

CONTENTS

*Illustrations* · xi  
*A Note on Money* · xvii

	Introduction	1
PART I	THE MILITARY CONTEXT	17
CHAPTER 1	The Italian Wars	19
	<i>The development of the handgun</i>	22
	<i>Terminology and capability</i>	26
	<i>From artillery to handguns</i>	31
	<i>The rise of the arquebusiers</i>	36
	<i>The Sack of Brescia, 1512</i>	40
	<i>The Sack of Rome, 1527</i>	42
	<i>Writing about guns</i>	44
	<i>The later years of war</i>	47
CHAPTER 2	The Arms Industry of Brescia	49
	<i>The establishment of an industry</i>	52
	<i>Valtrompia's privileges</i>	57
	<i>The export licensing system</i>	60
	<i>The challenge of religious reform</i>	65
CHAPTER 3	Arms Dealers and Auxiliary Industries	70
	<i>A broker and his network</i>	72
	<i>The arms transactions</i>	77

	<i>Transport and distribution</i>	81
	<i>Ancillary services</i>	84
PART II	BEYOND WARFARE	91
CHAPTER 4	Court Culture and Luxury Weapons	93
	<i>Ambivalence</i>	96
	<i>The contours of elite gun ownership</i>	98
	<i>Wheellocks</i>	100
	<i>Guns as gifts</i>	102
	<i>Domesticating guns</i>	104
	<i>Experimental and novelty weapons</i>	111
CHAPTER 5	Gun Proliferation	117
	<i>Civic militias</i>	118
	<i>Contests and the hunt</i>	124
	<i>Guns in the criminal records</i>	126
	<i>The contours of ownership</i>	129
CHAPTER 6	Gun Control	135
	<i>General regulation</i>	136
	<i>Privileges, social status, and gun licensing</i>	140
	<i>Soldiers, militiamen, and regulation</i>	145
	<i>Arms-bearing for self-defence</i>	148
PART III	BEYOND ITALY	153
CHAPTER 7	Assassinations	155
	<i>Pakington and Pole</i>	157
	<i>Pier Luigi Farnese</i>	159

	<i>The miracle of Carlo Borromeo</i>	162
	<i>The assassination of the earl of Moray</i>	167
	<i>Shootings in the French Wars of Religion</i>	169
	<i>The assassination of William the Silent</i>	172
CHAPTER 8	Visual Culture	175
	<i>Alexander the Great</i>	176
	<i>The Low Countries, Germany, and Switzerland</i>	179
	<i>Firearms in religious painting</i>	187
	<i>Historical depictions</i>	189
	<i>The Battle of Lepanto</i>	193
	<i>Religious wars</i>	196
	<i>Empire and guns in portraiture</i>	200
CHAPTER 9	The European Empires	207
	<i>Morocco</i>	211
	<i>The Horn of Africa and Asia</i>	213
	<i>Southern and Western Africa</i>	217
	<i>The Americas</i>	219
	<i>From Mexico to Florence</i>	224
	Conclusion	237
	<i>Acknowledgments</i> · 243	
	<i>Notes</i> · 245	
	<i>Bibliography</i> · 279	
	<i>Index</i> · 303	
	<i>Photo essay follows page</i> 236	

# Introduction

THE GUN IS not the first object to come to mind when one thinks of Renaissance Italy. Perhaps it should be. In 1433, as Cosimo de' Medici was forced into exile from Florence, the first handguns were spotted on the peninsula. Guns were used at the 1440 Battle of Anghiari, and later in the century Leonardo da Vinci sketched a design for a wheel lock that would allow a gun to be fired without a lighted match. The Beretta company dates itself back to 1526, the year before Machiavelli's death and when Michelangelo was working on the Medici funerary chapel at the basilica of San Lorenzo in Florence.<sup>1</sup> Later that decade, Paolo Giovio, who combined careers as a historian and physician at the papal court, identified print and gunpowder, along with the voyage of Columbus to the Americas, as inventions that had 'made this age so renowned for its good fortune'.<sup>2</sup> Others followed in that assessment of gunpowder's significance to modernity, notably Girolamo Cardano (in his 1575 autobiography),<sup>3</sup> Jan van der Straet and Philips Galle, in the frontispiece of their *New Inventions of Modern Times*, and Francis Bacon.<sup>4</sup> Firearms, however, are also central to problematizing ideas of progress, representing as they did new possibilities for violence and conquest. In the eighteenth century, guns would be regarded as a more gentlemanly weapon, thanks to the possibility they presented of avoiding a direct physical fight.<sup>5</sup> In this sense, they were sometimes characterized as relatively civilized, a description that plays down their comparative lethality. In the sixteenth century, however, guns were still regarded as unchivalrous, unmanly, and diabolical: they still

[1]

had to be ‘domesticated’ and made socially acceptable, and masculine identities had to be modified to accommodate this new model of the armed self.<sup>6</sup> That process took some time. To borrow one of the many gun-related phrases that pervade the English language, Europe shot first and asked questions later.

The continent’s debates about firearms take us to the heart of an argument about how and whether early modern Europe underwent a ‘civilizing process.’<sup>7</sup> The imagined golden age of the Renaissance, described by Baldassarre Castiglione in his 1528 *The Book of the Courtier*, is one of learned men and women eloquently debating questions of art and beauty in their castle gardens, a world in which, while arms remained the ‘first profession’ of the courtier, nobility came to be constituted as much through virtuous knowledge of letters as through prowess on the battlefield. Yet even while royal courts became more settled, the life of kings less characterized by direct participation in battle, and the upper classes more restrained and polite in their bodily comportment, guns became ever more common. Research on seventeenth-century Italy has shown just how fragile this process of civilizing was, and how easily even major cities could fall into patterns of violent feuding.<sup>8</sup> Society could be simultaneously more modern and more lethal.

The tensions around guns become apparent in the case of a cowherd named Vincenzo, who in 1552 obtained a licence from the Bologna authorities that allowed him to carry arms, including a gun for the purpose of hunting.<sup>9</sup> It came with the standard caveat that the weapon must not be carried at churches, festivals or in markets. These were busy environments where an accidental misfire had higher risks than out in the countryside, and where a generalized ban on arms-bearing (staff weapons such as pikes were also included) made policing more straightforward. The local guard did not have to decide whether any given individual was plotting a murder in the cathedral: they could simply exclude anyone carrying a gun. Vincenzo was taking advantage of a technology that was proliferating rapidly. Fifty years before, handguns had been a relative novelty on the Italian peninsula, but after decades of conflict they had become far more familiar: the Italian Wars (1494–1559), in which France and Spain contended for hegemony on the peninsula, saw firearms become decisive on the battlefield for the first time.

The rulers of Italy's multiple states promoted shooting in the interests of civic defence and military preparedness, but as early as 1522 the same rulers began to issue gun control decrees. These attempts at regulation, however, often failed to convince the population. The anonymous author of a proposition for international gun control observed, probably in the late 1570s, that

if the Pope, as chief, and then the other princes do not make some prompt provision, life will be so badly corrupted in this matter that it will become even more difficult, and soon there will be no place nor state where people are safe, given that every low herdsman or shepherd you meet in the countryside today has a wheel-lock arquebus over his shoulder.<sup>10</sup>

In these first centuries of guns, pressure for gun control in the face of proliferation was already apparent.

In fact, wheel-lock firearms, particularly those of smaller sizes, were extensively regulated in sixteenth-century Italy. Unlike the traditional matchlock (which worked by application of a lighted match to gunpowder), they were fired by means of a self-lighting mechanism, could be concealed beneath clothing, and were thus a handy weapon for assassins and bandits. Rulers were intensely concerned by their threat to public order. Yet, at the same time they could see a case in favour of firearms. Cardinal Ferdinando de' Medici, to whom that gun control proposition may have been addressed, had in his library a manuscript known as the *Florentine Codex*. It described in some detail the advantage that guns conferred on the Spanish commander Hernando de Cortés and his troops as in 1521 they entered the Aztec capital Tenochtitlan:

The fifth group [of the army] were those with arquebuses, the arquebusiers. . . . And when they had come to enter the great palace, the residence of the rulers, they fired them; they repeatedly fired the arquebuses. They each exploded, they each crackled, were discharged, thundered, disgorged. Smoke was spread, smoke was spread diffusely, smoke darkened, smoke massed all over the ground, spread all over the ground. By its fetid smell it stupefied one, it robbed one of one's senses.<sup>11</sup>

How rulers in Italy and beyond balanced their desire for civic defence and overseas conquest with the maintenance of social

order—and the impact their decisions had on wider society—is the subject of this book.

A study of guns, moreover, brings new insights to our understanding of many wider social developments in sixteenth-century Europe. The Italian Wars drew in combatants from across Europe as France and Spain fought for hegemony on the peninsula and, as we will see, ideas about gun use were exchanged between men (and it was primarily men) of different nationalities. Guns were everywhere in this society. They can tell us about courtiers and other social elites, and about how the private companies that produced them interacted with the state and the older feudal aristocracy. They can tell us about perceptions of gender, rank and race. Efforts to regulate gun use in the later sixteenth century can be read in the context of post-Reformation state formation, as rulers on either side of a continent divided into Protestants and Catholics sought to prove their commitment to orderly Christian morals. In relation to European empire-building, firearms briefly offered a technological advantage: in early accounts of global encounters stories about guns underlined a narrative of European superiority. In fact, however, guns were swiftly adopted and assimilated by both Africans and Native Americans. In contrast, during conflict with the Ottoman Empire, the Catholic powers faced an opponent with a well-established firearm industry, making for somewhat, yet not entirely, different portrayals of gunpowder weapons.

Firearms, however, do not only offer a lens through which to rethink early modern European society. This is a topic with significant contemporary resonance. Sixteenth-century Italy was a society where the risk of conflict was—and was perceived to be—high. Divided into multiple and often warring states, its relative wealth and location at the crossroads of the Mediterranean meant that foreign powers were keen to secure their influence on the peninsula. To do so they sought out local allies. The modern distinction between soldier and civilian was not acknowledged in the contemporary laws of war, and non-combatants were commonly targeted; beyond the military context, banditry was an established problem.<sup>12</sup> It is hardly surprising that both states and individuals saw a case for arming themselves, yet at the same time they recognized the risks. Many of the arguments raised today in relation

to gun control are to be found in sixteenth-century sources. These include calls for restrictions on the ownership of those weapons judged most dangerous, demands from users that they be allowed to keep guns for self-defence (but also critiques of firearms' effectiveness in defensive contexts), associations with honour and, perhaps most notably, the question of how to regulate an armed militia. It will become apparent to readers that these early modern documents not only echo debates in the United States, but also discussions in post-conflict environments and in societies and subcultures worldwide where honour remains an important justification for firearm ownership.<sup>13</sup> Indeed, when I first wrote on this topic, during a master's degree at the start of this millennium, the United Kingdom had recently had its own debate on gun laws. This followed the tragic massacre at Dunblane Primary School, where on the morning of 13 March 1996 sixteen children and their teacher were shot dead. I had attended high school in Stirling, the nearby county town, so these questions came rather close to home. In 1997, most handguns were banned in England, Wales and Scotland. The one part of the United Kingdom that retained more latitude for gun ownership was Northern Ireland, where in acknowledgement of its decades of conflict it is still legal, if uncommon, for handgun permits to be issued for self-defence. Yet if firearms now rarely hit the UK domestic headlines, coming back to the topic after more than two decades, I remain struck by the wider continuities between past and present.

Firearms, moreover, have a further interest for anyone concerned with the impact of new technology and new products on society. Much consideration has been given to the change wrought by printing on Europe: in the four and a half decades since Elizabeth L. Eisenstein called the printing revolution unacknowledged, it has been the subject of multiple studies.<sup>14</sup> For the eighteenth century, historians have explored how new commodities imported from European empires—coffee, chocolate, sugar, tea, tobacco—changed the social and cultural life of the metropole. Looking back on that literature, which I taught to first-year undergraduates twenty years ago, I now wonder why guns were not on the list. Considerations of the 'gunpowder revolution' have tended to confine it to a military sphere. Yet it should not be a surprise to find technologies originally

developed for military purposes finding wider uses. We might be sceptical now about the extent to which that was desirable, but Vincenzo the cowherd had a practical use for his gun beyond its use in warfare. Once the genie was out of its bottle, there was no putting it back in.

None of this is to say that scholars have ignored the history of early modern firearms. Until recently, however, guns were typically to be found in the margins of any given field of study. Military historians considered their impact on the battlefield. Historians of violence noted their use in crime. Studies aimed at curators and connoisseurs documented makers' marks, materials and technological developments in detail.<sup>15</sup> Overall, however, there were few broad analyses to be found until the global survey by Kenneth Chase published more than two decades ago. Interest has grown since then, as scholars focusing on England and the German states have established the significance of firearms in domestic and civic contexts, and especially the importance of militia service in their proliferation. Lois Schwoerer has made a case for the existence of a gun culture in England, noting the rising interest in firearms at the court of Henry VIII, who was shooting with handguns by 1536–37 and arranged additional tuition for himself in 1541; B. Ann Tlusty and Jean-Dominique Delle Luche, on the other hand, have shown how firearms were assimilated into existing martial cultures in the Holy Roman Empire.<sup>16</sup> Sheila Nayer (for England) and Patrick Brugh (for Germany) have explored the literary responses, which are largely hostile.<sup>17</sup> Until recently much literature on Italian handgun production focused on the identification of gunfounders, although there is also an important history of the Beretta firm, and local histories of Valtrompia and the nearby city of Brescia provide further information.<sup>18</sup> A 2022 volume produced to mark the thirtieth anniversary of the Luigi Marzoli museum of arms and armour in Brescia has proven a valuable addition, while the work of Michael Mallett and John Hale on the military organization of the Venetian state (now forty years old) sets these studies in wider context, as does Hale's essay on gunpowder and the Renaissance, and more recent studies of the Italian Wars.<sup>19</sup> In these broader analyses, the role of arms manufacturers and brokers, who served a clear

purpose for the state in the military context but also had their own interest in promoting weapons use and encouraging the expansion of firearms technology, has often been lost, but this has begun to be remedied, with recent studies exploring the arms industry in seventeenth-century Brescia; artillery production in Florence; and the gunpowder industry in Venice. To these should be added the work of David Parrott, who takes a broader European view on the question of military enterprise.<sup>20</sup>

New scholarship on material culture offers a further perspective through which to study handguns. There is now a rich body of literature on Renaissance Italy that draws on the peninsula's extensive archive record to examine everyday life through objects, considering for example practices of gift-giving, and the location of things in domestic and institutional space.<sup>21</sup> Growing numbers of scholars have turned to this approach to understand the history of war, although their studies have often focused on objects ancillary to conflict rather than weapons.<sup>22</sup> Notable exceptions are Victoria Bartels, whose work on masculinity in sixteenth-century Florence situates arms and armour in a wider gendered and cultural context, and Kristen B. Neuschel, who explores swords over the *longue durée* in France and Britain.<sup>23</sup> Building on this scholarship, I have paid close attention to the gun as an object, exploring its life cycle from production to decay, and considering its materials, users and meanings.

Alongside individual interactions, throughout this book I discuss guns in relation to the state, a term that needs some qualification. The concept of the state in Italy is not straightforward, uniting as it does polities of different sizes and political types, ranging from more or less broad-based republics to principalities, as well as those areas ruled as subject territories. Though commonly translated as 'state', the term *stato* referred to governing authorities that were embryonic by comparison to later 'states' with permanent standing armies. Yet, however under-developed these sixteenth-century regimes were, the oversight of military matters was a central task for them, alongside policing, justice and, of course, tax-raising. The management of firearms cut across these various responsibilities, and guns therefore offer a prism through which we can view aspects of state formation that are often dealt with separately in the

literature: the development of the military state with its concern for defence on the one hand, of the disciplining state with its concern for social order on the other, and of the associated ‘civilizing process’.<sup>24</sup> I will introduce these briefly in turn.

The idea of the military state emerged from a long-running debate about whether there was a military revolution in Europe.<sup>25</sup> That debate began in the 1950s, when Michael Roberts made the case that the tactical innovations of warfare between 1560 and 1660 led to a growth in the authority of the state, especially in relation to tax-raising. (He referred primarily to complex infantry techniques requiring extensive drill and training.) Subsequent debate focused not so much on whether there had been a military revolution but on its timing, with contributors highlighting the significance of both earlier and later developments.<sup>26</sup> The Italian states were rather marginal to discussions of the military revolution, although Giuseppe Del Torre has made a case that the taxation system introduced by Venice after the War of the League of Cambrai (1508–16) laid the groundwork for that city-state’s long-term significance in European politics.<sup>27</sup> In relation to the Italian Wars, further nuance has been added by Idan Sherer’s observation that what may not look like a revolution in hindsight can certainly look revolutionary to those involved.<sup>28</sup> In the 1990s, Clifford Rogers attempted to bring together the wider scholarship with the concept of ‘punctuated equilibrium’, in which the development of the state was characterized by a ‘series of intense revolutionary episodes’ within a longer evolutionary process.<sup>29</sup> Emphasizing the concept of evolution more strongly yet, some twenty years later Frank Jacob and Gilmar Visoni-Alonzo argued for the abandonment of the military revolution concept altogether. In light of newer scholarship on global history, they particularly criticized the idea that a distinctly western European military revolution had enabled the continent’s powers to build their global empires, pointing out that the new methods were not widely used in overseas conquest and that, in any case, military development was well advanced elsewhere in the world.<sup>30</sup>

Even while scholars question the concept of a military revolution, some concepts from this literature remain useful, especially those relating to the two sides of the state: the fiscal state, whose need for a standing army motivates its efforts in tax-raising, and

the contractor state, which purchases services. Recent research has built on the concept of fiscal-military/contractor states through a transnational perspective focused on those European cities which from the 1530s onwards became ‘fiscal-military hubs’.<sup>31</sup> This work challenges the idea that the state was necessarily the most important organizing factor in military supply. Whether or not one thinks the idea of a military revolution is helpful, the fact that early modern states often contracted out arms purchases is certainly important to understanding developments in the small arms industry.<sup>32</sup> Nor is the idea of a fiscal state irrelevant: effective use of small arms on the battlefield required drilling, which in turn had implications for the organization of military personnel, including the militia that became a vital route for gun proliferation. Training armies in the new techniques had costs that needed to be met through taxation, and guns were more expensive than some (if not all) alternatives.<sup>33</sup> Moreover, there does not need to have been a military revolution for there to have been a ‘firearm revolution’. Handguns matter precisely because they escaped the military sphere. Their use expanded over decades and persisted over centuries, as did the debates about how to manage them. Jacob and Visoni-Alonzo are right to observe that ‘the development of new military technology does not necessarily have to change society as a whole’.<sup>34</sup> Like print, however, handguns changed human relations. If we can speak of a print revolution in early modern Europe, then we can speak of a firearm revolution too.

This book brings the literature on the military aspects of the state into dialogue with discussions of the role of government in the maintenance of social order. Discipline is, of course, not insignificant in discussions of the fiscal-military state, which emphasize the importance of collective manual drill in disciplining armies.<sup>35</sup> However, it remains rare to see these different state priorities treated in tandem. Yet, if defence was one challenge for the early modern state, addressing crime and disorder was another, and scholars of violence have also taken an interest in the use of firearms. This is a particularly pressing historical question in the Italian context: it is generally agreed that the rate of homicide in sixteenth- and seventeenth-century Italy was relatively high compared to northern Europe.<sup>36</sup> Robert C. Davis’s essay on outlaws and their firearms in the late sixteenth-century Papal States addresses

some of the attempts to legislate bans on wheel-lock guns in relation to social change and the process of ‘refeudalization’ in early modern Italy.<sup>37</sup> Moreover, numerous scholars have pointed to the importance of the early modern state in the social disciplining of its people, whether through the development of norms around manners and the rise of civility, through its legal provisions or through surveillance.<sup>38</sup> Recent work, however, has tended to emphasize state-building from below, assessing the role of estates, communities and social conflict in state formation, and the emphasizing the significance of personal agency.<sup>39</sup> Such approaches have tended to highlight the limitations of the state: Joanna Innes suggests that in relation to welfare organization ‘early modern states were rarely much more than co-ordinating agents’.<sup>40</sup> This echoes the approach of the latest military histories.

In this book, therefore, I approach the military revolution debate side-on, taking one of its components—the rise of small arms—and assessing its impact on society at large. Beginning with the original, military, function of handguns, I identify the processes through which, despite initial suspicion, they came to be familiar objects in western Europe. The proliferation of guns via militia service made them accessible for use in farming, but also by bandits. Rising crime led to demands to carry guns for self-defence, and although their usefulness for self-defence was questioned, by the time that debate arose they were entrenched as a technology. Their producers had a direct interest in continuing to make them, and the many ancillary industries had an interest in their continued use too. Governments, meanwhile, were concerned to ensure they had adequate capacity to increase production in the all too likely event of war. These intertwined processes, together with a growing cultural acceptance of handguns, together made for a firearm revolution that left western Europe with a lethally armed citizenry and normalized the new technology.

Moreover, thinking about a firearm revolution in this way gives us a holistic perspective on the early modern state. The production of handguns for military use, and the training of shooters, is an important aspect of their history, but it is far from being the only aspect. If, as Robert Barret observed in 1598, ‘the wars are much altered since the fierie weapons first came vp’, so too was life

beyond.<sup>41</sup> As the case of Vincenzo indicates, guns had non-military uses: for livestock control and hunting, and for personal protection. Given the lethality of these weapons, they raised concerns about social order, confirmed by their use in robbery and assassination. They also had a significant role to play in the process of imperial expansion, and the trade in gunpowder weapons was soon a matter of international diplomacy. Finally, and perhaps most importantly, they changed relationships between human beings. As Bruno LaTour observed, 'You are different with a gun in your hand'.<sup>42</sup> With guns, there could be gunmen: the possibility of killing that guns represented made for a revolutionary change in human relations. Indeed, the presence of firearms in society made a civilizing process all the more important. This book brings together these diverse approaches to the history of handguns to produce an integrated picture of their production, use and cultural meanings in sixteenth-century Italy and beyond.

The sources for the history of handguns in sixteenth-century Italy are fragmentary. Western Europe had a notably ambivalent attitude towards firearms, and this results in some significant silences.<sup>43</sup> Still, the archival record is more substantial than it might appear at first sight. In the nineteenth century, several useful compilations of primary sources were produced, which remain important points of reference, but regime change in the large centres of Bologna, Florence and Milan disrupted institutions and record-keeping, and there are few military archives with consistent series through the Italian Wars (that of the Duchy of Ferrara, in Modena, is an important exception; the Siena records, which have been studied by Jacopo Pessina, likewise).<sup>44</sup> The records of Brescia and Venice, which might shed light on handgun production, have numerous lacunae: the earliest sixteenth-century Brescian ducal register covers the years 1528–33, but consistent records begin only in 1546; only a single volume detailing the issue of arms licences in sixteenth-century Bologna, covering four months of 1552, survives.<sup>45</sup> Sometimes, however, the absences have been exaggerated: records do exist, but it is a matter of knowing where to look for them.<sup>46</sup> I was told in one Italian archive that they held no relevant documentation for a study of firearms, only to find guns listed in

the records of the ducal armoury. The ‘material turn’ in history suggested to me—and so it has proven—that the more conventional military and legal sources might well be complemented by evidence from inventories and account books as well as by objects themselves and surviving representations.

Moreover, lacunae in one Italian archive can often be compensated for with documents from elsewhere: this study thus draws on archive material from across north and central Italy, including Rome, Florence, Bologna (second city of the Papal States), Venice and its subject city Brescia, and Modena (where the archive of the Duchy of Ferrara is located); I have further consulted published primary sources from Venice and Brescia as well as those referring to other Italian city-states, including Lucca and Siena. The types of documentation cited include rulers’ decrees, account books, inventories, correspondence, judicial records, export licences, arms licences and military surveys. Letters and account books of noble families who acted as *condottieri* (mercenary commanders) and arms brokers show how transactions were conducted in practice, which allows us to establish how firearms supply networks intersected with (or broke from) prior practices of arms supply. Criminal investigations reveal details of firearms offences but also the broader social context of non-elite gun use.

This material is complemented by the study of surviving firearms from numerous museum collections, including those of the Royal Armouries Museum in Leeds, the Museu Militar of Lisbon, the Kunsthistorisches Museum (Vienna), the Metropolitan Museum of New York, the Chicago Art Institute, the Bavarian National Museum, and the surviving armoury of the Este dukes of Ferrara—the only consistently preserved Renaissance armoury—at Konopiště Castle near Prague. I consider visual evidence, including manuscript illuminations, weapon designs, sketches, portraits, tapestries, frescoes, furniture and sculpture, from museums and historic houses including the Villa del Principe in Genoa and Palazzo Vecchio in Florence, the Museo del Prado, National Gallery of Ireland and Tate Britain. In a number of cases, the focus on firearms allows me to add nuance to existing interpretations of these artworks, and to identify some key innovations, notably in relation to the likely earliest sculptural representation of European guns. I also

assess the absence of firearms from representations of places where we know they were present, asking why, for example, did Titian paint the Emperor Charles V with a gun only for Van Dyck to leave the weapon out when he produced his own version of the portrait? Taken together, this rich range of sources illustrates the production, distribution and maintenance of firearms, modes of use, the routes by which guns proliferated, the mechanisms of regulation that states attempted to impose, the variety of loopholes and flaws in the regulatory system, and, of course, wider cultural perceptions that shaped social attitudes towards the gun.

The book is divided into three parts, moving from a deep local case-study of arms production and contracting to wider issues of gun ownership and gun control in Northern Italy, and finally to Europe and its empires. Part I addresses handgun proliferation in military contexts, assessing how guns came to be adopted, how they were produced and distributed, and the social implications of these processes. Chapter 1 outlines the development of portable firearms and their changing use in warfare, situating the Italian Wars (1494–1559) in international perspective and setting the scene for the discussions that follow. Chapter 2 focuses on the world of arms manufacturers. It investigates the processes by which an arms industry developed and gained political leverage in northern Italy, focusing on Brescia, a subject city of Venice, and the small valley town of Gardone Val Trompia in its hinterland, which in the sixteenth century became a major centre for arms manufacture and remains so to this day. Chapter 3 then sets the process of military contracting in wider social context through a case-study of a Brescian patrician, Giovanni Battista Porcellaga, who acted as broker for arms purchases, and through consideration of wider distribution networks. As a major theatre of European conflict in this period, Italy offers a rich case-study in the social dynamics of gun production and use, and this microhistorical study helps us understand precisely how firearms were assimilated into society. Moreover, while these chapters have a local focus, this is a global story too: guns from Gardone Val Trompia were found on the wreck of the *Mary Rose*, which sank off southern England in 1545, while Cesare de' Fedrici, a man from the arms-producing valleys, travelled to

what is now Myanmar in 1569 and reported that there he had seen arquebusiers drilling daily.<sup>47</sup>

Part II turns to investigate firearms in the civilian context and attempts to regulate them across north and central Italy. Chapter 4 addresses court culture and luxury guns, exploring the changing types of weapons owned over time, and examining the imagery that decorated guns, which ranged from the religious to the erotic. It demonstrates how—through the integration of guns into existing cultures of gift-giving, and through the use of familiar designs and materials—firearms were assimilated into the cosmopolitan world of the court, with technologies exchanged across Europe. Chapter 5 turns to wider civic gun cultures, exploring how the development of militia helped familiarize the men of the north and central Italian states with guns and drawing on qualitative material from legal and criminal trial records to analyse firearm use by people of different rank and gender. Chapter 6 then assesses the attempts at gun control enacted on the Italian peninsula through the course of the sixteenth century, investigating how the many limits and exemptions to the legislation were justified.

Part III of the book looks beyond the Italian peninsula, towards the final thirty years of the sixteenth century and into the seventeenth. Chapter 7 explores the use of firearms in a series of attempted and successful assassinations between the 1530s and 1580s, ranging from northern Italy to the Netherlands via England and France, including the well-known assassinations of the earl of Moray, regent of Scotland in 1570, and William the Silent in 1584. The case-studies shed light on cultural attitudes, technological capabilities, and the continuing debate about firearm proliferation in the last quarter of the sixteenth century. Chapter 8 turns to consider representations of firearms in European visual culture, from the early Amsterdam militia portraits to the Catholic iconography of the Battle of Lepanto, to the French Wars of Religion and Dutch Revolt. Both chapters draw contrasts and comparisons between the Italian material and northern Europe. Chapter 9 then turns to the rising European empires and to new representations of the gun in imperial and colonial contexts. Taking as its starting point the collection of *Navigations and Voyages* published by Giovanni Battista Ramusio in Venice from 1550, and continuing through a

study of the visual culture of firearms, this chapter investigates the association of guns with increasingly racialized ideas of European technological superiority, setting the scene for the coming centuries in which the arms trade became fundamental to the functioning of empire. While the Italian states themselves were rarely directly involved in these new colonial projects, numerous individual Italians and private firms engaged in global trade via the growing Spanish and Portuguese Empires. Venice was a key centre in the provision of information about these early encounters, while Genoa acted as a financial hub for Spain. Here, as with the Italian Wars, the Italian case-study is one that illuminates societies well beyond the peninsula in a pivotal period for global history, the legacies of which remain with us today.

## INDEX

Page numbers in *italic* indicate illustrations.

- accessories for firearms, 27, 80, 84, 99, 114  
Accolti, Benedetto, 143  
accuracy of firearms, 27–29, 30, 43  
*Acts and Monuments* (Foxe), 158  
*Adoration of the Magi* (Bruegel), 188  
Africa: African figures in art, 177–79,  
    205–6; Horn of Africa, 213–17;  
    southern and western, 217–19  
Agostini, Niccolò degli, 41  
Alberto dai Morsi, 99  
Alessandro Ferrarese, 83  
Alexander the Great, 176–79, 177, 178  
Alexander VI (pope), 120, 157  
Alfonso III (king of Naples), 31  
Alfonso V (Portuguese king), 25  
Alidosi, Francesco (Cardinal), 115  
*Allegory of Peace* (Salviati), 200  
*Allegory of the Church*, 197, 197–98  
Allegretti, Allegretto, 220–21  
Allegretti, Girolamo, 66  
Alvarado, Pedro de, 223  
Alvares, Pedro, 213–14, 221  
Alvarez, Francesco, 215, 224  
Amalteo, Giovanni Battista, 195  
ambivalence toward firearms, 11, 20,  
    96–98, 117  
Americas, conquest of, 219–24; Mexico,  
    224–33  
Anabaptists, 66  
Añastro, Gaspar de, 172  
Andrade, Tonio, 22  
Andreassi, Giorgio, 65  
Angoulême, Charles (count of), 187  
Anguissola, Giovanni, 161  
Anna of Bohemia (queen), 102–3  
Anselmi, Cesare d', 38–39, 41  
Antonio del Grasso, 130–31  
Anthonisz, Cornelis, 180  
Aq Qoyunlu confederation, 193, 207  
archery weapons: crossbows, 38, 100, 114,  
    175, 187–88, 214, 220; longbows, 38, 159  
*archibusetti*, 136–37. *See also* wheellock  
    guns  
archival record on history of handguns,  
    11–13  
Arcimboldo, Giuseppe, 184, 185  
Ariosto, Ludovico, 96, 196  
Armeria Reale (Turin), 95  
armour, 29–30; armoury inventories,  
    95–96; in court settings, 105  
arms brokerage and distribution. *See* fire-  
    arm distribution  
arquebuses: fitted inside objects, 114–15;  
    as gifts in court, 103; in Italian Wars,  
    19, 20, 21, 27, 36–40; military use,  
    36–40; in notebooks of Leonardo da  
    Vinci, 32; types and sizes, 26; Venetian  
    Arsenal, 42  
*Art of War* (Machiavelli), 46, 172  
Aruscone, Ambrogio, 97  
Ascham, Roger, 41, 46  
Asia: conquest of, 213–17; firearms dis-  
    tributed in, 207–8  
assassinations: Carlo Borromeo, 162–67;  
    French wars of religion, 169–72; James  
    Stewart, earl of Moray, 167–69; Pier  
    Luigi Farnese, 159–62; Reginald Pole,  
    158–59; Robert Pakington, 157–58;  
    William the Silent, 172–73  
Augustine of Hippo, 35  
author's methodology: archival records,  
    11–13; chapter outlines, 13–15  
axe and gun combinations, 112–14, 113  
Bacon, Francis, 1  
Baker, Nicholas Scott, 133  
banditry, 4, 10, 56, 118, 128, 134  
*Baptism of Christ* (Patinir), 187

- Barbara (duchess of Ferrara), 103  
Barbara (saint of gunpowder technology), 187  
Barbosa, Duarte, 214  
Bardi and Cavalcanti firm, 110, 158  
Barret, Robert, 10–11  
Bartels, Victoria, 7, 133  
Basel, Switzerland, 119  
Basilica of Saint Denis, 21  
Battista, Maestro, 175  
Battle of Agnadello (1509), 54  
Battle of Anghiari (1440), 24, 25  
Battle of Bicocca (1522), 48  
Battle of Caravaggio (1448), 24  
Battle of Ceresole (1544), 21  
Battle of Cerignola (1503), 36, 48, 54  
Battle of Lepanto (1571), 97, 193–96  
Battle of Marciano (1554), 190, 192  
Battle of Marignano (1515), 21, 31  
Battle of Marj Dābiq (1516), 25  
Battle of Mohács (1526), 194  
Battle of Mühlberg (1547), 182, 183, 184, 186, 186, 226  
Battle of Pavia (1525), 19–22, 20, 21, 39, 43, 186, 189  
Battle of Pisa (1499), 190, 233  
Battle of Ravenna (1512), 31  
Battle of Siena (1554), 233  
Battle of Tondibi (1591), 211  
Battle of Wādī-al-Makhāzin (1578), 211  
Battle of Wenzelbach (1504), 182  
Bavarian National Museum, 12  
Bayley, C. C., 119  
Bembo, Pietro, 222  
Bendenuzo, Antonio, 138  
Beretta, Bartolomeo, 51  
*Bern Chronicles* (Tschachtlan), 180  
Bibboni, Francesco, 162  
Bicker, Roelof, 205  
Biringuccio, Vanoccio, 45, 54–55  
Birrel, Robert, 168  
Black figures in art, 177–79, 205–6  
Black Riders (Schwarzreiter), 48  
Bles, Herri Met de, 55  
Bologna, gun regulation in, 140, 144–45, 148  
Bonfanti, Antonio, 166  
*Book of Armaments*, 36–37  
*Book of Hours* (d'Angoulême), 34, 35, 187  
*Book of the Courtier, The* (Castiglione), 2  
*Book of True Chronicle of All the Wars of Italy*, 41  
Borgia, Cesare, 61, 72–74, 120  
Borgia family, 157  
Borni, Francesco, 78, 80  
Borromeo, Carlo, 162–67, 165, 166, 167, 170, 174, 187, 195, 204  
bounties, 152  
Brescia: background, 49–50; council membership, 81; crime, 127; demobilized militiamen, 122; gun control and social privilege, 141; map, 50. *See also* Brescia, arms manufacture in; Porcellaga, Giovanni Battista  
Brescia, arms manufacture in, 49–69; establishment of arms industry, 52–57; export licensing system, 60–66; export licensing systems, 60–65; Leonardo da Vinci's visit, 52; mining and mineral resources, 52; overview, 49–52, 68–69; religious reform, impact of, 65–68; supply and export management, 61–64; Valtrompia, privileging of, 57–60; Venice, negotiations with, 53–54  
Breu the Elder, Jörg, 182  
Bril, Paul, 184  
Bruciaferro, Giovanni Matteo, 83  
Bruegel the Elder, Pieter, 188  
Brueghel the Younger, Pieter, 188  
Brugh, Patrick, 6, 47–48, 96  
Brun, Samuel, 219  
Bruni, Leonardo, 119  
Burgkmair, Hans, 182, 207, 208, 209, 210  
Buti, Ludovico, 224, 225, 226  
Butler, Thomas, 200, 201  
Caccini, Giovanni, 150  
Calderwood, David, 168  
cannons, 23, 31–32  
Capitoline Museum, 175  
Cardano, Girolamo, 1  
Casale sul Po, 24  
Casal Sanvas, Giovanni Francesco Aloisi de, 160  
*cassa* (stock), 39  
*assoni* panels, 24, 104–5, 176  
Castel Durante, 166

- Castel San Pietro, 86  
Castiglione, Baldassarre, 2, 95  
Catholic Church: conflict with Protestant groups, 4, 49, 65–68, 163, 169, 182; heresy in, 66–67; iconography, 14, 196  
*cavaballe* (barrel cleaning device), 79–80  
Cavalli, Marino, 58  
Cecchi, Domenico, 119  
Cellini, Benvenuto, 29, 30, 42–43, 93–94, 98, 115, 133, 150  
Centurione, Marco, 104  
*Certaine Wayes for the Ordering of Souldiours . . .* (Withorne), 171  
Cesi, Giovanni Francesco, 161  
Charles d'Angoulême, 187  
Charles II (Archduke of Inner Austria), 107, 110–11  
Charles IX (French king), 170  
Charles of Styria (Archduke), 111  
Charles V (Holy Roman Emperor), 22, 27, 39, 42–43, 47, 102, 103, 108, 111, 155, 176, 182–84, 183, 189, 193, 226  
Charles VIII (French king), 31  
Chase, Kenneth, 6, 22  
Chicago Art Institute, 12  
China and gunpowder technology, 22  
Chino, Battista del, 59–60  
Chino, Jacomino del, 56  
Chino, Venturino da, 159–60  
Christianity: Christian elements in gun decoration, 107; masculinity, views of, 183–84; morals, 4; perceptions of weaponry, 36; represented in art, 179; symbolism, 20. *See also* Catholic Church; Protestantism  
*Christian Soldier, The* (Possevino), 188  
Cibo, Innocenzo (Cardinal), 102  
Cini Archive, 175  
Circassia, 25  
*City of God, The* (Augustine), 35  
civic militias, 118–24  
“civilizing process,” 2, 8, 11, 95, 237  
classical elements in gun decoration, 107  
Clement VII (pope), 43, 48  
Clovis (Frankish king), 177  
*Codex Atlanticus*, 32–34, 33, 100  
Coligny, Gaspard de, 170–71, 171  
Colombo, Bartolomeo, 220  
Colonna, Fabrizio, 46  
Columbus, Christopher, 220  
*Commentaries* (Pius II), 24  
competitions, shooting, 124–25  
concealed carry, 27, 88, 114–15, 138, 170  
*condottieri* (mercenary commanders), 12, 72  
Confalonieri, Gianluigi, 161  
Contarini, Alessandro, 85  
Contarini, Tommaso, 76  
*Conversion of St. Paul* (Bruegel), 188, 189  
Cook, Weston F., 211  
Correr, Jacopo, 56  
Correr, Paolo, 57, 146  
Corsi, Peter, 158  
Corso, Belantonio, 82  
Cortés, Hernán, 3, 220, 223, 226–27  
Costa, Lorenzo, 182  
Council of Ten (Venetian), 53–54, 56, 58, 84–85, 86, 124, 143, 149  
Council of Trent, 163  
Counter-Reformation, 193; and art, 204  
court culture: armoury inventories, 95–96, 98–100; “civilizing process,” 95; courtiers, life of, 2; elite gun ownership, 98–100; experimental and novelty weapons, 111–15; gift-giving, 102–4; guns in the domestic environment, 104–11; overview, 93–96, 115–16  
crime rates and self-defence, 10  
criminal records, 126–29  
Cromwell, Thomas, 157  
crossbows, 38, 100, 114, 175, 187–88, 214, 220  
crusades, 24  
Curtius, Marcus, 110  
  
da Empoli, Giovanni da, 217–18, 221  
Danner, Wolf, 112  
Daret, Jacques, 176, 177, 178  
da Vigo, Giovanni, 44  
Davis, Robert C., 9–10, 151  
Dawit II (Ethiopian king), 214–15, 224  
De Bry, Theodoor, 197, 198  
decoration of guns, 104–11  
*De furoribus gallicis* (Hotman), 171  
del Bene, Alessandro, 133  
della Rovere, Francesco Maria, 93, 115

- della Valle, Battista, 45  
Delle Luche, Jean-Dominique, 6  
*Del modo di fortificar le città* (Battista de' Zanchi), 45  
Del Torre, Giuseppe, 8  
de Marees, Pieter, 218  
demobilized militamen and armaments, 121–24, 238  
de Mula, Marc'Antonio, 58  
*De Pirotechnia* (Biringuccio), 45  
*Description of Africa* (Leo Africanus), 212  
Desmond Rebellions, 200  
Devisse, Jean, 177–78, 179  
*Diario* (Tommaso di Silvestro), 44  
Dirck Jacobsz, 180  
discipline: in armies, 9; social disciplining of citizenry, 10  
Donato, Girolamo (Il Farina), 163–64, 170  
Doria, Andrea, 176  
Doria family, 142–43  
Dossi, Battista, 61, 180–82  
drums on battlefields, 44  
Drury, Sir William, 198  
du Bellay, Joachim, 44  
Dubois, François, 196  
Dudley, Robert, 198, 199  
Dunblane Primary School shooting (1996), 5  
Dürer, Albrecht, 46  
Dutch Revolt (1566–1648), 172, 176, 196, 197–200  
  
earthworks in warfare, 32, 36, 77  
Eisenstein, Elizabeth L., 5  
Elizabeth I (English queen), 200  
empire-building. *See* Indigenous peoples, conquest of  
Enciso, Martín Fernández de, 220  
England, arms sales to, 67–68  
Erasmus of Rotterdam, 34  
Esigie (Oba of Benin Kingdom), 236  
Este, Alfonso d' (duke of Ferrara), 60–61, 180–82, 181  
Este, Anna d', 162  
Este, Ippolito d' (Cardinal), 101, 141  
Este, Niccolò d', 24  
*Events of the Italian Wars*, *The* (Agostini), 41  
  
Exeter Conspiracy, 158–59  
exile, Italian system of, 128  
  
Fangarezzo, Pierantonio, 128  
farmers, 30; protection of livestock, 133  
Farnese, Alessandro (Cardinal), 65, 198  
Farnese, Ottavio, 99, 102, 114  
Farnese, Pier Luigi, 75, 82, 159–62  
Fedrici, Cesare de', 217  
Ferdinand II (Archduke), 107, 114  
Ferdinand of Austria, 103  
Ferrero, Bonifacio, 143  
*Fire* (Arcimboldo), 184, 185  
firearm distribution: ancillary services, 84–88; brokers, role of, 79–81; contacts and networks, 72–77; contracting process, 78–79, 82–83; contractor state purchases, 9; export licences, 76, 77, 85; overview, 70–72, 88–90; small-scale artisans, 75–76; transactions, 77–81; transport and distribution, 81–84  
firearm inventories, 129–31  
firearm manufacture. *See* Brescia, arms manufacture in; manufacture of weapons  
firearms: cleaning and maintenance, 86–88; in decorative environment, 104–11; experimental and novelty weapons, 111–15; guns as gifts, 102–4; handguns, 22–25; history of, overview, 6–11, 23, 44–46; illegal possession of, 128–29; luxury and elite gun ownership, 98–100, 102; maintenance services, 86; negative views and fear, 34, 165, 195–96, 217–19, 221–22, 226–27; normalization of, 24, 173; opposition and resistance to adoption of, 96–97; perceptions of and “civilizing process,” 1–2; personal acquisition, reasons for, 129–33; positive views of, 147, 238; proliferation of during sixteenth century, 47–48, 117–34; safety concerns, 117; sections and mechanisms, 26–27; stocks, 39; warfare and access to, 131–32. *See also* gun control; matchlock firearms; names of individual weapon types; wheellock firearms

- firearms industry. *See* manufacture of weapons
- fiscal-military states. *See* state, concept of
- Fitzwilliam Museum, 29
- flasks: flask-makers, 84; powder-flasks, 27, 61, 85, 106, 114; priming-flasks, 61, 62, 85, 188
- Fleurange, Robert de, 41
- Florentine Codex*, 3, 211, 225–29, 228–32
- Florentine militia, 118–19
- Foix, Gaston de, 38–39
- Fontana, Carolo, 136–40
- Fornari, Nicola, 160
- fortifications, 46, 51, 232
- Fortunio, Agostino, 195
- Fourquevaux, Raimond de Beccarie de Pavie, baron de, 29–30
- Fourth Venetian-Ottoman War (1570–73), 57, 81, 138–39
- fowling, 30
- Foxe, John, 158
- Francesco de Calabria, 85
- Francesco I (Grand Duke), 233
- Franci, Riccardo, 105
- Francis I (French king), 19, 20–21, 34, 39, 208
- Franzini, Pietro, 54
- French Wars of Religion (1562–98), 196
- Fribourg, Switzerland, 120
- Frobisher, Sir Martin, 202, 203
- Fronsperger, Leonhard, 46, 96
- Galle, Philips, 1
- Gambara, Giovanni Battista da, 103
- Gambara, Niccolò, 150
- Gambara, Veronica, 97–98
- Gambara family, 76–77, 86
- Gandino, Lodovico, 77
- Gardone Val Trompia, Italy, 38, 49–51, 52; heretics during sixteenth century, 67
- Garimberto, Girolamo, 45, 48
- Geistliche Kreigsordnung* (Fronsperger), 46
- Gemlich, Ambrosius, 108, 109
- Gérard, Balthasar, 172–73
- German lands, 182; luxury firearms, 102. *See also* Holy Roman Empire
- Gheeraerts, Marcus the Younger, 200
- Ghent, 119
- gift-giving, 115; in court societies, 93; guns as gifts, 102–4; symbolism and power, 74–75
- gilding, 75, 76, 109–10, 114
- Gilino, Coradino, 35–36
- Giovanni Battista da Ravenna, 125
- Giovio, Paolo, 1, 48
- Justinian, Paulo, 85
- Goldring, Elizabeth, 198
- Gonzaga, Ercole, 104
- Gower, George, 198
- Great Pox (syphilis) epidemic, 35–36
- Great Princes of Africa, The*, 215–16
- Green, Toby, 210
- Grenier, Pasquier, 176
- Gritti, Niccolò, 63
- Grumo, Zuan Antonio, 143
- Guercino (painter), 166
- Guicciardini, Francesco, 31, 42, 44, 48
- Guise, François (duke of), 162, 169
- gun control: concealed carry, 138; con-temporary contexts, 5, 240–41; early movement for, 3, 4, 239; enforcement of, 139; general regulation, 136; licensing systems, 2, 152; privilege and social status, 140–45; regional differences, 140, 156; self-defence, 148–51; soldiers and regulation, 145–47
- gunpowder weaponry: dangers of, 40; limitations of, 41; production, 84–85; shortages of gunpowder, 223; technology, 22
- guns. *See* firearms
- Gustav Vasa (Swedish king), 112
- Habsburg-Este, Franz Ferdinand, 95
- Habsburgs, 102, 103
- Hakluyt, Richard, 213
- Hale, John, 6, 96, 129, 175, 187
- Hamilton, James, 167–68, 170
- Hamilton, Tom, 196
- handguns, 22–25; use in Italian Wars (1494–1559), 31–36. *See also* firearms
- Hasselaer, Kenau Simonsdochter, 132, 132–33
- heavy artillery, 31–32
- Heikamp, Detlaf, 225
- Heller, Rupert, 19–20

- hemp production, 85, 193  
Henry of Valois, 172  
Henry VIII (English king), 6, 67–68, 112, 157, 158  
heresy in Catholic Church, 66–67  
Hetoum (Armenian monk), 96  
historical depictions of firearms, 189–93  
Hogenberg, Frans, 196  
Hohti, Paula, 130  
Holbein the Elder, Hans, 187  
holsters, 84, 111  
Holy Roman Empire, 23–24  
homicide, 9, 126–27  
horseback riders: use of guns, 46; use of wheellocks, 101  
Hotman, François, 171  
*Hours of Charles d'Angoulême*, 34, 35  
Huguenot infantry, 169. *See also* wars of religion  
hunting, 30; fowling, 30; hunting scenes in gun design, 107–8; licences, 135–36; permissions, Bologna (1552), 2; as preparation for warfare, 125; and proliferation of guns, 125; wheellocks, 100  
Hurtado de Mendoza, Don Diego, 104  
*Il Capitano Generale* (Garimberto), 48  
imperial expansion. *See* Indigenous peoples, conquest of  
imperial imagery, 183–84  
Indigenous peoples, conquest of: Africa, southern and western, 217–19; Americas, 219–24; Asia, 213–17; Horn of Africa, 213–17; Mexico, 224–33; Morocco, 211–12  
infantry, use of firearms, 38–39. *See also* warfare  
Innes, Joanna, 10  
*Instructions for the Warres* (Fourquevaux), 29–30  
Ireland, English campaign in, 200  
iron-ore processing, 55, 57  
Irwin, R., 208–9  
Italian Renaissance. *See* court culture; visual arts  
Italian states: civic militias, 118–24; defence policy, 121; exile, system of, 128; outlaws in sixteenth century, 9–10; political instability, sixteenth-century, 4  
Italian Wars (1494–1559), 2–3, 4; arquebusiers, 36–40; artillery, heavy, 31–32; impact of, 151; later years of, 47–48; origin of, 31; and shifting views of masculinity, 133; sourcing of weaponry, 121–22; use of handguns, 31–36. *See also* names of individual battles  
Ivan the Terrible (Grand Prince of Moscow), 25  
Jacob, Frank, 8, 9, 210, 220  
Jacob Cornelisz van Oostsanen, 187  
Jacobita, Martín, 225  
Jacomino de Philippin (Giacomo di Filippino), 54  
James Stewart, earl of Moray, 167–69  
James V (Scottish king), 167  
Janissary forces, 25, 194  
Jardine, Lisa, 198  
Jáuregui, Juan de, 172  
Jewish suppliers, 85  
João de Castro, 216  
João III (Portuguese king), 215  
Johanna/Giovanna (grand-duchess of Tuscany), 103  
John Frederick I (elector of Saxony), 185  
Julius II (pope), 38, 86  
*jus ad bellum*, 34  
*jus in bello*, 45  
Kang, Hyeok Hweon, 209–10  
Ketel, Cornelis, 202, 203  
Konopiště Castle, Czechia, 12, 95, 107, 112  
*Kriegsbuch (War Book)* (Fronsperger), 96  
Kunsthistorisches Museum (Vienna), 12, 24, 107, 194  
Lando, Agostino, 161  
Landsknechts, 27, 36  
Lapulapu (Mactan chief, Philippines), 217  
LaTour, Bruno, 11  
Lee, Thomas, 200  
Leo Africanus (Al-Hasan ibn Muhammad al-Wazzan), 212, 214, 215  
Leonardo da Vinci, 1, 48; Atlantic Codex, 32–34, 33; gunpowder weapons,

- ambivalence concerning, 34; notebooks of, 32; visits to Valtrompia, 52; wheellocks, sketches of, 100  
Leo X (pope), 74  
*Libro continente appartenentie ad capitania* (della Valle), 45  
licensing systems, 2, 152  
longbows, 38, 159  
Lotto, Lorenzo, 175  
Louvier, Charles de, 171  
Low Countries, 179–80; martial culture, 119–20; post-Reformation art, 188  
Ludovico de Sexto de Frigoli, 161  
Luigi Marzoli Museum (Brescia), 6, 95, 114, 140  
Lutherans, 65–66. *See also* Protestantism  
Luzzago, Girolamo, 142  
Machiavelli, Niccolò, 46, 119, 120, 125, 172  
Magellan, Ferdinand, 214, 217  
Magnani, Battista, 122–23  
Magnano, Nicodemo, 60  
Mailles, Jacques de, 41, 43  
Malindi, Kenya, 213–14  
Mallett, Michael, 6, 129  
Mamluk Empire, 23, 24, 207, 208–9, 214  
Mannozi, Giovanni, 165  
manufacture of weapons: ancillary services, 84–88; print technology, analogy with, 51, 237; Valtrompia and tax privileges, 57–60. *See also* Brescia, arms manufacture in  
Marendelli, Zambonino de, 56  
Margaret of Parma (previously duchess of Florence), 102, 103, 155  
Marguerite de Hurltelon, 169  
Marguerite of Navarre, 34  
Markey, Lia, 225  
Martinengo, Camillo, 148  
Martinengo, Giulio, 148  
Martinengo, Scylla, 127  
Martinengo family, 142  
Martire, Pietro, 220, 221  
Mary (queen of Scots), 167, 169  
Mary I (queen of England), 190  
Mary of Hungary, 189  
*Mary Rose* (ship), 24, 61  
masculinity: Christian views of, 183–84; shifting views of, 133  
*Massacre of the Innocents* (Brueghel), 188  
Massacre of Vassy, 169–70  
match-cords, 184, 193  
matchlock firearms, 3, 79, 80, 100; contrasted with wheellocks, 174; mechanism, 24, 27  
material culture: material turn in history, 12; scholarship concerning, 7  
Maurice (prince of Orange), 198  
Maximilian (Holy Roman Emperor), 137, 182, 207  
Maximilian II (Holy Roman Emperor), 184  
Mazzoli, Bartolomeo, 62  
Medici, Alessandro de', 93–94, 102, 157, 160  
Medici, Catherine de', 94, 103, 155, 170  
Medici, Cosimo de', 30, 60, 98–99, 101, 104, 107–8, 112, 114, 130, 138, 143, 150  
Medici, Ferdinando de' (Cardinal), 3, 112, 225  
Medici, Ippolito de', 157  
Medici, Lorenzino de', 160, 162  
Medici, Lorenzo de', 98, 157  
Medici duchy, 135  
Medici murders, 157  
Melville, James, 168  
Merz, Martin, 46  
Metropolitan Museum of Art (New York), 12, 29, 103, 105, 112–14  
Mewtas, Peter, 158  
Mexía, Pedro, 43  
Mexico, 224–233  
Michele da Cuneo, 220  
military power: arquebusiers, 36–40; circulation of military knowledge, 45; contracting systems, 51, 116; contractor states, 9; and gun regulation, 145–47; military state, concept of, 8; private contracts and entrepreneurs, 71; technology and symbolic power, 183–84. *See also* warfare  
*Militia Company of District VIII . . .* (van der Helst), 205, 205  
militias: civic, 118–24; and gun regulation, 145–47; Italian, 238  
mining and mineral resources, 52  
Moctezuma (Aztec emperor), 226–27  
Moizio, Guglielmo, 195  
Mollat, Michel, 177–78, 179

- Mongols and gunpowder technology, 22  
Monluc, Blaise de, 19, 48  
Montaigne, Michel de, 97, 151, 222  
Moray, earl of, 167–69, 170  
Morin, Marco, 27  
morions (helmets), 84  
Moro, Giovanni, 120  
Morocco, 211–12  
Mor van Dashorst, Anthonis, 198  
moulds for shot, 61, 79, 80, 84  
Muhammad ash-Shaykh (king of Fez), 212  
murder, 126–27  
Musée de l'Armée (Paris), 182  
Museo Correr (Venice), 95  
Museo del Castelvecchio (Verona), 72  
Museo del Prado (Madrid), 12  
Museo di Capodimonte (Naples), 20  
Museo Stibbert (Florence), 95  
Museu Militar (Lisbon), 12, 32
- Nassino, Pandolfo, 40  
National Gallery of Ireland, 12, 24  
Nationalmuseum (Sweden), 19  
*Natural and General History of the Indies*  
(Oviedo), 202, 220, 221, 223–24, 233  
*Navigations and Voyages* (Ramusio), 14,  
202, 211, 213  
Nayer, Sheila, 6  
Negroboni family, 78  
Neuschel, Kristen B., 7  
*New Inventions of Modern Times* (van der  
Straet & Galle), 1  
Nigerian sculpture, 234, 236  
*Night Watch, The* (Rembrandt), 180, 205  
Nine Years War (1594–1603), 200  
Northern Ireland, 5
- Odescalchi collection (Bracciano), 95, 107  
Oldofredi family, 52  
*On Pyrotechnics* (Vanoccio), 54–55  
*On the Law of War* (de Vitoria), 45  
*On the New World* (Martire), 220, 221  
*Orlando Furioso* (Ariosto), 96  
Orsini, Camillo, 72–75, 74, 76, 77, 80, 81  
Orsini, Felice della Rovere, 86  
Orsini, Francesca Sforza, 85  
Orsini, Giovan, 75  
Orsini, Isabetta, 75
- Orsini, Latino, 75  
Orsini, Niccolò, 74  
Orsini, Ottavio, 75  
Orsini, Paolo, 72  
Orsini, Paolo Giordano, 32–34, 94,  
108, 114  
Orsini, Valerio, 75  
Orsini family, 72, 75  
Orvieto, bombardment of (1497), 43–44  
Otto di Pratica (Eight of Practice), 121  
Ottoman Empire, 4, 23, 24–25, 104, 190,  
193–94  
Ottorenghi, Mario, 143  
Oviedo y Valdés, Gonzalo Fernández, 202,  
220, 221–22, 223–34
- Pacheco Pereira, Duarte, 212  
pacifism, 67  
Paitone, Valerio, 40  
Pakington, Robert, 157–58  
Palazzo, Lelio, 142  
Palazzo Bellomo (Syracuse), 187  
Palazzo Caffarelli (Rome), 184  
Palazzo Vecchio (Florence), 12, 119, 190–92,  
194, 200, 233  
Pallavicino, Sforza, 146, 160–61  
Paolo Veronese, 194  
papacy: papal defences, 120; papal nuncio  
and firearm purchases, 65; papal poli-  
cies on guns, 173; papal service, 74;  
*sede vacante* (1559), 148  
Papal States: arms purchases, 80, 81–82;  
ban on wheellock guns, 171; and civic  
defence, 121; import of Brescian arms,  
61; *massari* (town captains), 83–84;  
Papal Armies, 75. *See also* Italian  
states
- Paradisi, Josepho di, 80  
Paré, Ambroise, 45, 169  
Parino, Bartolomeo, 63–64  
Parrott, David, 7  
Pastrana Tapestries, 25, 176, 211  
Patinir, Joachim, 187  
Paul III (pope), 75, 94, 138, 192  
Paumgartner, Hans, 110–11  
Pazzi Conspiracy (1478), 157  
Peck, Peter, 27, 108, 109, 112, 140, 182  
Pessina, Jacopo, 11, 121

- Philip II (Spanish king), 172, 190  
Philip III von Croÿ (duke of Aarschot),  
198  
*Philip II Offering the Infante Fernando to  
Victory* (Titian), 194  
Philip IV (Spanish king), 184  
Philippe de Croy, 106  
Picchi, Angelo, 186  
Picchi, Ludovico, 186  
Pigafetta, Antonio, 214, 217  
“pike-and-shot” formations, 30  
Pilgrimage of Grace, 157  
Pius II (pope), 23–24  
Pizzo, Zoane “ditto Janino” del, 78, 80  
Pizzoni family, 78  
Plantation of Ulster, 200  
Podavini, Davide, 195  
Poeta, Ercole, 64, 75  
Pole, Reginald, 158–59  
policing and firearm use, 42  
political violence, 128–29, 134. *See also*  
assassinations  
Pollaiuolo, Antonio del, 187  
Pollaiuolo, Piero del, 187  
Poltrot de Mérey, 169  
Porcellaga, Giovanni Battista, 70–71, 88,  
141–42, 145, 159; gift-giving and social  
network, 93; network of contacts,  
72–77; transactions, 77–81; transport  
and distribution, 81–84  
Porcellaga, Marcantonio, 90  
Porcellaga, Scipione, 72, 73, 75, 81, 90  
Porcellaga, Theseo, 90  
Possevino, Antonio, 188  
Possevino, Giovan Battista, 163, 164  
powder-flasks, 27, 61, 85, 106, 114  
*Practice of Surgery, The* (da Vigo), 44  
Prester John, 214–15  
priming-flasks, 61, 62, 85, 188  
print technology: analogy with handgun  
production, 51, 237; and military  
knowledge, circulation of, 45  
Priuli, Domenico, 57  
Procession of the Catholic League, Paris  
(1590), 196–97  
Protestantism, 65–68; conflict with  
Catholic Church, 4, 49, 65–68, 163,  
169, 182; and gender roles, 131;  
martyrology, 157–58; and religious  
imagery, 188  
Pulgar, Hernando del, 212  
*Quesiti et inventioni diverse* (Tartaglia),  
45  
ramrods, 27, 39, 79, 84  
Ramusio, Giovanni Battista, 14, 202, 211,  
213, 215, 223  
Raphon, Hans, 187  
Ratgeb, Joerg, 187  
recyclers of old guns, 84  
Refashioning the Renaissance project,  
130–31  
refeudalization, 10  
religious painting, 187–89  
religious reform: wars in France, 169–72;  
and wars post-Reformation, 49,  
65–68, 196–200  
reloading process, 38–40, 145  
Rembrandt, 180, 205  
Renaissance. *See* court culture; visual arts  
*Resurrection* (Ratgeb), 187  
Riccabello, Battista, 59  
Rich, Barnabe, 171–72  
rifling, 27–28  
*Right Exelett and Pleasaunt Dialogue . . . ,  
A* (Rich), 171–72  
Rijkmuseum, Amsterdam, 180  
Rimbombi, Paolo, 130  
Roberts, Michael, 8, 86  
Rocca di Bracciano, 61, 86  
Rocca di Carpi, 86  
Rocca di Palo, 86  
Rogers, Clifford, 8  
ropemakers, 84, 85, 88, 89  
Rose, Colin, 126  
Rota, Martin, 194  
*Roundel Depicting the Bohemian Battle*  
(Jörg Breu the Elder), 182  
Royal Armouries Museum (Leeds), 12,  
24, 112  
Sack of Brescia (1512), 22, 38–39, 43  
Sack of Rome (1527), 22, 133  
Safavids, 193  
Sahagún, Bernardino de, 211, 225, 228–32

- Sala del Cinquecento, Palazzo Vecchio, 190–92, 233
- Sala dello Scrutinio, Palazzo Ducale, 194
- Sala dell'Udienza, Palazzo Vecchio, 200
- Salviati, Francesco, 200
- Salvetis, Giulio de, 160, 161
- San Buenaventura, Pedro de, 225
- Sansovino, Francesco, 186–87
- Santacroce, Giorgio, 130
- Sanudo, Marin, 58, 120
- Satia, Priya, 210
- Scaevola, Caius Mucius, 200
- Scheme or Mirror of Princes* (Stradano), 198–200
- schioppetti*, 24; artisans in Ethiopia, 215; and civic militias, 119; in notebooks of Leonardo da Vinci, 32; and regulation, 138
- schioppettieri*: Duke of Urbino's service, 37, 42; Pope Julius II's service, 38
- schioppi*: German styles, 103; types and sizes, 26
- Schwoerer, Lois, 6, 131–32, 202
- scrap metal merchants, 84
- Scultori, Giovanni Battista, 185–86
- Segar, William, 198
- self-defence, 5, 10, 135, 148–51
- Sforza, Ascanio (Cardinal), 101
- Sforza, Bona, 94
- Sforza, Gian Galeazzo, 31
- Sforza, Ludovico, 31
- Sherer, Idan, 8
- shooting contests, 124–25
- shooting guilds, 119
- Siege of Asilah (1471), 25, 26, 176, 189
- Siege of Florence (1529–30), 131, 133
- Siege of Huesca (1324), 23
- Siege of Padua (1509), 120
- Siege of Rhodes (1522), 194
- Siege of Sentenil (1484), 212
- Siena: adoption of firearms (fifteenth century), 47; production of firearms (sixteenth century), 55, 59–60
- Sigismund of Luxembourg (Holy Roman Emperor), 23
- Silverman, David J., 210, 222
- Smith, Thomas, 170
- social status and gun control, 140–45
- Soncino, Annibale, 127
- Soncino, Valerio, 127
- Songhai Empire, 211
- Spagnolo, Giliberto, 120
- Springer, Carolyn, 105
- Stanley, William, 198
- state, concept of, 7–8; contractor states, 71; fiscal-military states, development and role, 8–10; limitations of, 10; purchases and power, 88–89; state formation, 4, 10; state's relationship with citizenry, 238
- St. Bartholomew's Day Massacre (1572), 170, 196
- Sternbersky Palace, 187
- Stibbert Museum, 105
- Stradano, Giovanni (Jan van der Straet), 1, 117, 118, 125, 126, 184, 198–200
- Strunck, Christina, 194
- Süleyman the Magnificent (Emperor), 104, 194
- Switzerland, 119–20
- syphilis (Great Pox) epidemic, 35–36
- Taieti, Zuanagnolo de', 143
- Tartaglia, Niccolò, 45, 86–87
- Tate Britain (London), 12
- tax systems, 89–90; *datia lancearum* (Brescia), 58; Valtrompia, 57–60
- technology, new, adoption of, 5–6, 240
- Tedesco, Giovanni, 120
- Tedesco, Giulio, 100
- Tempesta, Antonio, 184
- Terraciano, Kevin, 227–28
- Third Battle of Rukn (1596), 212
- Titian, 22, 61, 180–81, 181, 182, 194, 196
- Trusty, B. Ann, 6
- Tommaso di Silvestro, 44
- Tournai tapestry, 177, 178
- Townsend, Camilla, 219
- Toxophilus* (Ascham), 46
- trace italienne* (fortification style), 32
- trajectories, calculation of, 86–87
- travel, self-defence during, 150
- Treaty of Cateau-Cambrésis (1559), 138
- Tresham, Sir Thomas, 198
- Triumph of Emperor Maximilian I*, 36, 37

- Triumph of Federico II Gonzaga*  
(Costa), 182
- Tryner, Joe, 126, 131
- Tschachtlan, Bendicht, 180
- Ubertini, Antonio, 80
- Uffizi Armoury frescoes, 224–25, 231–32
- Uffizi Gallery (Florence), 184, 211
- Ulloa, Francisco de, 223
- Umiliati (religious order), 163–64
- United Kingdom, gun restrictions, 5
- University of Padua, 158
- urban militias, 119–20
- Uzun Hasan (sultan), 193
- Valeriano, Antonio, 225
- Valiano (Tuscan fortress), 24
- Valtrompia: *comuni* (councils), 53; early firearm production, 56–57; gun-making and tax privileges, 57–60; mining and mineral resources, 52
- van der Helst, Bartholomeus, 205, 205
- van der Meulen, Steven, 200, 201
- van der Straet, Jan, *see* Stradano, Giovanni
- Van Dyck, Anthony, 184
- Van Orley, Bernard, 20
- Van Orley tapestries (*The Battle of Pavia*), 20, 20, 21, 27, 39–40
- Varthema, Lodovico de, 214
- Vasari, Giorgio, 190, 192, 196, 204
- Vegerano, Alonso, 225
- Velázquez, Diego, 184, 204
- Venetian Arsenal, 42, 47, 51
- Venetian-Ottoman War (1537–40), 56
- Venetian-Ottoman War, Fourth (1570–73), 57, 81, 138–39
- Venice: arms sales to England, 67–68; banditry, 56; defence of territory, 62–63; export licensing system, 60–66; gun regulation, 138, 141–42; handguns in fifteenth century warfare, 25; militias, 120; negotiations with arms producers, 53–54; Ottoman territory, border with, 36; shooting contests, 124–25; taxation systems, 8; tax systems, 57; Venetian rule, 56
- Venier, Francesco, 76
- Venier, Sebastiano, 195
- Vermeyen, Jan Cornelisz, 122, 123, 189–90, 191, 204
- Vicentino, Andrea, 194
- Vico, Enea, 186
- Victors of the Battle of Lepanto, The*, 194
- Villa del Principe (Genoa), 12, 176
- Villa D'Este (Tivoli), 112
- violence, political, 128–29. *See also* assassinations; warfare
- Visoni-Alonzo, Gilmar, 8, 9, 210, 220
- visual arts: Alexander the Great, depictions of, 176–79, 177, 178
- Vitoria, Francisco de, 45
- Vittorino, Marco Antonio, 74–75
- Vonn Geschütz und Feuerwerck* (Fronzperger), 46
- Wallace Collection, 186
- warfare: and access to firearms, 131–32; accuracy of weapons and need for armour, 29–30; drums on battlefield, 44; earthworks, 77; firearms, ambivalence toward, 19–21; firearms, early use of (fifteenth century), 25; firearms, terminology for and capability of, 26–30; fog and confusion, 43; hunting as preparation for, 125; infantry, use of firearms, 38–39; Italian Wars (1494–1559), 2–3; “just war,” 45; military knowledge, distribution of, 45–46; non-combatant casualties, 4; “pike-and-shot” formations, 30; portability vs. recoil of firearms, 38–39; reloading and discipline during battle, 38–40; tactical innovations and state authority, 8. *See also* military power
- War of the League of Cambrai (1508–16), 8
- War of the League of Cognac (1526–30), 62
- wars of religion, 162, 169–72
- wealth: demonstration of, 110, 115; redistribution, and military contracting, 116
- weather and limitations of weaponry: fog, 43; rain, 41
- Wells, Morgan, 159

- wheellock firearms, 100–102, 101; *archibusetti*, 136–37; contrasted with matchlocks, 174; as gifts in court culture, 102–3; Papal States ban, 171; pistol and axe combinations, 112–14, 113; pistols, 109, 110; and regulation, 136–38; sixteenth-century Italy, 3; ubiquity of, 168; wheellock mechanism, 1, 27, 29
- William the Silent (prince of Orange), 155, 172–73, 197, 198
- Withorne, Peter, 171
- women and gun ownership, 131–33
- wounds, treatment of, 44–45
- Wunderkammer* (cabinet of curiosities), 186
- Yáñez Pinzón, Vicente, 220
- Zanchi, Giovan Battista de', 45
- Zen, Catterino, 65–66, 67, 131, 142, 146, 151, 152
- Ibn Zunbul, 208
- Zurita y Castro, Jerónimo, 212