capacity.

Real-state practices are well fitted to provide security in violence-poor material contexts because they compensate for this poverty and because the insecurity potentials inherent in the structures of intra-unit hierarchy and inter-unit anarchy are unrealizable in violence-poor contexts. In situations of violence poverty, security institutions must be preoccupied continuously

with balancing against potential outside threats. This requires the mobilization of violence resources in a context that resists and retards such an enterprise. A further imperative is toward concentration, the bringing together of scarce violence capabilities into the hands of one organization so they can be used effectively. In order to compensate for the relative slowness with which actors can act and interact, a high premium is placed upon ensuring the autonomy of the organization controlling violence capability. Finally, the security-viable polity is oriented toward the employment of the violence capability that it can glean and husband from the chary context.

In situations where violence capability is available in superabundance for rapid employment, the provision of security entails an entirely different set of tasks, ones for which real-state practices are misfitted. When violence capability is superabundant and rapid, the main real-state external security practice — balancing — requires little special effort, and thus need no longer define security institutions. When violence capability is superabundant, security-viable polities no longer have to strain to mobilize enough power, but rather must de-mobilize power. Where superabundant violence capability is available for extremely rapid employment, security requires enhanced checks on violence employment authorities that real-state practices and structures are unable to provide. In short, violence-rich contexts render real-state security practices and arrangements simultaneously superfluous and insufficient.

This pattern of fit and misfit is also evident in the relationship between the material context of violence availability and the political structures of intra-unit hierarchy and inter-unit anarchy that are produced by real-state practices. The generic security problem posed by intra-unit hierarchy is despotism and by inter-unit anarchy war. In violence-poor material contexts, internal hierarchies are unable to violently oppress large numbers of their own subjects. Despite the rhetoric of absolutism and unlimited imperium, early hierarchies were unable actually to apply their authority in a complete or rapid manner (Innis, 1972). Similarly, the wars endemic to interstate anarchy rarely became total wars, not because of the presence of institutional restraints, but simply because the material context within which they occurred was so impoverished. In violence-rich material contexts the continued absence of internal and external institutional restraints on the application of violence combines with the absence of restraints in the material context to produce large-scale insecurity, manifest in the unrestrained internal violence of the modern totalitarian state (Wolfe, 1981; Rummel, 1994), and the unrestrained external violence of industrial and nuclear total wars (McNeill, 1982). As the restraints in the material context have diminished, the absence of institutional restraints has become a manifest source of insecurity.

A converse pattern of misfit and fit characterizes the security functionality of the federal-republican mode of protection and its attendant structures of republics and states-unions. Federal-republican practices and structures tend to be security dysfunctional in violence-poor material contexts because they are not well suited to solving actual security problems and because the problems they are well suited to solving are not salient. Elaborate systems of internal 'check and balance' power restraints and the absence of centralized unitary decision-making impede effective balancing against outside threats. And despite republican rhetoric about the intrinsic security menace of centralized 'despotic' authority, such arrangements usually failed to realize anything approximating their full potential in violence-poor material contexts, thus rendering federal-republican remedies unnecessary. Similarly, the intrinsic potentials of interstate anarchy cannot readily manifest themselves in the fully unrestrained violence of total war when material contexts are violence poor, rendering inter-unit co-binding unnecessary.

But federal-republican practices and structures are security functional in violence-rich material contexts. Internally, federal-republican practices of arms control and authority constitution are security functional in violence-rich material contexts because they avoid internal anarchy without producing uncheckable internal hierarchy. Similarly, these federal-republican approaches applied externally avoid both the Sylla of total war and the Charybdis of empire.

Substantial testing of this preliminary security materialist hypothesis is beyond the scope of this article, but a powerful confirming case of great importance is the trajectory of security politics in Europe over the last half millennium. As the model hypothesizes, real-state practices and their attendant structures of unit-level hierarchy and system-level anarchy were security functional in the relatively violence-poor material context of the early modern era, while republics were precarious and states-unions were utopian. In the global-industrial era, as the model hypothesizes, the real-state mode was security dysfunctional — the anarchy of the European-state system produced total war and system collapse in the first half of the 20th century, and the hierarchic state realized its full potential in totalitarianism. Conversely, federal-republican practices and structures, manifest in the political 'integration' of the European Union and the confederal security arrangements of NATO, are security functional because they are able to more fully and systematically restrain violence.

Conclusions

This article has sketched the transition from naturalist to historicist materialism, summarized the main conceptual apparatus of Marx's historical

production materialism, offered a reformulation of geopolitics as historical security materialism and advanced a preliminary proposition on the viability of real-statist and federal-republican modes of protection in different material contexts. Rather than further summarizing the argument, it is useful by way of conclusion to specify five major avenues for further exploration and research.

First, it is necessary to further explore the ontology, or set of general assumptions about society and politics, that underpins historical materialism. Despite its simple label and widespread reputation as solely materialist, historical materialism in fact presupposes a hybrid ontology that incorporates naturalist assumptions about human nature, materialist assumptions about geography and technology as non-socially constructed (while always socially interpreted), structurationist and constructivist assumptions about the relationship between practices and political structures, and structural-functionalist assumptions about the relationship between practices (and their attendant structures) and material contexts. Of particular importance will be the effort to parse out components of the multi-sided phenomenon of technology into elements that are socially constructed and other elements which (like geography) are essentially given as revelations of non-human physical nature. By conceptualizing these usually antagonistic ontological assumptions into an explicitly hybrid ontology, it will be possible to put historical materialist claims on a firmer footing and to move international theory beyond debates about assumptions and into investigations about empirically resolvable propositions.

Second, in order to develop more nuanced versions of the hypothesis advanced here, it is necessary to specify variations in material contexts in greater detail. A useful starting point for this effort is the notion of 'interaction capacity' as a variable in structural realist theory (Buzan, 1993b), which needs to be narrowed to 'violence interaction capacity', further conceptualized as a composite of violence volume and violence velocity, and then delineated into empirically observable variations, which can then be used to map changes over time and space and variations in scale. Once this has been accomplished it will be necessary to analyze how such variations in material context specifically relate to the power restraint potentialities of different security practices and their attendant political structures. Beyond this primary theoretical work, it would also be useful to reconsider, sharpen and employ the numerous other material variables in early geopolitical theory, such as topographical fragmentation, multi-media (e.g. land-sea) environments, and fungibility of power assets, and to develop security materialist arguments about contradiction, reification and idealist formalism.

Third, the initial formulation of the federal-republican mode and its attendant structures of republics and state-unions needs further develop-

ment in several dimensions. An intellectual historical analysis of earlier liberal and republican theorists and practitioners is needed to determine the ways in which they understood the problem of security-from-violence, the role of federal, republican and constitutional arrangements in meeting this problem, and the role of material context in shaping the security problem and the viability of different responses to it. A re-reading and reinterpretation of liberalism and its precursors along these lines promises, first, to produce an understanding of this tradition as at least the peer — and possibly the master — of realism and its *realpolitik* precursors as a structural-materialist theory of security politics, and second, to unearth raw materials for the further extension and application of federal-republican practices to contemporary security issues. This line of investigation is particularly promising because it can help make sense — as realism has such a hard time doing — of a world dominated by liberal democracies whose politics seem so non-hierarchical and whose relations seem so non-anarchical.

Fourth, once these conceptual and model building tasks have been completed, it will be necessary (and possible) to formulate empirically testable propositions on the viability of real-statist and federal-republican arrangements across time and space. Such an investigation can offer insight into matters as important and diverse as the emergence of the European state-system in early modern times, the collapse of the European state-system in the 20th century, the emergence and consequences of totalitarian states, the globalization of security-political relations in the wake of the industrial revolution, the implications of the nuclear revolution, and the emergent practice of interstate arms control.²⁹

Last, but not least, it would be productive to examine the relationship between reformulated geopolitics and contemporary Marxist international theories, particularly versions developed by Immanuel Wallerstein, Stephen Gill, Robert Cox and Justin Rosenberg. Of particular interest are the relationships between different modes of production and protection, the relationships between five centuries of economic and military globalization, and the ways in which the intellectual hegemony of realist theory interacts with and reinforces the fading functionality of the real-state mode of protection.

Taken as a whole, the argument and research agenda sketched here offers the prospect of achieving the elusive goal of theoretical integration in the explosively heterogeneous contemporary enterprise of theorizing about security in world politics. It also offers to displace realism from its hegemonic status in security studies without fully rejecting realism's enormously powerful — but significantly incomplete — insights into security politics. By returning to the conceptual legacy of international

theory before it so luxuriantly and productively fragmented and incorporating subsequent refinements of the fragments into a new whole, geopolitics as historical security materialism offers the possibility of a theory of world security politics that is as conceptually multifaceted and sophisticated as it is rooted in longer traditions and responsive to contemporary problems.

Notes

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1. For overviews of the arguments of the global geopoliticians, see Parker (1985), Strauss-Hupe (1942).
2. Liberal-materialist arguments are contained within many of the major texts in the global geopolitical literature (Seeley, [1884] 1971; Wells, 1902; Coolidge, 1908; Mackinder, 1919; Turner, 1932), but have been almost ignored in the secondary literature.
3. In Waltz's version of neorealism, material variables only enter as distributional. Gilpin's neorealism contains a more nuanced appreciation of geography and technology, but he alludes to them most extensively in his brief discussion of system change (change of system), and his main analysis of 'uneven growth' as the motor of systemic (change within system) is a variant of distribution or balance of power analysis (Waltz, 1979; Gilpin, 1982).
4. Aside from Henry Kissinger, who employs 'geopolitics' to refer to international high politics generally (Hepple, 1986), Colin Gray is the most prolific contemporary analyst of 'geopolitics' as strategic realism with an attention to geography (Gray, 1977, 1988).
5. The recent postmodern or critical geopolitics (Tuathail, 1996; Dalby and Tuathail, 1998) is not so much a geopolitical theory as a critical and deconstructive theory about illusions of geopolitical constructs, ideas and theories. It is strongly anti-materialistic and holds that geopolitical constructs are power-serving ideologies rather than serious claims about reality.
6. The single best reconstruction of this tradition is provided by Glacken (1967), but he focuses most on theories about the influence of climate, and says little about early theories about topography, arable land and land-sea interactions. For early theories of the security implications of arable land, see Deudney (1999).
7. Elsewhere I have suggested that the term 'physiopolitics' most accurately captures the subset of naturalist arguments concerned with the effects of nature upon politics (Deudney, 1997).
8. The main work of Karl Kautsky, a leading theorist of the Second International, attempted a synthesis of Darwinism and Marxism (Kautsky, [1929] 1988). For influences on Marx himself, see Ball (1995).
9. An important limitation of Darwin's theory was that it lacked an explanation of how different species arise in the first place, a gap in evolutionary theory that was only to be filled with an understanding of genetics. Social scientific functionalist

- arguments have a similar limitation, in that they do not attempt to explain the sources of a new practice or structure, but only whether they are fitted or unfitted to their context.
10. This kind of thinking is also appropriately referred to as structural-functionalism, to reflect the fact that it is social or political structures whose viability is held to be determined by the extent of its functional fit. For an overview of the many varieties of functionalist argument, see Johnson (1968).
 11. Some readings (Shaw, 1978; Cohen 1978) of Marx are force-centric, but others locate the center of gravity in the modes and social relations (Miller, 1984; Elster, 1985). 'In his programmatic proclamations Marx always accents the determination of the relations of production by their forces, and never the reverse. He clearly believed that the relations of production were dependent on the productive forces in a way in which the former were not dependent on the latter' (Shaw, 1979: 163).
 12. Marx's most extensive analysis of earlier economic formations are contained within the unpublished *Grundrisse* notebooks (Hobsbawm, 1964).
 13. The accuracy of Marx's understanding of the feudal system has been disputed (Bloch, 1967: 136-68). For more extended discussions of technological determinism, see Heilbroner (1994); Bimber (1994); Deudney (1997).
 14. Led by Karl Kautsky and Eduard Bernstein the mainstream of Western Marxism in the last decades of the 19th and first decades of the 20th centuries tended to emphasize the possibilities of a slower and less violent transition to socialism.
 15. Ontological materialism asserts that nothing exists except matter, the movement of matter, and the modifications and extensions of matter. Epistemological materialism is the view that sensations are the sole or main source of knowledge, and that the brain and the mind are identical. Ethical materialism holds that bodily desires, wants for objects, and crasser interests either are or should be more important than spiritual or ideal values in the lives of human beings and human societies. For the distinction between historical and dialectical materialism, see Lichtheim (1973).
 16. Major statements (Onuf, 1989; Kratochwil, 1989; Wendt, 1993; Adler, 1997) of constructivism, seeking to distinguish themselves from postmodernism, acknowledge that the material world exists and matters, but they advance no specific materialist propositions.
 17. For example, Smith posited four stages (hunting, pastoral, agricultural, and manufacturing) each characterized by very different social and political institutions (Smith, [1776] 1937: 698-708; Goodwin, 1991).
 18. It is, however, striking how extensively sophisticated Marxian historical narratives incorporate geographical variables in an ad hoc way (Anderson, 1974a, 1974b).
 19. In subsequent work Herz employed this insight to analyze the industrial and nuclear eras (Herz, 1959).
 20. Despite Kenneth Waltz's influential attack on 'first image' human nature arguments, they continue to play a pivotal, if often obscured, role in realist theory (Spegele, 1996).

21. For case studies of this interaction, see Dudley (1991). For analysis of 'modes of communications' and their relationship to technology, see Deibert (1997).
22. The distinction between 'global' and 'planetary' is intended to capture the geographical shift from the largely two-dimensional terrain of land, sea and air in the industrial era to the fuller three-dimensional terrain produced by the addition of near-orbital space resulting from the development of ballistic missiles and satellites (Deudney, 1983: 8–20).
23. Lewis Mumford, building on Marx and Patrick Geddes, introduced the distinction between the *eotechnic* (wind, water and wood), the *paleotechnic* (coal, steam and iron) and the *neotechnic* (electricity and alloys). But this periodization does not give sufficient emphasis to destructive capabilities to be employed here (Mumford, 1934).
24. The idea of contradiction or disjuncture appears in many realist theories about uneven growth and power distribution, perhaps most notably in Gilpin's theory of hegemonic change and succession (Gilpin, 1982).
25. For an extended contemporary analysis of the security perils of unit-level anarchy, see Holsti (1996).
26. 'Pactum de trahendo' (an alliance of restraint) was part of European diplomatic practice (Schroeder, 1976), European monetary unification has been attributed to French efforts to bind Germany (Grieco, 1995) and international institutions are held to generally bind or restrain states (Ikenberry, 1998). These formulations fail to distinguish between asymmetrical binding that constitutes hierarchical structures and the reciprocal or co-binding that constitutes republics and states-unions, thus glossing over the most important of political distinctions.
27. Elsewhere I have analyzed the structural and security dimensions of republicanism and argued the existence of a third structural ordering principle, which I label 'negarchy' (Deudney, 1995a). This security and structural line of argument by no means exhausts the many uses to which 'republicanism' has been put. Aristotelian and communitarian non-liberal arguments are also cast as 'republican' (Onuf, 1998).
28. 'Security' here is the traditional short-hand for 'security from political violence'. Broader uses of the term have been advanced recently (Buzan et al., 1997).
29. For preliminary security materialist analysis of the nuclear revolution, see Deudney (1993, 1995b).

References

- Adler, Emanuel (1997) 'Seizing the Middle Ground: Constructivism in World Politics', *European Journal of International Relations* 3(3): 319–63.
- Anderson, Perry (1974a) *Passages from Antiquity to Feudalism*. London: New Left Books.
- Anderson, Perry (1974b) *Lineages of the Absolutist State*. London: New Left Books.
- Ashley, Richard (1984) 'The Poverty of Neorealism', *International Organization* 38(2): 225–86.

- Ball, Terence (1995) 'Marx and Darwin: A Reconsideration', in *Reappraising Political Theory*. Oxford: Clarendon Press.
- Berger, Peter L. and Thomas Luckmann (1966) *The Social Construction of Reality*. New York: Anchor Books.
- Bimber, Bruce (1994) 'Three Faces of Technological Determinism', in Leo Marx and Merritt Roe Smith (eds) *Does Technology Drive History? The Dilemma of Technological Determinism*. Cambridge, MA: MIT Press.
- Bloch, Marc (1967) *Land and Work in Medieval Europe*. London: Faber and Faber.
- Bowler, Peter (1983) *Evolution: The History of an Idea*. Berkeley: University of California Press.
- Brodie, Bernard and Fawn M. Brodie (1973) *From Crossbow to H-Bomb*. Bloomington: Indiana University Press.
- Bull, Hedley (1977) *The Anarchical Society*. New York: Columbia University Press.
- Buzan, Barry (1993a) 'The English School Meets American Theorists', *International Organization* 47(3): 327-52.
- Buzan, Barry (1993b) 'Rethinking System and Structure', in Barry Buzan, Charles Jones and Richard Little (eds) *The Logic of Anarchy: Neorealism to Structural Realism*. New York: Columbia University Press.
- Buzan, Barry, Ole Wæver and Jaap de Wilde (1997) *Security: A New Framework for Analysis*. Boulder: Lynne Rienner.
- Cohen, G.A. (1978) *Karl Marx's Theory of History: A Defense*. Princeton: Princeton University Press.
- Coolidge, Archibald Cary (1908) *The United States as a World Power*. New York: Macmillan.
- Cox, Robert (1987) *Production, Power, and World Order*. New York: Columbia University Press.
- Crook, Paul (1994) *Darwinism, War and History: The Debate over the Biology of War from the Origins of Species to the First World War*. Cambridge: Cambridge University Press.
- Dalby, Simon and G.O. Tuathail (eds) (1998) *Re-thinking Geopolitics*. London: Routledge.
- Deibert, Ronald J. (1997) *Parchment, Printing, and Hypermedia: Communication in World Order Transformation*. New York: Columbia University Press.
- Deudney, Daniel (1983) *Whole Earth Security: The Geopolitics of Peace*. Washington: Worldwatch Institute.
- Deudney, Daniel (1993) 'Dividing Realism: Security Materialism versus Structural Realism on Nuclear Security and Proliferation', *Security Studies* 2(3-4): 7-37.
- Deudney, Daniel (1995a) 'The Philadelphian System: Sovereignty, Arms Control, and Balance of Power in the American States-Union, 1787-1861', *International Organization* 49(2): 191-228.
- Deudney, Daniel (1995b) 'Political Fission: State Structure, Civil Society and Nuclear Security Politics in the United States', in Ronnie Lipschutz (ed.) *On Security*. New York: Columbia University Press.

- Deudney, Daniel (1996) 'Binding Sovereigns: Authorities, Structures, and Geopolitics in Philadelphia System', in Thomas J. Biersteker and Cynthia Weber (eds) *State Sovereignty as Social Construct*. Cambridge: Cambridge University Press.
- Deudney, Daniel (1997) 'Geopolitics and Change', in Michael Doyle and G. John Ikenberry (eds) *Change in International Relations Theory*. Boulder: Westview.
- Deudney, Daniel (1999) 'Bringing Nature Back In: Geopolitical Theory from the Greeks to the Global Era', in Daniel Deudney and Richard Matthew (eds) *Contested Ground*. Albany, NY: SUNY Press.
- Dorpalan, Andreas (1942) *The World of General Haushofer: Geopolitics in Action*. New York: Farrar and Rinehart.
- Dudley, Leonard (1991) *The Word and the Sword: How Techniques of Information and Violence Have Shaped our World*. Oxford: Blackwell.
- Elazar, Daniel J. (1987) *Exploring Federalism*. Tuscaloosa: University of Alabama Press.
- Elster, Jon (1985) *Making Sense of Marx*. Cambridge: Cambridge University Press.
- Engels, Frederick [1878] (1947) *Anti-Duhring*. New York: Progress Publishers.
- Forsyth, Murray (1981) *Unions of States: The Theory and Practice of Confederation*. Leicester: Leicester University Press.
- Giddens, Anthony (1979) *Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis*. Berkeley: University of California Press.
- Giddens, Anthony (1985) *The Nation-State and Violence: Volume Two of a Contemporary Critique of Historical Materialism*. Berkeley: University of California Press.
- Gill, Stephen (ed.) (1993) *Gramsci, Historical Materialism and International Relations*. Cambridge: Cambridge University Press.
- Gilpin, Robert (1982) *War and Change in World Politics*. Cambridge: Cambridge University Press.
- Glacken, Clarence (1967) *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century*. Berkeley: University of California Press.
- Goodwin, Craufurd (1991) 'National Security in Classical Political Economy', *History of Political Economy* 23: 23-35.
- Gray, Colin S. (1977) *Geopolitics of the Nuclear Era: Heartlands, Rimlands, and the Technological Revolution*. New York: Crane, Russak.
- Gray, Colin S. (1988) *The Geopolitics of Super Power*. Lexington: University Press of Kentucky.
- Grieco, Joseph (1995) 'The Maastricht Treaty, Economic and Monetary Union, and the Neo-Realist Research Programme', *Review of International Studies* 21(1): 21-40.
- Gulick, Edward V. (1967) *Europe's Classical Balance of Power*. New York: Norton.
- Halbrook, Stephen (1984) *That Every Man Be Armed: The Evolution of a Constitutional Right*. Albuquerque: University of New Mexico Press.
- Heilbroner, Robert L. (1994) 'Do Machines Make History?' and 'Technological Determinism Revisited', in Leo Marx and Merritt Roe Smith (eds) *Does Technology*

- Drive History? The Dilemma of Technological Determinism*. Cambridge, MA: MIT Press.
- Henrickson, David C. (1997/8) 'In Our Own Image: The Sources of American Conduct in World Affairs', *The National Interest* 50: 9-21.
- Hepple, Leslie W. (1986) 'The Revival of Geopolitics', *Political Geography Quarterly* 5(4): S21-S36.
- Herz, John (1951) *Political Realism and Political Idealism*. Chicago: University of Chicago Press.
- Herz, John (1959) *International Politics in the Atomic Age*. New York: Columbia University Press.
- Hinsley, F.H. (1986) *Sovereignty*. Cambridge: Cambridge University Press.
- Hobsbawm, Eric (1964) *Pre-Capitalist Economic Formations*. New York: International Publishers.
- Holsti, Kalevi J. (1996) *The State, War, and the State of War*. Cambridge: Cambridge University Press.
- Huntington, Samuel P. (1957) *The Soldier and the State*. Cambridge: Harvard University Press.
- Ikenberry, G. John (1998) 'Constitutional Politics and International Relations', *European Journal of International Relations* 4(2): 147-77.
- Innis, Harold (1972) *Empire and Communications*. Toronto: University of Toronto Press.
- Johnson, Chalmers (1968) *Revolutionary Change*. Berkeley: University of California Press.
- Kautsky, Karl [1929] (1988) *The Materialist Conception of History*. New Haven: Yale University Press.
- Kiernan, V.C. (1986) *The Duel in European History: Honour and the Reign of Aristocracy*. Oxford: Oxford University Press.
- Krasner, Stephen D. (1995/6) 'Compromising Westphalia', *International Security* 20(3): 115-51.
- Kratochwil, Friedreich (1989) *Rules, Norms and Decisions*. Cambridge: Cambridge University Press.
- Kristof, Ladis K.D. (1960) 'The Origin and Evolution of Geopolitics', *Journal of Conflict Resolution* 4(March): 15-51.
- Kumar, Krishan (1978) *Prophecy and Progress: The Sociology of Industrial and Post-Industrial Society*. London: Penguin Books.
- Lichtheim, George (1973) 'Historical and Dialectical Materialism', in *Dictionary of the History of Ideas*. New York: Charles Scribner.
- Livingstone, David (1993) *The Geographical Tradition: Episodes in the History of a Contested Enterprise*. Oxford: Blackwell.
- Mackinder, Halford J. (1919) *Democratic Ideals and Reality*. New York: Henry Holt.
- McNeill, William (1982) *The Pursuit of Power: Technology, Armed Force, and Society since AD 1000*. Chicago: University of Chicago Press.
- Marx, Karl [1847] (1963) *The Poverty of Philosophy*. London: Lawrence and Wishart.

- Marx, Karl [1852] (1969) *The Eighteenth Brumaire of Louis Bonaparte*. New York: International Publishers.
- Marx, Karl [1859] (1970) *A Contribution to the Critique of Political Economy*. New York: International Publishers.
- Marx Karl and Frederick Engels [1845] (1965) *The German Ideology*. New York: International Publishers.
- Millar, John (1781) *The Origin of the Distinction of Ranks*, 3rd edn, enlarged and corrected. London: Murray.
- Miller, Richard W. (1984) *Analyzing Marx*. Princeton: Princeton University Press.
- Mumford, Lewis (1934) *Technics and Civilization*. New York: Knopf.
- Neumann, Sigmund (1944) 'Engels and Marx: Military Concepts of the Social Revolutionaries', in Edward Meade Earle (ed.) *Makers of Modern Strategy*. Princeton: Princeton University Press.
- Onuf, Nicholas Greenwood (1989) *World of Our Making*. Columbia: University of South Carolina Press.
- Onuf, Nicholas Greenwood (1998) *The Republican Legacy in International Thought*. Cambridge: Cambridge University Press.
- Ostrom, Vincent (1987) *The Political Theory of a Compound Republic*, 2nd edn. Lincoln: University of Nebraska Press.
- Parker, Geoffrey (1985) *Western Geopolitical Thought in the Twentieth Century*. New York: St Martin's Press.
- Plekhanov, George V. [1908] (1969) 'Interaction of Base and Superstructure', in *Fundamental Problems of Marxism*. New York: International Publishers.
- Rosenberg, Justin (1994) *The Empire of Civil Society*. London: Verso.
- Rummel, R.J. (1994) *Death By Government*. New Brunswick: Transaction.
- Sanderson, Stephen K. (1990) *Social Evolutionism: A Critical History*. Oxford: Blackwell.
- Schaff, Adam (1957) 'Marxist Dialectics and the Principle of Contradiction', *Journal of Philosophy* 57(1): 241-50.
- Schroeder, Paul (1976) 'Alliances, 1815-1945: Weapons of Power and Tools of Management', in Klaus Knorr (ed.) *Historical Dimensions of National Security Problems*. Lawrence: University Press of Kansas.
- Seeley, J.R. [1884] (1971) *The Expansion of England*. Chicago: University of Chicago Press.
- Semmel, Bernard (ed.) (1981) *Marxism and the Science of War*. Oxford: Oxford University Press.
- Shaw, William (1978) *Marx's Theory of History*. Stanford: Stanford University Press.
- Shaw, William H. (1979) '“The Handmill Gives You the Feudal Lord”: Marx's Technological Determinism', *History and Theory* (18): 155-76.
- Smith, Adam [1776] (1937) *The Wealth of Nations*. New York: Modern Library.
- Spegele, David D. (1996) *Political Realism and International Theory*. Cambridge: Cambridge University Press.
- Sprout, Harold H. (1963) 'Geopolitical Hypotheses in Technological Perspective', *World Politics* 15(2): 187-212.

Deudney: Geopolitics as Theory

- Strauss-Hupe, Robert (1942) *Geopolitics: The Struggle for Space and Power*. New York: G.P. Putnam's Sons.
- Thomson, Janice E. (1994) *Mercenaries, Pirates, and Sovereigns*. Princeton: Princeton University Press.
- Tilly, Charles (1985) 'War Making and State Making as Organized Crime', in Evans et al. (eds) *Bringing the State Back In*. Cambridge: Cambridge University Press.
- Tuathail, Gearoid O. (1996) *Critical Geopolitics*. Minneapolis: University of Minnesota Press.
- Turner, Frederick Jackson (1932) *The Significance of Sections in American History*. New York: Henry Holt.
- Wallerstein, Immanuel (1974) *The Modern World System*. New York: The Academic Press.
- Walt, Stephen M. (1987) *The Origins of Alliances*. Ithaca, NY: Cornell University Press.
- Waltz, Kenneth N. (1979) *Theory of International Politics*. Reading, MA: Addison-Wesley.
- Weber, Max (1946) 'Politics as Vocation', in H.H. Gerth and C. Wright Mills (eds) *From Max Weber: Essays in Sociology*. New York: Oxford University Press.
- Wells, H.G. (1902) *Anticipations of the Reaction of Mechanical and Scientific Progress Upon Human Life and Thought*. New York: Harper & Brothers.
- Wendt, Alexander (1993) 'Anarchy Is What States Make of It', *International Organization* 46(2): 391-425.
- Williams, Raymond (1977) 'Determination' and 'Base and Superstructure', in *Marxism and Literature*. Oxford: Oxford University Press.
- Wittfogel, Karl [1929] (1985) 'Geopolitics, Geographical Materialism, and Marxism', trans. G.L. Ulmen, *Antipode: A Radical Journal of Geography* 17(1): 21-72.
- Wohlstetter, Albert (1968) 'Illusions of Distance', *Foreign Affairs* 46(2): 242-55.
- Wolfe, Bertram D. (1981) 'The Totalitarian Potentials of Modern Great-State Society', in *Revolution and Reality*. Chapel Hill: University of North Carolina Press.

- arguments have a similar limitation, in that they do not attempt to explain the sources of a new practice or structure, but only whether they are fitted or unfitted to their context.
10. This kind of thinking is also appropriately referred to as structural-functionalism, to reflect the fact that it is social or political structures whose viability is held to be determined by the extent of its functional fit. For an overview of the many varieties of functionalist argument, see Johnson (1968).
 11. Some readings (Shaw, 1978; Cohen 1978) of Marx are force-centric, but others locate the center of gravity in the modes and social relations (Miller, 1984; Elster, 1985). 'In his programmatic proclamations Marx always accents the determination of the relations of production by their forces, and never the reverse. He clearly believed that the relations of production were dependent on the productive forces in a way in which the former were not dependent on the latter' (Shaw, 1979: 163).
 12. Marx's most extensive analysis of earlier economic formations are contained within the unpublished *Grundrisse* notebooks (Hobsbawm, 1964).
 13. The accuracy of Marx's understanding of the feudal system has been disputed (Bloch, 1967: 136-68). For more extended discussions of technological determinism, see Heilbroner (1994); Bimber (1994); Deudney (1997).
 14. Led by Karl Kautsky and Eduard Bernstein the mainstream of Western Marxism in the last decades of the 19th and first decades of the 20th centuries tended to emphasize the possibilities of a slower and less violent transition to socialism.
 15. Ontological materialism asserts that nothing exists except matter, the movement of matter, and the modifications and extensions of matter. Epistemological materialism is the view that sensations are the sole or main source of knowledge, and that the brain and the mind are identical. Ethical materialism holds that bodily desires, wants for objects, and crasser interests either are or should be more important than spiritual or ideal values in the lives of human beings and human societies. For the distinction between historical and dialectical materialism, see Lichtheim (1973).
 16. Major statements (Onuf, 1989; Kratochwil, 1989; Wendt, 1993; Adler, 1997) of constructivism, seeking to distinguish themselves from postmodernism, acknowledge that the material world exists and matters, but they advance no specific materialist propositions.
 17. For example, Smith posited four stages (hunting, pastoral, agricultural, and manufacturing) each characterized by very different social and political institutions (Smith, [1776] 1937: 698-708; Goodwin, 1991).
 18. It is, however, striking how extensively sophisticated Marxian historical narratives incorporate geographical variables in an ad hoc way (Anderson, 1974a, 1974b).
 19. In subsequent work Herz employed this insight to analyze the industrial and nuclear eras (Herz, 1959).
 20. Despite Kenneth Waltz's influential attack on 'first image' human nature arguments, they continue to play a pivotal, if often obscured, role in realist theory (Spegele, 1996).

21. For case studies of this interaction, see Dudley (1991). For analysis of 'modes of communications' and their relationship to technology, see Deibert (1997).
22. The distinction between 'global' and 'planetary' is intended to capture the geographical shift from the largely two-dimensional terrain of land, sea and air in the industrial era to the fuller three-dimensional terrain produced by the addition of near-orbital space resulting from the development of ballistic missiles and satellites (Deudney, 1993: 8-20).
23. Lewis Mumford, building on Marx and Patrick Geddes, introduced the distinction between the *eotechnic* (wind, water and wood), the *paleotechnic* (coal, steam and iron) and the *neotechnic* (electricity and alloys). But this periodization does not give sufficient emphasis to destructive capabilities to be employed here (Mumford, 1934).
24. The idea of contradiction or disjuncture appears in many realist theories about uneven growth and power distribution, perhaps most notably in Gilpin's theory of hegemonic change and succession (Gilpin, 1982).
25. For an extended contemporary analysis of the security perils of unit-level anarchy, see Holsti (1996).
26. 'Pactum de trahendo' (an alliance of restraint) was part of European diplomatic practice (Schroeder, 1976), European monetary unification has been attributed to French efforts to bind Germany (Grieco, 1995) and international institutions are held to generally bind or restrain states (Ikenberry, 1998). These formulations fail to distinguish between asymmetrical binding that constitutes hierarchical structures and the reciprocal or co-binding that constitutes republics and states-unions, thus glossing over the most important of political distinctions.
27. Elsewhere I have analyzed the structural and security dimensions of republicanism and argued the existence of a third structural ordering principle, which I label 'negarchy' (Deudney, 1995a). This security and structural line of argument by no means exhausts the many uses to which 'republicanism' has been put. Aristotelian and communitarian non-liberal arguments are also cast as 'republican' (Onuf, 1998).
28. 'Security' here is the traditional short-hand for 'security from political violence'. Broader uses of the term have been advanced recently (Buzan et al., 1997).
29. For preliminary security materialist analysis of the nuclear revolution, see Deudney (1993, 1995b).

References

- Adler, Emanuel (1997) 'Seizing the Middle Ground: Constructivism in World Politics', *European Journal of International Relations* 3(3): 319-63.
- Anderson, Perry (1974a) *Passages from Antiquity to Feudalism*. London: New Left Books.
- Anderson, Perry (1974b) *Lineages of the Absolutist State*. London: New Left Books.
- Ashley, Richard (1984) 'The Poverty of Neorealism', *International Organization* 38(2): 225-86.

- Ball, Terence (1995) 'Marx and Darwin: A Reconsideration', in *Reappraising Political Theory*. Oxford: Clarendon Press.
- Berger, Peter L. and Thomas Luckmann (1966) *The Social Construction of Reality*. New York: Anchor Books.
- Bimber, Bruce (1994) 'Three Faces of Technological Determinism', in Leo Marx and Merritt Roe Smith (eds) *Does Technology Drive History? The Dilemma of Technological Determinism*. Cambridge, MA: MIT Press.
- Bloch, Marc (1967) *Land and Work in Medieval Europe*. London: Faber and Faber.
- Bowler, Peter (1983) *Evolution: The History of an Idea*. Berkeley: University of California Press.
- Brodie, Bernard and Fawn M. Brodie (1973) *From Crossbow to H-Bomb*. Bloomington: Indiana University Press.
- Bull, Hedley (1977) *The Anarchical Society*. New York: Columbia University Press.
- Buzan, Barry (1993a) 'The English School Meets American Theorists', *International Organization* 47(3): 327-52.
- Buzan, Barry (1993b) 'Rethinking System and Structure', in Barry Buzan, Charles Jones and Richard Little (eds) *The Logic of Anarchy: Neorealism to Structural Realism*. New York: Columbia University Press.
- Buzan, Barry, Ole Wæver and Jaap de Wilde (1997) *Security: A New Framework for Analysis*. Boulder: Lynne Rienner.
- Cohen, G.A. (1978) *Karl Marx's Theory of History: A Defense*. Princeton: Princeton University Press.
- Coolidge, Archibald Cary (1908) *The United States as a World Power*. New York: Macmillan.
- Cox, Robert (1987) *Production, Power, and World Order*. New York: Columbia University Press.
- Crook, Paul (1994) *Darwinism, War and History: The Debate over the Biology of War from the Origins of Species to the First World War*. Cambridge: Cambridge University Press.
- Dalby, Simon and G.O. Tuathail (eds) (1998) *Re-thinking Geopolitics*. London: Routledge.
- Deibert, Ronald J. (1997) *Parchment, Printing, and Hypermedia: Communication in World Order Transformation*. New York: Columbia University Press.
- Deudney, Daniel (1983) *Whole Earth Security: The Geopolitics of Peace*. Washington: Worldwatch Institute.
- Deudney, Daniel (1993) 'Dividing Realism: Security Materialism versus Structural Realism on Nuclear Security and Proliferation', *Security Studies* 2(3-4): 7-37.
- Deudney, Daniel (1995a) 'The Philadelphian System: Sovereignty, Arms Control, and Balance of Power in the American States-Union, 1787-1861', *International Organization* 49(2): 191-228.
- Deudney, Daniel (1995b) 'Political Fission: State Structure, Civil Society and Nuclear Security Politics in the United States', in Ronnie Lipschutz (ed.) *On Security*. New York: Columbia University Press.

- Deudney, Daniel (1996) 'Binding Sovereigns: Authorities, Structures, and Geopolitics in Philadelphian System', in Thomas J. Biersteker and Cynthia Weber (eds) *State Sovereignty as Social Construct*. Cambridge: Cambridge University Press.
- Deudney, Daniel (1997) 'Geopolitics and Change', in Michael Doyle and G. John Ikenberry (eds) *Change in International Relations Theory*. Boulder: Westview.
- Deudney, Daniel (1999) 'Bringing Nature Back In: Geopolitical Theory from the Greeks to the Global Era', in Daniel Deudney and Richard Matthew (eds) *Contested Ground*. Albany, NY: SUNY Press.
- Dorpalan, Andreas (1942) *The World of General Haushofer: Geopolitics in Action*. New York: Farrar and Rinehart.
- Dudley, Leonard (1991) *The Word and the Sword: How Techniques of Information and Violence Have Shaped our World*. Oxford: Blackwell.
- Elazar, Daniel J. (1987) *Exploring Federalism*. Tuscaloosa: University of Alabama Press.
- Elster, Jon (1985) *Making Sense of Marx*. Cambridge: Cambridge University Press.
- Engels, Frederick [1878] (1947) *Anti-Duhring*. New York: Progress Publishers.
- Forsyth, Murray (1981) *Unions of States: The Theory and Practice of Confederation*. Leicester: Leicester University Press.
- Giddens, Anthony (1979) *Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis*. Berkeley: University of California Press.
- Giddens, Anthony (1985) *The Nation-State and Violence: Volume Two of a Contemporary Critique of Historical Materialism*. Berkeley: University of California Press.
- Gill, Stephen (ed.) (1993) *Gramsci, Historical Materialism and International Relations*. Cambridge: Cambridge University Press.
- Gilpin, Robert (1982) *War and Change in World Politics*. Cambridge: Cambridge University Press.
- Glacken, Clarence (1967) *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century*. Berkeley: University of California Press.
- Goodwin, Craufurd (1991) 'National Security in Classical Political Economy', *History of Political Economy* 23: 23-35.
- Gray, Colin S. (1977) *Geopolitics of the Nuclear Era: Heartlands, Rimlands, and the Technological Revolution*. New York: Crane, Russak.
- Gray, Colin S. (1988) *The Geopolitics of Super Power*. Lexington: University Press of Kentucky.
- Grieco, Joseph (1995) 'The Maastricht Treaty, Economic and Monetary Union, and the Neo-Realist Research Programme', *Review of International Studies* 21(1): 21-40.
- Gulick, Edward V. (1967) *Europe's Classical Balance of Power*. New York: Norton.
- Halbrook, Stephen (1984) *That Every Man Be Armed: The Evolution of a Constitutional Right*. Albuquerque: University of New Mexico Press.
- Heilbroner, Robert L. (1994) 'Do Machines Make History?' and 'Technological Determinism Revisited', in Leo Marx and Merritt Roe Smith (eds) *Does Technology*

- Drive History? The Dilemma of Technological Determinism*. Cambridge, MA: MIT Press.
- Henrickson, David C. (1997/8) 'In Our Own Image: The Sources of American Conduct in World Affairs', *The National Interest* 50: 9-21.
- Hepple, Leslie W. (1986) 'The Revival of Geopolitics', *Political Geography Quarterly* 5(4): S21-S36.
- Herz, John (1951) *Political Realism and Political Idealism*. Chicago: University of Chicago Press.
- Herz, John (1959) *International Politics in the Atomic Age*. New York: Columbia University Press.
- Hinsley, F.H. (1986) *Sovereignty*. Cambridge: Cambridge University Press.
- Hobsbawm, Eric (1964) *Pre-Capitalist Economic Formations*. New York: International Publishers.
- Holsti, Kalevi J. (1996) *The State, War, and the State of War*. Cambridge: Cambridge University Press.
- Huntington, Samuel P. (1957) *The Soldier and the State*. Cambridge: Harvard University Press.
- Ikenberry, G. John (1998) 'Constitutional Politics and International Relations', *European Journal of International Relations* 4(2): 147-77.
- Innis, Harold (1972) *Empire and Communications*. Toronto: University of Toronto Press.
- Johnson, Chalmers (1968) *Revolutionary Change*. Berkeley: University of California Press.
- Kautsky, Karl [1929] (1988) *The Materialist Conception of History*. New Haven: Yale University Press.
- Kiernan, V.C. (1986) *The Duel in European History: Honour and the Reign of Aristocracy*. Oxford: Oxford University Press.
- Krasner, Stephen D. (1995/6) 'Compromising Westphalia', *International Security* 20(3): 115-51.
- Kratochwil, Friedreich (1989) *Rules, Norms and Decisions*. Cambridge: Cambridge University Press.
- Kristof, Ladis K.D. (1960) 'The Origin and Evolution of Geopolitics', *Journal of Conflict Resolution* 4(March): 15-51.
- Kumar, Krishan (1978) *Prophecy and Progress: The Sociology of Industrial and Post-Industrial Society*. London: Penguin Books.
- Lichtheim, George (1973) 'Historical and Dialectical Materialism', in *Dictionary of the History of Ideas*. New York: Charles Scribner.
- Livingstone, David (1993) *The Geographical Tradition: Episodes in the History of a Contested Enterprise*. Oxford: Blackwell.
- Mackinder, Halford J. (1919) *Democratic Ideals and Reality*. New York: Henry Holt.
- McNeill, William (1982) *The Pursuit of Power: Technology, Armed Force, and Society since AD 1000*. Chicago: University of Chicago Press.
- Marx, Karl [1847] (1963) *The Poverty of Philosophy*. London: Lawrence and Wishart.

- Marx, Karl [1852] (1969) *The Eighteenth Brumaire of Louis Bonaparte*. New York: International Publishers.
- Marx, Karl [1859] (1970) *A Contribution to the Critique of Political Economy*. New York: International Publishers.
- Marx Karl and Frederick Engels [1845] (1965) *The German Ideology*. New York: International Publishers.
- Millar, John (1781) *The Origin of the Distinction of Ranks*, 3rd edn, enlarged and corrected. London: Murray.
- Miller, Richard W. (1984) *Analyzing Marx*. Princeton: Princeton University Press.
- Mumford, Lewis (1934) *Technics and Civilization*. New York: Knopf.
- Neumann, Sigmund (1944) 'Engels and Marx: Military Concepts of the Social Revolutionaries', in Edward Meade Earle (ed.) *Makers of Modern Strategy*. Princeton: Princeton University Press.
- Onuf, Nicholas Greenwood (1989) *World of Our Making*. Columbia: University of South Carolina Press.
- Onuf, Nicholas Greenwood (1998) *The Republican Legacy in International Thought*. Cambridge: Cambridge University Press.
- Ostrom, Vincent (1987) *The Political Theory of a Compound Republic*, 2nd edn. Lincoln: University of Nebraska Press.
- Parker, Geoffrey (1985) *Western Geopolitical Thought in the Twentieth Century*. New York: St Martin's Press.
- Plekhanov, George V. [1908] (1969) 'Interaction of Base and Superstructure', in *Fundamental Problems of Marxism*. New York: International Publishers.
- Rosenberg, Justin (1994) *The Empire of Civil Society*. London: Verso.
- Rummel, R.J. (1994) *Death By Government*. New Brunswick: Transaction.
- Sanderson, Stephen K. (1990) *Social Evolutionism: A Critical History*. Oxford: Blackwell.
- Schaff, Adam (1957) 'Marxist Dialectics and the Principle of Contradiction', *Journal of Philosophy* 57(1): 241-50.
- Schroeder, Paul (1976) 'Alliances, 1815-1945: Weapons of Power and Tools of Management', in Klaus Knorr (ed.) *Historical Dimensions of National Security Problems*. Lawrence: University Press of Kansas.
- Seeley, J.R. [1884] (1971) *The Expansion of England*. Chicago: University of Chicago Press.
- Semmel, Bernard (ed.) (1981) *Marxism and the Science of War*. Oxford: Oxford University Press.
- Shaw, William (1978) *Marx's Theory of History*. Stanford: Stanford University Press.
- Shaw, William H. (1979) '“The Handmill Gives You the Feudal Lord”: Marx's Technological Determinism', *History and Theory* (18): 155-76.
- Smith, Adam [1776] (1937) *The Wealth of Nations*. New York: Modern Library.
- Spegele, David D. (1996) *Political Realism and International Theory*. Cambridge: Cambridge University Press.
- Sprout, Harold H. (1963) 'Geopolitical Hypotheses in Technological Perspective', *World Politics* 15(2): 187-212.

Deudney: Geopolitics as Theory

- Strauss-Hupe, Robert (1942) *Geopolitics: The Struggle for Space and Power*. New York: G.P. Putnam's Sons.
- Thomson, Janice E. (1994) *Mercenaries, Pirates, and Sovereigns*. Princeton: Princeton University Press.
- Tilly, Charles (1985) 'War Making and State Making as Organized Crime', in Evans et al. (eds) *Bringing the State Back In*. Cambridge: Cambridge University Press.
- Tuathail, Gearoid O. (1996) *Critical Geopolitics*. Minneapolis: University of Minnesota Press.
- Turner, Frederick Jackson (1932) *The Significance of Sections in American History*. New York: Henry Holt.
- Wallerstein, Immanuel (1974) *The Modern World System*. New York: The Academic Press.
- Walt, Stephen M. (1987) *The Origins of Alliances*. Ithaca, NY: Cornell University Press.
- Waltz, Kenneth N. (1979) *Theory of International Politics*. Reading, MA: Addison-Wesley.
- Weber, Max (1946) 'Politics as Vocation', in H.H. Gerth and C. Wright Mills (eds) *From Max Weber: Essays in Sociology*. New York: Oxford University Press.
- Wells, H.G. (1902) *Anticipations of the Reaction of Mechanical and Scientific Progress Upon Human Life and Thought*. New York: Harper & Brothers.
- Wendt, Alexander (1993) 'Anarchy Is What States Make of It', *International Organization* 46(2): 391-425.
- Williams, Raymond (1977) 'Determination' and 'Base and Superstructure', in *Marxism and Literature*. Oxford: Oxford University Press.
- Wittfogel, Karl [1929] (1985) 'Geopolitics, Geographical Materialism, and Marxism', trans. G.L. Ulmen, *Antipode: A Radical Journal of Geography* 17(1): 21-72.
- Wohlstetter, Albert (1968) 'Illusions of Distance', *Foreign Affairs* 46(2): 242-55.
- Wolfe, Bertram D. (1981) 'The Totalitarian Potentials of Modern Great-State Society', in *Revolution and Reality*. Chapel Hill: University of North Carolina Press.

constraints and opportunities posed by the base of material destructive conditions. Although many varieties of Marxism, geopolitics and realism have been cast in highly deterministic language, the relationship between the material conditions, modes and superstructures in the security materialist model can be cast in terms of functional viability — material conditions determine whether particular modes and superstructures are security viable, but material conditions do not determine whether or not security-seeking agents will pursue — or successfully generate — practices and structures that are security viable in particular material contexts.

The concept of contradiction can also be usefully employed in the security materialist model (Deudney, 1997). Security materialism, like Marxism, conceptualizes the process of historical change as discontinuous. Once brought into existence, security practices and structures tend to persist whether or not the material contexts in which they were viable still remain, thus producing situations in which security systems are in contradiction to their material contexts.²⁴ In the security materialist model the most important form of contradiction occurs between obsolescent modes and emergent material contexts. Similarly, the concept of reification can be employed in security materialism to grasp the tendency for humans to confuse the structural products of their particular security praxis, such as the state, as timeless and natural thing-like entities.

Real-Statist and Federal-Republican Modes of Protection

Because the most pivotal relationship in historical security materialism is between material forces and protective practices with their attendant structures, much hinges upon the conceptualization of modes of protection. Leaving aside the possibility of feudalism as pre-modern security mode, it is possible to identify two distinct modern modes of protection — the *real-state mode of protection*, a distillation of statist and realpolitik security practices, and the *federal-republican mode of protection*, a distillation of liberal and proto-liberal republican security practices. Modes of protection, like modes of production, are clusters of related practices not reducible to any one component: Real-state and federal-republican modes may exist in hybrid forms (as do feudal, capitalist and socialist modes of production), but their essential features can best be grasped by considering them in pure form (see Figure 3).

At their core, modes of protection are about how violence capacities and authorities over violence capacity are institutionally regulated — or unregulated. As such, they vary with regard to how violence capacities are controlled and how both internal (or domestic) and external (or international) violence threats are addressed. The sustained operation of these