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HISTORY OF WARFARE

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TECHNOLOGY, DISEASE AND COLONIAL CONQUESTS, SIXTEENTH TO EIGHTEENTH CENTURIES

Essays Reappraising the Guns and Germs Theories

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One of the strongest arguments against the general concept of the Military Revolution is that it enforces a uniform perception of the world as a single global entity, an approach that invites a presentation in systemic terms. This was a tenable perception for Europe since the late eighteenth century, but systemic perceptions of the world by Europeans over the previous three centuries sharply distinguished between overseas expansion in the Old World and the New. European warfare in Africa and South Asia was largely private and conducted under the supervision of chartered trading companies. This helped ensure a different deployment for European regular forces than was the case in the New World. Issues of cost were much more important in Africa and Asia, as was seen with debates inside the English and Dutch East India Companies on the question of the building and maintenance of fortresses during the later seventeenth and the early eighteenth centuries. We have been too focused on the quality (and quantity) of the means applied to major developments in European expansion, and military history, and not sufficiently focused on motives.

To close on such a note might appear unhelpful. There is no intention of offering a demilitarization of military history, or of ignoring the contingent, the conjunctural and the operational dimension. Nevertheless, a cultural interpretation that focuses on reasons for conquest or for the avoidance of aggressive warfare and conquest, rather than on technological or organisational enablers, directs attention to moods as well as moments. Such an interpretation also focuses on the methodological difficulties of devising a general theory of military capability and change in the early-modern world. An awareness of attitudes, diversity and difficulties is more appropriate than any simplistic and deterministic model that may be helpful to systems theorists of state formation and the global economy, but inappropriate for scholars trying to understand the nature of military power.

2. OUTFIGHTING OR OUTPOPULATING? MAIN REASONS FOR EARLY COLONIAL CONQUESTS, 1493–1788

George Raudzens

The notion that handfuls of European invaders colonized the New World by defeating one great horde of indigenous defenders after another is still with us. Historical generalizers keep stressing either the superior combat powers of the invaders, or their disease infliction capabilities, or both. For the preceding generation of such writers, these greater killing powers brought victories over heathen primitives and expanded the domain of a higher and better civilization. For many current writers, such powers were the unfair advantages of land-stealing and genocidal imperialist aggressors. But whether the colonial conquests are judged good or evil, too often the central acts of conquest are seen almost entirely as armed assaults and/or forms of inadvertent germ warfare. There is surprisingly little detailed evidence offered up in support of these perceptions, and it seems timely to re-examine the linkages between generalizations and evidence.

With the exception of the Spanish invasion of Mexico under Hernan Cortes between 1519 and 1521, there are few details supporting concepts of major invasion wars and battles in the other early colonies in the Americas or Australia. What the sources instead show is that fighting between colonizers and defenders was the exception more than the rule, and that invasion “battles” were small fights even by contemporary European standards. In most of the foundation colonies which became permanent bases for subsequent European expansion over the continents behind them—notably Hispaniola, Virginia, New England, and New France—invasions “succeeded” not when some or other group of indigenes was outfought in some type of combat, but rather when the influx of settlers grew large and continuous enough to numerically overwhelm the native populations in the colonial target areas. Direct disease impacts were exceptional and debatable. As often as not the fighting was a consequence of territorial outnumbering rather than a cause, as multiplying settlers sought to clear native communities off lands for European living-space needs.

The Cajamarca Paradigm

Probably the biggest single source for the belief in amazing victories against huge odds is the story of Pizarro's capture of the Inca Atahualpa at Cajamarca in Peru on November 16, 1532. Amazingly, less than 200 Conquistadors overthrew some tens of thousands of armed Incas in something like one hour, seizing the Inca emperor and his entire empire.¹ The Aztec conquest is the second most dramatic example of the handfuls versus hordes theme. It is a perennial in general histories of European expansion, and it is supported by some specialists. Geoffrey Parker states that European overseas expansion rested, more than anything else, on "... the absolute or relative superiority of Western weaponry and Western military organization over most others", especially in the cases of the Aztec and Inca conquests where the invaders were so few and the defenders so many.² The latest expression of this amazing theme is in Jared Diamond's important anthropological study of the rise and fall of world cultures. He starts his book with Cajamarca. In *Guns, Germs and Steel* he entitles Part One "From Eden to Cajamarca", and his chapter 3 is "Collision at Cajamarca".³ For him, a "... ragtag group of 168 Spanish soldiers ...", surrounded by an Inca army of 80,000,⁴ "... crushed a Native American army 500 times more numerous, killing thousands of natives while not losing a single Spaniard".⁵ They probably killed 7000 Incas.⁶ They did this because they had the massive advantages of guns, steel armour and cutting and thrusting weapons, horses, and the benefit of Eurasian diseases which had pre-

viously devastated the Inca empire. If we accept the figure of 168 Spaniards and 7000 Inca casualties as real, each conquistador on average must have killed 41.7 Incas, in about an hour. This could be an all-time face-to-face killing record. If Cajamarca is then listed among the other great European imperialist invasion victories, it clearly stands out as the greatest. It outshines the greatest of Portugal's Asian victories, Malacca in 1511, where the great Affonso da Albuquerque led 900 Portuguese men at arms and 200 Indian mercenaries in a successful one-day assault against some thousands of the war-elephant equipped defenders, at the cost of only 28 Portuguese battle deaths.⁷ It is also greater than the Aztec conquest battles of Cortes and the Conquistadors, perhaps the best known of such amazing invasion triumphs. With never more than 1500 men at arms, Cortes overthrew an Aztec empire with a population of no less than 12 million people, and possibly even 25 million.⁸ But this conquest took 30 months, from February 1519 to August 1521, and so Cajamarca stays as the victory over the biggest odds, and the strongest example of a technologically and biologically determined triumph over mind-numbing odds. There are, of course, a long series of lesser examples, both in scholarly writing and in popular culture. The settlers usually beat off the various swarms of hostile natives throughout the literature, and the films.

But while Cajamarca is accepted as a victorious battle against odds, to what extent is such acceptance justified? Diamond calls it a battle. Others are less specific, with good reason. The slaughter central to the story was in fact much more a *coup d'état* than any sort of military contest. The best evidence suggests the Incas offered no serious or sustained military resistance. According to chronicler Garciles de la Vega, Atahualpa ordered his people not to resist, and they did not fight.⁹ The so-called battle was a diplomatic conference in which the guest negotiators turned suddenly against their unsuspecting hosts while the latter were most vulnerable and massacred a large number of them. It can be argued that this blood-bath proved nothing much about military power but plenty about the greater nastiness of the Spanish over the Incas. Whatever the

¹ Garciles de la Vega. *The Incas* (New York: Avon, 1961), pp. 400-401. De la Vega writes that there were 160 Spaniards in the massacre, and that they killed 5000 Incas, including 1500 women, children, and other non-combatants. F.A. Kirkpatrick, in *the Spanish Conquistadores* (London: Adam and Charles Black, 1967), pp. 156-160, states that Pizarro led 106 infantry and 62 horsemen at Cajamarca, against a possible 30,000 fighting Incas, of which the Spanish probably killed 4000. According to Edward Hyams and George Ordish in *The Last of the Incas* (New York: Dorset, 1963), Pizarro started his march to Cajamarca with 213 men and 64 horses (p. 142) and killed 3,000 to 4,000 Incas in less than one hour, at a rate of 10 to 30 Incas per conquistador (p. 225).

² Geoffrey Parker, *The Military Revolution* (C.U.P., 1988). The quotation is on p. 115. See also p. 119.

³ Jared Diamond, *Guns, Germs and Steel. The Fates of Human Societies* (New York: W.W. Norton, 1997).

⁴ *Ibid.*, p. 68.

⁵ *Ibid.*, p. 75.

⁶ *Ibid.*, p. 73.

⁷ B.W. Diffie and G.D. Winus, *Foundations of the Portuguese Empire, 1415-1580* (Minneapolis, MN: University of Minnesota Press, 1977), pp. 256-7, 258-9.

⁸ The best recent studies of the Aztec conquest are those of Ross Hassig. See his *Mexico and the Spanish Conquest* (New York: Longman, 1994).

⁹ Garciles de la Vega, *op. cit.*

possible range of interpretations allowed by sources which are both one-sided and incomplete, to call Cajamarca a battle seems doubtful.

But battle or not, what about the huge disparity of odds? It is, however, already obvious from the vagueness and contradictions about numbers in the traditional accounts that hard and fast conclusions about the odds are not possible. To exaggerate opponent numbers expanded conquistador achievements. The Incas left no specific information about their version of events, or their own numbers. And the 1530s were not yet a statistically minded age even in Europe. When it came to emotive experiences such as battles and massacres, Europeans back home, recording their own bigger and more frequent battles, could not manage accurate statistical details much of the time. For the period 1503 to 1670, when large formal battles at home coincided with aggressive New World colonization, and when the incidence of such battles was higher than ever before and in any other continent, the participation and casualty numbers were collected with increasing care by state bureaucracies. Nevertheless, for 54 of these battles, as they are reported by our most respected military historians, the discrepancy rates in 18 of them are so great that the standard deviations for the basic numbers in various sources are 30% and over. Only in 18 other cases do all the authorities agree on all the figures.¹⁰ Where quantifications were made by one side only, as in the Mexican and Peruvian conquests and where conditions for accurate counting were marginal due to after-combat stresses and continuing tensions, the likelihood that historians can agree about even the most basic comparative numbers seems small. In any case, Diamond's statement that Pizarro's men overcame odds of 500 to one seems entirely too confident.¹¹ If the so-called "battle" then lasted an hour, as Diamond and other sources agree, and if the Atahualpa estimate of 7000 Inca casualties is accepted, then each conquistador must have averaged 41 or 42 Inca killings.¹² Edward Hyman and George Ordish reduce this to 10 to 30 Incas per conquistador in less than an hour,¹³ but even so the killing rate seems fast even by World War II death-camp standards.

¹⁰ George Raudzens, "In search of better quantifications of war history. Numerical superiority and casualty rates in early modern Europe", *War and Society*, Vol. 15, No. 1 (May 1997), 1-3. See especially p. 30.

¹¹ Diamond, *op. cit.*, p. 75.

¹² *Ibid.*, p. 73.

¹³ Hyman and Ordish, *op. cit.*, p. 225.

The explanation for this amazing rate has so far been largely technological, given that disease did not directly impinge on the "battle" itself. As Pizarro himself, Garciles de la Vega, and other chroniclers describe the Cajamarca violence, it was initiated by Spanish cannon and arquebus fire, followed up with a charge by 62 armoured cavalry, and completed by armoured men at arms on foot with swords. Firearms were present and apparently exercised a strong shock effect on the Incas. Horses, too, had a powerful shock effect. But the guns were few, and probably fired only once. The slaughter zone was in an urban built-up area, with little room to deploy or manoeuvre cavalry effectively. Incas too had body armour, though not as good as Spanish steel. But most of the chroniclers and experts also agree that most of the Spanish killing was done with swords.¹⁴ If this was a technological edge over stone and copper-tipped Inca thrusting and slashing arms, it was marginal rather than monumental. And, in any case, it seems the Incas did not offer serious armed resistance, or perhaps any sort of resistance. If we take only the 10 to 1 killing rate above, it remains an isolated incident rather than any kind of credible suggestion that Spanish men at arms had the capability of overcoming 10 to 1 Inca odds on any sort of regular basis.

Evidence for a massive overall combat superiority based on technological advantage—or anything else—is also missing for the Aztec conquest. Implications about the odds disparity range from 500 to 1500 conquistadors versus from 12 to 25 million subjects of the Aztec empire in the Valley of Mexico. Even extended over a series of battles during 30 months, this was an odds ratio ranging from 8,000 to one (for 12 million Amerindians and 1,500 conquistadors) to 50,000 to one (for 25 million Amerindians and 500 conquistadors). These are clearly fantasy figures. As Ross Hassig has argued, the effective fighting force of Tenochtitlan, with which the Aztecs controlled the entire Valley of Mexico with its possible 12 to 25 million people, numbered no more than 8,000 men.¹⁵ The soldiers of many of the other cities in the Valley in fact joined the Spanish side, in rebellion against their sacrifice-levying Aztec dominators. Thus, the biggest odds were more like 1,500 conquistadors versus 8000 Aztec warriors, about 1 to 5, similar to the claimed kill ratio

¹⁴ See the accounts listed in Note 1 above.

¹⁵ Hassig, *op. cit.*, p. 24.

odds of the German forces against Soviet combatants between 1941 and 1944. In virtually every important battle the conquistadors were supported by numerous Amerindian allies. The conquest was more like an internal revolution against Aztec rule than a European invasion of an Amerindian state.¹⁶ These battles were the biggest and most frequent large-scale set-piece combats in the entire Americas invasion experience to the nineteenth century, but by contemporary European standards they were still small-scale affairs.¹⁷ The odds were probably much more even than the types of conjectural figures which require large technological and biological factors to make them plausible seem to suggest.

Defeated Invasions

In the other main colonizing invasions of the Americas the European handfuls versus Amerindian hordes interpretation is even less relevant. In fact, where the odds did favour the defenders, they repelled the Europeans. The first and possibly biggest example of such a successful Amerindian defence was in Vinland around the year 1010. The Viking invaders, armed with steel swords and helmets, and steel-reinforced shields not very different from the basic equipment of Pizarro's men-at-arms at Cajamarca, were driven out of Newfoundland by superior numbers of Skraelings armed with wood, stone and bone weaponry. At least this is as strong a conclusion of the Norse Sagas and recent archaeology suggest.¹⁸

The total number of colonists under Thorfinn Karlsefni and Freydis Eriksdotter probably came in one ship and totalled 60, mostly men. Freydis then started an internal blood feud and organized the killing of some of her fellow Vikings. Meanwhile, the initial friendly relations with the Skraelings began to break down as individuals from the two groups got into a variety of disputes, in a pattern that was to be repeated in later invasions. Soon hostilities became general and the Skraelings mounted a concerted attack on the settlement.

¹⁶ George Raudzens, "So why were the Aztecs conquered, and what were the wider implications? Testing military superiority as a cause of Europe's pre-industrial colonial conquests", *War in History*, Vol. 2, No. 1 (1995), 87-104.

¹⁷ *Ibid.*, p. 101.

¹⁸ See Else Roesdahl, *The Vikings* (Harmondsworth: Penguin, 1991), and F. Donald Logan, *The Vikings in History* (London: Routledge, 1991).

Freydis tried to rally the Vikings, and her individual sword-play is said to have intimidated her attackers. As the *Vinland Saga* states

Karlsefni and his men came over to her and praised her courage. Two of their men had been killed and four of the Skraelings, even though Karlsefni and his men had been fighting against heavy odds . . .

Karlsefni and his men had realized by now that although the land was excellent they could never live there in safety or freedom from fear, because of the native inhabitants.¹⁹

Whatever the actual events were, the Vikings departed and attempted no subsequent settlements.

Their Iceland settlements from about 870 and the Greenland settlement led by Erik Raudsen from 985 were made in uninhabited lands. The most westerly Greenland settlement prospered modestly for about three centuries, though the population stayed small. In 1345, however, Inuit people, driven southward out of the Arctic by the colder climatic conditions after about 1300, wiped out the Norse settlements of western Greenland. By 1410 there was no more regular contact between Greenland and Europe.²⁰ Thus, where European settlers were few, it seems even the unwarlike Inuit could drive the Europeans out of lands they desired.

There were a number of other repelled invasions. In 1492, Columbus left 39 of his men, with a year's provisions, at Navidad on Hispaniola as he headed for Spain to announce his discovery. There seemed no threat from the Amerindians. When he returned, however, the 39 were gone and Navidad was a ruin. It appears the local Tainos had contributed considerably to their demise.²¹ They did not wipe out the much more numerous Hispaniola settlers of 1493, and Spanish colonization by the early years of the next century became irreversible. But not in places where they sent only small groups of invaders. From 1513 to 1542 the Florida Amerindians consistently repelled well-armed Spanish exploring and colonizing expeditions, often after winning pitched battles. In 1513 three ship-loads of Ponce de Leon's men were driven back into the sea by Calusa archers. In 1521 he invaded again with 200 men at arms, and was again repelled

¹⁹ Quoted in M. Magnusson and H. Palsson, trans. and intro., *The Vinland Sagas. The Norse Discovery of America* (Harmondsworth: Penguin, 1985), p. 100.

²⁰ See G.J. Marcus, *The Conquest of the North Atlantic* (New York: O.U.P., 1981). See especially pp. 5-15, 24, 39, 76.

²¹ C.O. Sauer, *The Early Spanish Main* (Berkeley: University of California Press, 1981), pp. 31, 72.

and himself killed. In 1526 500 Spanish men at arms attempted another settlement but were effectively starved out by blockading Creek Amerindians. In 1527 Panfilio Narvaez, a hero of the Aztec conquest, led another 500 men into Florida only to be defeated in sustained combat by the Apalachee people. In 1539 Hernando de Soto landed at Tampa Bay with 330 infantry and 270 cavalry. After a series of battles with various groups of Amerindian warriors the expedition reached the lower Mississippi River, but de Soto died and his men were a shattered remnant. In 1565 Spanish colonists finally set up a lasting base at St Augustine, but only after a sustained effort fully funded by the home government. In his analysis of these failed invasions Ian K. Steele concludes that European guns and steel weaponry were not sufficient to overcome the deadliness of Amerindian archery, and that diseases and climatic conditions hurt the Spanish invaders much more than imported Eurasian diseases hurt the Florida Amerindians, at least at that time.²²

Some of the early invasion efforts of the other European colonizers were also wiped out. The biggest disaster was suffered by the French colonizers of 1541 to 1543 under Jacques Cartier and Jean François de la Roche, seigneur de Roberval, near the site of the Iroquois town of Stadacona on the St Lawrence River. This was supposed to be the start of a New France. There were 1500 original settlers, about the same number as in the 1493 Hispaniola invasion, and like the Spanish colonizers the French too had armour and guns. But the local Iroquois almost immediately identified the French as enemies, and after killing 43 of them, drove the rest to abandon the colony by 1543. Unlike the Spanish on Hispaniola, the French had no prospect of reinforcements from home, and faced hostile Amerindians from the start. There were more Iroquois than settlers, and the Iroquois won.²³ The English also had an early failure, on a smaller scale, the disappearance of the Roanoke Island colonists of 1584–1587. According to Helen C. Rountree this small expedition might have been either wiped out or scattered or assimilated by the Chesapeake Amerindians. The small invader numbers enabled the original landowners to hold on to their territories.²⁴

In all the rest of the serious colonizing invasions, the defenders always lost. For present purposes four foundation colonies are suggested as the main examples of invasion successes. Mexico and Peru are exceptions to the patterns in Hispaniola, Virginia, New England, and New France, each of which became vital staging areas and bases for further major invasions. Even such large ventures as the colonization of Brazil were in many ways reactions to Hispaniola and other Spanish initiatives. In any case Aztec and Inca conquests were take-overs of Native American governments and their populations as much as anything else; the sudden injections of foreign minorities into the ruling elites of politically disrupted Amerindian socio-economic structures. These involved sustained large-scale military operations only in the Aztec case, and even here with most of the combat between Amerindians on the Aztec side against Amerindians on the Spanish side.²⁵ By contrast, in Hispaniola, Virginia, New England and New France large-scale military operations in the first generation of settlement were uncommon. The term infiltration may be more appropriate here than invasion. In the more derivative settlements of Brazil, the Greater Antilles, New Holland and the French and English West Indies, large-scale combat against Amerindians was even less frequent, and population displacement—by the injection of African slaves as well as European migrants—even more pronounced.

Hispaniola, 1493–1514

After the Vikings the first serious effort to colonize the Americas was the 1493 Hispaniola venture led by Columbus. It was a project fully supported by Queen Isabella's Castillian government and state funding. When it became clear that it was not in Asia, royal enthusiasm weakened, but it was still enough to keep the colony going and then

²⁵ Douglas M. Peers, ed., *Warfare and Empire. Contact and conflict between European and non-European military and maritime forces and cultures* (Ashgate: Variorum, 1997), p. xviii. Peers in his introduction argues the urgent need for more detailed studies of Europe's military and naval conquests in the "wider world" after c. 1450; among his criticisms of superficial historiography in this area is his statement that "... Spain's spectacular gains over the Aztecs and Incas in the sixteenth century are arguably unique. We must recognize the exceptional character of this encounter and that it did not establish a precedent for Europe's later military encounters with non-European peoples." Eurasian diseases and Aztec and Inca political weaknesses, he states, gave the conquistadors unique advantages.

²² Ian K. Steele, *Warpaths. Invasions of North America* (O.U.P., 1994), pp. 7–19.

²³ *Ibid.*, p. 61.

²⁴ Helen C. Rountree, *Pocahontas's People. The Powhatan Indians of Virginia Through Four Centuries* (London: University of Oklahoma Press, 1990), pp. 20–21.

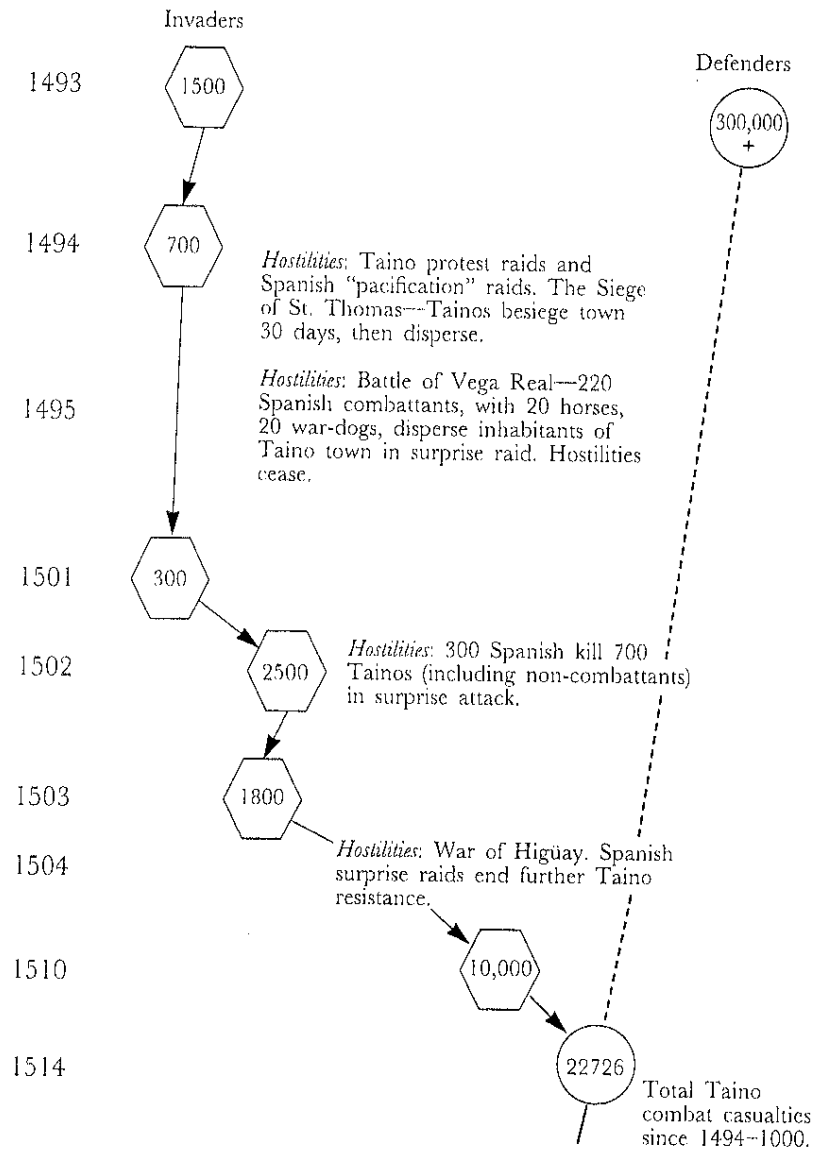


Figure 2.1. Hispaniola 1493-1514.

send the big 1502 settler reinforcement. Initially Hispaniola held out the same types of promises as the Moorish regions of Iberia and the Canary Islands to adventurous colonists, lands and workers with which to build agricultural estates. In addition, there was gold. But between 1493 and 1502 the first 1,500 or so settlers dwindled to 300 males. Death from diseases caused most of the decline, though some colonists returned to Spain. In 1502 the government sent 2,500 reinforcements. These also suffered a disease death rate of more than 50%, but were now continuously replaced by additional settlers so that the Spanish population began to grow steadily. By 1510 there were about 10,000 permanent Spanish residents on Hispaniola. The remaining indigenous Tainos were by this time well on the way to being fully Hispanicized.²⁶

Serious Taino resistance to this influx was probably over as early as 1495. In that year they still greatly outnumbered the newcomers. At the start of colonization Bartolome de las Casas estimated there were a million Tainos, or Arawaks, on Hispaniola. Modern scholars suggest 300,000 as more likely. They were fairly evenly spread over the island, in towns surrounded by cassava gardens. But the overall odds were perhaps 300,000 Tainos, counting their non-combatants, versus 1,500 interlopers in 1493, and 700 only in 1494. These 700 were equipped with 100 "hacabuche" hand cannons, 100 "espingarde" guns, and the usual armour and steel equipment of European men at arms. In fact they seem to have had a rather higher proportion of advanced technology guns than was common in European armies in the 1490s.²⁷ In addition they had horses and war dogs, both armoured, and both a big shock to the Tainos. But these obvious advantages were seldom deployed in large or even medium-scale combat against more poorly equipped Taino warrior forces.

One explanation for the low frequency of combat has been that Eurasian diseases were already slaughtering Tainos on a massive scale. William H. McNeill, Alfred Crosby, and now Jared Diamond, all argue that Tainos were devastated by imported pathogens to which they had no immunities. But there is little evidence of serious

²⁶ D.J.R. Walker, *Columbus and the Golden World of the Island Arawaks* (Kingston, Jamaica: Ian Randle, 1992), p. 309.

²⁷ M.L. Brown, *Firearms in Colonial America, 1492-1792* (Washington, D.C.: Smithsonian Institution Press, 1980), pp. 35-6.

epidemic disease among the Tainos until about 1510. Meanwhile it was the invaders who were sickening and dying at rates exceeding 50%.

Neither technology nor disease seem to have been central in this first conquest of Amerindian territory. The local Tainos did not contest the initial Spanish landings, and did not identify the newcomers as a threat. They traded, and supplied food to the sick and struggling Europeans. They allowed the invaders to build a total of four fortified towns by 1494, from which the invaders began to make more and more demands on adjoining Taino towns for food and also for labour services. Only when these demands exhausted their small food surpluses and imposed culturally intolerable work ethics did the local towns unite under Caonabo in an organized resistance movement. Only those in close contact with the invaders joined. Individual disputes grew into exchanges of violence and into small-scale raids. Columbus interpreted these as acts of rebellion and launched "pacification" counter-raids against those Taino towns assumed to be hostile. As the violence reached its peak, Caonabo led possibly 10,000 warriors against part of the surviving 700 invaders in the new town of St Thomas, besieging the inhabitants for 30 days, but failing to wipe them out. He had to call off operations for logistical reasons, to let his warriors return to their towns for food. In 1495, after more fighting in smaller engagements, the Spanish settlers struck back against one of the Taino towns containing allegedly 100,000 Amerindians. In a surprise attack with 200 armoured infantry, 20 armoured cavalry, and 20 armoured war dogs they dispersed the defenders and put many to the sword. This they called the Battle of Vega Real. It was probably the biggest organized military operation of the conquest; by European standards it was a small raid and a massacre of mostly non-combatants. Caonabo and his followers sued for peace and submitted to Spanish rule. Other Taino towns in the areas further from the Spanish settlements continued low-level hostilities after this. Murders, raids and counter-raids went on, but to call these "wars" and "battles" of a European kind is inappropriate. The closest the Tainos came to wearing the invaders down in this disorganized fashion was in 1501, when only 300 Spanish settlers remained on the island. The next year, after the great reinforcement, the invaders escalated their anti-Taino raids. In 1502 the biggest of these was one attack by 300 Spanish men at arms which inflicted up to 700 casualties counting non-combatants. In 1503, hav-

ing expanded their fortified towns to a total of 14, the invaders finished off the last pockets of Taino resistance in what they called "The War of Higüay". Afterwards there was no more serious combat between settlers and Tainos of any sort. Since 1493 Taino combat deaths were probably not much over 1,000. Spanish casualties from disease alone exceeded 2,000. From 1510 Spanish numbers rose above 10,000. In the first official census of surviving Tainos in 1514, the total was 22,726, or a bit more than two Tainos to one invader. By 1540 the remaining Tainos had merged with the settlers, culturally assimilated, and annihilated as a distinct people.²⁸ The military side of this process boiled down to two serious but small fights, the siege at St Thomas in 1494 and the "Battle of Vega Real" in 1495, with hardly a defender horde anywhere to confront the invader handfuls, technology and disease to the contrary notwithstanding.

Virginia, 1607-1622

The English invasion of Powhatan lands from 1607 was different in many ways but similar in other ways to the Hispaniola conquest. The colonists were not as well supported by government, but the business interests and migration urges driving the flow of settlers were persistent, continuous and spontaneous. About 1,700 settlers invaded the Jamestown area between 1606 and 1616. As in the Hispaniola case between 1493 and 1502, most of these also died soon after landing, from disease and acclimatisation problems. The death rates were 60% in 1607; 45% in 1608 and 1609, and over 50% in 1610. By 1616 there were only 351 survivors.²⁹ Until they began to grow tobacco for export in the latter year, they were constantly short of food, struggled with the unaccustomed extremes of heat and cold, and often lacked adequate fresh water in their locations on the brackish and tidal James River. While they made no moves to convert the local Powhatan and Pashpaheg people into

²⁸ For details of the Hispaniola invasion, see Sauer, *op. cit.*, Walker, *op. cit.*, and George Raudzens, "Why did Amerindian defences fail? Parallels in the European invasions of Hispaniola, Virginia and beyond", *War In History*, Vol. 3, No. 3 (1996).

²⁹ J.J. McCusker and R.R. Menard, *The Economy of British America, 1607-1789* (Chapel Hill: University of North Carolina Press, 1985), p. 118.

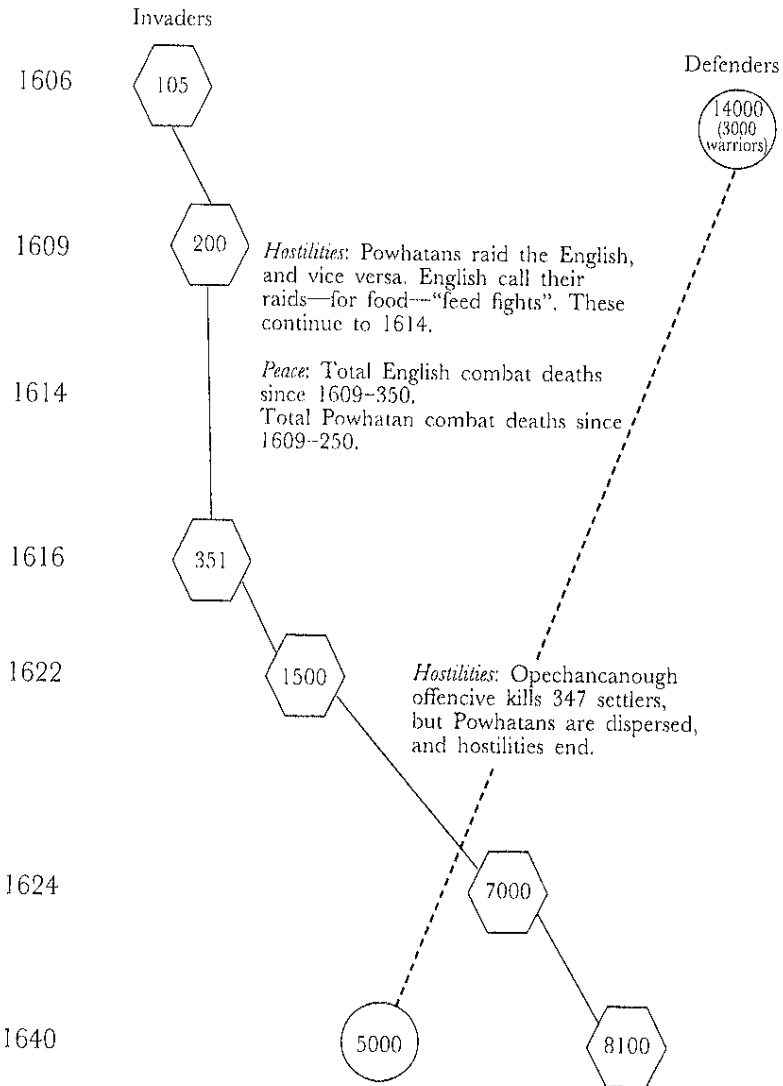


Figure 2.2. Virginia 1606-1624.

their labourers, as the Hispaniola invaders had done with the Tainos, they instead relied on Amerindian surplus corn production to keep them alive for much of the time. It was not an impressive conquering presence.

Opposite Jamestown and its modest outworks were as many as 14,000 Algonkin-speaking Amerindians in the 6,000 square miles of coastal Virginia accessible to the invaders by small boat. Many of these Amerindians were loosely united under the influence of Powhatan, their most powerful politician.³⁰ Between 1,470³¹ and 3,200³² of them were warriors of fighting age. Powhatan population density was probably no more than two per square mile, by contrast with England's density of 88.³³ Among other things these Algonkin people therefore needed something like 16 to 20 times as much land for sustenance, to produce corn, fish and game, than did European agriculturalists.³⁴ In terms of contact with the English at Jamestown, therefore, only a minority of the 14,000 indigenes—and perhaps 3,000 warriors—were within trading or fighting range of the invaders. The bulk of the latter, unlike the Amerindians, were men of fighting age, mostly well equipped with armour, pikes, and swords, and some with matchlock arquebuses or muskets. In relative combat strength, therefore, the Powhatans clearly outnumbered the English, but not by hordes versus better-armed handfuls. Nothing like a horde of Powhatans struck the invader beachheads when invader numbers were smallest. The first possible horde, rather dispersed, rose up only in 1622, when it was too late to win.

As on Hispaniola but longer, first contacts in 1606, 1607 and 1608 were amicable. In each of these years about 300 English settlers arrived, but about half died. The Powhatan odds against them were at their highest level, but instead of attacking them the Amerindians fed them. Only after slowly escalating individual disputes and steadily expanding food demands did the good feelings dissipate. When in 1609 the Powhatans ran out of corn for themselves and refused to keep supplying the English, the invaders assumed deliberate malice,

³⁰ Rountree, *op. cit.*, p. 3.

³¹ Raudzens, "Why did Amerindian defences fail?", p. 335.

³² Steele, *op. cit.*, p. 37.

³³ See M. Livi-Bacci, *A Concise History of World Population* (Oxford: Blackwell, 1992), pp. 31, 69, and elsewhere.

³⁴ Russell, Bourne, *The Red King's Rebellion. Racial Politics in New England 1675-1678* (New York: Athencum, 1990), pp. 88-90.

and after some individual killings on both sides, began to mount organized small raids against nearby towns and Amerindian cornfields. Those became the typical forms of settler-Amerindian combat, "feed fights" as the invaders called them. They went on, with Amerindian retaliation raids, until 1616. There were no large or even medium set-piece combats between fully-armed and prepared warriors and fully organized armoured musketeers. Mostly each side tried to ambush the other's unsuspecting non-combatants. There were more non-combatants among the Powhatans, and in this sense they were more vulnerable than the invaders. Also, Jamestown fortifications were much stronger than Amerindian palisades, and stayed unchallenged. The Powhatans chose to ambush individuals outside the walls; as some colonists complained, it was not safe to relieve oneself in the bushes. In 1611 the English added a second fort at Henrico, which also proved invulnerable to Powhatan attacks.

Among the biggest fights up to 1616 was the English raid of August 9, 1610, when 70 armoured musketeers attacked a Pashpahegh town, killing 40 warriors and 25 non-combatants.³⁵ There were nasty casualties in the smaller fights. In 1609 the Powhatans killed a total of 253 settlers, in 1610 they killed 18, in 1611 59, and up to 1614 a grand total of 350. They, in turn, lost about 250 warriors in direct combat.³⁶ Towards the end the Powhatans relied more and more on food denial in an effort to starve out the invaders, as Tainos had done between 1495 and 1502. But by 1614 they gave up the fight and made peace on invader terms, by giving up big pieces of territory.

After 1616 the English population began to rise. By 1624 there were 7,000 invaders in Virginia. Two years earlier, Powhatan leader Opechancanough for the first time organized a mass attack to drive the English out. In a series of co-ordinated raids against the most exposed English farms—but not their fortified towns—his warriors killed 347 settlers, a third of all the invaders in Virginia. In the English counter-attacks there was only one fight which looked like a battle. In July 1624 on the York River 60 armoured musketeers attacked another Amerindian town. For a change the defenders stood to fight it out for two days, but in the end were driven off.³⁷

In 1644 Opechancanough tried one more mass attack, with much less success. There were now 8,000 English people in Virginia, but only 5,000 Powhatans, being driven off their lands westward or to cultural extinction within a European society. There was only one more "Indian War" in Virginia, during Bacon's Rebellion in 1675-6, against small Amerindian refugee groups from wars with other European invader communities, now moving into the colony's frontier regions. The settler forces were decisively victorious. Their campaigns were mostly nasty massacres.³⁸

New England, 1620-1676

The first invaders of New England were very different from both those of Hispaniola and Virginia. They were politically alienated Pilgrim Fathers and Puritans who came as a more or less complete social slice, with their own rich elite and workers, their own funding, and all their wives and children. North America was their biblical promised land. Since they came as fully articulated societies with self-sufficient logistics they created stable communities faster than the early Virginians. They were very few to start, 102 landing at Cape Cod and settling at Plymouth in Massachusetts between July 22 and November 9, 1620. But on landing they already outnumbered the local Amerindians and, while about half died during the first winter, much as in the early days of Hispaniola and Virginia, they were steadily reinforced. In 1630 came the first of their more numerous Puritan associates, in the largest self-supported migration flow across the Atlantic to that time. By 1640 20,000 people had come to New England, of whom, with surviving Pilgrims, 13,700 were alive in that year. By 1650 there were 22,900 English residents in New England, by 1660 there were 33,200, and the growth was accelerating both from migration and natural increase.³⁹

As with other Amerindian population figures there is uncertainty about how many lived in the New England area in 1620. Neal Salisbury cautiously suggests between 114,000 and 126,000 in 1600, 90% of whom were dead from waves of Eurasian epidemic diseases

³⁵ Rountree, *op. cit.*, pp. 54-5.

³⁶ Raudzens, "Why did Amerindian defences fail?", p. 346.

³⁷ *Ibid.*, p. 351 and Steele, *op. cit.*, p. 47.

³⁸ Steele, *op. cit.*, pp. 55-6.

³⁹ McCusker and Menard, *op. cit.*, p. 103 and elsewhere.

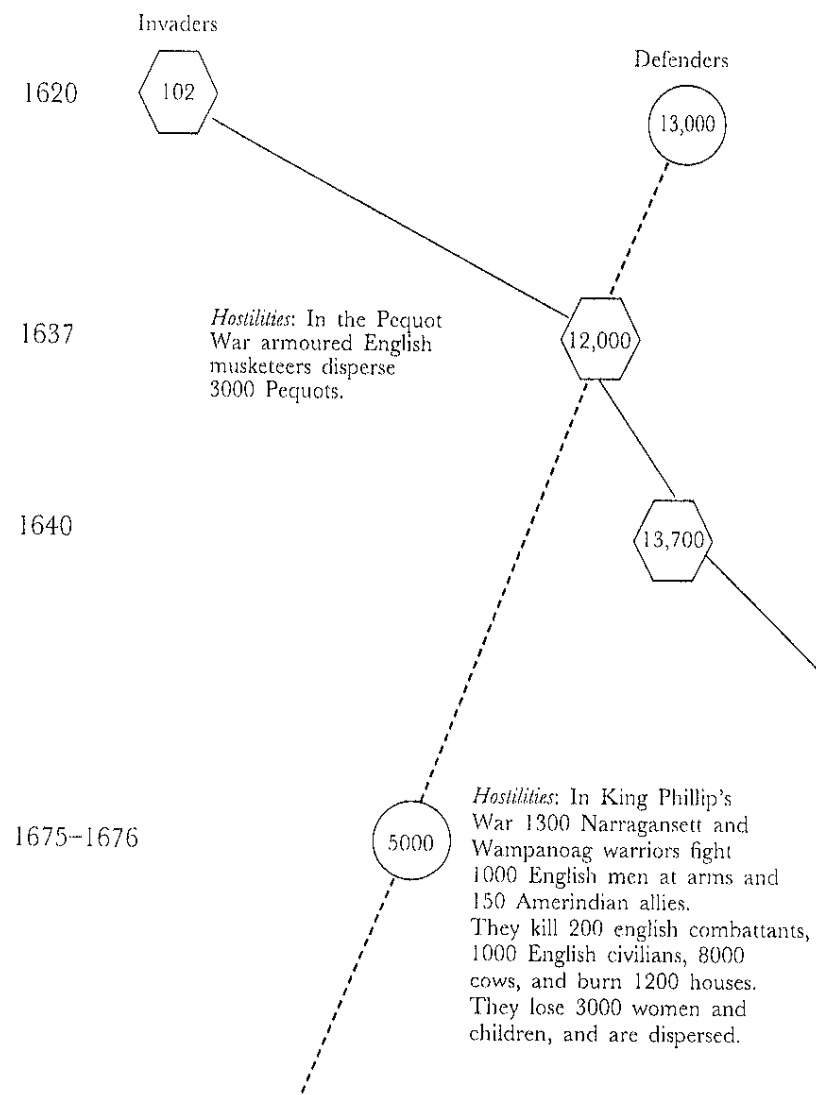


Figure 2.3. New England 1620-1676.

by the time the Pilgrim Fathers landed.⁴⁰ At best this translates into 11,400 survivors. The Pilgrims found deserted villages and cleared but unplanted cornfields. They found only very few Amerindians, established peaceful interactivities, and persuaded some of these original inhabitants to teach them how to grow corn on their former fields. There was no serious violence between invaders and defenders for over a decade. In this sense the term "invasion" seems inappropriate. The violent part of this colonization was the disease onslaught, the only clear case of disease as a big factor in helping European colonizers among the main foundation colonies. And those who brought the pathogens did not benefit from the Pilgrim and Puritan land seizures.

As the English settlements expanded in the early 1630s they began to encounter pockets of surviving Amerindian communities. Among the largest of these were the Pequots. In 1633 there may have been 13,000 of them. Smallpox struck later in the year and reduced them to about 3,000. But this was still too many for the expanding settlers. After the usual low-level violence deriving from European encroachments, in May 1637 the Boston authorities organized a force of 90 English armoured musketeers from the colonial militia, recruited 70 Mohegan (or Mohecan) Amerindian allies, and launched a dawn attack on the sleeping inhabitants of the main Pequot town. They were met by 150 surprised warriors, who failed to stop the assault. The Pequot women and children were massacred and the warriors dispersed. This was the only "battle" in the "conquest" of New England, more of an early example of ethnic cleansing than a military operation.⁴¹ By this time there were already many more English settlers in the colony than Amerindians, and it was English hordes versus Pequot handfuls. No greater forces were needed to deal with the Native Americans. The first English troops committed to North American combat by London authorities were 300 soldiers sent against the Dutch at New Amsterdam in 1664.

The bloodiest warfare between New Englanders and Amerindians came in 1675 and 1676, as part of the same type of ethnic cleansing and land-grabbing process as the Pequot War. In 1675 the Boston authorities declared King Philip of the Wampanoags and his 300

⁴⁰ Neal Salisbury, *Manitou and Providence. Indians, Europeans, and the Making of New England, 1500-1643* (OUP, 1984), pp. 26-7, 22-30.

⁴¹ *Ibid.* pp. 221-2 and Steele, *op. cit.* p. 99.

warriors to be in breach of the peace, but sent a militia force to attack the unsuspecting Narragansetts instead. With 1,000 armoured musketeers and 150 Mohegan and Pequot allies they struck at dawn launching "The Great Swamp Fight". But the surprised Amerindians also had muskets, killing 70 attackers and wounding 150 for a loss of 97 dead, 48 wounded, and up to 1,000 women and children slaughtered. About 1,000 surviving warriors joined King Philip's Wampanoags. In 1676 these 1,300 warriors killed 200 English combatants, 1,000 English civilians, 8,000 English cows, and burned 1,200 houses. In return they lost 3,000 men, women and children before giving up the fight because they ran out of food and gunpowder supplies. Most of them were driven inland or culturally, if not physically, annihilated if they stayed among the Europeans.⁴²

So while disease played a part, the Amerindians never had a big numerical advantage and the invaders never had much of a technological edge in weaponry. Instead, European settlers infiltrated into what they saw as unowned land, surrounded surviving Amerindians by population growth and, in 1637 and 1675-6, dispersed the remnants by force of arms. There were three years of "war" in this 56-year process.

New France, 1541-1665

The founding colonizers of the St Lawrence Valley had initial interactions with local Amerindians which were again different from the other main invasion experiences. In both Hispaniola and Virginia, to start with the Amerindians vastly outnumbered the European newcomers, but within the first two decades were themselves outnumbered. In New England the invaders in the contact zones always outnumbered the Amerindians. In the St Lawrence Valley, the Amerindians outnumbered the Europeans for the entire time it took the French to create an irreversible occupation. In some ways the French during their entire North American empire period lived as a minority group among Amerindian societies, some of whom, such as the Iroquois, were hostile, but most of whom were friendly. Despite their trade networks, missions and farms they were more like naturalized Amerindians than conquering invaders.

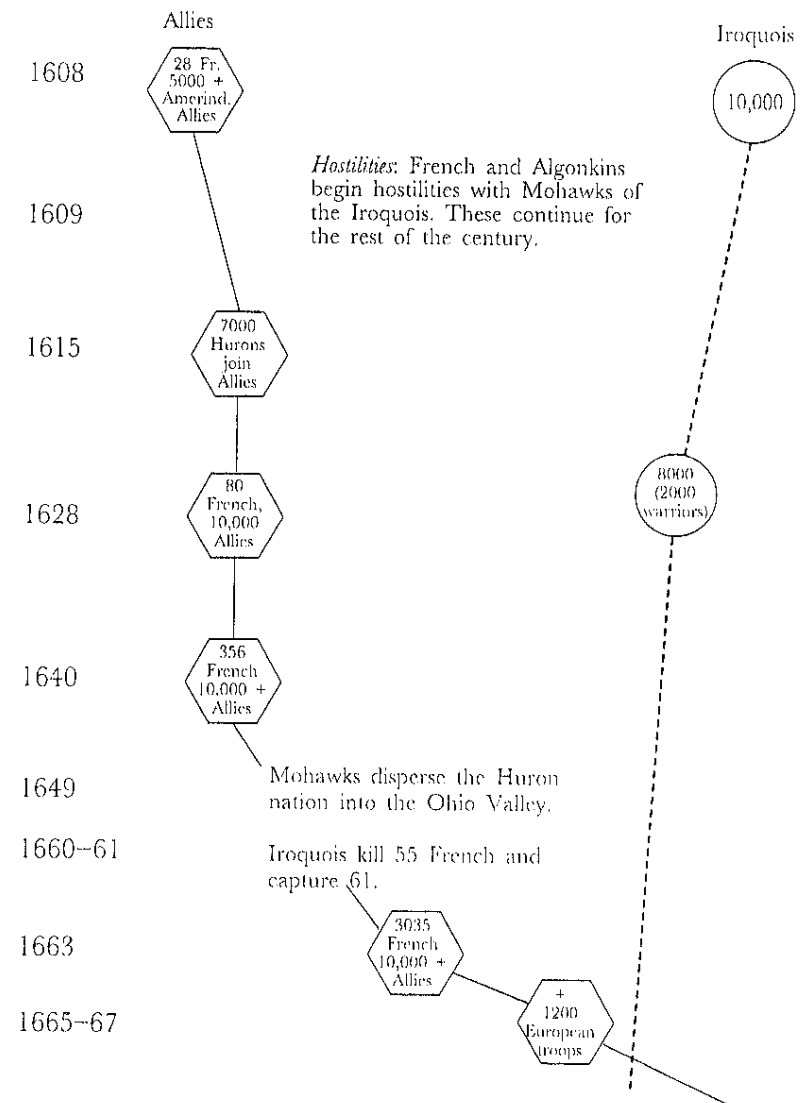


Figure 2.4. New France 1608-1667. (1541-43: Iroquois drive 1500 French out of St Lawrence Valley, killing 35.)

⁴² Steele, *op. cit.*, pp. 102-8, and Salisbury, *op. cit.*, pp. 103-120.

In 1608 Samuel Champlain followed up earlier fur trading ventures by building an outpost at Quebec with 28 men.⁴³ The site he chose was the one from which Cartier's and Roberval's colonists had been driven by the resident Iroquois in 1543. It was now unoccupied. There were several thousand Algonkin-speaking people elsewhere in the St Lawrence Valley but not close enough to feel threatened by the European newcomers. Twenty of Champlain's men died the first winter, but others came, and a steady fur trade—exchange of beaver pelts for manufactured and other European goods—developed and expanded with the Algonkins and the Hurons further inland. The Algonkins were hunter-gatherers with birchbark canoes which gave them an unrivalled inland mobility.⁴⁴ The trade was just profitable enough to keep the Champlain settlement going. To the Amerindians it was something of a materialist bonanza. European steel, for example, gave them unprecedented hunting capabilities, and thus more wealth and power. Those closest to the French gained the most and sought to keep the newcomers as their special clients, friends, and even relatives. Algonkin canoes were light enough to carry over gaps in the great inland river and lake networks but big enough for bulk transport, and so, while the French controlled the sea transport, their new hunter-gatherer allies monopolized the interior water ways. The French trade, missions and farms became dependent on the canoe infrastructure.⁴⁵ The agricultural Hurons were integrated as corn producers, to feed part of this trade. With perhaps 7,000 warriors, these Iroquois relatives became the friends and partners of both the Algonkin canoe people and the French.

⁴³ For the basic details and most scholarly interpretations of early French colonization, see W.L. Eccles, *Essays on New France* (Toronto: OUP, 1987), and his *The Canadian Frontier, 1534-1760* (New York: Holt, Rinehart and Winston, 1969). On Canada's Amerindians, see Bruce G. Trigger, *Natives and Newcomers. Canada's "Heroic Age" Reconsidered* (Kingston and Montreal: McGill-Queens University Press, 1985). On the Iroquois, George Hunt's *The Wars of the Iroquois* (Madison: University of Wisconsin Press, 1967) is still a worthy starting point. Richard White, in *The Middle Ground. Indians, Empires, and Republics in the Great Lakes Region, 1650-1815* (CUP, 1991) does an excellent study of the consequences of early colonization on the Ohio Amerindians. Steele, op. cit., is a standard reference for combat between Amerindians and Europeans throughout.

⁴⁴ Trigger, op. cit. In Trigger's opinion definite figures for the number of Algonkins in the Quebec area in 1607 are not possible, but there were some thousands of them. See pp. 231-242.

⁴⁵ See the essay by David McNab, Bruce Hodgins and Dale Standen in this volume.

On the other hand, the Iroquois corn growers south of the St Lawrence Valley were off the main Algonkin canoe and fur routes and were excluded from the trade. Almost from the start of the Champlain settlement, therefore, they became the implacable enemies of the fur alliance. Thus the gradual Europeanization of the St Lawrence Valley took place in the context of a dominant Amerindian alliance in which the French were a minority, more or less permanently at war with a numerically smaller but more cohesive nation of the Iroquois or Five Nations. The French operated on Amerindian terms, and at the limits of Iroquois war-making powers.

Both the Algonkin alliance and Iroquois wars began with Champlain's "battle" with the Mohawks on Lake Champlain on July 29, 1609. A Montagnais and Huron war party of 60 warriors took Champlain and two other Frenchmen with them on a raid against the Mohawks. They encountered 200 of the latter, probably on their way to do something similar to them. Champlain killed three Mohawks with the first triple-shotted blast of his matchlock musket. His two companions also fired. The Iroquois had no previous experience of firearms. They broke in shock, fled, and lost several more warriors, some killed and 12 captured.⁴⁶ Here at last was a genuine example of a small group beating a large one with advanced war technology. But most of the small group were also Amerindians, and once the shock among the Iroquois wore off, they not only withstood gunfire as well as European soldiers but also became as well armed with guns as the Europeans were. In 1628, when six Dutch musketeers went with a Mohegan war party on a raid against Mohawks similar in many ways to the 1609 Champlain "battle", Dutch firepower was entirely ineffective; four of the Dutch musketeers were killed by Mohawk arrows, and a fifth was roasted and eaten.⁴⁷ Subsequently the Dutch became the principal suppliers of guns to the Iroquois.

Meanwhile, as the Iroquois began to attack Algonkin canoe fleets in and out of Quebec, by 1615 Champlain was leading his Algonkin and Huron warriors against the nearest Iroquois villages. Casualties were small. In 1624 a brief peace was made. By 1628 there were about 80 permanent French residents in the colony. By 1640, with the support of Cardinal Richelieu's government, the French numbers rose to 356. But as population rose, Iroquois hostility increased.

⁴⁶ Steele, op. cit., pp. 64-5.

⁴⁷ *Ibid.*, p. 115.

By 1635 the French were arming their allies with guns, but the Dutch were arming the Iroquois from New Amsterdam. Hostilities between the Algonkin-Huron allies and the Iroquois escalated steadily until 1648, when the Mohawks began to attack the main Huron towns in southern Ontario. In 1649 Seneca and Mohawk Iroquois organized probably the most formidable Amerindian offensive since Opechancanough's attack on the Virginia settlers in 1622 or the Aztec defence of Tenochtitlan in 1520 and 1521. With 1,000 warriors they struck the Huron towns of St Ignace and Saint Louis, overran the defenders, and scattered 6,000 Hurons westward and southward into cultural annihilation among Algonkins, where their remnants became generally known as the Ottawas of the Ohio Country.⁴⁸ This stunning victory over the vital allies of the French was by Amerindians over Amerindians, both sides armed with European guns.

Only in 1660, however, did the Iroquois begin to kill serious numbers of French settlers. That year 800 of them annihilated Dollard des Ormeaux, 17 French musketeers, 40 Hurons, and 4 Algonkins at the Long Sault rapids, at a cost of 20 of their own warriors killed. In 1661 the Iroquois raiders killed 38 settlers and captured 61. But the European population was now rising, to 3,035 in 1663. The new colonial minister of King Louis XIV, Jean Colbert, began to allocate large amounts of funding in order to consolidate the French hold on North America. He sent thousands of new state-assisted migrants. In 1665 he committed the first fully articulated professional regiment of European veterans against the Iroquois; these were 12 companies, 1,200 men, of the Carignan-Salières Regiment, among the first unit to be fully equipped with new flintlock muskets. Other government soldiers were sent later. These troops had modest military success against the Iroquois, but the latter were impressed enough by their potential power to sue for peace, temporarily. The biggest Iroquois blow against the French settlers was in 1689, when they annihilated the entire town of Lachine, but by then there was no serious hope of winning against the colonists. By 1685 there were well over 10,000 Europeans in New France while the Iroquois could seldom muster 1,000 warriors. The Amerindian allies of the French outnumbered the Iroquois, and European professional troops out-

gunned them. So the Iroquois allied themselves to the expanding English colonists to balance out the odds, until the end of the French empire. Of all the Amerindians they stayed unconquered the longest, and held their territory from 1609 until the American Revolution. But they never had a real prospect of driving out the French. It was they who constantly battled against odds, armed with European guns. They owed their territorial integrity more to geography, their location between the main areas of European expansion, than to other factors.

Thus no Amerindians directly resisted the European colonization of New France in a serious way. The Amerindians actually assimilated the French more than they opposed them. Some regretted the end of the French empire. During Pontiac's Rebellion of 1763-1765, when the Ohio tribes finally mounted a united defence against further European expansion, many kept up their morale by circulating rumours that the French king was about to lead his soldiers back to North America to save them.⁴⁹ He did not come, and they too were dispersed.

Conclusion

There was one other big continental invasion which overran indigenous defenders, Australia in 1788. Here too there were no battles. From the first landings the British military and the convicts outnumbered the local Aboriginal residents of Port Jackson. Perhaps this was because of an imported small-pox epidemic. But the other killings were a consequence of conquest, not a means to it.⁵⁰ In any case, none of the four main North American invasion stories fit the

⁴⁸ Gregory Evans Dowd, "The French king wakes up in Detroit: Pontiac's war in rumour and history", pp. 254-271 in Douglas M. Peers, op. cit.

⁵⁰ As in the foundation invasions of North America, initial contacts between the concentrated Europeans of the First Fleet and the more thinly spaced local Port Jackson Aborigines were amicable. Hostility developed as Aborigines began to perceive a threat to their food supplies. See Keith Willey, *When the Sky Fell Down. The Destruction of the Tribes of the Sydney Region 1788-1850s* (Sydney: Collins, 1979), pp. 42-55. Noel Butlin suggests that the most widely cited estimate for total Aborigines in the Cumberland Plain is 4,000 in 1788. The First Fleet landed about 1,000 Europeans at Port Jackson, probably inhabited by only a portion of the estimated 4,000 defender people. See N.G. Butlin, *Economics and the Dreamtime. A Hypothetical History* (Melbourne: Cambridge UP, 1993). See especially pp. 137 and 142.

⁴⁹ White, op. cit., pp. 1-3, and elsewhere.

Cajamarca format either. Except in New England, the Amerindians outnumbered the first waves of Europeans substantially or even greatly, but did not concentrate numerical superiorities against the newcomers in the invasion zones. Almost all the sources and histories probably exaggerate Amerindian numbers, and perhaps the odds were not so great. But the odds were not exploited, whatever they were.

In the cases of Hispaniola, Virginia and New France the defenders failed to identify the Europeans as invaders. Both the Spanish and English newcomers were initially pathetically weak, struck down by diseases and dependent on Amerindian food. In the French case, the settlers seemed desirable allies. When hostilities developed in the first two cases, they came from disputes among individuals and from too much pressure on Amerindian food supplies. The Amerindians began to fight seriously only to avoid starvation. There was little sustained combat all the same. Serious fighting came after the Amerindians were already outnumbered, as in Virginia in 1622. The most formidable counter-invasion alliance north of Mexico was probably Pontiac's effort of 1763–1765, much too late.

As for disease and technology, disease helped the invaders only in New England, and technology was a marginal influence. In the rare cases of serious combat, cannon, arquebuses, muskets, armour, pikes and swords were clearly better than Amerindian arms. Europeans also generally built fortifications which Amerindians could not penetrate, and sometimes used cavalry as well. But none of the main invasions was decided by military operations and, in any case, Amerindians became remarkably well equipped with European guns very early.

If failed invasions are contrasted with successful ones, perhaps the critical difference was the strength and continuity of the European migrant flows in the several cases. In the failures small unreinforced invader groups were defeated and driven away. In the successes, migrant flows were continuous, and relative to local Aboriginal population densities—as far as these can be estimated—substantial. In Hispaniola and from the 1660s in New France European governments funded the migrations. In Virginia private capitalists paid the bills and in New England the migrants brought all their own capital with them. But whoever provided the means—for its time and place a big effort—it was the dynamism of the settlers themselves

who were driven to risk a frightening ocean voyage, deadly diseases, and perceptions of Amerindian hostility, in order to try to build new homes for themselves on a new and scary continent, were the critical difference. For many reasons, Europe from the 1490s already had enough people willing and able to colonize overseas and keep colonizing. Despite much scholarly effort, the expansionist forces driving ordinary Europeans to new lands still need further illumination.⁵¹

⁵¹ What drove the critical migrant flows has been studied as a whole in works such as Nicholas Canny's *Europeans on the Move Studies on European Migration, 1500–1800* (Oxford: Clarendon Press, 1994), and for North American migrants by specialists such as David Cressy, in *Coming Over. Migration and Communication Between England and New England in the Seventeenth Century* (CUP, 1987). But more research and analysis is probably needed. The “push” and “pull” factors needed to overcome the physical and psychological challenges of crossing the Atlantic and pioneering in a strange environment are too often neglected by historians who at least in an earlier generation