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The arms trade is a ubiquitous aspect of international relations. Today it involves up to 50 states as suppliers and 120 as recipients, and its annual volume exceeds $48,000 million. But although its current scope and magnitude are unprecedented, arms transfers have been used at least since the Peloponnesian Wars to achieve the political, military and economic goals of states and rulers. The invention of the cannon in the fourteenth century, and the 'Military Revolution' of which it was a catalyst, ushered in the modern global arms transfer and production system, as leading suppliers of that time such as Liège and Venice shipped their products to customers across Europe. But over the following six centuries, suppliers ascended and disappeared and the trade, then as now, had an impact on the direction of international politics and the evolution of the modern state system.

The patterns of change and continuity in the modern state system are complex, multi-dimensional and ill understood. On the broad canvas, different writers have highlighted crucial turning points in the legal, economic, technological, military and political spheres. These include the crystallisation of the modern state system after the Peace of Westphalia, the emergence of market economics, the transition from mercantilism to capitalism, the technological transformation of the Industrial Revolution, the rise of modern nation-states, the changing nature of warfare and the rise and fall of empires. Although the links between arms transfer relationships and these spheres of international politics are equally ill defined, each of these dimensions of change can be connected, in one fashion or another, to changes in arms transfers and production. In particular, states’ perceptions of the role of arms production and the arms trade in guaranteeing wealth, power and victory in warfare changed as a result of these transformations. Thus an exploration of the emergence and evolution of the international arms transfer and production system could be seen as a sort of prism through which these deeper changes could be viewed.

But my central concern is the obverse: to situate changes in the arms
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Transfer and production system against this broader backdrop. Then one can make sense of the pattern of evolution and change one finds and draw out the implications of this for the present and future. This book thus explores how the structure of the global arms transfer and production system – the geographical locations of centres of innovation and production, the pattern of arms transfers and the diffusion of military technology – evolves. A simple tracing of who sold what to whom would not help us understand this underlying structure, and existing knowledge does not tell us if arms transfers have always played the same, or even a similar, role in international politics.

To be more specific, the arms transfer and production system is located at the intersection of three important sets of concerns (or sets of forces for change) in international relations that are seldom considered together. These can be called ‘wealth’, ‘power’ and ‘war’. The first concerns those economic forces in the modern (post-feudal) world that shape the production and distribution of goods within and between states. To some degree, the production and trade in weapons are subject to the same pressures and evolutionary dynamic as are commodities such as bananas and televisions. The second set of forces, the pursuit of power by states, often results in attempts by states to change their position in the arms transfer and production system, attempts which accurately reflected shifts in the international hierarchy of power. As pointed out by Paul Kennedy and Robert Gilpin, what determines paramountcy is in part the ability of a state to capture the process of military innovation and production. The third set of forces (which is almost a subset of the second) is the often dramatic catalyst to military innovation and production (and social and political organisation for warfare) that war provides. Historical and contemporary examples abound of redoubled efforts for military production and innovation before, during and after major conflicts, and of the dramatic societal impact of the introduction of new military technologies.

None of these three sets of forces has absolute primacy over the others (at least over the medium term), and all have played a role at one point or another in shaping the patterns of military innovation and production, and the subsequent transfers of arms and know-how that result in the diffusion of military technology. In addition, the nature of the forces themselves has changed, as illustrated by the evolution from the mercenary wars of the fifteenth century to the total wars of the twentieth, or the transformation from mercantilist to capitalist trading in the nineteenth century. But it is critical for our understanding of the workings of the contemporary system to gain
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some insight into how these forces interact, and which of them may be more, or most, important over the longer term in shaping the structure of the arms transfer and production system.

This large topic contains many more specific questions, which are tackled in two distinct, but connected, parts. Chapters 1–3 discuss the historical evolution of the international arms transfer system, roughly from the Military Revolution of the fifteenth century to the early twentieth century. It presents a *longue durée* historical view of the arms trade that restores perspective to a subject too often seen only in the light of day-to-day transactions. As Fernand Braudel points out, ‘the social sciences, by taste, by deep-seated instinct, perhaps by training, have a constant tendency to evade historical explanation . . . by concentrating overmuch on the “current event”’. Few students of the arms trade have asked if historical parallels to the present situation exist, caught up as they are in the latest controversies over American sales to Saudi Arabia or Soviet shipments to Ethiopia. A *longue durée* viewpoint also presents the dynamic motive forces driving the arms transfer system and demonstrates that it possesses a ‘life cycle’ initiated primarily by the motor of technological change. A state’s position in the cycle, and the progress of the cycle itself, crucially affects the options states possess for using arms transfers and arms production as a tool of foreign policy. Finally, this historical perspective establishes that a greater continuity in the relationship of state power to military innovation exists than is commonly supposed.

This historical-structural examination prepares the ground for a comprehensive picture to be drawn in chapter 4 onwards of the contemporary (post-1945) arms transfer and production system, which will locate it with reference to the evolutionary scheme sketched in chapters 1–3. With the present system located in its historical context, and with a better understanding of the motive forces of change in the system, this snapshot can be extended, and the outlines of the likely future shape of the arms transfer system (and its impact on the relations between states) can be traced. Readers interested only in contemporary developments will be tempted to skip the historical material in chapters 1–3, and it can only be stressed that, in the arms trade as elsewhere, the historical dimension of contemporary developments can be ignored only with peril.

The intention is not, however, to build a model of the international arms transfer system and provide a scientific predictive account of its role in the relations between states. Such models are too often static structuralist presentations of a ceaselessly repeating timeless monotony that robs individual actors of what little freedom they possess to
shape their world. Equally important, one must not simply project the current system back into time, automatically finding the causal roots of contemporary developments. No one with a sensitive understanding of contemporary politics can escape noting the contingency of events; it is wise to keep this in perspective when evaluating the opportunities and projects of a Henry VIII or Gustav Adolphus.

Thus my more modest goal is to explore and articulate how the forces that affect the international arms transfer system worked themselves out from the Military Revolution of the 1500s until today and, more specifically, in the three periods following episodes of rapid technological innovation (the cannon/gunpowder revolution, the Industrial Revolution and the 'revolution in mobility'). This weighing of the various forces in the global arms transfer system will provide a better guide with which to make more specific judgements on the ability of any actor to manipulate its role in the system and achieve its policy goals. An understanding of the way in which the structure constrains the options of actors, and of the relevance of past constraints to current developments, is a much more important tool for assessing the future of the arms transfer system than the stated plans of decision makers.

These issues are of interest to various groups in addition to historians. States and individual decision makers always operate within structures that dictate the limits of their agency, but the role played by these structures is seldom understood, except in its vaguest outlines. Any assessment of the possibilities for success or failure of the specific changes which states or decision makers attempt to work on the world, however, depends critically on an understanding of these structures, their evolutionary processes and the types of change they allow. Since these structures only unfold and evolve slowly, a long historical perspective is essential.

To put this in concrete terms I can offer here two examples, one analytic and one practical, of the confusion created when scholars lack an understanding of the structural evolution of the global arms transfer and production system. As Aaron Karp observes in a summary of recent developments in the arms trade:

Since academic analysis of the international trade in arms and military equipment began in the mid-1960s, a weighty literature has emerged. Much has been done to illuminate basic facts, trends and relationships. None the less, understanding remains far from complete. Events in 1987 helped show the limits of insights about the arms trade [and] ... made it apparent that the international arms trade is evolving in ways that had not been anticipated ... Old
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assumptions can no longer be taken for granted. Basic relationships are not as clear as they seemed to be just a few years ago.7

A weighty literature capable of having its assumptions and understanding of basic relationships overturned by the developments of only a few years is unable to distinguish ephemeral from durable change. If it is true, as Karp later argues, that ‘in retrospect, the arms trade patterns of the 1960s and 1970s may come to be seen as anomalies in the history of international relations’, one wonders why, since the history of international relations is not a dark secret, this anomaly became apparent so late.8

The second example concerns the renewed attention being paid to the problem of controlling arms transfers. On the policy level, this interest is reflected in the creation of the Missile Technology Control Regime and the United Nations-sponsored expert-group study, Transparency in International Arms Transfers. On the analytic level, several scholars have recently addressed various specific problems of arms transfer control.9 Yet as Thomas Ohlson points out:

arms transfers are essentially a systemic phenomenon … [that] result[s] from national political, military and economic motivations and considerations in both supplier and recipient countries … Arms transfers can neither be understood nor judged without insight into the dynamics of this complex web of system interaction between and within interest groups and states.10

Because it generally fails to treat arms transfers within their systemic context, the existing literature offers a poor guide to addressing specific concerns such as control of the arms trade.

Before I present the structure of the book more clearly, it will be useful to sketch the three distinct phases the literature on the arms trade has passed through. The first phase, which spanned the interwar period, was distinguished by polemical, partisan and prescriptive analyses of the evils of the arms merchants, who were held partly responsible for the First World War and the lesser conflicts that preceded it. A quotation from an article of the period captures the flavour of the analysis:

In 1899 British soldiers were shot down by British guns that British armaments firms had sold to the Boers … in 1914 … German soldiers were killed by German guns manned by the armies of King Albert and Czar Nicholas II … Bulgarian troops turned French 75s on French poilus [and] … China has been pleased to use excellent Japanese guns for the purpose of killing excellent Japanese soldiers.11
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Titles such as Merchants of Death: A Study of the International Armaments Industry; Iron, Blood and Profits: An Exposure of the World-Wide Munitions Racket; Der Blutige Internationale der Rüstungsindustrie and Le Creusot: Terre féodale made up the backbone of the literature, the corpus of which was filled by pamphlets and exposés distributed widely throughout America, Britain, France and (to a lesser extent) Germany. The central argument was that ‘governments driven by the economic crisis work hand in hand with armament manufacturers in preparing for the next war’, and the main prescription was for arms industries to be nationalised. The literature accorded arms transfers great influence over the policies and destinies of states, and individuals great (even conspiratorial) control over arms transfer policies. Although this was an understandable reaction to the horrors of modern total war, the writing was anecdotal and unsystematic. The evidence did not support its conclusion that ‘armaments makers apply the two axioms of their business: when there are wars, prolong them; when there is peace, disturb it’, and only rarely can one find any hint that the solution to the problem was more complex than simple nationalisation of the international arms firms.

This literature did spawn slightly more sophisticated efforts to understand the international arms trade with the establishment in Britain and the United States of government commissions to investigate the arms industry. But the United States Senate’s Nye Committee became a precursor of the McCarthy hearings, with grandstanding, scapegoating and evidence-stretching being the order of the day. Britain’s 1934 Royal Commission on ‘The Private Manufacture of and Trading in Arms’ was a more sedate affair. Although ‘the tide of popular feeling was [now] running fiercely against private manufacture’ of arms, the Commission did not advocate any concrete action against private arms dealers. The League of Nations, which had enshrined in its charter its grave objection to the private manufacture of ‘implements of war’, also studied the arms trade. Its Statistical Yearbook, published annually between 1924 and 1938, was the first systematic attempt to collect data on the extent and structure of the international arms transfer system, but was hampered by the reluctance of governments to release potentially damaging information. The various League Disarmament conferences of the 1920s and early 1930s did little but stonewall arms control efforts.

The study of the arms trade had advanced little by 1945. The Cold War period, with its intellectually suppressive ideological climate and its massive transfers of weapons to the new alliances, was not conducive to dispassionate analysis, and the requisite data were not
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public. But a number of trends converged in the late 1950s and early 1960s to alter this, including:

- the growing number of arms consumers;
- the belief that arms transfers to new states in Africa, Asia and the Middle East would facilitate more intense partnerships and alliances;
- fears of a nuclear and conventional arms build-up that spurred peace research and data collection;
- the emergence of the Soviet Union as an arms supplier;
- the rebuilding of European arms industries.

These changes triggered the second phase (covering roughly 1965–73), which saw the first systematic and rigorous analyses of arms transfers. In 1970, the Stockholm International Peace Research Institute began publishing the World Armaments and Disarmament Yearbook (including data on arms transfers) and the Massachusetts Institute of Technology Arms Control Project published its study Arms Transfers to Less Developed Countries. The International Institute for Strategic Studies’ new publication, the Military Balance, also contained detailed information on global military arsenals. Individual studies by Harold Hovey (1966), Lewis Frank (1969), Geoffrey Kemp (1970–1) and John Stanley and Maurice Pearton (1972) also emerged. This work concentrated on case studies of specific suppliers and industries or on transfers to specific clients or regions, and relied on anecdotal or ad hoc data. None the less, these studies posed the questions that have concerned scholars since. It was in this period that the consensus emerged, buttressed by the behaviour of policy makers, that arms transfers were an important tool of foreign policy that supplier states could use to gain influence over clients.

The third phase, covering the period from 1973 to the present, witnessed an explosion of studies that paralleled the growth in the arms trade itself. Much of this material also used a case-study approach, and few attempts were made to situate arms transfers in the broader fabric of relations between states. Two notable exceptions were Robert Harkavy’s The Arms Trade and International Systems and Stephanie Neuman and Robert Harkavy’s Arms Transfers in the Modern World. At the risk of oversimplification, this recent literature can be grouped into three categories. The first (and largest) is the ‘American foreign policy’ literature, represented by such authors as Paul Hammond, David Louscher, Anthony Cordesman, Anne Cahn, Andrew Pierre and Michael Klare. These authors focused on foreign policy and the political motives and effects of arms transfers (and
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occasionally on their military implications), and generally left aside purely economic or economic/structural considerations. Consequently, their stress on the policy aspects of arms transfer relationships and on specific bilateral relationships such as the American–Saudi Arabian or American–Israeli led to an emphasis on agency and the actions of decision makers. This applies across the American political spectrum, whether or not the issue is the manipulation of arms transfers as ‘a valuable foreign policy instrument for use in a wide variety of circumstances’ or proposals for restraint on arms transfers, justified as enlightened self-interest. 20 Only occasionally have attempts been made to fit arms transfers into a broader international relations framework and to give a dynamic account of the factors affecting the evolution of the arms transfer system. 21

The second group, working in a ‘European political economy’ tradition, includes authors such as Wolfgang Mallmann, Herbert Wulf, Michael Brzoska, Thomas Ohlson and Mary Kaldor. Here one finds the strongest emphasis on a structural account of persistent features of the arms transfer system and an approach that integrates the economic, political and military motivations driving arms suppliers and recipients. On the one hand, their account of dependency and imperialism in relations between states led to a reliance on a strong variant of the ‘arms transfers provide political influence’ thesis. 22 On the other, they possessed a commitment to reducing the arms trade, or at least recipients’ dependence on the superpowers. 23

Finally, there are the iconoclasts who specialise in one aspect of the arms transfer system as regional specialists (David Pollock or William Quandt on the Middle East, Anne Gilks on China), or as economists (James Katz on developing world industries), or as analysts of the policy of a specific non-American supplier (Roger Pajak for the Soviet Union, Edward Kolodziej for France, Aaron Klieman for Israel). The detailed nature of the scholarship, and the limited scope of the conclusions drawn, does generate much wisdom on the arms trade. The scholarship is, however, neither systematic nor integrated, and by emphasising idiosyncratic factors it obscures structural constraints and recurring patterns operating on all participants in the arms transfer system.

There are five general weaknesses in the arms transfer literature. First, it is ahistorical, in two senses. It makes virtually no reference to arms transfers before the Second World War, and it seldom situates the changes discussed within the overall context of the evolution of international political relationships. While this would be defensible if the current epoch were unique, much can be learned about likely
future patterns of transfers from past arms transfer systems. Second, it is Americo-centric and policy-orientated: with few exceptions much of the material is concerned with generating specific policy prescriptions for the United States. This may again be defensible, but not if the analysis is narrowed to current popular subjects that add little to our understanding of the role of arms transfers in international relations. Third, there is little discussion of recipients’ motivations to purchase arms, and of the impact transfers have on them. This is doubtless because what is at hand is information about suppliers, but again, recipients’ attitudes and expectations affect the conclusions that can be drawn about the future evolution of the arms transfer system. Fourth, few writers integrate economic, military and political perspectives, with the result that the interaction of the different motivations for producing, supplying or receiving arms is neglected. Finally, the literature is largely atheoretical and fails to analyse arms transfers against the backdrop of the interactions of states in the international system:

Students interested in the international traffic in arms tend to make a series of assumptions about the international behaviour of national systems ... the larger theoretical questions and broader analytic perspective ... remain[ing], for the most part, unexplored.24

Running as a thread through all these weaknesses is one major flaw: little or no analysis (with the exception of the European political economists) of the structure of the arms transfer and production system. Direct analysis of the structural aspects of the current system is evident in the work of only a few authors, although many more make passing reference to the structure of the system without subjecting it to searching examination. A good example is the division of the arms market into different tiers of producers or suppliers. There has been little detailed work on how to divide the tiers or on what would determine membership in them (other than an ad hoc evaluation based on market share), no systematic attempt to relate this to the structure of the defence industry in various states, no attempt to determine if this structure is historically aberrant, and little attempt to assess the possibilities of movement between tiers.25

Although this book does not avoid all these weaknesses, it does examine some of the neglected aspects. It begins with the historical account of the development and structure of the international arms transfer system, with chapter 1 outlining the argument and providing the organising principles for the historical evidence. The key argument is that there have been a series of technological revolutions in
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Armaments which, when married with the pursuit of wealth, power and victory in war that motivated state policy, resulted in the emergence of several foci of innovation that were the source of increased arms transfer activity. The role of technological innovation as an exogenous variable catalysing the waves of the arms transfer and production system is detailed, and a life cycle of the international arms transfer system is sketched. It is argued that rapid innovation is followed by a period of levelling during which military technology is diffused, secondary and tertiary producers emerge and the arms transfer system manifests its traditional three-tiered structure. Finally, the structure of the three tiers, and of relations between actors in different tiers, is outlined.

Chapters 2 and 3 then detail the evolution of the arms transfer and production system from the European emergence from feudalism to the Second World War. This survey is necessarily fragmentary because of the scanty evidence and absence of work to draw upon, but it supplies evidence for the argument presented in chapter 1. It is broken into two periods: chapter 2 deals with the period leading up to the Military Revolution of the sixteenth century, and chapter 3 with the period of the Industrial Revolution and the revolution in mobility of the early twentieth century.

The second half of the work turns to the contemporary system. The greater information available allows an examination not only of the long-term evolutionary dynamic of the contemporary system, but also of the short- and medium-term forces at work, such as the acquisition cycle of weapons, the impact of decolonisation, and the debt load of Third World recipients. Chapter 4 presents as the starting point a descriptive and statistical snapshot of the emergence of the contemporary arms transfer system. Chapters 5, 6 and 7 examine the three tiers of producers identified (which can be characterised as the core, the semi-periphery and the periphery) in terms of the structure of arms industries within each tier, the mechanisms for arms sales decision making, and the differing economic, political and military driving forces that direct their participation in the arms trade. Chapter 8 discusses the role of recipients in the system, and highlights the range of clients’ responses to their subordinate status in the arms transfer and production system that one finds below the threshold of an attempt at indigenous arms production.

Finally, the conclusion compares and contrasts the contemporary arms transfer system with previous epochs, drawing out the persistence of such features as tiers of producers or the rise of indigenous industries in major customers, and differences such as the current use