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Douglas Comer

The Archaeology of Interdependence

European Involvement in the Development of a Sovereign United States

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Chapter 1
The American Wars of Independence as Elements of Global Cultural and Political Change

Douglas Comer

The term "interdependence" in the title of this book is taken from the fields of political science and international relations (for example, Keohane and Nye 1987; Axelrod and Keohane 1985). It was minted during discussions precipitated by political events over the past several decades that challenged the primacy of a certain school of thought in political science called "realism." Perhaps the main tenant of realism is that the state is the prime mover, the prime actor on the global stage. Joseph S. Nye, a Harvard professor of international relations who served in the Carter and Clinton administrations, puts it this way (2011, pp. 18, 19):

> For centuries, the dominant classical approach to international affairs has been called "realism," and its lineage stretches back to such great thinkers as Thucydides and Niccolo Machiavelli. Realism assumes that in the anarchic conditions of world politics, where there is no higher international government authority above states, they must rely on their own devices to preserve their independence, and that when push comes to shove, the ultimate ratio is the use of force. Realism portrays the world in terms of sovereign states aiming to preserve their security, with military forces as their ultimate instrument.

The preeminence of this school of thought was bolstered by the Cold War, a long period when two states dominated the world stage, vying for hegemony, as the realist school predicts all states will ultimately attempt to do. Yet even in that era, some political scientists observed that states sometimes cooperated in ways that fit uncomfortably with the realist model because they entered into agreements that voluntarily restricted their options. Examples range from the General Agreement on Trades and Tariffs (GATT) to the European Union. This suggested that states were simply acknowledging the condition of interdependence.

The end of the Cold War accelerated criticism of the realist school. After the Cold War, political states were no longer moving between two hegemons, resisting

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the power of one and allying themselves with the other. Also, at the end of the Cold War the United States had achieved the status of being the only global hegemon in terms of military power, but economically it experienced periods of great difficulty, one of which continues today. Something other than the power of the state to wage war was clearly at work here in determining the well-being of the country. On September 11, 2001, non-state actors committed acts of terrorism in the United States that resulted in more deaths than the attack on Pearl Harbor that precipitated the Second World War. The terrorist threat was unexpected because realism had held sway in universities for decades, influencing students who majored in political science and international relations.

Following 9/11, the world reacted convulsively, and political scientists rushed to defend, amend, or abandon realism. With terrorism, the term interdependence was exchanged for that of "globalization." The international policy of the United States became more concerned with "fragile states," where non-state actors, especially terrorists, were thought to thrive, than with stable, powerful states. There was sudden consensus in Washington, D.C., a coordinated response that clearly signaled this policy shift. Secretary of Defense Robert Gates said, "Over the next 20 years, the most persistent and potentially dangerous threats will come less from emerging ambitious states, than from failing ones that cannot meet the basic needs—much less the basic aspirations—of their people." Almost identical statements were made by the Secretary of State and the President of the United States (Patrick 2011, p. 4).

Ignored in this discussion has been the cultural basis for human organization. The website of the American Anthropological Association has this to say (http://www.aaanet.org/press/an/infocus/engagedanth/arc_engaged_anth.htm: 2012):

> Usually, politicians and journalists rely on international relations specialists in guiding their work; anthropologists are often outside players in this schema, particularly as the field of international relations is, for the most part, dominated by economists and political scientists.

Nonetheless, non-state human organizations preceded the development of the political state as it is assumed to exist today in all parts of the world, which is one based in a founding constitution and a framework of law built on that base. Other, non-state human organizations have always and will continue to coexist with the political state, will greatly influence the political agenda and success or failure of each state, and will as surely drive the course of international relations as do political states.

Culture and History

This book deals with a case in point: the American wars of independence. These have long been of great interest to historians. Historians have usually approached them in a way that is consistent with what has been the reigning view in political science, assuming that military prowess was the determining factor in these conflicts. While the outcome of key battles was surely a necessary factor in securing

independence, what is inconsistent with the realist view of history is that the American military at the beginning of the conflict existed in only the most rudimentary form. As time went on, it improved, due, in no small part, to the effort of European military advisors. Few, however, would contest that independence would not have been achieved without the presence of substantial French military assistance, both on land and on sea, in America. Military power was in the hands of other countries, and factions within those countries influenced their governments to provide not just military but also economic support to American revolutionaries. In the imagination of a segment of the American public that exercises considerable political influence, independence was won because American militiamen used unconventional tactics against the overly regimented British troops. The Friends of the National Rifle Association (NRA), for example, has as its logo the image of a Minuteman. The reality is more complex. Independence was gained with the assistance of other European countries that were opposed to Britain, provided as an element in overarching economic, political, and ideological transactions. Americans deftly influenced these in both unofficial and official state capacities, but others had very little to do with American intentions or interests.

History is written with the use of documents that were often prepared by agents of the state, in particular military and political leaders who recorded events from the perspective of the state. Such histories are recycled in academic circles in ways that are influenced by the assumptions of political realism, as discussed above. In what follows, we will examine some representative events in the American wars of Independence through the lens of archaeology, which is a subdiscipline of anthropology.

At the heart of the approach that we espouse here is the concept of culture. Culture is often confused with society. In fact, the former is an outcome of the latter, although the changes in the organization of society can affect culture. In general, however, it is instructive to understand that a person does not so much have a culture as a culture has a person, and that culture drives each person into the imagined community of the state as well as into non-state human organizations.

Kenneth Waltz, a pre-eminent neorealist, has explained the primacy of the state by use of a simple analogy: if a state is invaded and calls 911, there is no guarantee that anyone will answer. He therefore characterizes the international system as one of anarchy. For this reason, states are in a constant struggle to establish hegemony within their region or, if possible, in the world. All other human organizations are assumed to be under the domination of the state. Clearly, however, some escape complete or effective control by the state. Among these are ethnic and religious groups that persist despite state efforts to disband them, or that exist and are nurtured by states as military and economic proxies during temporary alliances. The Taliban provides a recent case study, others are given by Peterson in Chapter 4 of this book. Other non-state actors are corporations that exert tremendous economic influence and at times have operated almost as states do. The Dutch East India Company and the British East India Company are instances of this. They grew to threatened the state monopoly on the use of force by raising their own armies and navies. More recently, corporations operate internationally, in ways that cannot be effectively controlled by any single state. There are also

trans-national networks of kinship groups. The royalty of Europe were and are closely related by blood, for example.

These non-state human organizations sometimes strive for regional and sometime global hegemony as do states, they form temporary alliances as interdependencies wax and wane, they compete using force, but more often by enticing others to use force for their benefit and by developing and exerting economic and social influence. As with states, alliances do not persist in the face of the reality that there is no overarching, global authority that can resolve disputes in an orderly and peaceful way.

Material Culture and Prospects for Developing a Useable Past

While definitions of culture vary, here we will use two definitions articulated by the anthropologist Clifford Geertz. The first is that culture is "an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic form by means of which men communicate, perpetuate, and develop their knowledge about and their attitudes toward life" (Geertz 1973a, p. 89). Because of that, archaeologists are able to understand something of past human cultures through the study of material remains associated with them. Geertz later provided an even more concise, and often quoted, definition: "… man is an animal suspended in webs of significance that he himself has spun, I take culture to be those webs, and the analysis of it not an experimental science in search of law but an interpretative in search of meaning" (Geertz 1973b, p. 5).

The webs of significance that humans spin, culture itself, changes, and so our interpretation of the material remains, the material evidence of the past, also changes. Knowing this, our first obligation as archaeological heritage managers must be the preservation of potentially informative material remains. The material with the greatest potential to inform us is that which can still be found in undisturbed context: material that has been preserved, but as importantly, material for which the context in which it was initially deposited has been preserved. Uncontaminated material in context will be understood by future generations in ways that we cannot know, but we can hope that this understanding will be superior to our own. Preservation of archaeological material is done largely through the interpretation that we provide in the present. In a world where financial support is always limited, materials that are seen as very important to the stories told about archaeological resources will inevitably be given priority in terms of preservation over those that are seen as less important. Our challenge is to link archaeological remains to engaging, non-manipulative, and enlightening stories.

The chapters in this publication deal for the most part with archaeology on the scale of the landscape. War is waged on that scale. We will look at battlefields, military encampments, centers of trade that provided inducements and the materiel for conflicts, and fortifications. While artifacts and sites have been the traditional focal points of archaeological research, in recent decades more and more archaeologists

have come to realize that we can understand the behavior of past human populations better if we see artifacts and sites in the broad environmental context of the landscape in which they lived and which they shaped. This presents new preservation challenges; against these challenges presented by the preservation of artifacts and sites seem almost to pale. Artifacts can be put in a museum intended to provide a stable environment. Landscapes are changed by industrial and agricultural development, and the associated construction of roads, houses, and buildings that offer consumer and community needs. At the scale of the landscape, the concerns of environmentalists and archaeological heritage managers tend to converge.

Whose War Is It, Anyway?

In another convergence, archaeological remains associated with American wars of independence are examined in the papers to follow in ways consistent with recent critiques of the standard treatments of history by historians themselves. An archaeological approach leads one ultimately to regard the establishment of independence and sovereignty by what had been the New World colonies of European states as one that was a part of a much larger process of cultural change. Many of the historians mentioned in this publication seem to agree with that.

Conflicts that occurred as New World colonies were establishing independence were not only among countries, but also among classes, emerging industries, and corporations. The last of these is a social entity that had only recently emerged at the time of the American War of Independence, but has assumed a pivotal role in the geopolitical world of today. Further, all of these changes were enmeshed in the rise of an ideology that linked the legitimacy of rule not to the divine right of royalty, but to organizations that would ensure the ability of a greater percentage of populations to protection by law from the caprice of monarchs. In the year 1776, this ideology was given voice in works as varied as the American Declaration of Independence and the first volume of *The Decline and Fall of the Roman Empire*. Both of these rest upon the philosophical underpinnings of the ideological movements of the time. In 1789, we see this ideology again in a document fundamental to the French Revolution, the *Declaration of the Rights of Man and of the Citizen*, put forth by the Marquis de Lafayette, who, of course, had played an important role in the Revolutionary War in America. It was adopted by the National Constituent Assembly at a time when Thomas Jefferson, who wrote the first draft of the Declaration of Independence, was in France. As a diplomat, he was in frequent communication with the Assembly. All of this is consistent with an ongoing discussion among intellectuals on both sides of the Atlantic about nationhood and the legitimacy and function of the state. Ideas fundamental to this discussion quite clearly evolved in both places. In 1787, George Mason and other delegates to the Constitutional Convention refused to sign the Constitution in part because it did not contain a Bill of Rights. By 1789, just two years later, the proposal for a Bill of Rights put forward by Jefferson's good friend James Madison was adopted by the United States House of Representatives.

Changes in ideas about the appropriate role of the state among those in positions of leadership were, we argue here, essentially tied to broad cultural change; that is, changes in technology (including military technologies), economic structures, and social organization that both reflected and reformed ideology from the late eighteenth through the late nineteenth centuries. We live in a time when the idea of sovereign nation states seems so natural and normal that until recently there was little widespread interest in exactly what they are or how they came to be. Sovereign nation states are seen today as based in legitimate territorial claims (although legitimacy is frequently disputed). Within the area that they occupy, nation states exercise an ultimate authority, an authority based on the rule of law. Outside national boundaries the state is recognized as being the authority with which other states must negotiate all manner of interactions, from trade to war to travel. We assume that a state can rightfully limit access by outsiders and even close its borders. In global geo-politics, then, nation states were seen by those living in the developed world as the only actors with which one must be concerned. And this is because the industrial development that has occurred over the past two centuries is inextricably linked to the perceived legitimacy of nation states.

Written histories, as noted, have largely overlooked cultural transactions among non-state actors that have affected the course of history. Such transactions include those in the period during which the wars of independence in the New World occurred. As Phillip Bobbitt points out in *The Shield of Achilles* (2002), after the dissolution of states in post-classical times, they reemerged by means of a long process—one that we see here as cultural change—that begins in the medieval world and continues today. This starts with the establishment of princely states in Italy in approximately 1490, which evolved into the larger kingly states that date to the Treaty of Westphalia in 1648. The apotheosis of the kingly state was France under Louis XIV. During his reign there was widespread support for the divine rights of kings, an effective centralized taxation and administrative infrastructure, a dynasty of unquestioned legitimacy, and a ruler of regal temperament. From that time until 1776, what Bobbitt terms Territorial States developed, which began to mitigate notions of divine right and from these, beginning in 1776, State-Nations evolved into Nation-States.

Bobbitt sees these transformations as closely related to the changing strategies and tactics of warfare, although not driven by them in all cases. For example, he says that princely states developed in response to the use of light artillery, which could be put in place outside princely residences and used to reduce masonry defenses to rubble in a matter of days. Until then, political power was relatively horizontal, spread among nobility, the clergy, the burghers, and the peasants. There was some overlap among these groups. The clergy had authority over marriages and wills, the nobility could call upon vassals in time of conflict, but had no direct authority over peasants owned by the vassals. When Charles VIII of France brought 40 artillery pieces drawn by horses into the Italian peninsula, the order rapidly changed. Whereas states before had occasionally coalesced under the guidance of an unusually talented and charismatic prince, now the state itself was seen to be essential. It provided the means by which to organize an effective defense, which depended upon better organization and increased taxation. But Bobbitt also points to other societal changes that had preceded the threat

posed by the use of mobile artillery, which, from a more broadly cultural standpoint, we as anthropologists might see as having been a prerequisite to an effective response. With the fall of Constantinople in 1453, the most talented in the city, including scholars who had kept alive notions of knowledge based in the classical world, immigrated o the university towns of Italy. They carried with them notions of Greek city-states and Roman city-republics that found an accepting audience in the universities, replacing religious explanations of the world that held sway in Italy at the time of their arrival. These concepts and the cultural assumptions that underlay them were there to be implemented when needed (Bobbitt 2002, p. 79). Although Bobbitt does not say exactly this, among those notions one might expect to find at least a remnant of the *polis*, translated as city-state in English but conveying more: the notion that the state consisted of a citizenry who gave form to it by constructing an urban landscape. The title of his book refers to the need for a broad cultural approach when developing an understanding of the past. The shield of Achilles was embellished with imagery arranged in nine circles, the first having representations of the earth and celestial bodies, and others depicting many other aspects of cultural life, from a field being plowed to a dancing floor where young men and women perform.

War Reflecting and Reforming Culture

War is no less a cultural phenomenon than is architecture or music—all of these reflect and reform culture as a whole. Knowing this we can better understand the jockeying for position among the nations of the time, which made allies of nations that had been enemies only scant years earlier, and then enemies of these same allies a few years later. This is seen throughout the late eighteenth century and most of the nineteenth. In what became the United States; colonials successfully fought against Britain through the assistance of the French. The French were the first foreign power to lend support to the American rebels thanks to the reluctant consent of His Most Christian Majesty, Louis XVI. In the decisive Battle of Yorktown in 1781, more French than American forces fought on land, and the French Navy under de Grasse defeated the vaunted British Navy at sea at a time when the American Navy was in its infancy. Ironically, the American Navy came into being a few years later to defend the American merchant fleet, not from the depredations of the British, but from the French. The French by then had grown tired of waiting for the America that they had been instrumental in creating to come to their assistance in the continuing struggle against the British for what they saw as global dominance. And then a few years later, during the War of 1812, the French were once again our allies. While there was less enthusiasm, the contribution of the French was still important. They ceased overt hostile action against American interests and contributed weaponry. The cannon used at Fort McHenry during the pivotal Battle of Baltimore in 1814, which gave rise to the United States national anthem, had been salvaged by the French from one of their sunken naval vessels and given to the Americans to aid in the defense against the British.

Behind these shifting national allegiances were economic interests, and the economy was increasingly dominated by corporations. As the economist Niall Ferguson says in his book, *The Ascent of Money* (2008, p. 128), corporations came into being in the seventeenth century, a creation of the state. Wars in Europe were almost constant; a country improved its position by waging them and of course was obliged to defend against attacks by other countries. Wars were expensive, and to finance them, taxes had to be levied. Increasing taxes was problematic. There came a point when subjects began to protest vigorously, and after that point another when the state itself was threatened by protest and resistance. The rulers of the Netherlands found a way to raise revenue without increasing taxes. They formed a corporation of traders, the Dutch East India Company. The state gave this corporation a virtual monopoly on trade, and the corporation and the state prospered. Depending upon exactly how one defines a corporation, this might or might not have been the first, but its great success soon inspired such corporations in many European countries. The corporation thereafter played a major role in the colonial era. A closer look at history indicates that the actions of colonial era political leaders, as well as the military leaders who took direction from them, were driven by these economic interests.

It was, after all, East India Company (British, not Dutch) ships carrying tea to Boston, New York, and Philadelphia that were turned back in 1773 by the colonists. In Boston, this became known as the Boston Tea Party. The British East India Company had been granted a monopoly on trade with the East in 1600, and in 1742 was granted license for exclusive trade with India until 1783, under an agreement that the Company loan the government of Britain one million pounds. Clearly by now the Company had become an enormous political force.

We can see further evidence of this force in the Treaty of Ghent. This ended the War of 1812 under terms that were surprisingly favorable to the newly emerged United States. The War of 1812 was characterized by one American military debacle after another. The capital of the United States was invaded by the British in 1814. The United States could muster only ineffectual opposition, largely provided by the poorly trained, armed, and led militias of the country. The key structures in the capital of the young government were burned to the ground. The American fleet of hastily constructed small vessels that formed a large part of the nascent American navy was scuttled when threatened by the overwhelming force of the British navy, which was at that moment quite probably the most powerful in the world. And yet only months later the British agreed to the peace talks that resulted in a treaty which left the United States with the same boundaries that it had before the war, and which more importantly positioned it for the great expansion westward that it pursued, very successfully, for the balance of the century. The puzzle has been why the British did not seize upon this moment to reestablish rule, or at least obtain greater control over, its erstwhile colony. Instead, as the historian Phillip Bobbitt says (2002, p. 165):

> Of all the powers of the coalition, Britain took away the least in territorial gains. It annexed nothing on the continent. It returned scores of overseas areas seized and occupied during the years of warfare. At Ghent, moreover, Castlereagh had concluded a treaty with the United States that was so generous in its terms in light of the British capture of Washington that

> American students are routinely taught that the United States actually won the war. This far-sighted statesmen had, perhaps more than any other person at the Congress, created a permanent system of consultation, and genuine "concert of Europe."

The Concert of Europe that Bobbitt mentions was the brainchild of Castlereagh, who was motivated to form this by the evolution of warfare in Europe from that fought by relatively small armies of professional soldiers under the leadership of the aristocracy, which might employ mercenaries, to wars fought by great masses of the common people. The pattern for this had been set by Napoleon. As Bobbitt observes:

> Prior to the 1790s a military treaty might call for the provision of a force of 18,000 or 24,000….The French *levée en masse*, a nationwide mobilization, transformed this scale. In 1808, on the eve of the campaign that ended at Wagram, Napoleon commanded some 300,000 troops in Spain, another 100,000 in France, some 200,000 in the Rhineland, and another 60,000 in Italy. One expert has calculated that between 1800 and 1815, the number of Frenchmen called up reached two million, of whom an estimated 400,000 died either in service or as a result of service in war.

This radical change in the way that war was fought was costly. To the aggressor, the investment was enormous and failure therefore catastrophic. Nations subjected to such massive onslaughts were devastated unless equally large forces could be called up. Huge numbers of soldiers would have to be trained, armed, and fed at great expense. So great was the expense that a nation could be toppled from within by a populace grown weary of taxation and hardship. Bobbitt points to such insurrections in Belgium (1798), Naples (1799 and 1806), Spain (1808), and the Netherlands (1811–1812). The Concert of Europe obligated a nation subscribing to it to join with any nation attacked against the attacker.

Given the greatly escalated cost of war, revenue from trade became ever more important, and traders more politically powerful. At the same time, the benefits of peaceful trade became increasingly appealing. Various historians have pointed out that factory owners, maritime traders, and insurance companies put enormous pressure on the British government to end the War of 1812 as quickly as possible. While the Americans had only a rudimentary navy, hundreds of privateers sailed from American ports such as Baltimore, Boston, and New York. Archival research by Geoffrey Footner as reported by John Trautwein (2011, p. 1) has revealed that on December 1, 1814, House of Lords member Joseph Marryat, who in the past defended the virtual monopoly on maritime underwriting enjoyed by Lloyd's, presented an alarming report to that parliamentary body: By November of that year, 1,175 British merchant vessels had been lost, and of these only 373 recovered. From May through October of that year, 500 ships per month had been taken. Many of the losses to the swift American privateer vessels were in British waters. (See also http://www.historyofparliamentonline.org/volume/1790-1820/member/marryat-joseph-1757-1824 and Parliamentary Debates, *Vol. 29*). Distraught ship owners, insurers, and merchants in Glasgow wrote to the King:

> Unanimously resolved, That the number of American privateers with which our channels have been infested, the audacity with which they have approached our coasts, and success with which their enterprise has been attended, have proved injurious to our commerce,

humbling to our pride and discreditable to the directors of the naval power of the British nation, whose flag till of late waved over every sea and triumphed over every rival (Trautwein, 2011, p. 1) 1 and *Parliamentary Debates*, Vols. 28 & 29.

Military Power, Intelligence, Diplomacy

Economic interests have influenced national interests for centuries, sometimes pulling states in the direction of war, sometimes repelling them from war, depending upon economic benefit to actors, often, but not always, within the state itself that are able to exercise political power. Industries that produce weapons or that supply armies might encourage the state to take one course of action, corporations that profit from international trade another. And while wars fill history books, other means of achieving the strategic objectives of a state are no less important, although these means are not nearly as well represented in the historical record. They are more subtle, and often by nature at least somewhat covert. Edward Luttwak argues in *The Grand Strategy of the Byzantine Empire* (2009) and elsewhere that states accomplish strategic objectives in three ways. In addition to military action, these are by gathering intelligence and by engaging in diplomacy. Luttwak points out that while the Roman empire has received much greater attention from historians, the Byzantine Empire, which grew out of it, lasted much longer. Surrounded by hostile countries, many of which had powerful militaries, that empire invested great effort in understanding the economic, social, and ideological interests of their neighbors. This informed diplomatic efforts, which might include trade in what was most valued by potential enemies, the payment of tribute, bolstering the position of parties that could hold in check those countries that presented the most immediate threat (which might be factions within those threatening countries or other countries), or working with potential adversaries to advance common goals. The overall objective was to avoid military conflict. Wars are inevitably expensive and require raising revenue in ways that are often objectionable to those who must provide it. Wars are also unpredictable, as losses can occur even when victory appears to be certain. Thus, a state less sure that military capability alone will be sufficient to accomplish the strategic objectives, as was the case with the Byzantine Empire, will be more likely to employ the use of intelligence and diplomacy.

The American wars of independence were won during a time when American military power was very weak. Formal national intelligence organizations were not yet in existence. The particular cultural web that we have spun since the Second World War includes the assumption that intelligence can be gathered in no other way than by a specialized organ of the state, making it difficult indeed to understand the true nature of intelligence. Popular culture, which supplies numerous romantic portrayals of roguish secret agents, has played a role in this.

Instead of using surveillance satellites, listening devices, and formal covert operatives, the people most involved with charting the course of the emerging American state collected information firsthand, by incessant correspondence with those in

countries that were alternately enemy and ally, and in many cases by living for extended periods in those countries. Among the founders of the American state who spent considerable time in residence abroad were Thomas Jefferson, Benjamin Franklin, and John Adams. While George Washington was in comparison something of a homebody, he corresponded frequently with all of these while they lived in Europe. They provided him with information about political and economic issues that were current in Europe, as well as keeping him informed about technological and scientific innovations there. The exchange of letters constituted ongoing conversations with all sides asking questions and providing answers.

Personal relationships developed by means of the ongoing exchange of news and ideas. These might have begun as face-to-face encounters, but were maintained through written correspondence that seems extraordinarily voluminous and erudite by the standards of today. Written correspondence could be shared with others having like interests, which formed cordial groups among which information could be shared that could benefit a whole range of collective or individual projects, which might be technological, mercantile, or political in nature. As noted above, it seems clear that the exchange of ideas between Thomas Jefferson and the Marquis de Lafayette, influenced the founding constitutional documents in both the United States and France. Letters that circulated among founding fathers and the intellectual, mercantile, and political leaders of Europe demonstrate the same sort of sharing of ideas that ranged from the technological to the ideological, diplomacy at its best because the process identified and advanced common interests and goals.

The Landscapes

The role played by burgeoning New World trade in the economic change that was a precipitant of the wars of independence, and which funded them, can be seen in the description of St. Eustatius that Gilmore presents to us in Chap. 2. The landscape approach that he takes is evident in that the St. Eustatius Center for Archaeological Research (SECAR) has virtually completed a GIS for the island that includes historic sites found and recorded over 40 years. Gilmore points out that the enormous trade profits made on St. Eustatius provided a great deal of the capital required for industrialization in Europe and the United States. Ron Chernow, in his book, *Alexander Hamilton*, has this to say about the wealth of just the British islands in the Caribbean (2004, p. 7):

> … the small, scattered islands generated more wealth for Britain than all of her North America colonies combined. The West Indians vastly outweigh us of the northern colonies, Benjamin Franklin grumbled in the 1760s. After the French and Indian War, the British vacillated about whether to swap all of Canada for the Island of Guadeloupe; in the event the French toasted their own diplomatic cunning in retaining the sugar island.

Caribbean trade shaped the personality of Hamilton, who was born on the island of Nevis, and after moving to the "northern colonies" established many business interests there. In this, he had company among the founding fathers. Gilmore, in Chap. 2, notes that of the approximately 150 people to whom the term founding

fathers has been applied, more than 30 had some relationship with St. Eustatius alone. The island also linked the United States to European allies in a way other than financial, says Gilmore: Postmaster General Benjamin Franklin encouraged all official correspondence to be sent through St. Eustatius, which was officially neutral, but which acted as a conduit for financial support to the young United States. This might have been among the motives for the British sacking of the island in 1781, which realized 100 million pounds. As Gilmore says in Chap. 2:

> Trevor Burnard (2001) has put the value of the entirety of Jamaica at around 26 million pounds sterling. All of England and Wales was valued at around 275 million pounds sterling. All thirteen American colonies were worth around 110 million pounds sterling. Thus, one can see the true value of the capital invested in St. Eustatius, during wartime and prior to its maximum apogee—about the same as the entirety of the thirteen North American Colonies.

It may therefore come as no surprise that Alexander Hamilton, coming from the Caribbean hive of trade, went on to found the United States National Bank, and essentially established the financial viability of the federal government. Chernow, Hamilton's biographer, in an interview called him "the father of federal government."

This stance brought Hamilton into conflict with many of the founding fathers from Virginia, who envisioned an agrarian United States. Among them were Thomas Jefferson, James Madison, and initially George Washington. Yet during Washington's Presidency, he supported Hamilton in his efforts to strengthen the federal government by putting it on a firm financial footing that would allow it to participate fully in the industrialization that would soon gain momentum on both sides of the Atlantic. The obvious question would be why he would take a position counter to that espoused by his fellow Virginians, which whom he shared the belief in an agrarian ideal.

Chapter 3, by Robert Selig and Wade Catts, deals with the Battle of Princeton, and in doing so provides insights into Washington's later support for the establishment of strong central government and his acquiescence to the creation of a national bank. The Battle of Princeton was a rare military victory for the Continental Army. In contrast to the Battle of Yorktown, which ultimately secured independence for the United States, it was won by the Continental Army alone. At Yorktown, well-trained and armed French land troops outnumbered Continental Army soldiers three or four to one. At the Battle of Princeton, Washington overcame enormous liabilities inherent in the use of poorly trained and armed troops by rallying them at precisely the right moments and places. The archaeological findings at the Battle of Princeton illuminate how Washington used the terrain to his advantage, as well as highlighting some of the logistical difficulties that Washington had to overcome. A GIS was central to this landscape analysis. A lack of standardization is apparent, for example, in the wide range of lead balls received during the survey. The Continental Army was fighting with "rifles, fowling pieces, imported muskets, captured muskets, and locally made muskets." This graphically presents the overarching problem that Washington faced during his more than eight years as head of the Continental Army, the inability of the federal government to provide the funds and authority required to field a highly competent military. It is also highly notable that Hamilton was Washington's aide-de-camp at Princeton and through much of this time. As Washington's Secretary of the Treasury in later years, then, Hamilton was in an excellent position to make his argument to Washington for a strong and affluent federal government.

John Peterson also describes a landscape of trade and conflict in Chap. 4, aptly titled, "World Powers at Play." Clearly, this play was of the deadly serious sort. This has been documented in other parts of the world at other times, including in Peter Hopkirk's book, *The Great Game* (1990), which describes the mid-nineteenth century struggle between Britain and Russia for control of Central Asia. Like the earlier competition for strategic positions in the Pacific that Peterson describes, which greatly influenced the emergence of sovereign states in the Americas, in Central Europe this involved control of trade routes (including the Silk Route), the collection of intelligence, and military conflicts. Just as importantly, such struggles also engaged indigenous populations. What is also striking about the landscape that Peterson tells us about is that it be can used to tell the story of how indigenous cultural groups jockeyed for position in the face of the ever increasing presence of power of European nations in the region, a pattern seen many times during the wars of independence in the Americas. For example, the Shawnee allied themselves with France during the French and Indian War but then became an important military ally to the British in the War of 1812 under Tecumseh because the British held out the promise to them of a semi-independent sanctuary that would block further American movement to the West. Later, as this movement occurred, America gained the Southwest and California in 1848 with the assistance of southern Plains Indian tribes, in particular the Cheyenne and Arapaho, then repaid the favor by relocating them to ever smaller reservations. Peterson shows us the mechanics of these cultural transactions in the Western Pacific, tracing them back through time to the millennia-old empires of Southeast Asia, and relates them to the emergence of New World sovereign states.

Chapter 5, *Finding the French in Fairfax County*, again highlights the use of GIS in the analysis and study of a landscape. In this case, the artifacts associated with the archaeological site in question are almost ephemeral. They were deposited in only five days by the troops under the command of General Rochambeau, which played an essential role in the defeat of General Cornwallis at Yorktown in 1781. French supply wagons camped at this site, now partially within a Bureau of Land Management Special Recreation Management Area, Meadowood, as they moved south through Virginia to Yorktown on September 18, 1781. French and American troops as well as cannon and other weapons had been sent by ship from Baltimore and Annapolis down the Chesapeake Bay, and engaged the British there before the empty wagon train arrived. The French on their return northward the following year made camp at this site, division by division, on five nights in July of 1782 (United States National Park Service, (2006)). In the heat of the summer, the troops would depart as early as 1:00 a.m. in the morning (Selig, 2009: 663). One can imagine the confusion that would attend breaking camp in the dark were not the logistics of the march impeccably arranged. The person in charge of these logistics under General Rochambeau, Louis-Alexandre Berthier, later became Chief of Staff under Napoleon during his European campaigns. The maps and written descriptions of the French campsites as planned under the direction of Berthier leave little doubt that the key portions of the camp, including the structures occupied by officers, are within Meadowood. Artifacts found at the site corroborate this in an interesting way, Because Meadowood is in the densely populated county of Fairfax, Virginia, near roads that have been in existence

for over 200 years, and is a place accessible to recreationalists of many sorts, the most easily identified artifacts have long since been collected and so lost to the archaeological record. What remained to be found were the homely fragments of the many kettles used by soldiers for cooking. In collecting the recognizable military artifacts, the French had in one sense been found, although in a way that deprived forever those in the future access to this material. An interpretive program under development by the Bureau of Land Management will be used to rediscover the French. In doing this it will make more public the crucial role played by not only the French government, which underwent a sea change, from monarchy to republic, during the time that France provided assistance to the Continental Army, but also other actors, state and non-state, on both sides of the Atlantic, who were involved in the beginning of the end of the colonial period.

All of the landscapes described in Chaps. 2–5 can be used to arrive at an understanding of American history as an important element in world history, and world history as inseparable from American history. To the extent that this promotes a more effective and productive engagement among American states and nations in other regions of the world, it can be seen as contributing to a useable past.

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Chapter 2
Archaeology, Computer Technology, and the Battle of Princeton as a Cross-Cultural, Trans-Atlantic Encounter

Robert A. Selig, Matthew Harris, and Wade P. Catts

Introduction

Today the battlefield of Princeton is an evolved cultural landscape that includes some features dating to the battle. The National Historic Landmark Program and the American Battlefield Protection Program (ABPP) have both identified the Princeton National Historic Landmark (NHL) as threatened due to proposed residential development in the fields immediately adjacent to (east of) the Princeton Battlefield State Park (PBSP) lands.

Funded by a grant from the ABPP and administered by the Princeton Battlefield Society (PBS), the purpose of the Princeton Battlefield project was to create a comprehensive digital map of the significant cultural features, topographical features, and troop movements through the use of historical written and graphic sources and to correlate the historical record with the existing terrain and archaeological data (Selig et al. 2010). The map (Fig. 2.1) depicts not only the Core Area of the battlefield but includes the larger Study Area. In particular, recent archaeological testing has shown that the area of the PBSP and the surrounding fields retain substantial integrity dating to the time of the battle.

The composition of the comprehensive digital map the study team was tasked to create began with a series of map overlays constructed from digitized and georectified historical maps (published and manuscript), property plats, road maps, aerial photographs, USGS quadrangle maps, and insurance maps. These layers were

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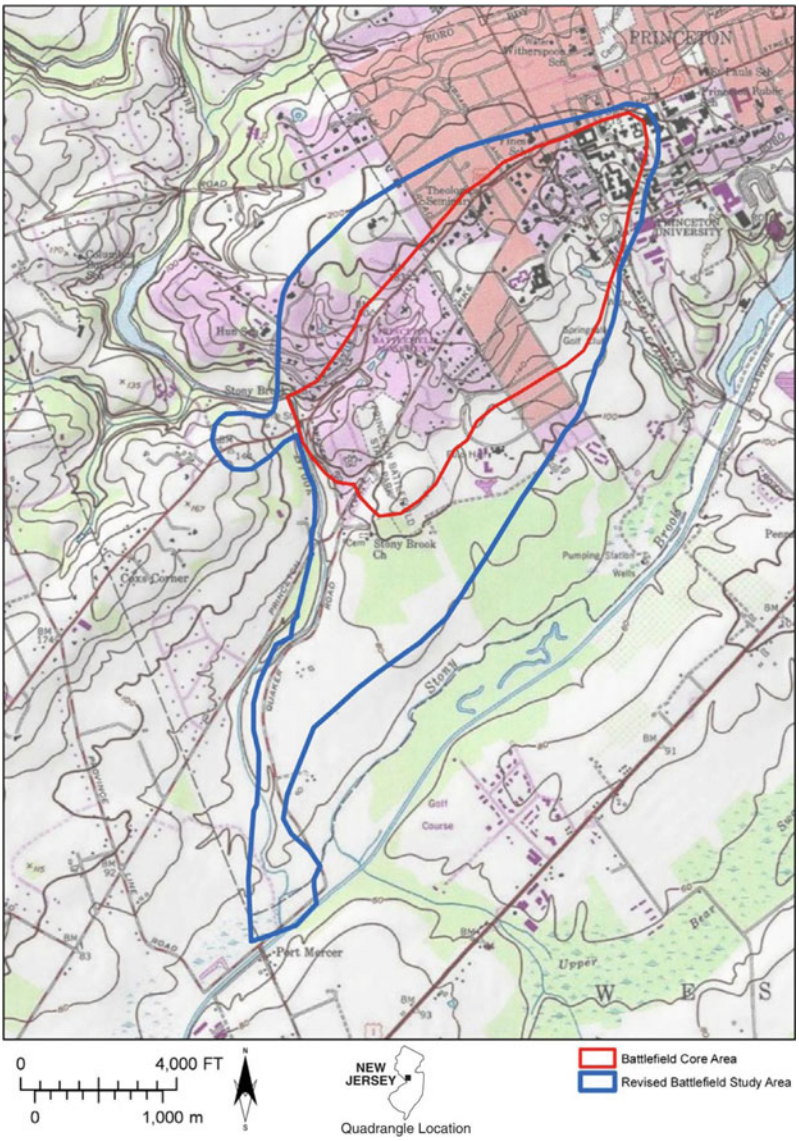

Fig. 2.1 Princeton battlefield and vicinity

enhanced by the addition of a series of battle maps developed by the study team showing troop movements and positions. Using elevation data from USGS maps and on-the-ground observation, the project team next developed a series of view-sheds overlays which turned out to be critical to understanding the opening sequence of the battle since they determine who could see what and whom from various

points on the battlefield. The concurrent analysis of the documentary record provided the historical foundation for the battle maps and was critical to interpreting, and in at least one important element, reinterpreting, the ebb and flow of the battle. The documentary sources utilized for the study of Princeton Battlefield represent over 180 first-person accounts, both American and Crown Forces, ranging from memoirs of participants to pension records. We relied on primary sources for the preparation of the maps, although we reviewed all significant secondary sources. The overarching system for the analysis of the key topographical features of the battlefield is the KOCOA system developed by the US military for the training of its infantry officers. KOCOA is an acronym of *Key Terrain, Observation, Cover and Concealment, Obstacles,* and *Avenues of Approach and Retreat*.

In the development of the map overlays the Princeton battlefield study incorporated the technology of the Environmental Systems Research Institute's (ESRI) Geographic Information System (GIS). A GIS is the intersection of computer mapping software, database capabilities, qualitative and quantitative analysis, and expert user input. For this project, a GIS was used to bring together various geographical datasets, aid in the interpretation of the battle, and create renderings of the projects findings.

The GIS task included geo-referencing historical documentation gathered by the team and physical features of the landscape obtained using a Global Positioning System (GPS). Historical information with a spatial component included troop affiliations and movements, battle line locations, land-cover features, and roads. Where the precise location of features relevant to the battle could be found, a GPS was used to map the exact location. Field methods used in gathering GPS data closely followed the GPS methodology described in the *Guide to Sustainable Earthworks Management* by the US National Park Service (NPS). Historically referenced places with imprecise locations were mapped using historic maps and modern aerial photographs. The resulting synthesis of available spatial and historical information into a single GIS location allowed the layers of historic and natural locations to be overlain and interpreted within any number of contexts.

Viewshed analysis is a Geographic Information technique that utilizes digital elevation models, slope, and observation points to establish line of sight visibility. According to the ESRI ArcView manual, "Viewshed analysis identifies the areas on a surface that are visible from one or more observation points. It answers the question: What can I see from these locations?" The basics of the method are quite simple in that the algorithm draws a straight line from an observer points or points to every other raster cell within the search radius. A cell is assigned to the "visible" category if the straight line between it and the observer is uninterrupted by the intermediate topography; it is assigned as "not visible" if that line is interrupted. If multiple observation points are used, each cell in the search radius is assigned to either "not visible," or if visible, it is assigned the number of observer points that can view that location. This technique is commonly employed within the studies or battlefield preservation (Benson 2000; Carlson-Drexler 2009; Heckman 2009; la Cour 2007) and landscape archaeology (Lock and Harris 1996; Wheatley 1996; Wheatley and Gillings 2002; Whitley 2004).

Formation	Commanding Officer	Strength
British 4th Brigade	Lt Colonel Charles Mawhood	
17th Regiment of Foot	Captain Francis Tew	246
40th Regiment of Foot	Major Samuel Bradstreet	333
55th Regiment of Foot	Major Cornelius Cuyler	250
16th Light Dragoons, (Queens Light)		70
Grenadiers, 1 company (43rd; 52nd)	Captain Hatfield (43rd) Captain Williams (52nd)	32
Light Infantry, 1 company (44th Regt of Foot?)	Lieutenant Campbell (44th)	50
42nd Regiment of Foot, 1 co.?		50
Royal Artillery detachment (4 guns)		30 (?)
71st Regiment of Foot, detachment	Captain Munro	?
17th Foot with dragoons and detachments		330
Convalescents, recruits (excl. transfers)		100 ?
		1,500 ?

Fig. 2.2 Order of battle—crown forces

For the Princeton Battlefield, viewshed analysis was used primarily as a heuristic method to test the validity of hypothesis, to aid in the corroboration of historical battle accounts and to determine if vantage points from certain views may be possible (e.g., Lt. Beale's account) (Fig. 2.2). In developing the viewshed analyses we applied methods previously used on other battlefields (cf., Carlson-Drexler 2009; Heckman 2009). Multiple observation points were used in each viewshed analysis to better account for the uncertainty of viewer location. Additionally, each observer point had an offset of two meters added to its elevation to account for the height of mounted horseman. This approach to viewshed analysis provides an estimate of "view-ability" to and from any point within the study area and the observer landform by calculating the number of observer points viable from each location. This estimate is more helpful than a binary "view" or "no view" analysis because it allows for the degree of "view-ability" to be considered (Fisher 1994). However, the viewshed analysis method in general has drawbacks that were considered within this analysis (Wheatley and Gillings 2002, p. 209). One such drawback is that this model only considers a landscape with no vegetation. Stands of trees, hedge rows, and atmospheric conditions would adversely affect the visibility portrayed in these models. This was taken into consideration when interoperating the results. Furthermore, the use of an offset for the observer points affects the visual reciprocity between the viewer and the viewed (Wheatley and Gillings 2002, pp. 210–211). However, it is unlikely that an offset of only two meters has an adverse effect. The use of a non-binary viewshed analysis as a heuristic aid in interpreting written documents sidesteps some of the pitfalls commonly associated with this type of analysis. The viewshed analyses turned out to be critical in determining the location of several key participants at significant moments of the battle, in particular the initial mutual sightings of the opposing forces near daybreak and in determining the movements and location of Continental forces during the final assault on Princeton.

The results of these analyses were factored into the overall evaluation of documentary evidence, military terrain analysis, and troop movements (Fig. 2.3).

Accurate identification of troop formations present at the Princeton—the Order of Battle—was a precondition for the geographical and chronological reconstruction of the course of the battle. The project team used a number of sources to complete as accurate a list of military units as possible. Secondary sources such as Stryker (1898), Woodhull (1913), Wertenbaker (1922), Smith (1967), Ketchum (1973), Bill (1975), Dwyer (1983), Hackett Fischer (2004), and Bonk (2009) were used as starting points, and supplemented with examinations of official records, pension records, and other primary sources.

Sullivan's Division	**MG John Sullivan**	
St. Clair's Brigade	*BG Arthur St. Clair*	1,200-1,400
Stark's New Hampshire Continental Regiment	Colonel John Stark	Remnant
Reed's New Hampshire Continental Regiment	Colonel James Reed, absent	Remnant
Poor's New Hampshire Continental Regiment	Colonel Enoch Poor	Remnant
Patterson's 1st Massachusetts Continental Regt		Remnant
Shepard's 4th Massachusetts Continental Regt		Remnant
Webb's 19th Massachusetts Continental Regt		Remnant
Glover's 14th Massachusetts Continental Regt		Remnant
Bailey's 23rd Massachusetts Continental Regt		Remnant
Baldwin's 26th Massachusetts Continental Regt		Remnant
Sargent's 16th Massachusetts Continental Regt	Colonel Paul Dudley Sargent	Remnant
Ward's Connecticut Regiment	Colonel Andrew Ward	Remnant
Connecticut State Troops	Colonel John Chester	Remnant
Read's 13th Massachusetts Continental Regt	Colonel Joseph Read	Remnant

Greene's Division	**MG Nathaniel Greene**	
Mercer's Brigade	*BG Hugh Mercer*	325-350
Smallwood's Maryland Continental Regiment	Captain John Stone	50
Miles Pennsylvania Rifle Regiment	Major Ennion Williams	200
Rawlings Maryland and Virgina Rifle Regiment	Colonel Moses Rawlings	75
New Jersey State Artillery (2 guns)	Captain John Neil	? 20
Stirling's Brigade	Remnant	? 50 -75
1st Delaware Regiment	Colonel John Haslet	6
1st Virginia Regiment	Captain John Fleming	20
3rd Virginia Regiment	Colonel George Weedon	?
6th Maryland Regiment	Colonel Otho Williams	?
Stephen's Brigade	*Colonel Charles Scott*	400
4th Virginia Regiment	Lt. Colonel Robert Lawson	
5th Virginia Regiment	Major Josiah Parker	
6th Virginia Regiment	Major Richard Parker	
Fermoy's Brigade	*BG Mathias-Alexis Roche-Fermoy*	610
German Regiment	Colonel Nicholas Hausseger	410
1st Pennsylvania Rifle Regiment	Colonel Edward Hand	200

Fig. 2.3 Order of battle—continental forces

Cadwalader's Brigade	*BG John Cadwalader*	**1,150**
1st Battalion Philadelphia Associators	Colonel Jacob Morgan	
2nd Battalion Philadelphia Associators	Colonel John Bayard	
3rd Battalion Philadelphia Associators	Colonel John Nixon	
Philadelphia Rifle Battalion	Colonel Timothy Matlack	
Philadelphia Light Infantry Company	Captain George Henry	
Chester County Militia		
Dover [Delaware] Light Infantry Company	Captain Thomas Rodney	
United States Marines	Major Samuel Nicholas	57
2nd Company Artillery, Philadelphia Associators	Captain Joseph Moulder	
Hitchcock's Brigade	*Major Israel Angell*	**353**
Lippitt's Rhode Island Regiment	Colonel Christopher Lippitt	160
2nd Rhode Island Regiment	Colonel Daniel Hitchcock	120
1st Rhode Island Regiment	Colonel James Varnum	7
4th Massachusett's Regiment	Colonel John Nixon	63
12th Massachusett's Regiment	Colonel Moses Little	3
Massachusett's Company of Continental Artillery	Captain Lt. Wintrop Sargent	
Mifflin's Brigade	*BG Thomas Mifflin*	**1,500**
2nd Pennsylvania Regiment	Colonel Philip De Haas	
4th Pennsylvania Regiment	Colonel Daniel Brodhead	
10th Pennsylvania Regiment	Colonel Joseph Penrose	
11th Pennsylvania Regiment	Colonel Richard Humpton	
12th Pennsylvania Regiment	Colonel William Cooke	
		Total: 5,600 to 5,800

Fig. 2.3 (continued)

Determining, if possible, the strengths of the various formations and numbers of artillery pieces present were also important parts of this research. The Order of Battle incorporates primary and secondary sources, and in some cases has identified formations that heretofore were not known to have participated in the battle, e.g., a company of militia from New Castle County, Delaware, or has provided additional information about the composition and strength of the various units, e.g., the ad hoc formation of the British grenadiers, light infantry, and convalescents in Mawhood's column.

Following the guidance established by the ABPP the project team applied KOCOA military terrain analysis to interpret the key topographical features of the battlefield (Lowe 2000; Walker and Thomason 2004). Used by the American land-based forces in the training of its officers, the application of KOCOA criteria allows the researcher to view the battlefield as a participant in the engagement would have evaluated it, not as a cultural landscape, or as a bucolic field or quiet woods. For our ABPP project KOCOA elements were defined using a variety of sources including historical documentation, previous battlefield surveys, maps, and the extant natural

landscape. The interpretation of these features was conducted using the quantitative capabilities of the GIS in conjunction with the expert knowledge of team historians and other experts. All of the spatial data included in the GIS are available in the form the ESRI shape-files or comparable GIS formats and metadata for each GIS file is provided in the Federal Geographic Data Committee (FGDC) standard format.

To fully understand the actions and reactions of opposing forces in battle and to interpret the battle accurately and in a balanced fashion, it is important to have access to participants' accounts from both of the forces involved (Williams and Langum 2004). For the study of the Battle of Princeton many American first-person accounts exist and are well-known. This should come as no surprise since the significance of the battle, as part of the "Ten Crucial Days" surrounding the Trenton and Princeton campaign, was recognized immediately by the rebellious colonials. American participants such as James Wilkinson, Charles Wilson Peale, Thomas Rodney, "Sergeant R," John Cadwalader, Appollos Morris, and many others left written records of the action. To this group the project team added considerably, most notably through the examination of soldiers pensions.

In contrast to written records detailing actions from an American perspective was a near absence of first-person Crown Forces accounts. This lack of accounts could be explained by a number of factors, such as the embarrassing acknowledgment that Crown Forces were defeated, an outcome not likely to inspire recordation although one that should have demanded culpability. Other contributing factors could be that the commanding officer of the British 4th Brigade, Charles Mawhood, did not survive the war, nor did the senior captain commanding the 17th Regiment of Foot that day, Captain Francis Tew, who lost his life in 1779 during the fighting at Stony Point (Odnitz 1988). The project team, through consultation with other American Revolution scholars and through its own research, was able to significantly add to the written record of Crown Forces at Princeton. The discovery of a court martial record for an officer in the 16th Light Dragoons, letters from an officer in the 17th Regiment of Foot, correspondence by the theater commander in New Jersey, and other official Crown Forces documents allowed the project team to gain a better understanding of the actions and reactions of Crown Forces on January 3, 1777 than previously obtained by historians.

Thorough understanding of the topography and conditions on the ground, critical reading of a wide range of primary sources combined with a military analysis of the battlefield are crucial to understanding the action on the battlefield (Andrus 2004). To achieve this goal the project team walked or toured the battlefield on several occasions, conducting timed movements on the battlefield and evaluated the topography. It also dissected the first-person accounts for any topographic information, troop movement and sequencing, and visualization data. The identification and, if possible, relocation of Saw Mill Road was an important terrain feature for interpreting the battlefield, since it was the principal avenue of approach for the Continental Army. Long vacated and unused, the exact location of the road is crucial for the interpretation of how the Battle of Princeton unfolded. While the documentary metes-and-bounds record of the creation of the road has not been found in the

archives, through the project team's research into the land plats of the battlefield, the first-person accounts, and through the terrain analysis, we believe we have located a portion of that road.

The archaeological study of battlefields—termed Conflict Archaeology—is proving that the physical evidence of such fields of conflict is often remarkably resilient and still present beneath the ground (cf., Bleed and Scott 2011; Scott and McFeaters 2011). While subsurface testing was not within the scope of this project, the project team treated the artifact information that is available from previous archaeological surveys as a data source and integrated the material evidence provided by the archaeological remains in the military terrain analysis and interpretation of the battle.

Increasingly, archeologists are calling for the anthropological study of military formations as "semiautonomous units of culture" possessing their own unique organization and social structure (Geier and Potter 2000, p. xxix). Our knowledge of how military formations were structured, fought, camped, marched, were supplied, tended to the sick, and disposed of debris needs to be better informed. The armies of the American War of Independence, i.e.; French, American, and British with their German allies, differed widely in their leadership, organization, systems of supply, and battlefield tactics, even though they were intended to accomplish similar tasks.

> For most professional archaeologists and historians … the culture of an army is a huge black box. Few are knowledgeable concerning issues of chain of command, organizational structure, battlefield tactics and strategy, military technology and its applications, or in the construction of defensive fortifications. Issues of supply and support personnel and staff, the composition of military trains, and the character and development of field hospitals and medicine are poorly understood by many historians and archaeologists. In effect, a key problem for most of us is that we are profoundly ignorant of the structural character of an army at rest or in action. As a result, when studying military events we are prone to oversimplification of the circumstances and factors that are shaping or driving them (Geier and Potter 2000, p. 30).

Archeologists attempt to identify patterns of human behavior through the material remains that survive. Of all the types of organizations or groups of people that can be studied, perhaps none is more organized, more patterned, than military organizations. This holds true whether the unit is a British light infantry battalion of the eighteenth century or of the twenty-first century. Military formations of any size, from armies to companies, can be studied as self-contained social units operating in a closed cultural system created with strict rules (Smith 1994, p. 15). The way military formations were organized for battle or for camp was prescribed, structured and patterned to varying degrees, and remnants of such structure may be observable in the archaeological record., In his study of American Civil War archaeological sites Steven Smith pointed out the significance of this patterning, stating that "the military settlement pattern of a regimental camp is expected because regulations were imposed. Variations in the expected settlement pattern are likely to be more visible in the archaeological record, and much less likely to be due to random behavior" (Smith 1994, p. 15). The same patterning holds true for the deployment of forces on the field, e.g., Light forces on the flanks, Line infantry in the center.

We applied the principle of Inherent Military Probability to the study of the Princeton battlefield (Keegan 1977, pp. 33–34). As initially developed by the

German military historian Hans Delbrück and further refined by British historian Alfred H. Burne, this principle holds that well-worn and accepted accounts of a particular battle will often be found to be impossible given the constraints of terrain, timing, and other factors (Burne 2005). Methodologically we applied this principle by placing ourselves in the position of what we as a knowledgeable British or American individual or officer would have done in a similar situation in January 1777. The process of critical reexamination of primary sources on the battlefield led us to the conclusion that the opening movements and actions on the morning of January 3, 1777—namely, the movement of the German Regiment prior to the battle, the deployment of the 4th Brigade by Mawhood, and the actions of Mercer's Brigade—were in need of reinterpretation.

It is also important for the researcher to understand relevant historical military practices which were in force at the time of the engagement, so that, as English archeologist Glenn Foard suggests, the principle should be termed Inherent *Historical* Military Probability (Foard 2009, p. 141). The manuals available at the time of the American War of Independence provide specifics regarding the spacing between and among formations, rates of marching, and the specific methods applied to deploy companies, battalions, and other maneuvering or firing formations. These manuals provide a framework of the "limits of the possible" that governed the actions of commanders in the field, keeping in mind that variations to the manuals were always possible, and most likely probable, given opportunities arising from such factors as terrain, visibility, and other battlefield conditions. Indeed, as one scholar put it, "Soldiers, not manuals, fight and win battles" (Graves 1986, p. 51). The most comprehensive study to date for the British forces during the American War for Independence is the recent volume by Matthew Spring (Spring 2008).

To accurately map the amount of space a particular military formation occupied (frontage and depth), we used information derived from contemporary military manuals. Plotting this data for Crown Forces formations was comparatively simple; the most recent detailed review of British manuals and regulations in use at the time of the battle is provided by Spring (2008, pp. 87–95, 139–145). Crown Forces at Princeton were under general orders from Sir William Howe to engage in battle in two files. By the mid-1770s manuals prescribed an interval (termed order) between soldiers of 1.5–2 feet. (Spring 2008, p. 139). In Howe's manual of September 2, 1774, Light infantry (and dismounted dragoons acting as light infantry) were ordered to maintained an interval of 4 feet "at Open Order" and 10 feet "at Extended Order."

At Princeton the Crown Forces battle line at the time of the initial firing consisted of approximately 800 rank and file. Assuming that an individual soldier occupied approximately two feet of space and applying the orders for intervals described above, the length of the Crown Forces battle line was at least 1,600 feet (487.68 m), or more than a third of a mile. This calculation does not take into account the interval between companies or other divisions within the units or the spacing provided for the artillery; we know for example that the dismounted dragoons noted that their formation was 30 feet (9.1 m) from the nearest formation to their left. The battle line length was calculated on paper, and then archaeological data was compiled as an independent data set. Remarkably, the length of battle line suggested by the archaeological data is approximately 1,400 feet (426.29 m).

At this early stage of the war delineating the frontage and depth of American formations is problematic, since a variety of drill manuals were in use at the time of the battle and the standardization developed by von Steuben was still a year in the future. If American formations had received any training, they were largely "self" taught by their individual officers using a variety of European manuals including English, French, and Prussian (Wright 1986, pp. 138–139). The general preference by American forces for manuals, however, appears to have been for English manuals in use with Crown forces (Graves 1986, p. 52).

Research into contemporary maps and post-battle maps and aerials, combined with primary-source descriptions of events in the morning on January 3, 1777, computer-assisted GIS and viewshed analysis and interpretation of the topography applying KOCOA criteria constitute crucial components in our preparation of the GIS overlay map as well as the supplementary battlefield maps, which are intended as a basis for further archaeological surveys and excavations on the battlefield and along the approach routes. This pertains particularly to the crucial access route of General Mercer's forces on the Sawmill Road going East from the Quaker Meeting House, which has finally been located as a result of this study, to the battlefield, the jump-off point for Crown Forces interdicting Mercer's units at the outset of the battle, and the pursuit route through Frog Hollow to Princeton and Nassau Hall. The existence of that road is a historical fact; its delineation on the ground and the discovery of a segment of it was greatly aided by our interpretation of the Battle of Princeton as a trans-Atlantic, cross-cultural encounter between two armies of widely different organizational structures, levels of professionalism and equipment which is in turn reflected in the archaeological record.

An Anthropological View of the Armies

As historian Jeremy Black has observed, the American War for Independence was "the first example of a transoceanic conflict fought between a European colonial power and subjects of European descent, and the first example of a major revolutionary war, a struggle for independence in which the notion of the citizenry under arms played a crucial role" (Black 1999, p. 120).

Crown Forces

The Crown Forces that fought at Princeton were composed almost exclusively of British military formations (Fig. 2.2). Three combat units—the 17th, 40th, and 55th Regiments of Foot—composed the 4th Brigade, under the command of Lt. Colonel Charles Mawhood. In addition to these units, detachments of Royal Artillery, mounted and dismounted soldiers of the 16th Light Dragoons, and an ad hoc formation of recruits, draftees, and convalescents were attached to the brigade. All totaled,

the Crown Forces on the morning of January 3, 1777 numbered approximately 1,500 though only about 1,200 were actively engaged in the battle.

The British regiments at Princeton were descendants of a long-standing military tradition. The three principal regiments represent a cross-section of the English society that created them. Officered by the titled aristocracy, gentry and the upper strata of society, and composed of soldiers drawn from the working class, the regiments were social as well as military organizations. While the formations themselves maintained standards and traditions, the personnel composing the regiments were not static, but instead ebbed and flowed with the processes of recruiting, drafting, transfers, and casualties.

Originally formed in 1688, the 17th Regiment of Foot was nearly a century old in 1777 with a long martial tradition (Beckett 2003, p. 75; Swinson 1972, p. 105). The regiment proved to be "one of the outstanding combat regiments of the war" and saw constant and active service between 1776 and 1783 (Odnitz 1988, p. 141). The 17th Foot arrived from Ireland in the American theater of war in January 1776 and was actively engaged in the New York campaign and the retreat across New Jersey.

The 40th regiment of Foot was a slightly younger regiment, created in 1717 from independent companies in Nova Scotia (Beckett 2003, p. 69; Swinson 1972, p. 137). The 40th spent the first 44 years of service stationed in Canada. The unit was present at the storming of Fortress Louisburg in 1758 and at Quebec a year later. In 1765 the regiment came to Great Britain for the first time, and was sent back to North America in 1776. Besides its role at Princeton, the 40th Foot fought at Long Island, Brandywine, and Germantown, where the regiment's dogged defense of the Cliveden mansion contributed to the American defeat.

The 55th Regiment of Foot was the junior regiment in the brigade, having been formed only in 1742 (Swinson 1972, p. 154). The 55th had served in North American during the French and Indian War, taking heavy losses at the assault on Fort Ticonderoga in 1758. While the regiment may not have performed well at Princeton, it was honored for its service later in the American War at St. Lucia in 1778. The degree that combat experience tempered the soldiers into veterans is clearly shown by the actions of the 40th Foot at Germantown (October 1777) and the 55th Foot at St. Lucia (December 1778). In both instances, the same men and officers who had not performed well under fire at Princeton fought to victory at the latter two engagements.

Officers were drawn from aristocracy and social elites. Ranks were purchased and sold, but a small percentage of officers had worked their way up through the ranks. Many of the officers held the colonial forces in distain, having outfought and outmaneuvered the amateur Americans since August of 1776. British officers at this time during the war had a great deal of contempt for the martial abilities of the American military, and this attitude was based on former experience with colonials during the French and Indian War and more recently on the campaign in New York and New Jersey. The sense of martial superiority, combined with more practical experience in handling troops and fighting battles, may have contributed more than a little to the actions of the British commanders at Princeton.

British regiments during the American Revolution were composed in large measure of men who volunteered, not conscripts or prisoners. The average soldier was almost 30 years of age and had been in the service nearly 10 years (Frey 1981, pp. 23–25), but this degree of experience, particularly combat experience, varied considerably among the regiments (Spring 2008, pp. 117–120). In civilian life, nearly one in five of the men had been employed in the textile industry, but changes in technology had made them superfluous. Within the textile field, over 65% of the men had been weavers. Similar technological advances in other industries resulted in displaced shoemakers and common laborers that also comprised a large number of the troops; comparatively few of the men came from farming backgrounds (Frey 1981, pp. 12–14).

American Forces

The American army of the War of Independence was the product of a new type of political state, and was more egalitarian than the Crown forces marshaled against it (Black 1999, p. 120). The American army was a new type of citizens' army, previously not encountered in eighteenth-century warfare. The army was composed not of professional soldiers, but of citizens who had taken up arms. Some of these officers and men had military training, either through militia service during peacetime, prior service during the French and Indian War, or perhaps previous service in the British Army. In the main, however, these American soldiers were not professionals, especially at this moment of the War.

In stark contrast to the long-standing professionals of the Crown Forces, the American army at Princeton was an army in a state of flux. Indeed, even the American army that just ten short days previously had defeated the Hessian garrison at Trenton (December 26, 1776) bore little resemblance to the American army fielded at Princeton.

The American forces that fought at Princeton were actually the third "army" created by the new republic since the beginning of the war in 1775 (Wright 1986). The "first" army known as the "Army of Observation" developed out of New England militias following the armed encounter at Lexington and Concord in April 1775. The Continental Army proper began as a sort of "multi-state militia" through a resolution of the Continental Congress on June 14, 1775, "federalizing" these state militias; the next day, 15 June, George Washington was appointed Commander-in-Chief. The "third" Continental Army had been created in a lengthy process in the course of the year 1776. Both the 1775 as well as 1776 army was composed of regiments drawn from the rebellious colonies on a quota system, and each regiment had terms of enlistment that lasted 1 year. Thus, at the end of 1775 and 1776, the American armies ceased to exist, both on paper and in the field, and new regiments were required to be formed. By early 1777 this system was found to be wanting, and a new army, composed of soldiers enlisted for 3 years or the duration of the war, was in the process of forming.

American units at Princeton thus did not have the long martial history of the British regiments, nor was there a tradition of military service as such. In practical terms this means that Congressional forces at Princeton were drawn from three different organizational and ideological backgrounds, varying degrees of training and a wide range of equipment: (1) a small number of militia organized on the basis of compulsory military service from New Jersey and Delaware, (2) militia organized on the basis of voluntary military service, i.e., three battalions (800 men?) called "Associators" from Pennsylvania authorized by the Pennsylvania legislature on August 18, 1775, and (3) Continental Army units with men from 9 of the 13 colonies—New Hampshire, Massachusetts, Rhode Island, Connecticut, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia. Congressional forces also included a higher ratio of campaign artillery pieces—28, one for every 200 men—than at any other battle during the American War of Independence. In another deviation from standard military practice at the time Congressional forces also included a disproportionately high number of riflemen and Light Infantry, more than 500 or around 10% of their total strength. All told Congressional Forces numbered close to 5,800 personnel, some 3,400 of which may have been actively engaged on the battleground.

Some of the officers and men had been with the Continental Army since 1775, going through the reenlistment process in 1776 and 1777. Others were new to the army or short-term militia and volunteers from Pennsylvania, New Jersey and Delaware who would serve for thirty to sixty days. In all cases, the military units identified themselves not as part of a national army, but aligned themselves with their state governments. Though all men serving with Congressional forces at Princeton would have had some kind of military training either in the Continental Army or during regularly schedule militia/Associators training, it would have been largely by their "self" taught officers using a variety of European manuals including English, French, and Prussian (Wright 1986, pp. 138–139). The level of expertise, familiarity with the skills required for deployment on the battlefield, and responsiveness to commands given by their officers would have varied widely.

In 1768, the British Board of Ordnance adopted a new pattern of musket for land service called the Short Land Service Musket (New Pattern). The Short Land musket had a barrel length of 42 in., 4 in. shorter than its predecessor the Long Land Service musket. Both muskets were known by the name of "Brown Bess." The Short Land Service musket was adopted from the British dragoon formations (Darling 1970, pp. 22–23). In the British army, Short Land muskets gradually replaced, but did not completely supplant, the earlier Long Land muskets. By the time of the American Revolution, British army regiments were in the main armed with Short Land Brown Bess muskets, particularly if the regiment departed for North America from Ireland (Coates and Kochan 1998, p. 44). British light infantry companies were exclusively issued Short Land muskets, but some British battalions were equipped with the Long Land Brown Bess when they were shipped to North America (Coates and Kochan 1998, p. 30) and Long Land muskets were apparently distributed to Loyalist formations that served with the Crown Forces (Darling 1970, p. 23).

What is important for the study of the Battle of Princeton as a cross-cultural, trans-Atlantic encounter and its concurrent archaeological footprint is the fact that

while British muskets all had the same 0.75 caliber, muskets in the Continental army were broadly divided between foreign and domestic (Huston 1991, pp. 113–114; Parrington et al. 1984, p. 145). Foreign sources principally included British, French, and Dutch muskets (Peterson 1968, p. 36). Prior to the encampment at Valley Forge in the winter of 1777–78 at least 13 different types of firearms were in use in the Continental Army, including muskets, carbines, fowling pieces, and rifles; small-arm caliber ranges were equally varied (Trussell 1976, p. 53). Not only was there variation among the Continental battalions, even companies within battalions were not always equipped with the same types of weapons. Such variation created supply and logistics problems for the army at Princeton.

Beginning with the arrival of the *Mercure*, in Portsmouth, New Hampshire on 17 March 1777, ten weeks after the battle of Princeton, a total of around 100,000 "Charleville" muskets were shipped from France to North America over the next few years to arm the Continental Army. Named after the town of Charleville in the Ardennes, these muskets came from French army reserve stocks and included weapons produced between 1717 and 1777 (Wright 1963, p. 66). At least six models were imported for the Continental Army, the most common being the Model 1763 and 1766, of which some 88,000 and 160,000, respectively, had been manufactured. With a 44 5/8-in.-long barrel of 0.69-caliber bore these weapons were longer and heavier than their British counterparts (Coates and Kochan 1998, p. 82).

Domestic sources available to the American soldiers included a number of Committee of Safety muskets and rifles manufactured in several of the states during the early years of the war (Boehret 1967; Peterson 1968, pp. 30–35). While patterned after the British Long Land Service Musket there was considerable variation in pattern, caliber, and the number produced of the Committee of Safety muskets and rifles. Calibers were intended to be 0.75 but smaller- and larger-bore muskets were not uncommon. Barrel lengths ranged from 42 to 46 in. The numbers of muskets produced by the various gun manufacturers spread throughout the states and ranged from dozens to thousands. Philadelphia gun manufacturer Alexander Nelson produced 600 muskets for Virginia "like the British" musket, and Philadelphia gun maker Thomas Palmer produced a small number (40) of pattern arms called a "Jersey Musket" in 1775, delivered in June of that year to Alexandria, Virginia (Boehret 1967, pp. 17–18).

The distribution of firearms for the Third Battalion of the Philadelphia Associators dating to the time of the battle of Princeton serves to illustrate the lack of standardization among the American forces (Fig. 2.4). Displayed as the number of lead balls per pound, the Third Battalion was outfitted with at least twelve different calibers of weapons. Balls/pound of 14, 15, and 16 are attributable to the 0.75-caliber Brown Bess and the 0.69-caliber Charleville muskets; the presence among the Associators of so many firearms with more balls/pound is indicative of the number of smaller caliber weapons—in this case, rifles. By contrast, British army regiments at Princeton were in the main armed with Short Land Brown Bess muskets. Thus, the armaments of the antagonists at Princeton may be discernible archeologically, in turn indicating battle positions.

Return of the Size of Musketts and Cartridges
Militia Commanded by Colonel John Cadwalader

Balls per Pound :	13	15	16	17	19	20	21	24	30	34	36	40
Number of Muskets :	24	43	2	54	110	7	71	68	13	1	6	1

This table is not dated but belongs into the winter of 1776/1777

Out of a total of 400 muskets in the Third Battalion, 110 have musket balls of the size/weight of 19 per pound of lead, 71 have 21 and 68 have 24. These three sizes make up 249 of 400 muskets or more than 60%.

Fig. 2.4 Musket Calibers in the Third Battalion, Philadelphia Associators

Historical Context and Summary of the Battle

The Battle of Princeton on January 3, 1777, Washington's first victory in the field against British regulars constitutes the high point in what historians term the "10 Crucial Days." Following hard on the heels of the First (December 26, 1776) and Second Battle of Trenton (January 2, 1777), the victory at Princeton constituted a severe setback for the British crown while keeping the War of Independence alive. Archaeological footprint and primary source accounts of participants are crucial for the interpretation of any battle; accounts and data need to match and mutually reenforce each other in order to produce a truthful reconstruction of events. For the interpretation of the Battle of Princeton as a cross-cultural, trans-Atlantic encounter, a critical reading focusing on the points of divergence in training both at the officer level as well as that of the enlisted men of the two armies.

Following the Battle of Long Island, on August 27, 1776, Crown forces under Sir William Howe drove Congressional forces under George Washington off the island and onto Manhattan. By late September, Howe had take New York City and forced Washington to retire to the northward into Westchester County. Following the Battle of White Plains on 28 October and Howe's capture of Forts Washington and Lee in mid-November, Washington was barely able to spirit a remnant of his army to safety across the Hudson into New Jersey in November 1776. Lord Cornwallis, however, followed hard on his heels, chasing Washington across New Jersey. By late December Congressional forces had retired into Pennsylvania and Philadelphia, capital of the rebellious colonies, lay within reach of Cornwallis' troops. With enlistments expiring at the end of the year, Washington decided on an attack on the British outpost at Trenton. Hessian forces under Colonel Johann Rall were routed on Christmas morning. Though it greatly boosted American morale, the victory provided only temporary relief to the beleaguered Congressional forces. On January 2, 1777, the Continental Army three times repulsed British attacks on their positions in what is known as the Second Battle of Trenton. By the evening Lord Cornwallis had Washington cornered and by all appearances would crush his forces the next morning.

Washington was well aware of the looming disaster and following a council of war late that evening ordered his army to prepare for a night march to Princeton for an early morning assault on Crown forces quartered there. Having departed Trenton around midnight of January 2/3, 1777, the Continental Army reached "a small wood, south of a Quaker meeting, on the left of Stoney [sic] brook, a little before sunrise," i.e., around 0715. Here, almost 2 miles from Princeton, Washington organized his forces into three tactical units, designated avenues of approach and assigned specific tasks in the attack. The First Division under John Sullivan consisted of Arthur St. Clair's Brigade with the remnants of 12 New England regiments, some 1,200 to 1,400 men strong, reenforced with Colonel Stephen's/Colonel Charles Scott's Virginia Brigade, Colonel Daniel Hitchcock's New England Brigade, and Colonel Edward Hand's Pennsylvania Rifles. Led by Washington himself, this lead division numbered around 2,200–2,400 men or half the strength of Washington's Continentals. It formed the right flank of the attack pincer movement against Princeton. The Second Division consisted of Mathias-Alexis Roche-Fermoy's and Thomas Mifflin's Brigades and formed the left pincer of the attack. It was ordered to march along the Stony Brook and across the Princeton-Trenton Road to the north and then turn east into the back of Princeton to cut off the British retreat to New Brunswick. At close to 2,000 Continentals, this division was almost as large as Washington's attack division. The Third Division consisted of Hugh Mercer's and Lord Stirling's Brigades of Continental Line troops, fewer than 400 men and New Jersey and Delaware militia and Pennsylvania Associators under General John Cadwalader. Marching behind the First Division, this Third Division at around 1,400 officers and other ranks, 1,000 of whom were militia, was Washington's weakest, least experienced, and least cohesive division.

Unbeknownst to Washington Lieutenant-Colonel Charles Mawhood of the British 17th Regiment of Foot with about 1,500 forces had departed Princeton earlier that morning and was headed for Trenton to reinforce Cornwallis. At around 7:45 a.m., the rearguard of Sullivan's column discovered a small number of horsemen of the 16th Light Dragoons on Cochran's Hill on the Trenton side of the Stony Brook. Crown forces in turn discovered the Americans about 3/4 of a mile to the east. At that point on Washington's battle plan began to unravel.

That it would unravel with the sighting of the British by the van of Sullivan's forces is not something Washington could have foreseen—he had made his dispositions without the assumption that the garrison at Princeton would be on the march rather than asleep in their barracks. Neither could Mawhood, however, have assumed that the whole of the Continental Army would be on his left flank just outside Princeton. What is important for the subsequent course of the battle and the interpretation of the battle as a meeting engagement between two military organizations at vastly different stages in their development are the reactions of the two commanding officers to the changing circumstances on the field. Over the next 15 min, Mawhood stopped his columns and twice sent a dragoon to reconnoiter the exact location and strength of the forces opposing him. Only after as thorough an intelligence gathering as possible within the limited time-frame available did he issue deployment orders to his troops. A look at the troop distribution prior to their first

encounter with Continental forces under General Mercer—highly mobile cavalry on the far left and right of the battle line, line troops in the center and light forces on either side of them maintaining contact with the cavalry—shows that his subalterns knew exactly how to deploy.

Military professionalism on the British side stands in stark contrast to the American response to the discovery of Mawhood's column. Washington's aide-de-camp Major Apollos Morris recorded that Washington, "Supposing this a detachment sent out of Princetown to reconnoiter, he ordered Mercers brigade, the next which followed, to quit the line of march pursue and attack it. He then rode on after Sullivans [sic] division, which continued its march towards Princetown" (Morris 1777). There was no stopping of columns or intelligence gathering. Washington, behind schedule and anxious to reach Princeton, hoped that Mercer would be able to intercept the British column. Anxious to reach Princeton he had but cursorily observed the horsemen on Cochran's Hill before giving orders to Mercer to go and eliminate them and continued on his march. Mercer in turn moved rapidly with his around 400 Continentals, most of them riflemen, toward the Princeton–Trenton Road. When Mercer reached the orchard near the William Clarke house, Crown forces were waiting for him. Washington's focus on taking Princeton, combined with Mercer's advance without deploying a screen of riflemen to protect his column from a surprise attack or ambush, cost Mercer his life and Washington almost the battle.

The relative inexperience of Congressional forces expressed itself further on in the battle as well. With Mercer dead and the riflemen not having time to reload in the face of the advancing 17th Regiment, the detachment was unable to withstand the onslaught of forces almost three times their strength and were thrown back to the Thomas Clarke house. Here they collided with the militia under John Cadwalader which had marched behind Mercer. Rarely ever during the War of Independence did (usually poorly trained and equipped) militia hold out for very long against regular forces. This was even more true in the morning of January 3, 1777, when Cadwalader's brigade was quickly thrown into turmoil by the advancing Crown forces. The situation was only salvaged by the men of Mifflin's brigade climbing the steep embankment of the Stony Brook and joining the battle on Mawhood's right flank, by the van of Sullivan's column retracing their steps and out-flanking Mawhood on his left, and the personal courage of Washington rallying Mercer's and Cadwalader's columns in the center. Facing overwhelming numbers in both men and artillery and in danger of being encircled, Crown forces broke. Shortly thereafter Sullivan's men took Princeton.

The victory at Princeton, decided eventually by the sheer discrepancy in numbers the opposing sides could field, wreaked havoc on British strategy for winning the war. It forced Howe to contract his lines in New Jersey, concentrate his forces in a small number of fortified posts, and left many of the Crown's supporters at the mercy of their rebel neighbors. It shook the British aura of invincibility and their faith in being able to defeat the rebels in open battle whenever and wherever they chose to put up resistance. It breathed hope into the veterans gathered in their huts around Morristown and new life into

America's struggle for independence. And while it shows Washington as a great strategist it also shows how much he, and his forces, still had to learn in the military art.

Archaeology at Princeton

In the last two decades several archaeological studies of various portions of the Princeton Battlefield have been undertaken and previously reported (cf. Grzybowski et al. 2007; Hunter Research 2004; Sivilich and Philips 2000). In 2003 Hunter Research conducted an archaeological survey of the approximately 22-acre Institute for Advanced Study (IAS) property adjacent to Princeton Battlefield State Park (Hunter Research 2004). The metal detector portion of the survey recovered a total of 41 battle-related artifacts. Fifteen musket balls of various calibers—eight were 65″ diameter or less, six were greater than 65″ diameter, and one was indeterminate. Some of the musket balls exhibited evidence of impaction, or having been fired, while others were dropped or not fired. One showed signs of having been extracted from the barrel, and two had dimples caused by ramrods. A small (54″ diameter) pewter ball was also retrieved as were three pieces of small lead shot, likely associated with the American method of firing "buck and ball" premade cartridges. These artifacts likely represent American weaponry, and the pewter ball may represent a rifle ball. A possible nose cap to a Committee of Safety musket (American-made by gunsmiths in the various colonies) was also retrieved. Besides the musket balls, seventeen pieces of canister were recovered spread in the field northeast of the State Park. Other military-related artifacts included a bayonet fragment, a lead strip used as a flint wrap, a copper alloy ramrod holder, a copper alloy finial to a cartridge box, and a brass tube likely associated with a cartridge waist box. An iron butt cone, used to encase the ground end of a staff or pole, was also found.

Overall, approximately 90 battle-related artifacts have been recovered and reported from the Core Area of the Princeton Battlefield. The majority of the recovered artifacts are lead shot, including musket balls (including dropped, impacted, and extracted), smaller lead shot (buck shot), and rifle balls. These shot have been found in an area approximately 1,400 feet (426.89 m) in length (west to east) extending from the Mercer Oak enclosure on the west to the hedge line west of Maxwell Lane in an area approximately 400 feet (121.95 m) in depth (north to south) below Mercer Road and Stone House Drive. This area includes artifacts that researchers have attributed to both American and Crown Forces weaponry and accoutrements. Another small cluster of battle-related artifacts is located immediately north of the hypothesized location of a portion of Saw Mill Road.

The range in size of the recovered lead balls is perhaps the best archaeological indicator of the composition of the American forces at Princeton and their early stage of military development. Smoothbore firearms of the colonial period typically fired a cast soft lead (usually) ball that measured approximately 0.05–0.10″ less than the barrel bore caliber, or size. The difference is size allowed the ball to be more easily loaded down the barrel (as opposed to a breech-loaded weapon), but

also allowed for gas leakage around the circumference during firing (Neumann 1967, p. 14). The difference between the lead shot diameter and the weapon's bore caliber is referred to as windage. For rifled weapons, the windage was considerably less. Paper cartridges containing a lead bullet (or shot) and a charge of gunpowder were the standard ammunition of the period. Due to the windage, the paper cartridge was necessary to prevent the lead shot from rolling out of the barrel (Peterson 1968, p. 27). From many American Revolutionary War battlefields, archeologically recovered lead shot with diameters measuring 0.69″ are associated with the 0.75″ British muskets ("Brown Bess") and shot with diameters measuring 0.64″ are ascribed to 0.69″ French and/or American muskets (Sivilich 1996, pp. 104–105). Large numbers of French "Charleville" muskets began arriving in the United States in April of 1777, several months after the Princeton battle. For lead shot that was misshapen or impacted, measurement of the diameter is difficult. For such lead shot we applied the Sivilich formula, initially developed by Daniel Sivilich in his work at Monmouth Battlefield in New Jersey and widely used on American Revolutionary War sites (Sivilich 1996, 2009). The formula is used to estimate the original diameter of lead shot:

$$\text{Diameter in inches} = 0.223204 \times \left(\text{weight in grams}\right) 1/3$$

The Sivilich formula was applied to all of the archaeologically recovered lead shot discussed in this article.

From the Princeton battlefield, a large percentage—nearly 25%—of the recovered balls are likely rifle balls and are smaller than the standard ball size attributed to Charleville or Brown Bess muskets. These balls represent the lack of standardization present in the American army in 1777, and show that a wide range of firearms, including rifles, fowling pieces, imported muskets, captured muskets, and locally made muskets, were in use. This range of weaponry continued to plague the American army well past January of 1777. As described by Parrington, Schenck, and Thibaut in their study of the Valley Forge encampment "the diversity of arms in use, including not only muskets, but small caliber rifles, would presuppose the use of lead projectiles of varying calibers" (Parrington et al. 1984, p. 145).

The contrast is telling when the Princeton lead balls assemblage is compared to those collected at Monmouth Battlefield (Fig. 2.5). Fought in June 1778, a year and a half after Princeton, the assemblage shows a remarkable degree of uniformity for both the Crown Forces and the Continental army. While there seems to be a significant difference in the percentages of rifle balls recovered from Princeton and Monmouth, this difference is heavily influenced by sample size, however, there is an intuitive rather than statistical difference between the percentage of rifle balls at these two battlefields. The most obvious change is seen in the percentage of lead balls that range between 0.60″ and 0.66″ diameter balls, a size that was used by muskets of the period. This contrast is a result of the large influx of French muskets to the American army during the summer and autumn of 1777 and the development of standards in weaponry throughout the army.

A second principal artifact type recovered on the battlefield is iron canister shot. Overall, seventeen pieces of canister have been found in the Core Area of the

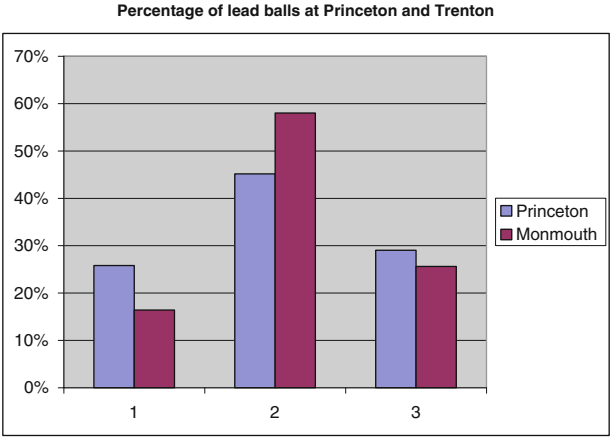

Fig. 2.5 Comparison of lead balls recovered from Princeton and Monmouth battlefields. 1 = Lead balls under 60″ diameter; 2 = Lead balls between 60″ and 66″ diameter; 3 = Lead balls over 69″ diameter

battlefield. The iron balls composing the canister range in weight from 1.0 to 1.8 oz; only one ball weighs more, at 3 oz. Analysis of these iron shot indicates that the majority are projectiles more accurately referred to as canister, and were fired from 6 lb guns—artillery pieces used by both American and Crown forces during the battle. Several iron canister shot are fired from 3-lb guns, pieces used exclusively by the Americans.

Nine of the canister shot are found in the field area immediately south of Stone House Drive in a concentration measuring approximately 400 feet (121.95 m) (northwest-southeast) by 250 feet (76.21 m) (southwest-northeast). A second smaller concentration of canister is found in the southeastern corner of the IAS field, mirroring the small cluster of battle related artifacts described in the preceding paragraph. A third concentration is found in the State Park field, southeast of the hypothesized location of Saw Mill Road and below the crest of the slight topographic rise where the road may have been located. A final single piece of canister has been recovered from the field approximately 400 feet (121.95 m) northeast of the Thomas Clarke House.

When combined the archaeological evidence provided by the series of surveys is compelling and revealing of the distribution of forces on the battlefield (Fig. 2.6). The concentration of musket balls and other battle-related artifacts along the northwestern side of the topographic rise likely represents the main Crown Forces battle line following the route of Mercer's formation from the William Clarke orchard and farm. It is likely the position that 17th Regiment of Foot, reinforced with the ad hoc companies of light infantry, grenadier, and recruits, and supported by Royal artillery and dragoons, occupied when Hand and Hitchcock's formations attacked from the southeast and east. The density of material here, in a swath about 120 m (400 feet)

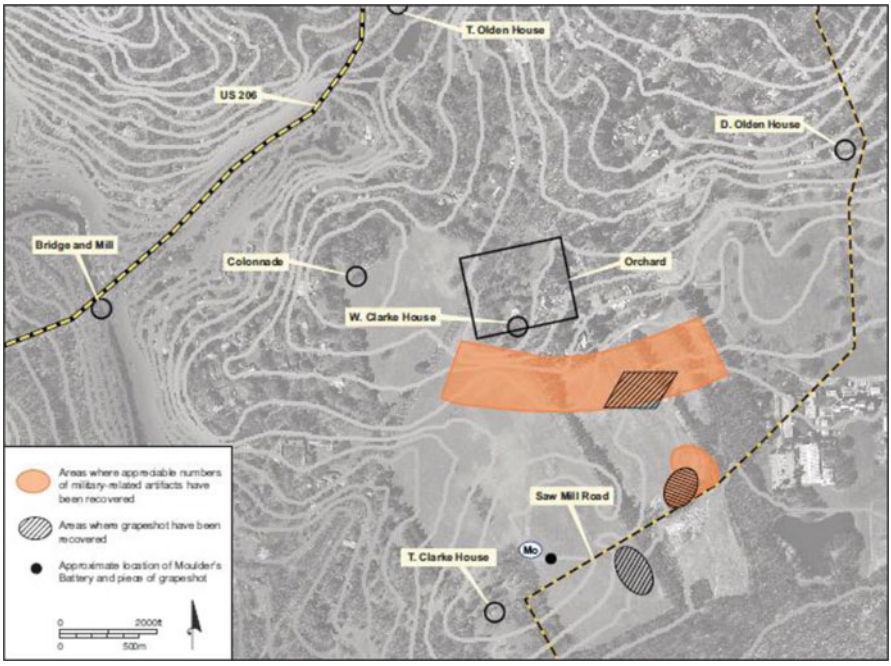

Fig. 2.6 Summary of archaeological data at Princeton battlefield

thick, includes not only fired and dropped musket balls and buck shot, but also parts of cartridge boxes, an extracted musket ball from a Brown Bess, a ramrod holder for a Brown Bess musket, a lead flint wrap, an iron butt cone for a pole or staff, and a silver coin (1/2 Real Spanish Cob, produced 1572–1733). Added to these artifacts is the distribution of canister. The heaviest concentration of canister is nearly contiguous with the density of other battle-related objects in the IAS field south of Stone House Drive. Canister was an anti-personnel round, intended for killing and maiming infantry. Its presence on the battlefield in a relatively dense area suggests that infantry formations were standing in that location, taking artillery fire.

The three other concentrations of canister are also of interest, because they likely represent the locations of American formations. The single canister shot recovered east of the Thomas Clarke House has been previously interpreted as associated with the position occupied by Moulder's battery. The canister in the southeast portion of the State Park field is likely related to Royal Artillery rounds fired at American formations standing along or maneuvering along the hypothesized trace of Saw Mill Road. The canister recovered from the southeastern portion of the IAS field, north of the hypothesized Saw Mill Road may also represent Crown Forces artillery rounds fired into American formations. These canister shot also suggest that Royal Artillery batteries were placed on the high ground southwest of the William Clarke House and northeast of the Mercer Oak enclosure.

While no systematic archaeological survey has been conducted to date within the Core Area of the Princeton Battlefield, the review of the above surveys and studies makes it clear that significant archaeological data associated with the battle is present. To date the balance of that material has been recovered from the IAS lands. This is likely a function of the multiple surveys of the land as well as its conditions at the time of the survey—i.e., the IAS lands were plowed and disked, something that has not occurred on the State Park property for many years.

Summary and Conclusion

Battles are temporary, albeit seminal, events superimposed on existing cultural landscapes that witness a variety of cultural actions—transportation systems, agricultural development, settlement patterns, population change—which already exert influence on the land prior to the engagement, and that continue to exert influences on the field after the battle. Battles can be interpreted from a variety of angles, including that of a clash of cultures. This viewpoint is most frequently applied to aid in the historical and archaeological interpretation of armed conflict between Europeans and native cultures, When applied to the January 3, 1777 Battle of Princeton the viewpoint is that of combat between two very different types of armies—a mature, highly developed professional military establishment and an army, composed of citizen soldiers in the process of creation (Black 1999, p. 120), The degree of sophistication impacts both the equipment as well as the behavior of forces on the battlefield, which in turn leaves a characteristic archaeological footprint. This footprint is extremely resilient even in the face of subsequent human activities as field patterns and farmsteads are changed and give way to subdivisions, roads are altered, vacated, rerouted or widened, woodlands are reduced or removed from the landscape. The historical trajectory of land development where the Battle of Princeton occurred was forever altered by the short but bloody engagement. Situated in an increasingly suburban landscape, the lands where the battle was fought would have long ago succumbed to development, but for the significance that Americans ascribe to the battle. While some of the land has been preserved in a state-owned park, other properties where the battle took place have no such protections, despite the presence of tangible remains of the engagement. The intrinsic “sacred” or hallowed value attached to the battlefield is a curious phenomenon about fields of conflict, their interpretation, memorialization, and commemoration. The completed digital map provides the PBS, the ABPP, and other local, state, and federal agencies with a planning tool for the protection and interpretation of the battlefield, and can be used to indicate those locations were land acquisitions, conservation easements, and other protective measures are warranted.

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Chapter 3
St. Eustatius: The Nexus for Colonial Caribbean Capitalism

R.G. Gilmore III

Introduction

In this chapter, I argue that St. Eustatius was at the nexus of an interdependent Atlantic World financial network. Trade at St. Eustatius was so great that a significant proportion of capital made available to the burgeoning Industrial Revolution via investment banks was as a direct result of profits derived from this small Dutch Caribbean island.

The evolution of many Caribbean colonial physical and fiscal landscapes was inexorably tied to the economic cycles associated with agricultural production. Plantation monoculture provided the wealth, both urban and rural, through which all levels of society were able to fund landscape modifications. On St. Eustatius, although there were many plantations, they contributed little to the economic position of the island's inhabitants.

Instead, the largest trading network in the world was centered on St. Eustatius in the latter quarter of the eighteenth century. Each level of society from the ultra-wealthy merchant/planters to slaves was affected. The result was a social order set apart from all others in the colonial Caribbean. Merchant/planters built a communal system designed to maximize profits through personal contacts reinforced by social structures centered on entertainment and ostentatious displays of wealth. At the other end of the spectrum, although slaves and free blacks were kept at the physical periphery of Oranjestad (the island's only town), they were intimately involved in keeping the trading activities there running smoothly for their owners while at the same time improving their own physical conditions. This chapter also explores the support provided via St. Eustatius for the American War of Independence as an example of the scale and significance of its trading domination.

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The success of this trading network led to a relatively large and cosmopolitan population resulting in the densest concentration of historical archaeology sites in the Americas with the most diverse material culture. Architectural technology combines English, French and Dutch methods sometimes within the same structure. Archaeological assemblages at any given site reflect the global reach of St. Eustatius merchants.

Next the chapter discusses the evolution of the eighteenth-century European banking and financial sectors (specifically in the Netherlands and England). This includes tracing the roots of merchant capitalists in the seventeenth century and defining the relationship of the mature banking sector with merchant capital derived from St. Eustatius. This chapter also draws strongly upon economic theory derived from practitioners including Adam Smith, Robert Pollin, John McCusker, Giovanni Arrighi, and Jason Moore.

The combination of theory, documentary and archaeological evidence helps to characterize the extent and value of St. Eustatius' contributions to the Atlantic World economy at the end of the eighteenth century. Finally, the analysis offers a compelling account of how St. Eustatius contributed to the development of global Capitalism. First, the background history of St. Eustatius is explored.

Historical Background

St. Eustatius

In order to show where St. Eustatius fits into the merchant trading picture, we must examine its historical condition from geological and geographical standpoints. St. Eustatius is located in the Northeastern arc of the Lesser Antilles—an ideal position for establishing a trading depot like none seen before or very likely since (Fig. 3.1). Both prehistoric and colonial peoples used the proximity of islands in the Caribbean archipelago as stepping stones for colonization and trade (Armstrong 2006; Armstrong and Hauser 2009; Hofman and Society for American Archaeology 2008). People, ideas and products were easily transferred over great distances with relative ease. Trade winds carried these items from and to the rest of the Atlantic World—especially during the colonial period. St. Eustatius possesses a relatively low geological topography significantly reducing rainfall amounts. The small size of the island combined with its drier climate meant that it was virtually ignored by France and England as a plantation island.

However, the French established the first European settlement on St. Eustatius when they built a wooden palisaded fort at the present location of Fort Oranje in 1627 (Hartog 1997). Prior to this time privateers used the island as a supply station while raiding the Spanish treasure fleets and colonies. The first Dutch West India Company (*Geoctroyeerde Westindische Compagnie* or GWIC) established a fort overlooking Oranje Bay on the southern leeward shore in 1636 replacing the French occupants. Tobacco and cotton plantations were established initially in an attempt

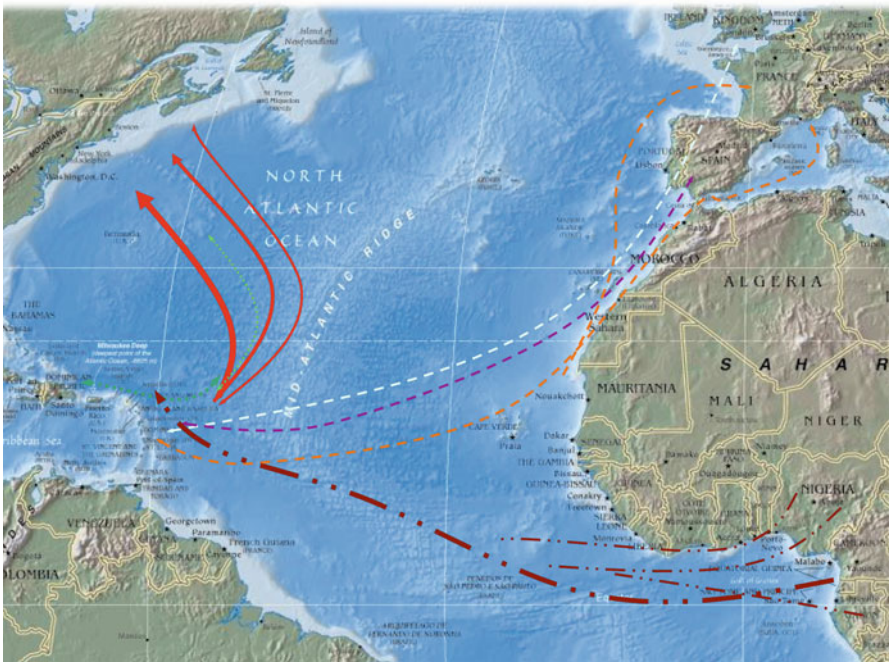

Fig. 3.1 The location of St. Eustatius in the Atlantic World

to develop yet another plantation economy. With the collapse of the tobacco market in the 1680s, the Dutch turned to their more commercial instincts and began building a trading entrepôt instead (Goslinga 1985). By the early eighteenth century, along with Curaçao, St. Eustatius turned toward the slave trade. Slave ships brought their cargo to Statia to be auctioned to buyers from the surrounding islands. Fort Amsterdam, at Oranje Bay's northern end, hosted slave auctions and served to store enslaved Africans. Although slavers periodically came directly from Africa, the majority of slaves were part of the *Kleine Vart*—or inter-island trade (Klooster 1998).

Dutch merchants on St. Eustatius built a unique plantation community differing from those found on other islands during the seventeenth and eighteenth centuries. Merchants lived primarily in the "Upper Town," which overlooked the harbor formed by Oranje Bay, and amongst the 200 warehouses located there (Gilmore 2006a). On St. Eustatius, urban and rural contexts differed in the unique social and economic roles assigned to each. Documentary evidence suggests that plantations were viewed as "country estates" whose economic significance was secondary to the trade occurring along the shore (Gilmore 2002, 2006a). Plantations were owned by merchants and were important as expressions of social status and in the role they played in transforming sugar from a raw product into a more liquid commodity (rum). Sugar planters from other islands (especially Jamaica, St. Kitts and Nevis) utilized this as a means to contravene high taxes on their islands. In fact, as early as 1753 English sugar refiners complained to Parliament that sugar exports from

Table 3.1 Relative shipping activity in European and Colonial ports

Country/Colony	Port	Year	Entering	Clearing	Total[a]
Britain	Bristol[b]	1768	178	–	356*
	London[c]	1777	627	342	969
British N. America	New York[d]	1772	710	709	1,419
	Providence/Newport[e]	1773	–	–	1,661
	Philadelphia[f]	1797	1420		2,840
France	Bordeaux[g]	1786	–	281	562†
	Nantes[h]	1704	–	151	302†
	Marseilles[i]	1787	–	146	292†
Jamaica	Kingston[j]	1764			364
Barbados	Bridgetown[k]	1730			843
St. Eustatius	Oranjestad[l]	1777	2,315	2460	4,785
	Oranjestad[m]	1779	3,551	–	7,102

[a]*Total* is estimated for the ports with a *based on entering ships while those with a †have totals based on ships clearing. Sources for data are [b](Whitworth 1777, p. whit); [c]London (Matson 1998); [d](Withey 1984); [e](Mease 1811); [f]Philadelphia (Clark 1981); [g–i](Walton 1968); [j,k](Schulte Nordholt 1982, p. 37); [l](Menkman 1932, p. 372); [m](Gilmore 2006a)

Jamaica would not satisfy consumer demand, this was due to the illegal Jamaican trans-shipment of raw sugar to St. Eustatius where it is likely they made higher profits by converting this sugar to white sugar. For example, in 1779, St. Eustatius plantations produced a grand total of 13,610 lb of sugar but exported an incredible 25 million pounds (Goslinga 1985)! The economic role of the Lower Town for pan-Caribbean trade is quite clear from both documentary and archaeological evidence. Trade grew even more after the American War of Independence reaching its apogee in the 1790s. Taxes under French and English occupation (1795–1816) and the severe decline of trade on the island after the 1820s (due to a substantial shift in commerce from the Caribbean to the United States) resulted in a massive reduction in population and general urban decay for the next 150 years (Gilmore 2006a).

A Cradle of Caribbean Capitalism: The Place of St. Eustatius in the Atlantic and Pan-Caribbean Trade

It is difficult to conceive today of the place that St. Eustatius once held in the world's trade economy. With our Euro- and Ameri-centric viewpoints, the West Indies no longer seems very important. However, during the eighteenth century the opposite was the case. Called variously the "Golden Rock," "Diamond Rock," and the "New Tyre," St. Eustatius (or Statia) could supply almost any product manufactured in the Old or New World. On St. Eustatius millions of products were bought and sold each year in auctions held in the more than 200 warehouses built along Oranje Bay. During the last half of the eighteenth century, up to 7,100 ships passed through Statia each year (Menkman 1932; Morgan 1993). In comparison, other ports processed far fewer ships during the same time period (Table 3.1). One must keep in

mind that Statia was an island only 21 km^2. If transients (sailors, prostitutes, etc.) are included, the population (about 20–25,000) was equal to that of New York City in the latter eighteenth century (Fenning and Collyer 1976; Gilmore 2004, p. 54; The Annual Register, or a view of the history, politics, and literature, for the year 1781, 1782)!

There were three primary reasons for the success of St. Eustatius as a center for trade. First, the island has an ideally situated harbor on the leeward side and had low agricultural output: left with no natural agricultural promise, *trade was the only economically viable option for residents*. The second reason for Statian success was its ideal location on the busy sea-lanes centrally placed between the northwestern Caribbean islands and those of the southwest (Fig. 3.1). The location was also favorable for taking advantage of wind conditions to trade and transship throughout the Caribbean and the greater Americas. Third, and most importantly, the Dutch West India Company made St. Eustatius into a free port in 1754 (Goslinga 1985; Heijer 1994). Thus, as with today's online auctions, the trade occurring on the island was relatively uninhibited by governmental interaction and commenced at a breakneck pace. Trade in contraband sugar was rampant and the capital value of Statia's entire trade was incredible (perhaps £100 million in 1781).

Thus, the aforementioned three factors combined to make the Golden Rock a corner post in the Atlantic trade and an essential connection for the American colonies to a Dutch global trade network. Dutch East India Company (*Vereenigde Oost-Indische Compagnie*, VOC) ships would ship items from Asia and the Indian subcontinent to Europe and these would then be transshipped via Statia to American destinations.

Dutch and English Banking in the Atlantic World

The Netherlands (Seventeenth Century): The Golden Age

The seventeenth century witnessed the apogee of overt Dutch commercial and military power. Dutch traders extended their influence through great fleets of armed merchantmen protected by a range of technologically advanced naval war vessels. At their height, the Dutch East India Company and the Dutch West India Company controlled vast wealth through trading stations and trading routes across the globe. Spanish influence had waned and French and English forces had yet to rise. In addition to a successful merchant economy, several other factors contributed to Dutch victory during this time, windmills and peat supplied inexpensive energy to growing cities, while sawmills began to supply shipyards with a steady supply of cut timber that could be efficiently used to build a large fleet of ships for worldwide trade and to project military power. The Low Countries also did well in trading on the Continent itself linking east and west and north and south via a web of trading networks. The Baltic trade was of significant importance with almost 1,000 ships involved by the 1680s (Woude and Vries 1997).

This economic growth led to a rapid urbanization of Amsterdam, which in turn attracted more merchants and bankers. Dutch bankers came to be the bankers for Europe with the most favorable terms for commercial loans to be had at that time but charging high interest rates for loans to countries fighting costly wars in Europe or overseas in the New World. A modern stock market engendered a "free trade" spirit with the Amsterdam Stock Exchange founding in 1608, a century before its English counterpart. One year later, the Amsterdam Exchange Bank was founded becoming a major financial force in the 1600s. Significant collateral was required for backing loans, and thus, many merchants were not able to use these financial institutions.

Thus, merchant banks were formed to meet this particular need. Private loans among merchants eventually evolved into formal, government-approved or even government-funded enterprises. Within a few years, the Amsterdam Lending Bank was established to provide low cost loans to less than wealthy customers.

A confluence of factors contributed to the establishment of a global financial center in Amsterdam at this time. During the Eighty Years War the loss of what is modern Belgium drove many merchants that had been based in Antwerp north to Amsterdam. Religious persecution drove waves of refugees including Sephardic Jews (from Portugal and Spain) and later Huguenots from France. Eventually, the Dutch enjoyed the highest per capita income in Europe, and Amsterdam was the financial centre of the world until the Industrial Revolution. A century later, these wealthy merchants and bankers would prove extremely useful in financing the American War of Independence (Augur 1955; Bruyn 1984; De Luca 1996; Hurst 1996; Schulte Nordholt 1982).

The Netherlands in the Eighteenth Century: A Declining Power

During the second half of the seventeenth century, Amsterdam and Holland suffered an economic downturn. As a result, commercial innovation came to an end, industrial productivity dropped, and the population barely grew. Several issues brought about this decline. First, overseas commerce was emphasized at the expense of any sort of industrial development. Earlier in the century, profits from the few industrial activities were reinvested in commercial activities. However, after 1650, money made in commerce was instead invested in land or securities commodities. This along with a lack of raw materials and cheap labor resulted in little to no industrial activity in the Netherlands. Second, skilled workers left the Netherlands with the promise of higher wages elsewhere. Third, tax rates were higher than in other European countries (more than three times the English rate, for example) (Prak 2005). Fourth, Holland fought a series of expensive wars placing a heavy financial burden on the central government that was untenable with declining tax revenues. Fifth, other countries began to cut out Amsterdam's "middle-men" financial services managers and began to invest heavily in domestically owned merchant marine fleets. Finally, France and England invested more creatively in swinging the balance of economic power through mercantilist enterprises during the latter seventeenth century.

British Banking and the West Indies Trade

Opened by Elizabeth I in 1565, The Royal Exchange in London was established to facilitate trade among merchants. It quickly became a center for stock exchange, commodities trading and a central place to obtain information about both. Stockbrokers were expelled during the 1600s and took up business in nearby coffee houses—the direct antecedents of the London Stock Exchange (Brown 1978). Private bankers also established themselves nearby. These bankers took advantage of the instability of the previously dominant Amsterdam banking during Franco-Dutch War (1672–1678) by offering much lower interest rates for loans. Eventually, London displaced Amsterdam as the leading European financial center facilitating merchant exchange, loans, joint-stock companies—all lubricating international trade on a scale not seen before.

Several English financial institutions can trace their roots to this early period including The Bank of England (1694), Barclays (1690), Coutts & Co. (1692) and Drummonds (1717). The Bank of England is the second oldest national bank. The Bank of England was originally a joint-stock company and started loaning to the English government in 1694 (Brown 1978). By the eighteenth century the Bank of England acted more like a central bank including raising money through bond sales. Financial transactions for most government entities were processed by the bank. The Bank of England also backed other London banks and thereby greatly influenced the financial markets and loan transactions. These London banks soon supported the establishing of other banks throughout the country during in the second half of the eighteenth century (including Lloyds Bank (1765)). To support this guarantee system the Bank of England accumulated the majority of England's bullion in its vaults (Wood 2005).

By the end of the seventeenth century whenever companies or individuals needed financing for capital investment or trade a relatively efficient internationally accepted banking system was in place to support it (Cain and Hopkins 1986; McCusker 1978, 1999). Merchants also could have their ships and cargo insured via institutions such as Lloyd's of London (1688) (Brown 1978). After the American Revolution, the business of insuring cargo and ships also found a home in the new United States, primarily in Virginia and New England (Crothers 2004). By the late eighteenth century, if the appropriate fees were paid, then a merchant operating in the Atlantic World could significantly reduce their structural risk through these devices. They could focus on deriving profit from their trading skills (Price 1989; Robinson 1987). A network of middlemen (and some women) known as factors or agents was utilized to represent their commercial interests in far-flung corners of the globe and especially in the West Indies (Checkland 1958; McCusker 1999). English agents based in Jamaica, Barbados and especially St. Eustatius were crucial to successfully moving sugar to Europe, rum (made from West Indies molasses) to the Caribbean and Europe and finished European products to the colonists in the West Indies and North America (Price 1989; Truxes 2005).

As trade flourished throughout the European powers' colonial realms the incentive for central banks to tax colonists on everything they produced and purchased became very strong with obvious consequences for both parties.

Documents and Archaeology of St. Eustatius' Capitalism and War

When historical archaeologists first came to St. Eustatius in the 1960s they found a veritable cornucopia of very well preserved sites. Ivor Noël Hume was the first historical archaeologist to set foot on the island in 1966, and later related the uniqueness of St. Eustatius archaeologically and within the Atlantic World (Noël Hume 1991, 2001). In 1982, Edwin Dethlefson and Norman Barka (1988) dubbed the island "The Pompeii of the New World" due to the incredible preservation of buildings and archaeological sites both above and below the sea. From the 1970s onwards, historical archaeologists have continuously worked on the island, with a permanent presence beginning in 2004 with the establishment of the St. Eustatius Center for Archaeological Research (SECAR). Primary research foci for this author and SECAR have been quantifying and understanding the character of St. Eustatius's contributions to capitalism as a global economic force as well as the island's contributions to supplying and financing the American War of Independence.

Over almost four centuries, Oranjestad on St. Eustatius has passed through several development phases. Outwardly, the island's economy was tied to trading in sugar; however, it was more a combination of tax policy and the diverse array of commodities offered for sale that provided the most significant influences on urban development on Statia. During the colonial period these conditions resulted in the mixing of various cultures through commerce on the island that cannot be found at many other places in the region. Dutch, Spanish, French, English, Swedish, 'Italian', and Jewish (both Ashkenazi and Sephardic) merchants participating in commerce on a massive scale formed this community. Eighteenth-century trade was so great that the island was known as the "Golden Rock" and became the busiest trading port in the world by the 1770s with thousands of ships landing and departing each year. Labor was provided primarily by enslaved Africans in the harbor, warehouses, plantations and they also frequently crewed canoes, boats and ships across the Caribbean in trading for their masters (and for themselves) (Gilmore 2006b). Areas associated with each of these subcommunities provide insights into economic and social relations in this intense business environment.

It was along Oranje Bay's shores that the most significant changes occurred during this time. With the rapid expansion of the illicit trade in guns, gunpowder, and naval stores provided to the French military and the American rebels, dozens of new warehouses were constructed. In total, it is estimated that over 600 buildings including 200 warehouses once stood along this shore. When Rodney sacked St. Eustatius in 1781, the island had just suffered a devastating hurricane only 4 months earlier

(The Annual Register, or a view of the history, politics, and literature, for the year 1781, 1782). When Rodney landed, the yearly rent on these warehouses totaled £1,200,000. Over £3,000,000 was realized from goods that were auctioned from the warehouses in what the 1781 Annual Register described as "one of the greatest auctions that ever was opened in the universe." In addition to this sum, over £4,000,000 in bullion was confiscated from island residents. All of these figures are in eighteenth-century terms. They represent the largest single booty taken in time of war by any nation during the eighteenth century (Lavoie et al. 1995). Some comparisons are in order at this point to put these figures in perspective. Total UK public spending (including defense) was approximately £22,000,000 in 1780 (McCusker 1978, 1999; Mitchell and Deane 1971)—thus at this one short period in Statia's economy there existed the capability of financing all UK government spending during wartime for 4 months. Or alternatively, everything confiscated on Statia would have paid for all public spending outside of defense for an entire year in 1780! Further descriptions of the scale of tiny Statia's economy are detailed later in this chapter. It has been generally accepted that with the British occupation, trade on St. Eustatius suffered a blow from which it did not ever recover; however, this was patently not the case as trade was in fact greater during the 1790s—a decade after the end of the American Revolution.

As mentioned above, Statia was first settled by the Dutch in the 1630s. Trade began to take off in the 1680s and really got going after Statia became a free trade port in 1754. With occupation by the French in 1795, and the resulting removal of free trade status, merchants rapidly abandoned the island for more commercially friendly locales such as the Danish Virgin Islands and Swedish St. Barths. Statia entered a period of general economic decline that resulted in the preservation of an incredible archaeological and architectural landscape—virtually identical to what happened in Newport, Rhode Island (USA) and Williamsburg, Virginia (USA). The volume of Statia's trade is reflected in the table discussed previously (Table 3.1). Philadelphia is the only port in the Atlantic World that even came close to ship numbers coming and going from St. Eustatius during this period.

The cosmopolitan nature of Statia's eighteenth-century population was also unique in contrast with that of other Caribbean colonies. For example, the population of Jamaica in 1785 included a three percent free-black segment—a typical breakdown within a Caribbean slave economy based on monoculture. In contrast, the population breakdown of St. Eustatius includes a free-black population approaching 15%. The only other colonial metropole with a similar percentage of Free Blacks was Charleston, South Carolina (USA) (Gilmore 2004). The agrarian economy of Statia was largely based on so-called "Provision Grounds" which supplied fresh fruit and vegetables to both ship crews and nearby sugar islands such as St. Kitts, Nevis, and Montserrat (Gilmore 2009a). Statia was *the* haven for avoiding sugar taxes on other islands. Fully half the sugar produced on Jamaica was secretly exported to St. Eustatius to be refined into white sugar and then re-exported thereby maximizing profit for planters and merchantmen alike (Gilmore 2004). This conveniently circumvented the profits normally lost through the mercantilist system imposed by most European powers. The headquarters for this trading venture was

the Dutch West Indies Company in Oranjestad's Lowertown. The SECAR partnered with the owners in investigating the history of the complex that dates to the 1730s (Gilmore 2008). A series of watercolors completed in 1774 includes a tantalizing depiction of the Dutch West Indies Company compound (A. Nelson 1774). It was from within this compound that entreaties were sent to convince the GWIC directors that Statia should be made a tax-free port.

Investigations have also been completed for many of the religious properties on the island including the Synagogue, Lutheran, Roman Catholic, Methodist, Anglican and Dutch Reformed Churches. The diversity that coexisted in Oranjestad reflects a cosmopolitan colonial community that could only be found in a few other cities—Kingston, Charleston and Bridgetown for instance. Honen Dalim Synagogue represents the second oldest standing synagogue in the Americas. It has been thoroughly investigated by SECAR and Norman Barka (Barka 1988; Gilmore and Miller 2011). The first excavation conducted under the auspices of the SECAR unearthed the Mikveh or ceremonial bath for Jewish women (Gilmore 2006c). The Jewish merchants were instrumental in tapping into finances that would otherwise not been available to the Americans fighting their War of Independence (Hurst 1996; Jameson 1903; Tuchman 1988). One artifact recovered from test excavations at the Lutheran Church provides an interesting link to the English financial network—albeit a sordid one (Gilmore 2009b). In one test unit what appeared a first glance to be halved silver Spanish 8 Reale piece was recovered. Upon cleaning it became clear that this was most likely an early product of the prodigious Birmingham counterfeiting industry from the end of the eighteenth century (Barrera Coronado 2000). The coins were mostly exported to the Chinese market to disrupt the dominance of Spanish silver. At least one made it to St. Eustatius, illustrating the island's ties to global trade.

Alongside SECAR, University of Virginia (USA) architectural historian Louis Nelson has examined in great detail the standing architecture found in and around Oranjestad. It has been determined that the town reflects a unique combination of architectural technology and styles drawing upon English, French and Dutch traditions not found anywhere else in the region. English building techniques are combined with French and Dutch room designs. Kitchens adjacent to late eighteenth-century homes retain typically French and Dutch ovens and fireplaces while abandoning English norms. One architectural example that stands out is in a home owned by the Van Putten family on Kerkweg in Oranjestad (Nelson and Gilmore 2005). The entire home dates to the eighteenth century and is virtually completely intact with all original elements down to the door hinges. The most interesting part of this structure ties directly with the maritime trade economy on the island. In the fully finished basement are several Dutch yellow brick columns that support the weight of the structure above and spanning the space between these columns are large curved oak beams—the reused ribs of a ship! (Fig. 3.2).

Norman Barka and SECAR have excavated a number of sites on Oranje Bay (Dethlefsen and Barka 1979; Gilmore 2006a). In one instance, a section of one warehouse (SE 316) was tested inside its foundation walls. In about 1.5 cubic meters of soil over 3,000 sherds were recovered. They were a mix of locally produced and imported low-fired earthenware sugar refining vessels. The mix of ceramic types

Fig. 3.2 The full cellar under a 1750s merchant's home in Oranjestad, St. Eustatius that exhibits the reuse of ship's rib as arch supports

with identical uses was examined in Miller's (2008) thesis. A possible local clay source has been identified and is currently undergoing Instrumental Neutron Activation Analysis (INAA) through Leiden University. Here, and in other areas along Oranje Bay, deep stratigraphy tells a story of destruction and rapid rebuilding. Mid-seventeenth century archaeological deposits right on the water are over 2 m deep. One particularly interesting stratum is a thick deposit (25–40 cm) of bituminous coal that is a type often used in blacksmithing or metal smelting. The stratum was identified in excavations over 100 m apart and was likely the result of a ship sinking during a storm. The cargo would have been used on the island perhaps in the local ceramic industry as well as the aforementioned smithing. By the mid-eighteenth century as trade was taking off, Statia's landscape would have been devoid of any local fuel sources—merchants and tradespeople would have had no choice but to import what they needed. In this case, the choice was clear, coal provided the most BTUs per unit (Bealer and McRaven 1984) and would have been good ballast for a ship on a journey to pick-up Caribbean sugar.

Profit making was the sole purpose of the economy on St. Eustatius. As a result, not only are there hundreds of coin types, there are several that were produced on the island to make up for shortages in small change (Salamanca-Heyman 2004). Recently, a fine example of a Roman *Sestertius* from the third-century AD depicting Concordia on the reverse (Gilmore 2010) was discovered on the island. It is interesting to note that the coin was found on property owned by one of Statia's more

illustrious governors—Johannes de Graff. One of De Graff's many plantations was named "Concordia" and it was he who authorized the famous First Salute of the Continental Brigantine *Andrew Doria* (Du Sart 1791; Jameson 1903).

The diverse origins of artifacts found across St. Eustatius is reflective of its pre-eminent position in the Atlantic trade (Gilmore 2009a). For example, a typical bottle assemblage usually reflects the most influential European colonial powers on Statia's history and economy. A mix of English, French and Dutch bottles are found on most archaeological sites. The same goes for ceramics. On free black, enslaved African, warehouse and plantation big houses often a range of French St. Onge, English pearlwares, Mexican greywares and Dutch coarse earthenwares are found (Gilmore 2004, 2009a, p. 200; Gilmore and Reid 2013). Archaeologists working on the island must be intimately familiar with virtually all sources of colonial ceramics and how to identify them. One early nineteenth-century visitor commented on the magnificent ballroom with silk wallpaper and crystal chandeliers on the Pleasures Estate Plantation (Teenstra 1836). This was clearly an ostentatious display of wealth for the owners. Cannon and anchors also reflect the diversity of visitors and their extensive trading networks with English, Spanish, Swedish, French and Dutch guns all found on the island (Stelten 2010).

There are some classic examples of budding capitalists in Statia's colonial history. For instance, Olaudah Equiano's trade through St. Eustatius brought him enough returns to purchase his freedom (Equiano 1999; Gilmore 2009a). This little focused upon fact surely reflects the capitalistic environment that engulfed the island during the last 50 years of the eighteenth century. Documentary evidence also exists of free blacks taking on free black apprentices. Also, surviving ship muster roles regularly describe slaves crewing inter-island traders with only the captain and mate being free—a circumstance rarely found anywhere else in the Caribbean (Gilmore 2004, 2006b, 2009a). Surely there must have been great incentive to remain with the ship. Equiano's description of his ability to trade alongside the crew for his own profit is the most likely explanation (Gilmore 2009a).

During 2008–2010, the author also excavated a portion of a free-black village on St. Eustatius. The material cultural remains indicate an upwardly mobile community where housing and personal possessions improved incrementally over several decades. Architecture on the site evolved from wattle-and-daub post-in-ground housing to shingled wooden structures on stone foundations. Material possessions developed to the point that even hand-painted porcelain was relatively common. Alongside these changes, a sociologically permissive atmosphere prevailed in which West African religious practices not only survived but actually openly flourished. For example an earthen ritual mound containing a gold offering was uncovered at the axes of property boundaries on this site (Gilmore 2013).

The number total known sites is now close to 1,000. The entirety of the Netherlands has 15,000 archaeological sites, and thus, St. Eustatius possesses fully 12% of the archaeological sites in the country. SECAR is now curating over 750,000 artifacts. Thus, the Statia landscape is one of the richest archaeological resources in the Americas. A primary research focus has been answering why this richness was present on tiny Statia and what impact it had economically on the Atlantic World.

In a few short decades, Statia's trade network was global extending well beyond the Atlantic World.

Research at the International Center for Jefferson Studies, uncovered the ties that bound many of America's so-called Founding Fathers to St. Eustatius. Of the over 150 generally accepted Founding Fathers, over 30 had some relationship to the island. A few examples can be provided here. Benjamin Franklin and many others requested that all official correspondence be sent via "neutral" St. Eustatius as this would facilitate the most expeditious communications between the Americans and their Continental allies and supporters (Gilmore 2013). Franklin's position as head of the Secret Committee of Correspondence as well as the future first Postmaster General required that he be especially knowledgeable about getting documents and other correspondence quickly across the Atlantic. George Washington mentions the supplies obtained via St. Eustatius numerous times in his correspondence (Chase 1994). Like Franklin, Jefferson expected that his mail (and packages) be delivered with speed and discretion. St. Eustatius came through for him on a regular basis—one letter packet was delivered to Monticello 13 days after departing the island!

As America's first Ambassador to The Netherlands, John Adams helped to engineer what has stood as the longest peaceful relationship between two countries in history. Based in Leiden, Adams could quickly travel to Amsterdam or The Hague to induce merchant bankers or the government to help the cause for independence. Adams (and his son's diary written in Leiden) provides an intimate look at exactly to what degree the merchant class in Holland were involved in bankrolling the revolution. In 1781, when the island was sacked by Admiral Rodney and General Vaughn, this severely disrupted the flow of capital to these individuals and delayed by over a year the completion of loans negotiated by John Adams (Adams and Donovan 1965).

After lawyers, merchants made up the occupations of the bulk of Founding Fathers. As such, many had direct family and business ties to the island that greatly facilitated communications regarding war materiel, loans and other supplies to keep the American War of Independence going. Pennsylvania's Lewis Morris (1726–1798) married the daughter of leading New York merchant William Walton who had strong ties to St. Eustatius all the way back to the Seven Years War (French and Indian War) (Truxes 2008). Another highly successful merchant and signer of the Declaration of Independence hailing from Pennsylvania was George Clymer. Clymer apprenticed with his uncle and eventually during the War, his son traded extensively with St. Eustatius (Three Generations of the Clymer Family 1885). The brother of New York's Robert Livingston, John Livingston, traded extensively during the war between New York and St. Eustatius. James Monroe was the fifth President of the United States and author of the "Monroe Doctrine." He was the last Founding Father to pass. A significant question that this researcher was able to address is whether his familial ties with the West Indies were an influence on his politics. Born in 1768, Elizabeth Kortwright (Kortright) married James Monroe in 1786. She was the daughter of Lawrence Kortwright, an extremely successful merchant in New York City. He in turn was the son of a successful New York merchant, Cornelius Kortwright. He was a descendant of the Kortryk family who immigrated to Nieuw Nederland in the seventeenth century.

Lawrence ran a small fleet of privateers during the French and Indian War alongside his brother Nicholas (Abbott 1922). The two Kortwright brothers helped arranged the passage and education of Alexander Hamilton through their company Kortright and Crugar (Chernow 2004). Elizabeth's sister, Hester, married Alexander Nicholas Gouverneur in 1790. Another Kortwright sister, Mary, married Thomas Knox an attorney and relative of Henry Knox in 1793. The final Kortwright sister, Sarah, married John Heyliger related to the Heyligers of St. Eustatius and the Virgin Islands.

Henry Knox, the first Secretary of War, was the son of William Knox—a merchant born on St. Eustatius. William eventually died there as well (Drake 1873). It appears that William Knox was closely related to Alexander Hamilton's religious mentor, the Reverend Hugh Knox.

Many historians have discussed Alexander Hamilton's Caribbean roots (Chernow 2004). However, few have pursued what it meant for him to visit the island on a regular basis while running the Cox trading firm on St. Croix. Not only that, his grandmother was born and died on St. Eustatius. His mother and biological father visited Statia for a christening with him and his brother in tow while they resided on Nevis. It is not difficult to believe that these visits shaped his view on the West Indies and facilitated trade and correspondence to further the war effort against Britain.

An illustration of the direct connection between St. Eustatius and the fledging United States involved a special trading mission that was first discussed by William Griffiths (1893) and J. Franklin Jameson, a founder of the American Historical Society (Jameson 1903). The sovereignty of the United States was first recognized here when on November 16, 1776 a salute was fired from Fort Oranje in reply to a salute by the Continental Navy brigantine Andrew Doria (Tuchman 1988). The merchants on St. Eustatius provided much of the arms, gunpowder and ammunition used by the rebels in the American Revolution.

Named for the most celebrated sixteenth century admiral, the *Andrew Doria* was one of four ships authorized by the Continental Congress to form the first Navy of the fledgling United States. Formerly named the *Defiance*, the merchant brig was converted for war by Wharton and Humphrey's Shipyard in Philadelphia during late 1775. *Andrew Doria* set out on its first assignment on 4 January 1776 under the command of Capt. Nicholas Biddle. Capt. Biddle guided the *Doria* on a number of successful raids and captured several enemy vessels throughout 1776 (Navy 2004). John Paul Jones, the Revolution's most illustrious naval hero, captained another vessel in the small fleet that raided a British garrison in the Bahamas.

Biddle was transferred to another ship in September 1775. Captain Isaiah Robinson took command and was ordered to go to St. Eustatius to obtain munitions and military supplies. The *Andrew Doria* also carried a precious cargo to St. Eustatius—a copy of the Declaration of Independence (Griffis 1893).

The *Andrew Doria* was flying a flag long expected at St. Eustatius—the Grand Union Flag—representing the newly independent Colonies (Griffis 1893). When the brigantine pulled into Oranje Bay, she fired 13 guns in salute. The commander of Fort Oranje consulted the governor Johannes de Graff before firing a return

salute of 11 guns—the standard practice at the time to fire two less than the ship. The salute was a significant diplomatic move by the Dutch Governor as the Netherlands was ostensibly neutral in the conflict (Tuchman 1988). The British added this to a list of grievances against Holland that would later force them to secretly declare war in 1781. The governor of nearby St. Kitts immediately dispatched a ship to England to tell Parliament and the King the news—that Holland was the first foreign power to recognize the United States. During her voyage back north after loading with arms, guns, gunpowder, and other military and civilian stores, she captured the HMS Racehorse during one of the more celebrated naval engagements of the Revolutionary War.

The trade in arms and ammunition continued at a frentic pace with some historians indicating that the majority of shot and gunpowder unleashed by the American revolutionaries during the 1776–1781 period being procured through direct trade with St. Eustatius (Reynolds 1965; Tuchman 1988). Thousands of barrels of gunpowder and tons of lead were brought into the colonies, especially Virginia. Colonists traded tobacco, cotton and indigo for the arms. The war materiel was vitally important as indigenous supplies were woefully inadequate. The trade was only cut off in 1781 through Rodney's sacking of Statia.

Conclusion

> It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own self-interest (e.g., profit) (Smith 1776, p. 456).
>
> Every individual necessarily labours to render the annual revenue of the society as great as be can … he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention … by pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it (Smith 1776).

The Dutch Overseas colonies were inextricably tied to the banking systems in the Netherlands and in England. During the height of trade on St. Eustatius, the colony became the source for the capital that many banks used for loans to other merchants, industrialists and other investors throughout the colonial world. Previous examinations of banking and capitalism have completely ignored the place that the West Indies and in particular St. Eustatius, had in the development of Free Trade and Capitalism itself. That is all except for the grandfather of economic history—Adam Smith. Free trade did not start with the English free ports act of 1766. Instead it started with the free trade agreement granted by the Dutch West Indies Company in 1754 after being persuaded by Statia's governor at the time—Jan de Windt (Karras 2003). Other ports were places where "free trade" was commonplace such as Monti Christi on Hispaniola or New Amsterdam were not officially sanctioned by law and instead the government merely overlooked violations (Gardner 1988).

Over the course of the eighteenth century, economies evolved out of the "putting out" system whereby capital was expended to purchase labor (free and waged)

to manufacture finished products from imported raw materials. As the industrial revolution progressed due to a confluence of factors in England (cheap labor, better transportation, and more efficient use of energy resources in the form of coal and water power), capital providers came to own factories and machinery (Smith 1776, p. 57). Beginning in the 1780s, and corresponding precisely with the economic explosion on St. Eustatius, the industrializing economies in Europe began to grow enormously (More 2000).

Alongside this economic growth, many governments from the fifteenth century onwards attempted to regulate trade for the benefit of the nation on the local, regional and international levels. It was not until Adam Smith put ideas to paper that the benefits of a true "free trade" across international borders and even oceans was made clear to citizens and businesses everywhere. Smith's ideas took time to be implemented in most places—however, as he used St. Eustatius as an example, Statia reflected the tremendous advantages of a true free trading environment.

Arrighi and Moore (Braudel 2002, pp. 59–60) argue that finance capitalism:

> was no newborn child of the 1900s, I would even argue that in the past, in say Genoa or Amsterdam, following a wave of growth in commercial capitalism and the accumulation of capital on a scale beyond the normal channels for investment, fiancé capitalism was already in a position to take over and dominate, for a while at least, all the activities of the business world.

As Robert Pollin has pointed out, the idea of recurrent and protracted phases of financial expansion poses a basic question: "Where do the profits come from if not from the production and exchange of commodities?" There are three possible answers to this question with each pointing to a different source of profits. First, there is a redistribution of profits within the capitalist class as some capitalists are making money at the expense of other capitalists so that there is no expansion of profits for the capitalist class as a whole. Second, by either by breaking previous commitments to workers and communities or by inducing governments to squeeze their populations to make payments to their capitalist creditors so that profits for the capitalist class as a whole expand because these financial deals enable capitalists to force a redistribution of wealth and income in their favor (e.g., a *diversion of profits from Britain to St. Eustatius capitalists*). Finally, "financial deals can be profitable on a sustained basis… if they enable capitalists to move their funds out of less profitable and into more profitable areas of production and exchange."(Braudel 2002, p. 61). Thus, sustained financial expansions materialize only when the enhanced liquidity preference of capitalist agencies is matched by adequate "demand" conditions. Thus, *Statia became the first truly free port in the Caribbean, smuggling goods into British American colonies to circumvent levies and taxes before revolution and supplying goods during the revolution blockade* (Jameson 1903).

The history and material culture of St. Eustatius in the Dutch Caribbean epitomizes "The Archaeology of Interdependence." As the nexus for international trade in the Atlantic World during the latter eighteenth and early nineteenth centuries, St. Eustatius provided the single largest and most efficient conduit for people, news, correspondence and trade items during this time. The material cultural record in

both archaeology and architecture reflect the cosmopolitan society geared toward unfettered capitalism in the first free trading port in modern times. A mix of nationalities, languages and religions found in few places in the colonial Atlantic World significantly benefited the establishment of the United States as an economic and military power during its formative years.

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Chapter 4
World Powers at Play in the Western Pacific: The Coastal Fortifications of Southern Cebu, Philippines

John A. Peterson

Introduction

The Pacific was a "Spanish Lake" throughout the sixteenth to the eighteenth centuries, long before it became an "American Lake" in the twentieth century. Spanish exploration and the galleon trade from Manila to Acapulco beginning in the late 1500s dominated the region and the sea lanes and they were largely uncontested in the region. In Southeast and Island Southeast Asia, however, conflict among European powers was intense in competition for the spice trade, and also, indirectly for control of trade with China. English and Dutch mercantile interests competed for an edge in the market from India to Malacca to the spice islands of Molucca, but also contested the edge of Spanish Empire in the region. The British captured Manila from 1762 and held it for 20 months as an action of the "Seven Years War" fought in Europe between the British and the French and Spanish; by the 1770s the Spanish were eager to ally with France against the British in support of American Independence. The support of the French, of course, proved to be pivotal in the American War of Independence. As noted elsewhere in this book, four times as many French as American soldiers fought the British at the decisive battle of that war at Yorktown, Virginia.

In this remote corner of the world the British conducted a proxy war against their Spanish geopolitical enemies. Using trade, promoting piracy on the high seas, and enlisting native Taosug and Iranun seafarers, the British impetus was to at least pester the Spanish colonies in the Philippines, and, by sea in Guam and the northern Marianas. Pirates like William Dampier harbored in Zamboanga and English flagships captured ports in the Sulu Sea; the British East India Company traded down-the-line with maritime, Moro pirates like the Taosug, promoting a proxy war in the region. The Taosug took weapons and powder in return for captured Visayan slaves,

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mostly women from raids against villages in the Spanish colonies in the southern Philippines, for exchange by the British (and Dutch and Portuguese) in Malacca. Trade wars, piracy and alliances with indigenous peoples were common elements in the British strategy for global hegemony.

The Spanish also joined in battle to retake key positions abandoned in the Louisiana Territory in North America, they lent and gave funding to the colonies, and they maintained their hegemony of the Pacific lanes from Manila to Acapulco and along the Pacific Coast of California. There was one chink in their armor in the western Pacific in the centuries prior to the 19th, however, and the English fought a proxy war there with the Spanish against their southern Philippines territories in alliance with native seafaring raiders who had controlled the region for centuries and brokered trade among all outsiders including the Chinese, the Portuguese in the sixteenth century, the Spanish in the sixteenth and seventeenth, and the English and the Dutch in the eighteenth century. They were enlisted as trading partners and also as proxies for hegemony in the Pacific as a microcosm of conflicts in Europe and the New World as well. Ultimately, though, it was the Taosug and the Sultanates who ruled the region, and the sacking of the English trading settlement at Balambangan in 1775 was testament to the fierce control they would exercise in the face of trading for guns and powder, slaves from the southern Philippines, and trepang (dried sea slugs), birds' nests, wax, and daumer (resin for caulking) for the Chinese market.

The Spanish Lake

When Ferdinand Magellan sailed into the archipelago now known as the Philippines in 1521 he carried with him a navigator who was the first person to circumnavigate the globe. His name was Enrique, a Malay navigator whom Magellan had captured in 1511 during his earlier journey to Malacca, when Magellan was sailing for the Portuguese Crown. Enrique knew the region and Malay family languages, and likely knew the archipelago. Magellan had closed a loop on the exploration of the globe but also forced a wedge into the region for the Spanish Crown by expanding Spanish hegemony over the western Pacific that had been contested by Portuguese control of shipping to the Moluccas and the rich treasures of cloves and black pepper and other spices bound for Europe.

The impact of this voyage is still felt today in the region. Spanish culture, town planning, and governance prevailed as an overlay in the region for almost 400 years until ceded to American control in 1898. For the entire period the Philippines were drawn into Spain's European political machinations and they were played out in proxy in this far corner of Island Southeast Asia.

Magellan's voyage was met with defeat in the battle of Mactan and the remnants of his crew scattered south and then west through Malacca and, in due course, back to Spain. His crew and his chronicler, the Italian Antonio Pigafetta, repeated Enrique's accomplishment and laid the basis for compliance with the Treaty of Tordesillas. The first successful colonizing venture was that of Legaspi in 1565 who led a return to Cebu. There they claimed to find a religious relic, the statuette of the Santo Niño, that

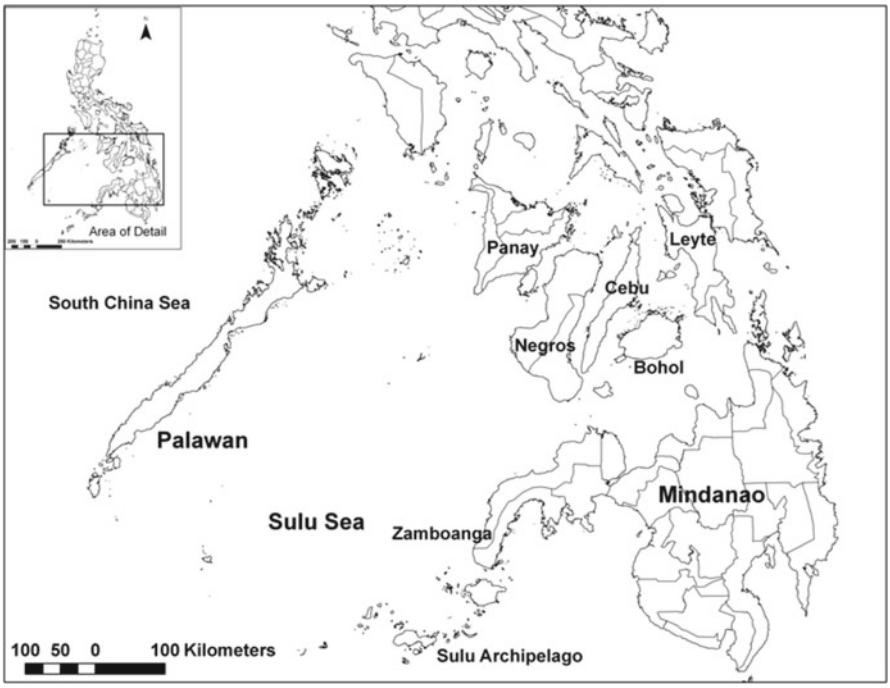

Fig. 4.1 The Sulu Zone, with principal areas discussed in text

was said to have been abandoned during Magellan's voyage. It became the founding icon of the Spanish claim to the Philippines. A church was erected, and the small Spanish force set about exploring the area for support and alliance (Peterson 2005).

Within a few years Legaspi expanded from the Cebu settlement because it lacked sufficient surplus to support the native Visayan population as well as the Spanish garrison. Moving first to Iloilo-Iloilo City in Panay, and then soon after to the Bay of Manila, the Spanish expanded their command of the region and also positioned themselves in the aegis of trade with China—the true fruit of the Spanish incursions into the region. By now they had ceded control of the spice trade in the Moluccas to Portuguese, then Dutch, mercantile traders, but a capital in Manila situated the Spanish enterprise in a prime trading relationship with China. The legendary Manila galleon trade emerged from Manila Bay as well as, less frequently, Cebu, and at least until Mexican Independence in 1821 several galleon fleets each year plied the seas between the Philippines to Acapulco and thence to coastal ports in Mexico before returning to the Philippines. The galleons carried porcelain and silk to the New World for transshipment to Spain as well as trade in Mexico, and they carried Mexican silver pieces for trade to China. The trade declined as early as 1810 with the first volleys of the Mexican Revolution.

The province of Cebu, along with the southern Visayan islands of Bohol and Negros, were at the fringes of Spanish power and control (Fig. 4.1). A fort and trading center had been established as early as 1635 in Zamboanga, on the western coast of Mindanao, but it was fitfully occupied as it was subject to raiding by the navies

of the Sulu sultanate as well as English pirates. Chinese junks had traded at Zamboanga, but less frequently, and the garrison and fort was turned over to the native community in 1663. The English pirate Dampier visited the ruins in 1686, but it was abandoned until 1717 when it was restored by the Spanish (Spoehr 1973, p. 38). In 1798 it was attacked by an English naval force and multiple times by Sulu gunboats in the Moro Gulf. The southern flank of the Philippines colony was exposed and poorly armed, and was subject to constant raiding by "Moro raiders" throughout the first few hundred years of the Spanish enterprise.

Legaspi's chronicles report a raid by "Moro raiders" in 1563, shortly before his forces commandeered Cebu. The raid had attacked Visayan villages on Bohol Island, situated to the east of Cebu, and had led to the destruction of several, as well as the forced evacuation of 2,000 villagers (Peterson 2003). Half of them resettled in the village of Tanjay, in Negros on the opposite side of Cebu. They doubled the population of Tanjay literally overnight. The villages of Bohol and Tanjay were sites of Spanish *visitas* that were visited occasionally by an itinerant priest, and later, Baroque churches, as the Spanish expanded their missionary incursions in the region. The first of the magnificent coral limestone churches were built in Dauis in Bohol, in Tanjay, in Cebu City, and a few other locations as early as 1580. The churches with their paved floors and splendid altars were the physical presence of Spain in the region, and from these the Spanish perfected the practices of *reducción* and *encomendero*, as already introduced in Spain's North American colonies. At first, natives were brought in from the hinterland to settle in the vicinity of a church, and, sometimes, a garrison. *Encomendero* was the practice of granting sovereignty over lands and people as rewards for valor as well as lordly rights. The *encomendero* was the patron of the hacienda as well as the lord of surrounding lands, and with an admonition from Queen Isabella to practice Christian tolerance and ethics, was given considerable leeway in his administration of the territory.

Unfortunately for the Bishopric of Cebu, the *reducción* was plagued by non-attendance and the *encomenderos* were mostly afraid to travel into the interior of Cebu. The high mountain cordillera that formed a rugged spine in the center axis of Cebu was heavily forested and steep. The only practical travel through the island was along the coast on a narrow "camino real," and by sea. The latter had been the preference of native Visayans, whose closest neighbors were often on opposing shorelines in Bohol and Negros rather than adjacent along the coast. The difficulties subduing the natives and enforcing farming in the rugged landscape hindered the Spanish mission in the region. The incursions of "Moro raiding" in the southern Visayas enforced the isolation and tenuousness of Spanish settlement at the edge of empire.

Context of Taosug Raiding

The world powers of the era had played in the fields of the region since the early sixteenth century. Malacca was founded in 1511, and inherited the pivotal role of trading *entrepôt* in the narrow straits dividing what is now Malaysia and Sumatra. Prior to that, throughout the first millennium AD, the Srivijayan Empire had wielded control over that region and brokered Indian culture and power throughout. Muslim

expansion into the region had reached into the Sulu Sea and southern Philippines by the early fourteenth century, and key *entrepôts* were established in the sultanate of Brunei and Sulu (Warren 1985). These powerful Muslim sultanates aligned with the native peoples of the Sulu sea that included Samal farmers and the Taosug, or "people of the current" or sea. The Taosug were a powerful tribal people descended from Visayans in the central Philippines who had migrated into the Sulu Sea sometime "in the last 900 years" (Spoehr 1973, p. 22). They are linguistically Visayan, quite different from the Samal languages of the farmers of those lands surrounding the Sulu Sea. They were renowned as "sea pirates," as raiders as well as traders who frequently invaded the coastal villages in the southern Philippines. They captured brides, slaves, and resources that were carried back to their strongholds in mangrove embayments dispersed along the shorelines.

The Taosug had a vast network of alliances and raiding targets, as well as refuges along the coasts. They no doubt had excelled in this highly adaptive, resilient lifeway for some time, and were probably the raiders who had sacked the Bohol villages as lately as 1563 before the settlement of the Spanish in Cebu. The preference for female captives may be demonstrated by the predominance of women's terms, or words relevant to the hearth, in the language, that appear to have been introduced as more recent Visayan terms. They also were highly prized for trade to the Sultanates and as far to the west as Malacca. Men were captured as well and exported as boat hands as well as farmers, and were exchanged as slaves to distant polities. The Taosug also captured beeswax, trepang (*beche-de-mer*), birds' nests, daumer, and other products of the sea and forest of Island Southeast Asia. These were invaluable items for exchange either first or second hand with Chinese traders visiting the region.

In this complex and dispersed world of ancient trading practices the Portuguese, Dutch, and later the English introduced alien items that were quickly seized on by the Taosug. Of greatest value were guns and powder. Soon after early trading contacts Taosug prahus carried mounted small cannon and rifles, and these enhanced their raiding prowess. The English introduced opium in the 1760s in hopes of addicting the Taosug and other peoples of the region. The effort failed however as Taosug preferred betelnut to opium (Warren 1985, p. 21). They accepted it, though, as a trade good. In exchange, slaves and regional products were provided to the English East Indies Company who in turn traded them to the Chinese.

The Taosug allied with the powerful Sultanates of Sulu and Brunei in this complex inter-trading network, and eventually became brokers themselves. The Taosug allied with Iranun and Balangingi peoples who became the front line in the raiding and trading network in the southern Philippines (Warren 2002). The Iranun and Balangingi themselves had been displaced from upland farms in Mindanao, in the Bukidon area. A terrific volcanic explosion buried their fields and they fled to the coast, where they were eventually recruited as intermediaries in the raiding network.

This violent, dispersed, and complex island network emerged from ancient exchange systems in tandem with the interplay of European powers in the region, as Spain persisted in its Philippines colony resistant to first Portuguese, then Dutch, and then also English attacks. The Taosug became a proxy force for world powers in their enlistment of the Iranun and Balangingi and their exchange of island products and slaves for guns and powder.

Fr. Julian Bermejo

Coastal villagers were largely at the mercy of raiding Iranun and Taosug. They were well-armed and stealthy. They raided with impunity, sacking Spanish settlements as well as Visayan villages. The visita of Sialo, or Salug as locals today call the once lost church, was destroyed in 1622, only 23 years after its establishment as one of the premier parishes south of Cebu City. It consisted of a substantial walled convent and church, and was thought to have been supported by many tithing family heads. The parish was completely destroyed and only recently discovered and excavated (Peterson 2006).

With the growing intensity of raiding in the late eighteenth century, churches and garrisons organized resistance. One of the strongest efforts was in the south of Cebu. The polymath priest Fr. Julian Bermejo, an Augustinian, supervised the construction of forts and watchtowers (Javellana 1997; Montero y Vidal 1894–1895; Perez 1901). He trained local village militias with boat crews and mounted cannon to combat the raiders at sea. The string of watchtowers, or *baluarte*, that he built stretched nearly 100 km along the southwest, southeast, and eastern coasts of South Cebu, from Ginatilan to Tuyom. He supported the local priest of the Oslob parish to construct a massive fort, and oversaw numerous other structures in the region (Fig. 4.2).

Fr. Bermejo was born in Pardillo, in the archbishopry of Toledo, in 1777. He graduated from the College of Valladolid in 1793, and was assigned to the parish of Argao in 1802, and later from 1804 to 1836 to Boljoon (Fig. 4.3). He served in the middle of this as the Provincial Prior at the esteemed Santo Niño Church in Cebu City, and then returned to Boljoon where he served until 1848. This was a pivotal period in the political and military history of the region, and he acquitted himself well as a principal player on that stage.

He is credited with building a line of *baluarte* from Tanong to Sibonga, but the additional towers found during recent island-wide survey must have also been from his oversight or local contributions to the successful resistance against Moro raiding. The line served as an early warning network, using flags like a telegraph system, advising coastal villagers upcoast of approaching raiders. In the pueblos of Argao, Dalaguete, and Sibonga, armadas of *bancos* with mounted *falconetes* (light cannon) were launched against the attackers. In a series of battles his warriors defeated the Moro raiders, and the final battle in the region, on Sumilon Island in 1813, saw the last of the raiding in the region (Fig. 4.4). He also led Visayans against an uprising on Bohol in 1827.

Bermejo was a renaissance man who also wrote a compendium of Cebuan language, contributed general mapping of the region, and wrote *Regla de bien vivir para todos los estados* (Rules of Good Living for All Conditions) for his parishioners (Montero y Vidal 1894–1895). “He taught women how to weave cotton cloth and introduced plants to augment the diet and livelihood of his parishioners.” (Javellana 1997, p. 146). The churches, forts, and *baluarte* that he built are still standing and many are in use in the modern landscape of South Cebu.

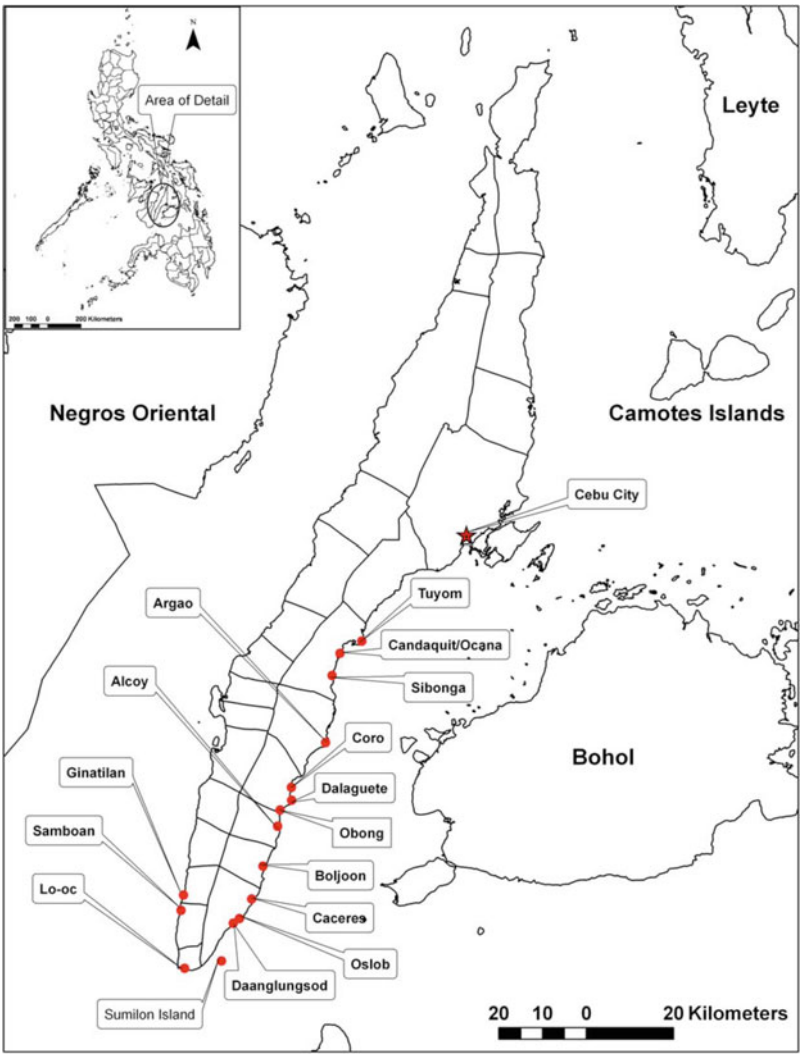

Fig. 4.2 The Province of Cebu showing sites in South Cebu with fortifications designed and built by Julian Bermejo for the defense of the coast

Baroque Landscapes

Several periods of church building populated the coasts of Cebu, beginning in the 1580s with churches at Cebu City, in Bohol, in Bantayan Island in the north, and in Barili on the west coast. In the late sixteenth century the Sialo parish was built (1599), and others were founded in key places along the coasts. Argao was founded in 1703 and a massive Baroque structure initiated in 1734 and completed in 1788.

Fig. 4.3 Boljoon tower and baluarte on hill in background designed and built by Julian Bermejo

Fig. 4.4 Sumilon Island, site of last battle at sea between Moro raiders and Bermejo's armada

Fig. 4.5 Oslob fort, bantayan within walls of 11,000 m^2 fortification

Dalaguete became a visita of Carcar in 1690, and a permanent church was begun in 1802 and completed in 1825. An octagonal three-story belfry was added between 1850 and 1860 (Ramon Aboitiz Foundation, 2004). The Baroque Boljoon church was built first in 1783, but was much expanded in 1808 after Fr. Bermejo joined the parish.

These were only a few of the major constructions in the late eighteenth and early nineteenth centuries. The parish of Oslob was begun in 1830 and completed in 1848, with a massive two-story rectory, surrounding walls, joining a fortress of 11,000 m^2 that had been built in 1788 (Fig. 4.5).

The structures echoed the architectural styles of the Augustinian homeland in Valladolid and central Spain. Baroque in style, with octagonal bell towers and massive free-standing cathedrals, the buildings were also highly adapted to the Philippines. The walls were coral limestone block assembled between massive *molave* posts that supported the weight of the tile roofs. The walls were free-standing shells. They mostly were built without buttressing, relying on the *molave* posts to buffer earthquakes and typhoons that were endemic to the region.

Baluarte were based on massive walls with square foundations (Figs. 4.6, 4.7, and 4.8). They were typically 25–30 ft high. They stood within 100–150 ft from the shoreline. Some, like the northernmost tower in the Valladolid peninsula in Carcar, are now standing in the high tide zone. They are mostly surrounded by bamboo housing and have become pens for prize fighting cocks or animal stables, despite the fact that each parcel is recorded on cadastral maps as “National Property.”

Fig. 4.6 Carcar bantayan, located in village of Bacsije, used as prize fighting cock pen

Archaeology at Sialo, Zamboanga, Boljoon

The site of Sialo or Salug along the central eastern coast of Cebu in the Philippines was one of a dozen or so villages reported by the Spanish during their early settlement of the Visayas from Legaspi's landing at Cebu City in 1565 (Peterson 2005). Its name, meaning "downriver" (Mojares 2000) or "by the river" (Fr. Marion Mejia, personal communication) fixes its location near the mouth of the Inag-a or Valladolid River along the broad coastal plain of the present-day *municipio* of Carcar. Salug was at the frontier of early Spanish colonization, both geographically as a vector along the coast from Cebu City, but also socially and politically. It was here that the intersection of Spanish and Visayan cultures would frustrate the colonial intentions of the Spaniards, as natives would disappear into the hinterlands at the slightest confrontation with state power.

Fig. 4.7 Bantayan sa hari, or baluarte, above shoreline in Alcoy, Cebu

Fig. 4.8 Ruins of Santa Catalina bantayan, inundated in high tide and storm surge. This is the furthest north from Santander and Boljoon

It was also here that the physical settlement along coast and river and into the highlands would confound the Spanish sense of social order. As Mojares writes (Mojares 2000, p. 7):

> … the ginsacopan (Filipino settlement as "following") were prone to fission and new combination (due to the presence of frontiers, the attraction of other settlements, the relative weakness of coercive mechanisms, and the pressures of a slave-raiding and trading economy.) this situation … made for a high degree of fluidity in centers and boundaries.

Where relations of linkage and power were determined by extended kinship and bilateral descent, and the parameters of physical settlement were established by a mosaic of resource opportunities in a tropical landscape, movement and fluidity among both physical and social spaces was highly adaptive and resilient. It was in this setting that the Spanish first aspired to define and to transform native peoples and resources.

The archaeological context of seventeenth-century Cebu reflects this intersection between expectations and discovery. Unfixed and shifting village formations, swidden agricultural practices, and mobility between coastal and highland regimes characterize the few applicable ethnographic models for the Visayas. Excavation investigations at the site of Salug in August of 2002 in the central Cebu *municipio* of Carcar examined an alternate model where patterns of residential mobility and social fluidity are viewed as the determining factors of Visayan settlement. As one of the earliest frontier sites in the early history of Spanish contact in Cebu, Salug provides a touchstone locale in which to center the investigations.

The findings were significant. We expected a simple *visita*, and found substantial limestone foundations nearly 1 m thick (Fig. 4.9). An area in what was probably the church was stone-paved, and was surrounded by calcined lime mortar that was nearly impervious to excavation. Postholes were embedded in the pavings of the floor similar to the structures that have survived to the present from that era (Fig. 4.10). Radiocarbon dating of a paleosol that the foundations were set into dated to between 1000 and 1200 AD, indicating stable climate and pedogenesis during what is called the Little Climatic Optimum in other regions, but from this same period globally.

Sudies of the earthenware sherds from the floor level of the church, that was tightly dated through documentary evidence to ca. 1599–1622, demonstrated continuity with earthenware pottery made from the early first millennium to the present in the Carcar area (Peterson et al. 2010, in press). We conducted elemental analysis using inductively coupled plasmolysis, mass spectometry (ICPMS) and using principal components analysis (PCA), we compared the results for sherds at Sialo, at sites in the region from the same period, and from earlier late Neolithic contexts. We also included modern sherds from a potter in Sibonga who obtained her clay from the nearby Tuyom clay source. The results demonstrated that the modern pottery from the local clay source were a close match, while all the pottery in the floor assemblage matched pottery from villages in the surrounding region, not from the local clay source. Also interestingly, the prehistoric sherds from Bohol across the straits were similar to those on the floor assemblage.

Fig. 4.9 Salug Church wall, 1 m wide beneath modern monument

These results suggested to us that the practice of *reducción* was not very successful, as parishioners must have brought with them their own village pottery, and apparently did not settle in Tuyom and make pottery there. The earlier pottery from 2,000 years ago found on a hilltop site near Napo was very different from the Tuyom source, gratifying to learn since the source clay was from the same paleosol deposit dating from 800 to 1,000 years ago. The relationship of cross-straits pottery may contribute to the ethnographic and ethnohistoric finding that in Island Southeast Asia and particularly in the Philippines neighbors by water may be more connected than adjacent neighbors by land, either along the coast or upslope.

There were abundant Asian export ceramics of blue on white, celadon, and glazed stoneware jars indicating a high volume of trade with outside agents. Little is known historically of that exchange from the Cebu records, except that it must have been massive as quantities of these imported ware far exceeded local wares found in excavations. From the period of the late Yuan Dyanasty, in the fourteenth century, through the early Ming (until the 1420s when Chinese external trade was

Fig. 4.10 Paving in floor of Salug Church, constructed in 1599, destroyed in Moro raid 1622

halted by the Emperor), and again in the late Ming and Qing Dynasties, porcelain and high-fired stonewares flooded the region. During the Ming Gap, blue on white, celadon, and stonewares were traded from Vietnam and the kilns of Thailand.

These results echo findings that Alexander Spoehr reported from Fort Pilar in Zamboanga in Mindanao (Spoehr 1973). A party of 1,000 Visayans and 300 Spaniards settled the fort in 1635. From there in 1636 they intercepted a party of Moros returning from a raid in the Visayas and captured much booty and slaves. After the fort was turned over to the local Christian converts in 1663, the fort was unused for several decades until it was reconstructed in 1719. As Spoehr (1973, p. 41) wrote:

> The fort is square with four bastions. Three bastions have straight flanks and one is in the form of an *orillon*. The fort is oriented with the *orillon*, the fort's defensive strong point, facing the sea. The curtains connecting the bastions are slightly more than 50 m long. The present entrance is at the midpoint of the northwest curtain. The former main entrance was through the northeast curtain but later was converted into the shrine of La Virgen de Nuestra

Senora del Pilar de Zaragosa. The fort covers an area of 7,282 m^2. The moat which once partially surrounded the fort has long since been filled in and the *terreplein* removed. There are four main interior structures.

Excavation units were placed along the base of the exterior walls, in the kitchen area, under a cement floor in an interior building, and in a series of units in a transect outside the fort to the west. The latter were excavated into highly disturbed fill, and those along the exterior walls had only a few broken roof tile. The kitchen unit inadvertently exposed a buried tunnel and had to be backfilled to protect the security of the school occupying the interior of the fort. The unit in the structure however exposed four prepared floors overlying a midden containing sherds, mollusks, tile fragments, and animal bones. A series of postholes were found containing charcoal and in one, a fragment of lead. Spoehr concluded from the tile and lead in the midden at 1.40 m below ground surface that the site of the fort had been occupied somewhat before the structure was built (1973, pp. 61–72).

Three ceramic types were discovered, including a Pilar Gray with plain, impressed, and decorated wares. Pilar Red had plain as well as impressed and incised forms, and was found in the same frequency at level with Pilar Gray. Pilar Brown appeared in lesser frequencies in the same levels. Spoehr concluded that all three were utilitarian wares and that the first two were probably from outside the fort in the region, and that Pilar Brown might have been made and used by the troops of the fort as it appeared to be the same material as used in the roof tile. There were also seven pottery pipes found of Pilar Gray, Pilar Brown, and from a carved roof tile (1973, pp. 135–162).

Large quantities of Asian export pottery were recovered from the unit, including Chinese porcelain blue on white, celadon, and glazed stoneware. From the descriptions it appears to have been from very late Ming into Qing Dynasty, similar to the assemblage found in the Sialo excavations at Carcar. The quantity suggested a higher volume of trade than expected. Historical records indicated only one to a few Chinese vessels stopping at Zamboanga each year. The vessels were huge, however, displacing 200–465 t, and one ship would have carried hundreds of thousands of ceramic vessels into the region. By 1830 only two junks from China visited Sulu, but each carried up to 800 t (Warren 1985, p. 6). The volume of Asian export sherds in archaeological sites during the period from the early fourteenth through the seventeenth century suggests considerable trade, but the volume carried in each vessel may have flooded local markets on their infrequent voyages. In addition to Chinese ships, Sulu prahu traded at Zamboanga, and in 1800 as many as 60 were reported to have exchanged Chinese porcelain wares at the port (Spoehr 1973, pp. 192–199, 264).

Spoehr's excavations provided a local history and documentation of the formation period of the fort, and provided some data on the character of the pottery of the Samal peoples in the area coexisting with the Spaniards, but suggest that they remained aloof from the life of the fort and may not have occupied the site before the arrival of the Spanish. A similar disembedded character emerged from the archaeological studies at the Sialo church in Carcar, where the local Visayans did not appear to have lived in the Spanish sites, but actively exchanged with the

Spanish, and participated in the occasional but high volume of trade with the Chinese and proxy traders.

At Boljoon, excavations by the University of San Carlos over several recent years exposed numerous burials in the churchyard of the parish built up by Julian Bermejo from 1804 (Bersales and De Leon, 2012). The burials range in age from pre-Spanish through possibly Spanish occupance of the region, but probably not at the site at the time. In all, 53 burials have been recovered ranging in age from the early sixteenth century to the early seventeenth century. This was a very narrow period just prior to Spanish settlement of the Philippines, but much earlier than effective Spanish settlement at Boljoon. The *visita* was established in 1599 as one of eight parishes of Carcar, but was separated into its own jurisdiction in 1692. It was 1783 when the first church was constructed. The age of the burials suggests that they were coeval with the earliest parish on the site, despite the absence of any structural evidence of the earliest *visita*. Likely it would have been modest and of thatch over a pole structure, with possibly a palisade wall, and so would have left little trace.

The material culture associated with the burials is interesting and demonstrates a vibrant lifeway, with decorated earthenware pottery along with Asian export pottery from China and Southeast Asia. Both Chinese and Japanese ceramics from the seventeenth century were recovered from burials, along with iron tools, pendants, and chain necklaces. The burial assemblages are a mix of elements reported from pre-Spanish sites such as Plaza Independencia in Cebu City (Nishimura 1992), and Spanish period burials reported from elsewhere in the Philippines. Iron age decorated earthenware and iron tools such as hafts of *kris* swords date from ca. 500 AD up ca. 1500 AD, and this aspect of the assemblage is coeval with obvious Spanish introductions. The metal predates Muslim and Spanish entry to the region (early fourteenth and early sixteenth centuries, respectively), and yet there is no evidence of local manufacture. Comparative investigations with Indonesian and Malaysian sites from the first millennium AD may unearth connections with Srivijayan control of trade through the region, and dispersed trade throughout the Sulu Sea and the Philippines. The trade network in place before the arrival of the Sultanates and the Spanish was likely very robust, trading down the line much as was practiced and documented in the Sulu zone of the eighteenth and nineteenth centuries.

Historical Preservation of the *Baluartes* and Churches

The historical landscapes of South Cebu are still evocative of the Baroque period of Spanish Settlement. South of Carcar the terrain is still rural and agrarian, with peasant and tenant farming of coconuts, corn, rice (in paddy systems along the coast as well as upland near artesian spring sources), bananas, and vegetables. The life of the local populations is still centered around the church and the ecclesiastical calendar. The structures from the Spanish period from 400 to 200 to the late nineteenth century are still intact and occupied. The period of 200 years ago is most pronounced in

South Cebu owing to the later settlement of the margins of the Spanish occupation, but also to the oversight in the region of Fr. Julian Bermejo who energetically fused the secular and the Catholic through Church practice and militia organization. His introductions of Spanish military and church architecture along with organization of militias and the early warning system along the coasts effectively incorporated the native populace to the service of both the defensive and the religious life of the communities along the shore. No doubt Bermejo also attracted tenancy in the vicinity of the churches for protection as well as access to the economic practices that he instilled among his parishioners.

The late eighteenth and early nineteenth centuries was a critical period in world history where European powers allied against the British in new and old worlds, and acted out these alliances and hostilities in Island Southeast Asia in muted and indirect strategies. The Spanish and French openly contested British hegemony over North America by supporting the American colonies with funding, materiel, and armed force. The Spanish retook their holdings in the Louisiana territories. They had retaken Manila following its capture by the British in 1762, and defended the galleon trade against English piracy in the Pacific from Manila to Acapulco. The southern flank of the Spanish Philippines empire was vulnerable to piracy from the indigenous Taosug, Iranun and Balangingi raiders, and to sacking of villages and capture of slaves for trade in the complex web of interpenetrating global mercantile capitalist interests in the region. The English did not succeed in that front against the Spanish, however, as their trading post at Balambangan was itself sacked by the Taosug, and their effort to co-opt the Taosug with the opium trade failed in the face of local preference for betelnut. The efforts to enlist native peoples in the interplay of global European powers faltered in the region against the more cunning and resilient strategies of the Taosug, Iranun, and Balangingi. Nonetheless, the local efforts of Fr. Julian Bermejo freed at least one corner of the Spanish Philippine world from attack. The later collapse of the galleon trade and the decline of the Spanish Empire returned the southern Philippines to geopolitical obscurity. The raiding occupied a period of global penetration into the region of global powers who fought a proxy war through the native maritime peoples of the region that subsided as those powers withdrew from conflict in the region.

Heritage Preservation of the Baluartes

The preservation of the architecture and the archaeological landscapes of South Cebu depend on the attention of NGO's like the Ramon Aboitiz Foundation and the Heritage Committee of the present Governor's Offices. Preservation planning for individual projects like the Tuyom baluarte have been supported by the National Commission on Culture and the Arts and the Spanish Program for Cultural Cooperation. The Catholic church has been receptive to preservation efforts and encourage community acceptance.

The structures and landscapes are embedded in the living community as they are part of the religious and community practice of South Cebu. This is evident, in fact, in the various ways that the baluartes have been incorporated into local villagers compounds. The Tuyom *Baluarte* was documented as part of an NCCA and SPCC project associated with the excavations at the Sialo church.

On one occasion we visited the *baluarte* to show the site to the daughter of then President Gloria Macapagal Arroyo of the Philippines, along with the wife of the US Ambassador to the Philippines. We had visited the *baluarte* many times to measure and photograph the structure, and had been treated hospitably by the neighbors who had built up to the structure and used it for storage. On this visit, however, we were suddenly hurried from the area by the Presidential Security Guard, who rushed us to our vans and away from the site.

We learned later that the *baluarte* was used as a storage shed for the transshipment of marijuana and guns from Cebu by way of bancas moored offshore from the escarpment below the watchtower. This contemporary use of the structure led the current neighbors later to discourage our interest in restoring the tower and encouraging tourists to visit. The global interplay of ideology, mercantile capitalism, and conflict still prevails in the region and in the very structures built to resist attacking forces which, in their time, were part of an intricate and dispersed network of power and affiliation, fusing local cultures and polities into far-reaching global dynamics.

This foray into the early colonial history of the Spanish Philippines and the contested maritime terrain of the Sulu Sea demonstrates that the European powers of the late 18th century did not miss any opportunity to harass and disable their geopolitical enemies. In the placid and remote waters of the Sulu Sea, the English enlisted Taosug and Iranun warriors to export their war against Spain into the Philippines. They promoted a proxy war by trading guns and powder for slaves seized in Moro raids against coastal villages in the Visayas. Their efforts to enslave the Taosug with opium failed, however, as the Moro warriors favored betelnut, and may have also abided Islamic proscriptions against use of drugs and alcohol, but the proxy war on Spain had some minor effect on the vulnerable Spanish settlements in Cebu, Bohol, Leyte, and Mindanao. That the conflict was neutralized by a polymath Augustinian priest, Fr. Julian Bermejo, who built fortifications and organized his Visayan flock as militia against the raids, is testament to how marginal this conflict was in the global scheme. Nonetheless, it characterized the proxy and informal character of British strategies for global hegemony.

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Chapter 5
Materiality and Meaning: The Search for the Rochambeau Camp in Fairfax County, VA

Douglas Comer

Archaeology and the Public Good

Archaeology deals with materials produced, altered, or assigned meaning by humans. Surrounded by such material, as archaeologists we must think constantly about what is worthy of investigation, which if done as it should be involves the systematic and therefore time-consuming organization and analysis of materials collected during fieldwork and information gleaned from the examination of primary and secondary documents. Until a half-century ago, such decisions were made according to agendas set by the interests of individual archaeologists and the organizations that provided funding for their work. Typically, the focus of research was on an archaeological site or landscape that promised information that might fill a lacuna in our knowledge of human history or cultural change.

With the passage of the National Historic Preservation Act of 1966 (as amended), archaeologists in the United States were assigned a societal role, one that has grown to dominate the field. Regulations that implement that legislation now direct archaeologists to inventory federal public lands, or any lands that are to be developed in ways that involve federal funding or require federal permits. Most states and many local governments have established similar legislation and from that have developed similar regulations. Archaeologists are to advise society on which of the multitude of material remains that surround us are important and why and how they should be protected. Thus it is now incumbent upon archaeologists to think carefully about this societal role, and therefore how best to contribute to the public good.

Paul A. Samuelson (1954, p. 387), the Nobel-Prize winning economist, defined a public good as one that "all enjoy in common in the sense that each individual's

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consumption of such a good leads to no subtraction of any other individual's consumption of that good." A public good is *non-excludable* (consumption is available to all) and *non-rivalrous* (one person's consumption of the good does not interfere with another's consumption of it). A private good, in contrast, is both excludable and rivalrous. Consideration of the public good is a serious matter. Many argue that knowledge should be a public good, for example, and have used this idea to bolster the case for open access to academic publications, for minimal regulation of the Internet, and to question how the patent system is enforced

The theory of public good is, in fact, very consistent with the ways in which regulations and policy that have stemmed from the National Historic Preservation Act of 1966 have been implemented. Information gained from archaeological research is shared with the public, and so is non-excludable, except for that which would reveal the location of materials not yet excavated that can not be effectively protected against looting. Making this information available to all would render access to archaeological resources rivalrous, and the resources would no longer be a public good.

In this chapter, we will explore the concept of archaeology as public good by using as a case study research undertaken to discover the location of an encampment utilized by the French army under General Rochambeau in 1781 and 1782. Only the supply wagons of the French army occupied the encampment in 1781, as the French army traveled south to participate in what proved to be the pivotal battle of the Revolutionary War, the Siege of Yorktown. All of the French troops encamped at the same location, over a period of several days, as the army returned north in 1782.

The public good in the case of the French encampment introduces issues beyond a consideration of how information gained from the research should be disseminated; it raises questions about commemoration and why and how that should be done. Archaeologists, coming from a tradition of academic research, often do not think in terms of commemoration. Nonetheless, a look at the criteria for listing a site on the National Register of Historic Places clearly indicates that commemoration was an intent of the legislation. These criteria are as follows:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
> A. That are associated with events that have made significant contribution to the broad patterns of our history.
> B. That are associated with the lives of persons significant in our past.
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.
> D. That have yielded, or may be likely to yield, information important in prehistory or history.

Few in the field would dispute that archaeologists are most comfortable with criterion D; in fact, it is likely that most of the non-structural archaeological sites nominated to the National Register make exclusive use of that criterion, which deals with the historic and scientific knowledge that has been or might be extracted from the site. Criteria A and B unquestionably deal with commemoration, although one

might also note that because criterion D mentions information that has been extracted from the site, and not just that which might add to our knowledge in the future, commemoration is clearly a concern here, too.

Epistemology, Archaeology, and Commemoration

Commemoration is the act of establishing shared memories. Maurice Halbwachs (1992), in a widely read work, argued that human memory could only function within the context of a collective memory, which is different for different groups. Many scholars have made the case that commemoration is an element in constructing an historical narrative (Gillis 1994; Nelson and Olin 2003, Introduction; Connerton 1989, pp. 26–27). The individual finds her or his place in this narrative. Commemoration can be by means of constructing monuments, engaging in ritual performance, storytelling, written accounts, or acknowledging special places. The philosopher Paul Ricouer in his influential work, *Memory, History, Forgetting* (2004) compares history writing to what Plato termed *pharmakon*, which is a drug that can be medicine or poison. It is one or the other depending upon whether or not adequate epistemological inquiry is made of memory.

With epistemology, we enter ground familiar to archaeologists, who must continually ask themselves, "how do we know what we know?" Even though many have abandoned the quest for a "nomothetic, theory building archaeology" (see, e.g., Shiffer 1988, p. 467), the interpretation of archaeological findings at even the most basic level (assigning dates to soil strata, sourcing lithic material) is an unrelenting exercise in assessing the validity of evidence and its relevance to the question at hand.

Transformation of Public Good to Private Property

In the research that we use here as a case study, this most basic sort of epistemological exercise comes into play. At sites of historical importance, there is competition for the material that provides the information that is ideally transformed into public good. Looting at such sites is commonplace, rendering what might have been a non-excludable and non-rivalrous good both excludable and rivalrous because it has been taken into private possession. Our site is located in Fairfax County, within what is now the Bureau of Land Management (BLM) Meadowood Special Recreation Management Area (SRMA). As public land, it is now illegal to take away archaeological material from Meadowood, but before being acquired by the government in 2001, archaeological materials on the site were private property, along with the real estate in which they were located. This is not to say that the previous owners of the property necessarily removed archaeological materials. "Pothunting," or collecting artifacts for private use or sale, is a popular activity, and is especially popular at known historic sites and battlefields. Where these

are on private lands, it can be very difficult for private property owners to prevent enthusiasts from trespassing. Fairfax County was the scene of many Civil War battles and skirmishes; there are many places where defensive structures were built and where troops who constructed them or staffed them camped. Collecting historic artifacts, especially military artifacts, has become much more easily and effectively done since the use of metal detectors by looters has become commonplace. This seems to have begun in the 1950s and 1960s, when transistors allowed the construction of smaller and lighter metal detectors. Technological developments since then have rendered the devices more effective and more popular. Because pothunting often involves trespassing or collecting artifacts on public lands, which is illegal, the numbers of persons engaged and the extent of their activities can never be known. In areas rich with artifacts, however, it is commonplace for archaeologists to find evidence of pothunting. At Meadowood, the transformation of public good to private property has probably been in progress for a very long time, in part because it is easily accessible from a road that has been in use for over two centuries. Thus, as will be described below, few artifacts that might be attractive to collectors were found. Buttons, coins, buckles, and even clothing fasteners of obvious military origin were not in evidence. The determination of the location of the encampment depended upon extensive documentary research, the analysis of historic maps with the assistance of GIS technology, and the presence of non-collectable artifacts that were nonetheless consistent with the kind that would be left behind by the French troops and were in association with structures shown on historic maps.

Epistemological Examination of Collective Memory

Commemoration presents its own set of epistemological challenges. As the students of memory cited above and many others have noted, collective memory is different for different groups, and almost inevitably is consistent with the interests of each of those groups. Archaeological sites that include monumental structures are often regarded as territorial markers. Sporadic gunfire erupts at the World Heritage Site of Preah Vihear, on the border between Thailand and Cambodia, as each side attempts to claim both the temple and the Khmer history that it represents as part of their respective national histories. Neil Silberman (1982, 1989), has written extensively on the use of archaeological sites in the Middle East to bolster territorial claims by attaching them to national narratives. Recognizing the Rochambeau campsite in Fairfax County commemorates the site as surely as if it contained a monumental structure. Where does our assigned social responsibility to commemoration intersect with our obligations as scientists to disseminate knowledge? As suggested by Ricouer, the degree to which we contribute to the public good will depend upon how thoroughly and well we subject collective memory to epistemological examination.

Historic Context

The French monarch, Louis XVI, saw the prospect of assisting the American Revolutionaries as a wise strategic move, although doing so was ideologically repugnant to him. He had made the comment to one of his closest advisors that "he disliked the precedent of one monarchy giving support to a republican insurrection against a legitimate monarchy" (Fonteneau 1976, p. 48) in 1776. Two years later, nonetheless, the 1778 French–American Treaty of Amity and Friendship was signed, which established a secret military alliance. Time would prove that the monarch's reservations were justified. French revolutionaries executed him on January 21, 1793.

What had been secret in 1778 soon became evident to the rest of the world. On July 10, 1780, General Jean-Baptiste Donatien de Vimeur, Comte de Rochambeau, along with 450 officers and 5,300 men, arrived in Narragansett Bay off Newport, Rhode Island. They began a march south in June of 1781 to meet with American forces who, in concert with naval support for French Adm. De Grasse, would confront the British at Yorktown. The planned route from Rhode Island to Yorktown passed through what is now Fairfax County, VA.

The American public is periodically reminded of its collective past. With the approach of the bicentennial of the War of 1812, in 2010 the Bureau of Land Management Lower Potomac District Office contracted with the author's company to test for the presence of one of the campsites occupied by Rochambeau's army, which preliminary research had indicated to be in the Meadowood SRMA, located on Mason Neck, Fairfax County, VA (see location map, Fig. 5.1).

The Movement of the Military Through Virginia and Fairfax County

After the march from Providence, Rhode Island, south to Baltimore, almost all American and French soldiers, along with their weapons and supplies, were transported by sailing vessels down Chesapeake Bay to Yorktown. Most of the Americans sailed from Fell's Point, most of the French from Annapolis; 4,000 troops (3,800 French and 200 American) traveled by water in this way. The field artillery was transported along with the French troops in 15 vessels sent by French Admiral de Grasse, which sailed on September 21, 1781.

The movement of troops by water took advantage of the absence of the British fleet in the Chesapeake Bay, but a march by the French army overland had been carefully planned. The officer in charge of reconnoitering the roads and creating the itinerary was Louis-Alexandre Berthier, who attained the rank of colonel before returning to France. Berthier is known as the cartographer who produced 111 maps used by the French as they moved their army to and from Yorktown, and indeed, he was. Yet one should not make the mistake of regarding him merely as a technician. Cartography

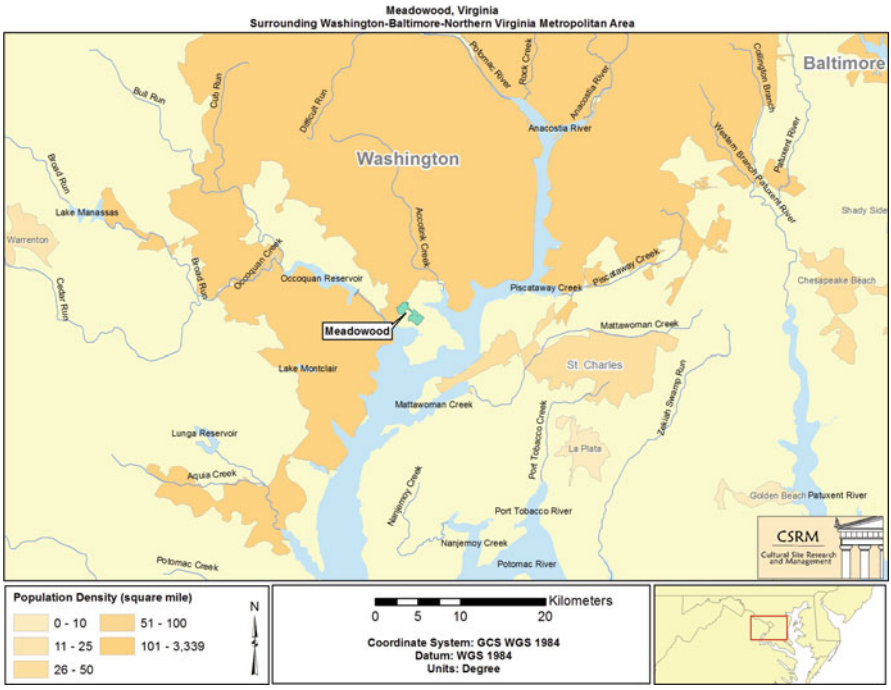

Fig. 5.1 Location map of Meadowood SRMA, Fairfax County, VA

was essential to military campaigning, and while it continues to be so today, in previous centuries, it was done or overseen by those who understood what among the myriad features would be important to the logistical and tactical needs of an army. Berthier was later Napoleon's Chief of Staff for many years, from 1796 to 1814.

Intimate knowledge of the landscape, which today can be readily obtained through maps and environmental data sets of many types, was both difficult to acquire and of enormous value in all manner of undertakings in earlier centuries. One might recall that George Washington worked for many years as a surveyor. In doing so, he gained a familiarity with the landscape that served him well in his later roles as a military and political leader and as a businessperson. Washington created the position of Geographer to the Continental Army in 1777, which had only a few assistants, and so was surely appreciative of the survey and documentation conducted by the French. Nonetheless, American and French troops, being under different commands, typically did not travel together, although some American troops and militia traveled with French wagon trains in order to provide the labor needed to move the wagons and local knowledge of the country through which the troops moved.

The empty American and French wagon trains set out to Yorktown overland. A light cavalry unit, the hussars of Lauzan's Legion, also traveled by land, as did George Washington and General Rochambeau. All took the same route as far as

Bowling Green, VA, although George Washington and General Rochambeau took a small detour to Mount Vernon.

The dates when these various groups crossed the Potomac into Virginia were as follows:

- Washington: September 9, 1781.
- Rochambeau: September 10, 1781.
- The Hussars of Lauzan's Legion: September 15, 1781.
- American wagon train: September 19, 1781.
- French wagon train: September 24, 1781.

Washington and Rochambeau

Washington arrived at Mount Vernon in time for dinner on September 9, 1781. In his eagerness to reach it, he had ridden 60 miles in a day. On the 9th, he wrote to Colonel Peter Waggener, Fairfax County Lieutenant, as follows (Selig 2009, p. 391):

> Instead of having the Militia of this County (who I am informed are now assembled) march immediately to join the Marquis de la Fayette; I could wish that they might be employed in repairing the Roads from George Town [At this point the following is crossed off: "towards Colchester and Rappahanock Falls avoiding Acoquan Ferry. As the service is very essential and must be performed either."] to the Ford of the Occoquan. To do this without a moment of loss of time is of such essential importance that I cannot but repeat in the most earnest manner my desire to have it done.

The Ford of the Occoquan to which Washington refers is Wolf Run Shoals, based upon further reading of his writings, the orders given to the French wagon train, and in particular the description of the location of the ford in these documents.

Washington continues

> The Waggons of the French and American Armies, the Calvary, and the Cattle will proceed by that rout and may be expected in a few days … For dispatch let the Militia be divided into several parties, and impress the Officers commanding each with the object and necessity of complete res. there will be no Troops with the Baggage Waggons &ca of the Armies before mentioned, and the Maryland Corps now on their March I wish to join the Troops commanded by Marquis de la Fayette as soon as possible.

The cavalry mentioned here is a portion of the Lauzan's Legion.

On September 10, 1781, Washington writes "to … George Weedon or Alexander Spotswood":

> The Waggons of the French and American Armies, the Calvary, and the Cattle of both are now upon their march from the Head of Elk to the point of operation below. The roads, from the specimen I have seen, are very bad, and stand in need of considerable res; I have therefore to beg you that you will immediately upon the receipt of this, apply, apply to the County Lieuts, or Civil Magistrates to have them put in order from the Falls of Rappahannock to Caroline Court House … .

> He also wrote on 10th September to James Hendricks, Deputy Quartermaster at Alexandria: "… I have desired Colonel Wagener instead of marching the militia to Williamsburg to employ them in repairing the Roads from George Town to the Ford of the Occoquan …" (Selig 2009, p. 392).

Washington, Rochambeau, and the hussars rode past Meadowood without stopping.

The American Wagon Train

Records for the American wagon train are not as complete as those for the French. Selig says that if the Continental Army wagon train had a ratio of wagons to soldiers similar to that of the French, then it would have had about 50 wagons that were probably drawn by six-oxen teams, or 300 oxen (2009, p. 393). They probably crossed the Potomac at Little Falls, and then followed Glebe Road.

Selig also says that the American wagon train camped at Pohick Church on September 20, 1781 (p. 402). Thus, "Wagon Train Camp No. 2" near Pohick Church is listed in DHR-DSS under No. 44FXAWCAMP2, RWRTS No. 000–9800.0046. Pohick Church was established before 1724, and so was the first permanent church to be established north of the Occoquan River (Selig 2009, p. 404). The Washington's Masons and Fairfaxs worshipped there, and so access to the church grounds and environs was probably easily arranged.

The American wagon train camped on the next day (September 21, 1781) at Dumfries (Selig says that "they continue on VA-SR 1") (Selig 2009, 393). Therefore, the American Wagon Train apparently did not camp at Giles Run, which the French had identified as a camping area to be used on the march.

Selig could not determine with certainty whether the American wagon train crossed the Occoquan at the ferry in Colchester or took the detour to the Wolf Run Shoals ford, but argues that the weight of the evidence favors the former over the latter. He points out that the road repairs that Washington had instructed the militia to make might not have been completed in time for the road to be usable by the American wagon train. Selig interprets the evidence as suggesting that both the American wagons and the hussars used the ferry to cross the Occoquan. He notes a ferry bill, as follows (Selig 2009, p. 409):

> Colchester Ferry Sept 27th 1781
> To Ferryage of 58 Waggons and Carts @ 2/5 16
> 100 horses @ 3d 1 5
> 100 Men @ 1d 8 4
> ----------
> ----------
> £ 794
> Signed by William Linsey.

Thus, because he estimates the wagon train of the Americans to have had about 50 wagons, it would have been quite feasible to cross the Occoquan on 20 September by means of the ferry.

Although Selig does not say it, it is worth noting that he does mention that (2009, p. 469):

> Nine miles does not seem like much today, but in 1781, it was almost a full day's march: on the way back in July 1782, the infantry marched a little over 10 miles per day—in July with fully loaded wagons and equipment—while the empty wagon train covered about 13.5 miles per day in September 1781.

With that in mind, it is likely that the only way to move from Pohick Church to Dumfries in a single day (16 miles) would have been to take the ferry, which eliminated the need to travel an additional 9 miles to the west to cross at Wolf Run Shoals, or 4 miles to cross at Seleeman's Ford, which Selig argues was where the French Army crossed the Occoquan on its way south (see below).

The French Wagon Train

The itinerary for the French wagon train as it moved from Annapolis to Williamsburg is published in Rice and Brown, *American Campaigns, Vol. 2*, pp. 85–107, p. 85.

On September 18, 1781, a missive from Vioménil to Rochambeau included:

> Since all our wagons will go to Williamsburg on land without a load, and […] I am convinced that we could save the king more than fifty thousands livres by sending back those that are of the least use {to us}. ref 671.

That the French wagon train camped at Meadowood on September 26, 1781 seems to be quite certain. They refer to the site as Colchester, which was located only about one mile to the south. There were many reasons to select the site near Giles Run as a campground over the town of Colchester itself. The official French itinerary says:

> Before entering the town of Colchester [from the camp at Giles Run] you take a road to the right that follows the north bank of the Occoquan. A good road leads to the ford, which is narrow and very good. 7 Miles.

Selig points out that "Seven miles is exactly the distance from the camps at Giles Run to Wolf Run Shoal 'the way the crow flies.'" This is additional evidence that the camp shown on the Berthier map (No. 14) is on Giles Run.

Additional evidence that the Giles Run site is in fact that of the French camp is provided by Robert Selig's interpretation of the symbols on the Berthier map. Selig said that the rectangle was a house and the square was an outbuilding. The gray rectangular line around both would be a fence, made of wood or stone. The south (square) building was incorporated into the fence, probably because it would form a part of the fence, saving material and labor (Selig, personal communication, 2011).

Selig said Rochambeau always camped near water and a main road, but also near a tavern or house where his officers could be quartered. By 1777, every state had put quartering acts in place, which spelled out the conditions of occupancy. French troops paid for the use of quarters in gold coin, which made them quite popular.

The alignment of Colchester road near the encampment changed at some point. Just as it reached the creek to the south of the house and outbuilding, it veered to the

northeast. Selig thinks that this route was almost surely the path that led to the house and outbuilding in 1781 (Selig, personal communication, 2011).

The size of the contingent that traveled south and camped at Meadowood in 1781 was substantial. As the wagon train left Annapolis on September 21, 1781, Louis Alexandre Berthier wrote that, "Luzon's Legions, the artillery horses, and the army wagon train formed a column numbering 1,500 horses, 800 oxen, and 220 wagons (Rice and Brown 1972, p. 83)." More than half of these were private wagons of officers. The "official" French wagon train for which Wadsworth kept records did not include the wagons of the officers. It consisted of 110 wagons drawn by 600 oxen. The wagoneers came from New England and New Jersey, for the most part, so 30 Americans and an American officer familiar with the roads were assigned to provide guidance and protection to the train.

Governor William Lee of Maryland sent the following letter to Governor Thomas Nelson of Virginia, on September 21, 1781 (Selig 2009, p. 457):

> Gov: Thos: S.. Lee to Gov: Nelson—recd: the 27th (dates September 21)
>
> Sir,
>
> This moment Major Genl: the Baron Viomeniel completed the embarkation of the French Troops under his command, destined for Head Quarters in Virginia—part of their baggage only, goes by water, the remainder is sent by Land. Apprehensive of danger from the Enemy, After wagons pass Fredericksburg, the Baron desired me to solicit your Excellency to afford guards of militia for its protection from thence to Williamsburg—the Baggage will be at Fredericksburg about the 26th of this month, and if no accident happens, at Head Quarters the first of next.
>
> With sentiments of very great personal respect & Esteem, I have the honor to be, &c &c.

This would indicate that the contingent accompanying the French wagon train might have included militia from Virginia, and not only the wagoneers from New England. Moreover, there were even more people accompanying the French wagon train. To conduct the many wagon teams, Rochambeau hired, at two dollars per day, 239 wagon conductors and 15 cooks, for the most part female (Selig 2009, p. 460).

It is also important to note that hospital wagons followed the main wagon train, lagging 1 or 2 days behind the main train. The hospital wagons picked up personnel too sick or injured to continue with the main train, and cared for them.

Most of the French wagon train then crossed the Occoquan on September 27, 1781. As noted above, 58 French wagons crossed with the ferry at Colchester. Selig is inclined to think that the French Wagon train did not cross at Wolf Run Shoals. This might have been the original plan, as Wolf Run Shoals is about seven miles distant from Colchester Road. The official French itinerary says:

> Before entering the town of Colchester you take a road to the right that follows the north bank of the Occoquan. A good road leads to the ford, which is narrow and very good. 7 Miles
>
> After fording the Occoquan you go down the creek again by the road leading to the forges. 1 Mile
>
> You proceed from the forges to the Furnaces, ½ Miles
> And from the furnaces to Marumsco Creek 2 ½ Miles
>
> Total: 11 Miles

Fig. 5.2 Berthier map of Giles Run Rochambeau encampment

Seen in Fig. 5.2 is the map showing the location and general layout of the Giles Run campground used by the French wagon train on the march south, and the French troops on the way back north. The road south of the Occoquan is labeled "Road to Colchester," and the very straight road on the north bank of the Occoquan is identified as the "Road to Ford." The notation after "Road to Ford" is difficult to make out; but seems to indicate that the ford was 4 miles distant. This was the distance to Seleeman's Ford. Possible reasons for not crossing at Wolf Run Shoals Run include that the road that Washington instructed the militia to repair might not have been completed as far as Wolf Run Shoals. In addition, if the water level were not too high, Seleeman's Ford might have served well enough as a ford, and by using it the trip would be made shorter. Also, it is well to bear in mind that although Berthier's maps are remarkably accurate in many respects, there do seem to be some curious features. It was standard procedure to sketch maps in the field working from measurements taken in

the field and then to finish the maps when time permitted. Thus, some license can be assumed. The road to the ford as seen in Fig. 5.2 is remarkably straight, which might indicate that it was essentially a work in progress, and thus a schematic representation, and the distance of 4 miles might have been added after the decision was made to alter the itinerary from Wolf Run Shoals to Seleeman's Ford.

By the time the wagon train reached Williamsburg on October 7, 1781, the siege of Yorktown had begun 10 days earlier, on September 28, 1781.

The Hussars

The hussars were part of Lauzun's Legion and were light cavalry. A visitor to the camp of Lauzun's Legion at a camp in New Haven, Connecticut on June 26, 1781 reported that "… the Duke of Lauzun with his Legion consist of 300 Horse and 300 ft Light Infantry" (Selig 2009, p. 88).

Hussars engaged in skirmish battles and were used for scouting. There are several widely circulated anecdotes about hussars. Among these are that Napoleon said that it would be unusual for a hussar to live beyond the age of 30 because they were notoriously impetuous, another that "The hussars of Napoleon created the tradition of sabrage, the opening of champagne bottles with a saber." (For example, Webster's online dictionary, http://www.websters-online-dictionary.org/definitions/hussar).

France was, of course, a kingship at the time and, as Selig (2009, p. 50) puts it,

> The upper echelons of the officer corps belonged to the top of aristocratic society whom Rochambeau could not afford to alienate. For the members of the *noblesse de race*, the wealthy and influential court nobility, promotion to high rank and participation in prestigious enterprises was a birthright. They alone had the influence and the money, 25,000 to 75,000 livres, needed to purchase a line regiment. …humble as ever, the *duc* de Lauzun recorded that he was simply "too much in fashion not to be employed in some brilliant manner."

The hussars traveled quickly, as they were a smaller group and not burdened by heavy equipment. The second of their camps after leaving Georgetown was near Pohick Run (listed in DHR-DSS under 029–0046, its RWRTS number is 00-9800-004) (Selig 2009, p. 312).

The third hussar camp was south of the Occoquan and 4 miles beyond Dumfries. This is 16 miles from Pohick Run (Selig 2009:313). Thus, the hussars did not camp at the Giles Run site as they moved south to Yorktown.

The Americans Return North

About 2 weeks after the British surrender at Yorktown, the American forces began to move to the north. Leaving to join General Greene in North Carolina on November 5, 1781 were Colonel McDowell's Pennsylvania Regiment, the Maryland Regiment, and 85 Delaware Regiment recruits. Many other groups, among them some from New Jersey, New York, and Rhode Island, made their way north by water. Only six units and the prisoners of war made their way by land route across Virginia.

On Sunday, November 4, 1781, New Jersey Regiments and New York Regiments began marching about 6,000 prisoners northward, the New Jersey regiment going ahead by 1 day most of the time. The prisoners were taken to Winchester and to Fort Frederick in Maryland, and from there to Lancaster in Pennsylvania. The route taken was to the west of the Giles Run campsite, which led more directly to Fort Frederick and Winchester.

The French Return North

On the journey to the north, the French soldiers were reunited with their wagons The French infantry and artillery traveled from Williamsburg to Georgetown, from June 30, to July 21, 1782.

The march from the French camps in Virginia to Georgetown was carefully planned in a document, the *Ordre de March pour porter l'armée Françoise aux orders de M. le Cte. De Rochambeau de ses différens Quartiers en Virginie à Georgetown sur la Rive gauche du Potowmak où Elle doit rester jusqúà nouvel ordre en 22 jours de marche y compris Quatre Sàjours*," dated June 28, 1782, signed by Quartermaster-General de Béville in Williamsburg (Selig 2009, p. 661). The French divided their troops into five groups, each accompanied by an assistant quartermaster, following the procedures that had been laid out in *ordonnances*. Lauzun's Legion departed from Petersburg, VA, and Rochambeau's infantry began their journey from Williamsburg. Because of the July heat, the French often left in the very early hours of the morning. Selig mentions the troops setting out sometimes at 1 a.m., (Selig 2009, p. 663), while Scott says that on the northward march they left about 2 a.m., stopping just after dawn. Each man carried a pack of about 60 lb; to march with this load in the heat of daylight hours would be practically impossible. Béville preceded all groups by about 1 day to prepare the route, which typically involved filling potholes, widening roads, or preparing bridges. The other divisions were also preceded by work parties of 15 men. Each division had with it artillery, which variously included 6-in. howitzers, 12-lb guns, and 4-pounders. (Selig 2009, p. 661). The 162-mile march to Georgetown was to be accomplished in 22 days by the five divisions. The 4-lb guns were drawn by four horses, 12-pounders by six horses, and each howitzer by four horses. (Selig 2009, p. 662).

In the Rochambeau Papers, the movement of Lauzun's Legion on July 12, 1782 to the Giles Run camp is described as follows (Selig 2009, p. 636):

> Twelfth day of the march … 10 miles
>
> It departs on 12 July from its camp at Dumfries to go to camp at Colchester (sic), a small village almost abandoned on the left bank of the Occoquan, which is 60 toises [about 350 feet] wide at the ferry where the troops will cross. The camp will be on a brook beyond the village where the headquarters can be established tolerably well.
>
> The wagons go to cross at a ford seven miles above the village, which will make them cover 18 miles altogether to reach the camp, but as the ford is good and not very deep they will certainly be able to make that march in a day provided that they start this movement at a very early hour.

We see here again the mention of a ford that corresponds in location to that at Wolf Run Shoals, which Selig thinks was not used the previous year, on the march south, by the French wagon train. By now, however, given that time was less pressing and that the road from the ford to Colchester Road that Washington had ordered militia to repair (or rebuild) might have been serviceable, the French wagon train might very well have crossed at Wolf Run Shoals.

The Giles Run site is Campsite No. 7 of Lauzun's Legion in Colchester. Listed in DHR-DSS under No. 44FXLLRETCAMP7, RWRTS No. 000-9800-0126. Selig's report notes that it "may be identical with French Wagon Train Camp No. 2 at Colchester listed in RWRTS No. 000-9800-007" (2009, p. 638).

The Giles Run campsite, like all others except campsites occupied on rest days, was to have to been used on successive days by the five groups into which the French had divided. On rest days, two divisions were to camp side by side.

Under the map of the Giles Run Encampment, Selig makes a note that "the site is used as a county waste-fill and inaccessible." There is a county waste-fill to the north of the Meadowood SRMA. It appears that at the time Selig wrote this he might have thought that some of the land within the Meadowood SRMA had been a waste-fill, because the location that he identifies as the Giles Run encampment elsewhere (see, e.g., the lower map at Selig 2009, p. 757) is the same one our GIS-based research and archaeological findings indicate to be the Giles Run camp.

Numbers of Troops at the Giles Run Campsite

No report of French troop strength at the time that Rochambeau's army departed Virginia has been found, but a report dated August 1, 1782 does exist. This would have been 2 or 3 weeks after the army had camped at Giles Run. The charts below report troop strength at that time:

Regiment	Commanding officer	Total
Bourbonnois	Marquis de Montmorency-Laval	48 company grade officers, 62 NCOs, and 923 other ranks
Soissonnois	comte de Sainte Maisme	56 company-grade officers, 71 NCOs, and 926 other ranks
Saintonge	comte de Custine	60 company-grade officers, 66 NCOs, and 936 other ranks
Royal Deux-Ponts	Christian comte de Deux-Ponts	47 company-grade officers, 66 NCOs, and 920 other ranks
Auxonne Artillery	de la Tour	40 company-grade officers, 50 NCOs, and 454 other ranks
Mineurs	Captain de Chanzelles	1 officer, 3 NCOs, and 19 other ranks
Workers	de la Chaisse	2 company-grade officers, 3 NCOs, and 32 other ranks
Lauzun's Legion	duc de Lauzun	30 company-grade officers, 347 NCOs, and 537 other ranks
Total		287 company-grade officers, 347 NCOs, and 4,747 other ranks

Lauzun's Legion had departed Williamsburg first as an advance guard; the rest of the army personnel listed above were divided into four groups, one for each regiment, with personnel and equipment from the other units traveling with them. As mentioned, a certain number of men preceded each division (the term "division" in this case meaning each regiment and assorted others) to repair roads.

The Design of a French Encampment

The *Ordonnance portent reglement sur le service de l'ifanterie en campagne* of February 17, 1753 and the *Ordonnance sur l'exercice de l'infanterie* of June 5, 1755 provided detailed direction on laying out a French army encampment. By establishing a pattern that is followed each time a camp is made, all military personnel know just where supplies and amenities are located, saving time and reducing confusion during the course of routine activities, and even more importantly at times of emergency, when confusion can become disastrous. Camps must be located where water and other resources are available, and on ground that can be defended and from which surveillance of the area, especially of approaches to the camp, can be made.

The French forces followed strict protocols and adhered to a carefully planned design, a template, at each camp. The French army of 1781 and 1782 was still a unit of the monarchy, and so the layout reflected more than the practical considerations outlined above. Camps were established along very rigid lines of class. This can be seen in Fig. 5.3. As Samuel F. Scott says in *From Yorktown to Valmay: The Transformation of the French Army in the Age of Revolution* (1998, p. 11):

> In practice, few commoners could aspire to be commissioned as officers and in May 1781, while Rochambeau's army was stationed in America, this practice was formalized by the Ségur decree, which required four generations of nobility for a direct commission as an officer. Despite a very few limited exceptions, this legislation effectively prohibited nobles and the recently ennobled from receiving direct commissions and formally established a caste system within the military hierarchy, Army routine reinforced the separation of officers from soldiers. Officers were quartered apart from their men, usually in private homes; they had separate meals and entertainment; whenever possible, they traveled by themselves.

In the march to the north, the officers had been ordered to travel with their men, but it was the constant preference of the officers to lodge separately and away from them. As shown in Fig. 5.4, the colonel and other top officers were separated from the enlisted men by the tents of lower-ranking officers. The regimental headquarter was 50 *pas* back from the row of captains tents (a *pas* is 30 in., or 0.76 m; therefore, this would be 125 ft or 38 m). A mere 20 *pas* (50 ft or 12.4 m) separated the captain's tents from tents of the lieutenants, who were that same distance removed from the *vivandiers.* Lieutenants and captains were from noble families, but lesser ones from the country, and often spent their careers at these ranks. The members of the upper aristocracy were rushed through these command levels to positions of more prestige and responsibility (Scott 1998, p. 9). All of this would radically change, of course, in the years after Rochambeau's army returned to France, when inherited position was in some cases a fatal liability.

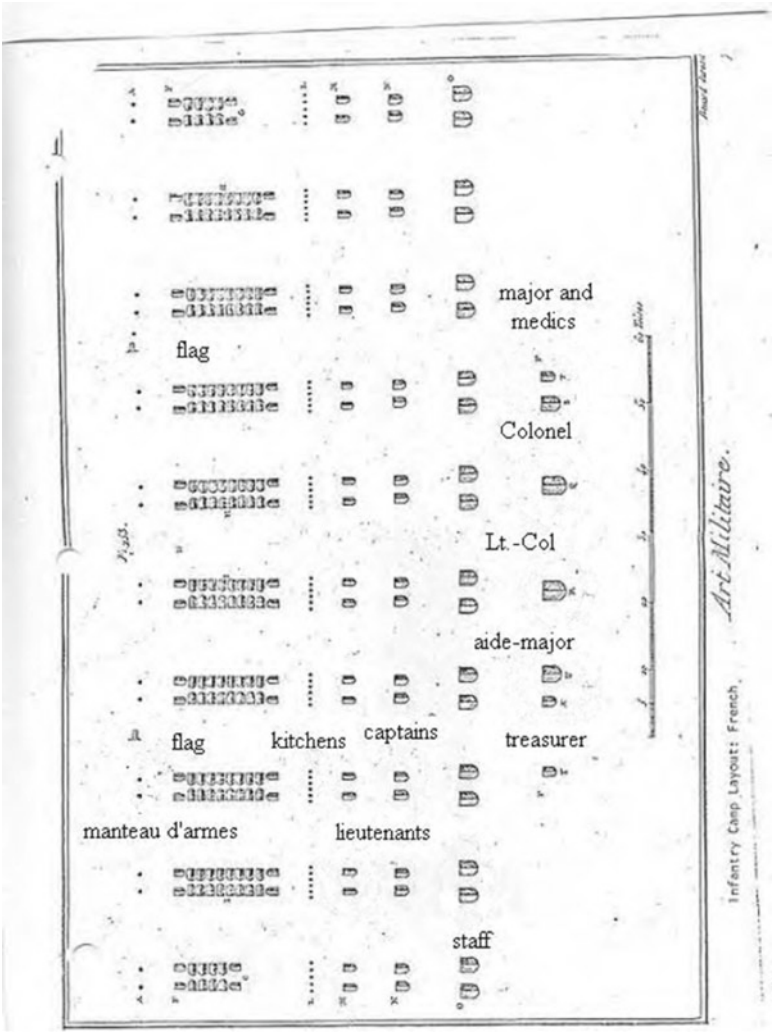

Fig. 5.3 Schematic of French army encampment

The *vivandiers* were women who acted as sutlers, selling food, drink, and other desirable items to the men to supplement rations. They also acted as nurses. As Selig describes (Selig 2009, p. 671):

> The Lieutenant's Camp was placed at twenty *pas* from the *vivandiers*, each lieutenant camped behind his company, and in the interval of these twenty *pas* they placed their servants, their horses, their kitchen, their wood and forage. Twenty *pas* further (sic) back were the tents of captains and their servants similarly arranged.

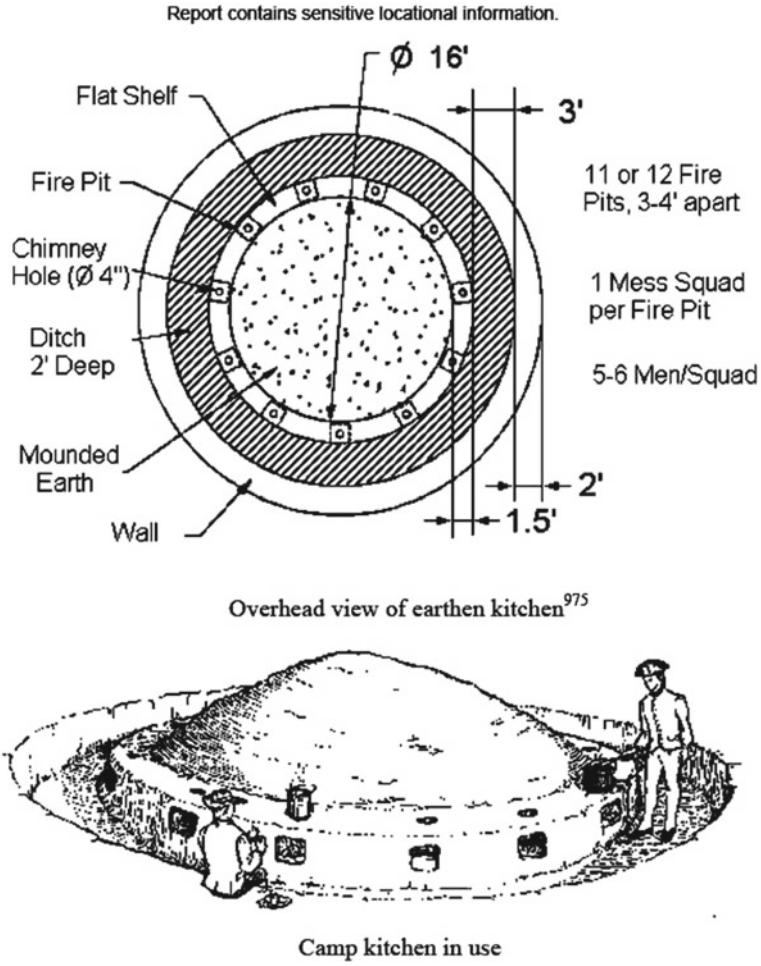

Fig. 5.4 Drawing of French army earthen kitchen

Superior officers were required to lodge in the camp. They usually were able to find grounds that included a house or tavern. One might ask why the army did not simply occupy houses in Colchester. The answer would seem to be that they were dilapidated, as noted above, and that the existing layout of a town would not accommodate the inflexible plan of a French military camp.

Kitchens for the soldiers were located ten *pas* (25 ft or 7.6 m) behind the company tents; the *vivandiers* were another ten *pas* behind the kitchens, and near their tents were horses, wagons, wood, and forage. Each company had one earth

kitchen (see, Fig. 5.4) and an additional kitchen for drummers, so there were many of these earthen constructions between the *vivandiers* and the companies. Each kitchen could accommodate several kettles. There were also kitchens in the areas between the lieutenants and the captains, and the captains and the regimental staff. These superior officers were supposed to lodge in their camp. When there was no other choice, they did this in tents much larger than that occupied by other troops, and furnished these large tents with chairs, tables, and camp beds. The tents of superior and subordinate officers opened toward the head of the camp; those of servants toward the rear or sideways. The itinerary of Rochambeau's forces shows, however, that officers stayed in a nearby house or tavern if available. The structures at the Giles Run camp groups would have served the officers well enough, providing more shelter and general comfort than a tent, yet still falling within the specified boundaries of the camp and occupying the correct spatial relationship in regard to the tents of subordinates, and perhaps most importantly providing a point from which to watch over the men and the approaches to the camp.

Butcheries and latrines were located some distance away; for the butcheries, 50 *pas* (125 ft or 38 m) behind the headquarters, for latrines, from 100 *pas* (250 ft or 76 m) and 200 *pas* (500 ft or 152 m) away, depending upon where in the camp one was located. Artillery was put nearby; in the case of the Giles Run campground, it can be seen on the opposite side of the road from the regiment campground.

GIS Analysis Using Historic Maps and Aerial Photos

Historic maps were very informative in determining the most likely location of the French Camp, which has been called by various parties Camp 14, the Giles Run Camp, or the camp at Colchester. In all, 12 maps were placed within a geographic information system (GIS) developed for the project. They ranged in date from 1737 to 1956. Maps were georeferenced to current maps and aerial photographs; that is, points on one map with the corresponding points on other maps or on photographs. In many cases, the correspondence between early and modern maps was good. This was especially the case with the most important of the historic maps, which was drawn by Louis-Alexandre Berthier.

As seen in Fig. 5.5, georeferencing of the Berthier map, as well as a road map drafted 8 years later, with more recent maps and aerial photos resulted in none of the distortion that results when historic maps are misaligned with benchmarks on contemporary landscapes. Even the alignment of what is now Colchester Road with the roads seen on the Berthier and 1789 maps between the Occoquan River and Giles Run overlay with remarkable precision. The slight difference in the course of the Occoquan River in the Berthier map and the aerial photo over which it has been

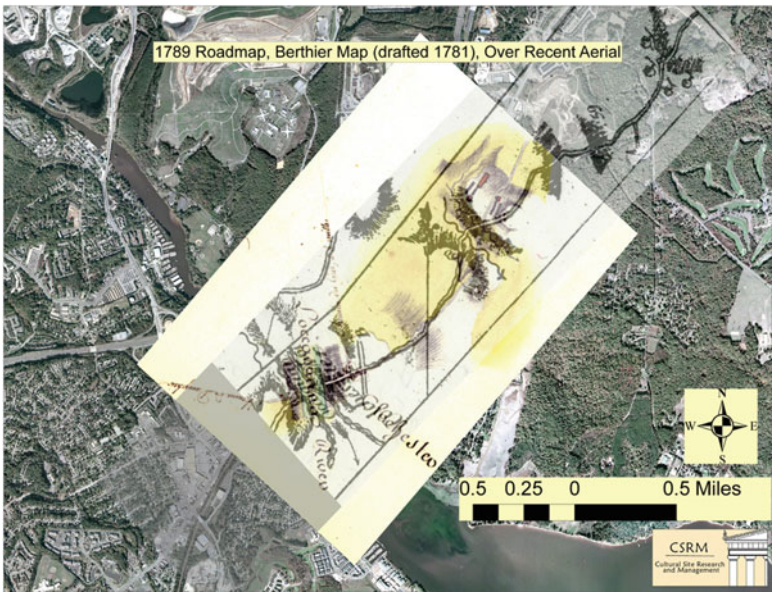

Fig. 5.5 Georeferenced Berthier and 1789 maps, over contemporary aerial photograph

placed could simply be because Berthier did not consider recording this with great precision to be a high priority.

The *Ordre de March pour porter l'armée Françoise aux orders de M. le Cte. De Rochambeau de ses différens Quartiers en Virginie à Georgetown sur la Rive gauche du Potowmak où Elle doit rester jusqúà nouvel ordre en 22 jours de marche y compris Quatre Sàjours* sets out the course and distance to be traveled by French troops from one encampment to the next. For example, the distance from the Giles Run encampment to the next one north, at Alexandria, VA, is recorded as being 15 miles. We can see in Fig. 5.6 that the distance from the Giles Run encampment to Alexandria over the Colchester Road is a little less than that; however, the road almost surely meandered much more 200 years ago than it does today.

French military logistical protocols strongly favored the placement of campsites on terrain such as that which can be seen on the Berthier map and that still exists at Meadowood. Campsites were placed if possible near a plentiful supply of moving water, on flat ground near a road so that troops could be put on either side of it, and at a location that included high ground from which to keep watch on the road and the camp. The artifacts found at the Meadowood site, described below, are those that one would expect given the layout of French military encampments and the structures and terrain seen on the Berthier map.

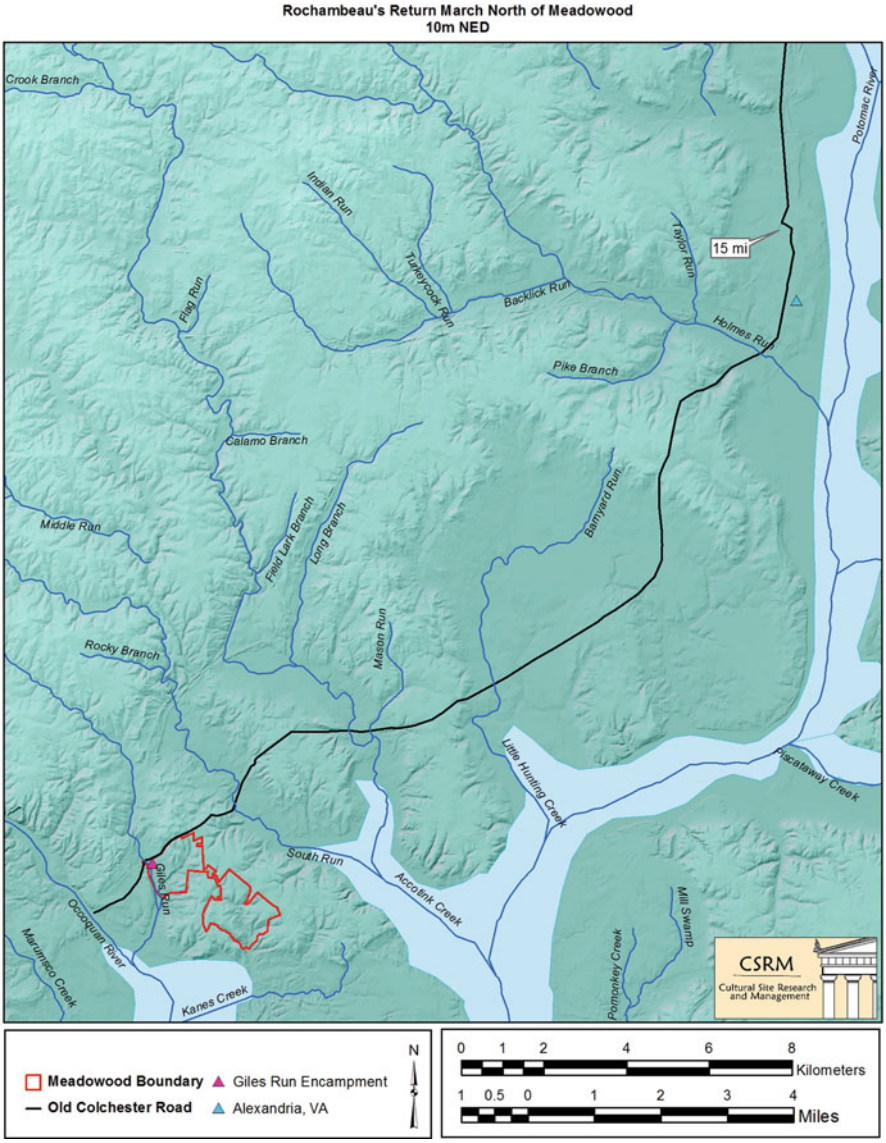

Fig. 5.6 Route from Giles run encampment to Alexandria

Archaeological Fieldwork

Metal Detector Survey

A metal detector (MD) survey was done within the 5-acre area in which documentary and map research indicated as having the highest potential to contain the French army campground. The area covered by the survey was approximately 2 acres. A digital 15-m grid (one developed in a GIS) was virtually superimposed over the 5 acres; the entire grid could only be seen on a computer screen. This was necessary so as not to draw attention to the fieldwork. Those charged with the stewardship of historic and battlefield site have learned that metal detecting enthusiasts will prospect in an area if there is any indication that it might contain detectable items of interest. Flags were set out on the ground as work was undertaken, then removed once an area had been examined.

As fieldwork progressed, the areas nearest to Giles Run were found to be much less productive than others. These were water-sodden, and fieldwork was very slow. We chose not to work in these areas in part because of that, but more importantly because our on-site experience here suggested that even though the location of Giles Run has probably changed to some extent over the past two centuries, it is likely that it has meandered within the low area near its present course. Water sodden ground would have been likely in this low area in 1781 and 1782, and so it would have been much less practical as a camping ground than terrain at higher elevations of slightly greater slope that would provide better drainage. This area was classified by the US Geological Survey as "Codorus and Hatboro soils, 0–2% slopes, occasionally flooded (United States Department of Agriculture, 2010: 8)."

When something was found with a metal detector, the location was flagged. After a 15 × 15 m unit had been completely examined with the metal detector, each flagged location was investigated. This was done by shallow probing and digging with a trowel. By far, most places investigated revealed very recent items. There were, for example, a very great number of foil gum wrappers, tin can fragments, modern nails, and unidentifiable pieces of corroded metal.

Excavation

The artifacts found by means of the shallow trowel probes were used to guide placement of standard 40 × 40 cm shovel test pits (STPs). Ultimately, there were 75 of these. Most STPs were excavated on a knoll where a concentration of wrought nails, dating to the eighteenth century, and a portion of a bar of pig iron had been found by means of metal detection. The STPs revealed ceramics of the sort that are typically found in association with domestic structures in the late eighteenth century. Artifact density attenuated drastically as one moved away from the edge of the knoll, roughly to the east.

Just as the results of the metal detector survey governed the placement of the STPs, so did the findings in the STPs guide the locations at which excavation units (EUs) were placed. These measured 1 × 1 m (1 sq m). When something of potential importance was found, an adjacent unit was opened.

Artifacts and Features

The first of these units was excavated where an artifact of great interest was found. This was a portion of an iron "pig," a bar of iron produced by an iron furnace of the type commonly used in the eighteenth century. Around this were a number of wrought nails made in the eighteenth century or earlier. These artifacts were found just where the structures on top of the knoll can be seen in the Berthier map. Selig interpreted these structures as being of the appropriate sort occupied by the highest-ranking French officers. They were also in the location assigned to these officers according to standard French army camp design. Excavation here found stones of the size and shape that have long been used in foundations for crude structures. The placement of these stones suggested that they might have once formed a foundation, despite the fact that they were no longer stacked one atop the other. After referring to historic maps and aerial photos of the area, it became clear that the location occupied by these features had been very near the road that ran to the Trice Farm, and further that the area had been farmed. Such activities would have put in disarray the foundation of structures that had been located here.

A few buckles and other clothing fasteners were found. These might have been from uniforms, as French army uniforms utilized many of these, but clothing fasteners might also have been from other eighteenth- or nineteenth-century clothing. Dispersed in the area of the landscape where troops would have camped in tents were corroded items that could not be identified with much confidence, but appear to be a possible bayonet fragment, calipers, brass grommets, a wick trimmer, and a gunworm of a size appropriate for cleaning a small cannon.

A number of artifacts could positively be identified as being fragments of kettles. At least some of the other corroded iron fragments were probably also of kettles. Almost all of these were distributed in the area that GIS-based map analysis and the topography of the area indicated to be where the tents of the troops would have been placed. One kettle fragment was found on the knoll above this area, the knoll upon which two structures are seen in the Berthier map of the Giles Run encampment.

The kettle fragments are significant because they are of the size that was used by troops during the Revolutionary War, not, for example, the very large iron kettles that were historically used in the process of butchering pigs. Many of these smaller kettles would have been in use at the encampment; in fact, one kettle was typically allotted to each soldier. Thousands would have been in use at the Giles Run encampment in just the 5 days during which it was occupied by Rochambeau's troops in 1782. Figure 5.4 illustrates one of the earthen French army kitchens, constructed to accommodate many kettles. In addition to the numerous kitchens used by the great

number of enlisted soldiers, cooking was done in other locations by the different grades of officers traveling with the regiment. As mentioned previously, food for the lieutenants was prepared in the area between the *viviandiers*, who were midway between the lieutenants and the tents of the enlisted men, and meals for the captains were cooked in the space between the lieutenants and the captains. The much greater distance between the captains and the highest-ranking officers and staff was utilized in a similar way, and it is likely that the colonel and his immediate subordinates dined on specially prepared food.

Each soldier carried a 60-lb pack, and in addition to this was compelled to carry his kettle in his hands. This was of special concern to George Washington because some soldiers intentionally jettisoned their kettles rather than carrying them. The General Orders to the Continental Army written in 1777 include this: "… To prevent the enormous abuse and loss of kettles, by slinging them to waggons, from which numbers fall, the General positively orders that each mess in turn carry their own kettles, as usual in all armies, and can be little burthensome in this" (Fitzpatrick 1932: pp 345–348). Of course, there would have also have been a certain degree of unintentional breakage. Because thousands of kettles were in use, this in itself could explain why so many kettle fragments were found.

Of particular relevance to the interpretation of the distribution of the ceramic assemblage found at Meadowood is that the ceramics that are most frequently found at late eighteenth-century sites were recovered only from STPs and EUs in the immediate vicinity of the scatter of stones (see below) that correspond in location to the two structures and fence seen in the Berthier map. Among these ceramics are creamware, salt-glazed stone ware, and pearlware. Ceramics of this material and form are as a rule not found in concentrations at venues other than domestic; that is to say, house sites.

Epistemology, Part I: Proof

Battlefields and historic sites have been mined systematically for artifacts by collecting enthusiasts for many years. Jim Weeks, in *Gettysburg: Memory, Market, and an American Shrine* reports that souvenir hunters converged on the battlefield at Gettysburg shortly after the smoke cleared, and that in1865, a newspaper wrote that, "relics, of course, are now a staple commodity in the town." Weeks makes the interesting observation that travel to see and take home relics has a Christian pedigree (Weeks 2003, p. 29). In fact, making a pilgrimage to see a relic at the site or some miraculous event or places within a monumental structure is a phenomenon seen around the word and spans many religious traditions, including Christianity, Buddhism, Hinduism, and shamanism in its many forms. Such activities occur also at secular destinations, among them the tombs of Lenin and Mao. The appeal of many tourism destinations is quite evidently similar. Visitors to Petra purchase pieces of the colorful sandstone from which the famous Nabataean tombs there are carved, antiquities are marketed to tourists at Angkor in Cambodia, ancient coins

looted from archaeological sites in Turkey and Cypress are surreptitiously offered to visitors to archaeological sites there. Looting that transforms a public good to private property is everywhere more the rule than the exception.

Battlefields and historic sites have grown increasingly vulnerable since metal detectors became available to the public and have steadily become more effective. As I write this, there has been a spate of reality television shows that celebrate the excitement of looting battlefields and historic sites with the use of metal detectors, one aired (to the great disappointment of archaeologists) by the National Geographic Channel, which in the past had been known for educational documentaries. This can only render what has been a pernicious problem worse, accelerating depletion of the public store of archaeological materials. Because battlefields and historic sites are so attractive and so much more vulnerable now that technology, including not just metal detectors, but GPS devices, all-terrain vehicles, and readily available maps and satellite photos has made them so, the effort to prevent the loss of metal artifacts might very well be doomed to failure. Archaeologists conducting research at such sites are now well advised to search as vigorously in archives as in the ground, and to look for pieces to the puzzle that every archaeological site presents in the landscape itself.

At the Meadowood site, it is notable that no collectable artifacts were recovered. All of the artifacts found there were corroding bits of metal, usually iron, and small fragments of ceramics. Buttons, coins, buckles, anything that might be readily identifiable as historic were not found; in fact, nothing shiny or otherwise eye-catching was found. Fortunately, there were enough pieces of the puzzle remaining, the material evidence of the domestic artifacts associated with the structure seen on the Berthier map, and kettle fragments, and possible military artifacts, to corroborate the documentary and map research and analysis (Fig. 5.7). Yet undoubtedly, the absence of unmistakably French army artifacts lessens the power of the proof provided by the combined results of the research.

Epistemology, Part II: Commemoration

Commemoration plays an important role in the development of a national identity. The first definition for *nation* given in the Oxford Dictions is, “a large body of people united by common descent, history, culture, or language, inhabiting a particular state or territory.” Nations of this sort are associated with a homeland, as the definition implies, although sometimes they have been displaced from this or the homeland has fallen under the control of another group. In either of these cases, there is a strong, nationalistic desire to reclaim the homeland. A nation in this sense is not the same as the modern state, which exists by virtue of a constitution and set of laws that provide the framework within which citizens settle competing claims for goods, resources, and services. States occupied by groups having different languages, cultures (perhaps most importantly, religions), and histories must, to be tenable, establish a common history. This history is a shared narrative, in other

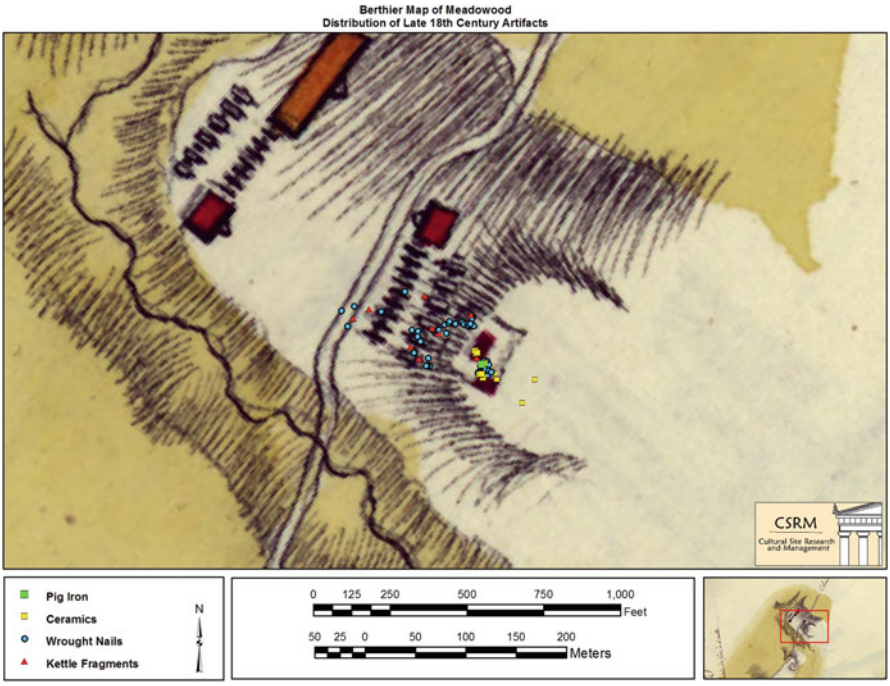

Fig. 5.7 The location of key artifacts shown on georeferenced Berthier map

words, a collective memory, thereby forming the "imagined community" (Anderson 1983) that is the modern state. Museums, historic parks and monuments, battlefields, and other historic sites act to create this shared history. With the passage of the National Historic Preservation Act of 1966, archaeology was given a task in the creation of a shared history and collective memory.

As Paul Ricouer argued, shared memories can act as a medicine or a poison. An extreme case of the latter, one commonly cited, would be the narrative constructed by the Nazi Party in Germany prior to the Second World War. This was an integral part of a cultural transformation that provided a rationale for ruthless oppression of all but those included in what became the ruling ethnic group. We are dealing with nothing so tragic in the case of commemorating the American Wars of Independence, but failure to examine the past with epistemological rigor can result in unfortunate consequences.

At a gathering of French and Indian War re-enactors recently, I stopped to talk with a man who made beautiful replicas of the flintlock firearms used in that war and the Wars of Independence. He explained to me that British and French small arms were smooth-bore, while flintlocks made by Americans, who had lived on the frontier and were accustomed to hunting and defending their property, had rifled barrels. For this reason, he said, the British and French marched in lines, firing all at once, accuracy mattering little because a barrage of lead would be launched at the

enemy. Americans, however, confounded the British by hiding behind rocks, fighting as individuals, and using their superior weaponry to produce a great number of casualties. It is safe to say that large numbers of Americans attribute independence largely to the actions of citizen-soldiers who acted in this way. It is difficult to say how many, and how deeply held are these ideas, but it is worth noting that the logo for the Friends of the National Rifle Association uses the silhouette of a man in a tri-corner hat holding a rifle. Primary documents tell a different story. George Washington wrote to Congress on September 24, 1776 that, "To place any dependence on Militia, is, assuredly, resting upon a broken staff … . if I was called upon to declare upon Oath, whether the Militia have been most serviceable or hurtful upon the whole; I should subscribe to the latter" (Ford 2002, pp. 33–34).

Proof and Commemoration

Careful interrogation of original documents and material culture provides a narrative that is not only more interesting and accurate, but also more relevant and useful to the political and economic issues of the present. The evidence assembled for determining the location of the Rochambeau camp is a case in point because it suggests the interdependence among countries that in the end nurtured the emergence of an independent United States.

A sovereign United States worked to the advantage of many parties in Europe. A politically independent United States was an important element in securing a balance of power. The balance of power provided a political environment that was of benefit to trading companies in France, Denmark, the Netherlands, as well as other European countries. It was of immediate value to industries in European countries that depended upon the raw materials of the New World, and later to businesses that marketed goods from iron to textiles that were produced in the United States.

The findings of this research highlight differences in the organization of the American and French armies. The organization of the French army was clearly superior. Logistical planning included precise instructions for each day's march and drawings of the encampment, delegated to and overseen by Berthier. In contrast, Washington himself writes instructions to the militia, asking them to repair roads and provide an escort to the French and American wagon trains. In doing so, Washington once again demonstrates his skill as a leader, assigning the militia to tasks for which they are prepared, and facilitating the movement of the French to Yorktown. Yorktown was a siege battle at which the French artillery was used to good effect.

As importantly, The French documents also indicate that a class system was still very much in effect in the French army. Leadership was inextricable from social status. This would soon change. Republican ideas shuttled back and forth across the Atlantic. In 1789, the National Constituent Assembly in France adopted *The Declaration of the Rights of Man and of the Citizen* at a time when Thomas Jefferson, who wrote the first draft of the United States Declaration of Independence, was in

France as a United States diplomat and so in frequent communication with the Assembly. The Marquis de Lafayette put the Declaration forth. Lafayette had provided such service to the Continental Army during the American Revolutionary War that he was made a citizen of the United States. He is buried in Paris, under soil taken from George Washington's Mount Vernon grave,

Achieving independence for the United States depended much more on the diplomatic skills of George Washington, Thomas Jefferson, John Adams, and other of the founding fathers than on American military prowess. Most battles fought by the Continental Army were lost, and for reasons that are readily apparent. Without a strong central government, the Continental Army was ill supplied, poorly trained, and often unable to pay soldiers. Ron Chernow (2004) has argued that this experience convinced Washington, as President, to side with Alexander Hamilton for the creation of a national bank, unlike his fellow Virginians and plantation owners Thomas Jefferson and James Madison, who imagined a bucolic future for the United States based in an agricultural economy. The commemoration of the Rochambeau camp in Fairfax Country can be a way to develop a more accurate historical narrative and thereby to restore shared memories.

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