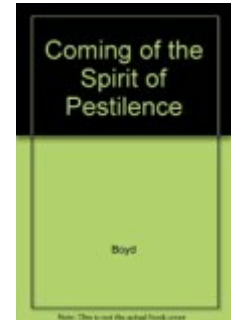


Robert Boyd. *The Coming of the Spirit of Pestilence: Introduced Infectious Diseases and Population Decline among Northwest Coast Indians 1774-1874.* Vancouver and Toronto: University of Washington Press, 1999. xv + 403 pp. \$50.00, cloth, ISBN 978-0-7748-0755-5.



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Many readers will already be familiar with Robert Boyd, and with the arguments he makes in this book. It is a revised version of his dissertation completed at the University of Washington in 1985, and has been summarized in the *Northwest Coast* volume of the *Handbook of North American Indians*. Boyd has also already published earlier versions of several chapters of this study. Still, those unfamiliar with his work, and those who work in the field of historical epidemiology will be pleased to see Boyd's arguments and evidence published in their entirety. A concise introduction conveys the assumptions, aims, and central thesis of the study. Having concluded that "the Northwest Coast experience provides, in microcosm, an unusually graphic example of a process which has happened in many other parts of the world at much earlier times," Boyd explains that "this book tests the 'disease and depopulation' hypothesis" (p. 5). It is most appropriate to use Boyd's own words to sum up his central thesis, because they convey both the conclusions reached from exhaustive empirical research, and the assumptions that permeate the work: "In the late 1700s, when peoples of Euro-American descent began to visit

the Northwest, they reported cultures that were vigorous, rich, diverse, and strong. After a century of Euro-American contact, however, these cultures were shattered: populations had plummeted, some groups had become extinct, and others were shadows of their former selves. From a pre-contact population conservatively estimated at over 180,000, only about 35,000 to 40,000 were left" (p. 3). Any reader will be impressed with the amount of research behind this work. Boyd has spent many hours indeed, combing the documentary record. Furthermore, Boyd quotes his sources often throughout the book and presents much of the raw data in appendices and eighteen population tables. Boyd clearly aims to further the scholarly dialogue with a clear, honest, and transparent presentation of his findings. Nevertheless, although Boyd has produced a very useful narrative of the arrival and spread of various disease phenomena, some of the assumptions, methods, and arguments contained in this book weaken it significantly.

The strongest sections of this book are contained in chapters two through seven. In those

chapters, Boyd provides a meticulously researched construction of the timing and diffusion of six disease episodes. The diseases include smallpox, measles, malaria, tuberculosis, scrofula and venereal diseases. Chapter one sets the context by looking at some of the scholarly background to the study, and chapters eight and nine and the conclusion provide summary interpretations of the evidence, particularly as it relates to the evidence of a demographic collapse, and suggest areas for further study. Incidentally, Boyd is to be commended for his choice of illustrations. The 23 well-chosen illustrations are drawn from no fewer than fourteen repositories across North America.

Quite intentionally, Boyd put numbers at the center of his analysis, but it is when he deals with numbers that he is most open to criticism. His approach to the data is unlikely to satisfy sceptics. For example, in his efforts to establish the exact timing of the first smallpox epidemic, which took place sometime between 1774 and 1783, Boyd concludes that a Spanish ship, the *Santiago* was most likely to have brought the disease in 1775. The evidence certainly is not clear, and Boyd concedes as much. In fact, he admits that there was no record of smallpox aboard the *Santiago* in 1775. It seems that he settled on that expedition as the culprit in large part because 1775 is the mean of the six estimates provided by different people who visited the region beginning in 1787 (pp. 36 and 38). Boyd's conclusion may be correct, but I imagine that his line of argumentation is unlikely to convince Cole Harris, who has argued that the epidemic took place in 1782 as part of a pandemic that originated in Mexico.[1] It is more convincing, it seems to me, to attempt to evaluate and defend an argument about the reliability of the different estimates. Do we have reason to believe that Daniel Portlock's account of 1787 is more reliable than Kyrill Khlebnikov's of 1820? If so, can we justify giving them, and the estimates of other

observers, equal weight by averaging their estimates?

The documentary evidence for later epidemics improves dramatically, enabling Boyd to be much more definitive in later chapters. These later chapters provide fine reconstructions of various disease phenomena. Chapter 4 probably makes the most significant contribution to our understanding of disease history in the Pacific Northwest. It is an updated version of an article Boyd published in 1975.[2] This chapter discusses the arrival, spread, and consequences of malaria in the lower reaches of the Columbia River and in the Willamette basin. Relying on ample documentary evidence, Boyd reconstructs the tragic consequences of the arrival of malaria in the early 1830s. Because of malaria, the population dynamics of the lower Columbia are distinct from other parts of the Northwest Coast.

Chapter seven also tells a remarkable story. Here Boyd argues that Euro-American newcomers were not merely negligent in the 1862 smallpox epidemic. The Hudson's Bay Company traders neglected to use the means at its disposal to prevent deaths, but settlers at Victoria actually evicted ailing Natives from Victoria, encouraging the rapid spread of the disease up the coast. The consequences were not only tragic, but preventable. Only various missionaries seem to have undertaken vaccination programs. Boyd explains that some of the most populous and "culturally viable" Native communities in the Pacific Northwest today are located where these missionaries worked in 1862 (p. 185). Findings such as these provide the great strengths of this book. Rather than capitalize on the fascinating qualitative evidence, however, Boyd chose to focus on the issue of the demographic collapse.

In his summary chapters, Boyd attempts to make sense of the many depopulation estimates that exist for the century he has studied. I do not know why Boyd chose to present the data in the form of tables, rather than graphs, but I know that

graphs would have revealed the dangers of accepting the estimates uncritically. Early population estimates of Native communities are notoriously unreliable. Trying to estimate population change over time, therefore, is fraught with problems. For example, in 1829 Jonathan Green estimated that 3000 people lived on the Queen Charlotte Islands. Three estimates of the population in the 1830s range from 6693 to 8600. This would suggest the population had boomed! Even Francis Pooles's estimate from 1862-3 places the population at 5,000, higher than the 1829 estimate (Table 7). Similarly, William Duncan estimated the Tsimshian population in 1858 at 2500, considerably higher than the HBC's estimate of 1,615 in the 1840s. (Table 11). In light of the fact that Boyd argued that population rebound was insignificant on the Northwest Coast, a reader is likely to wonder about such estimates. They seem like "ball-park figures" at best. Did Duncan and the HBC traders include the same communities under the category "Tsimshian?" Who knew the Tsimshian better? In my research on the history of the northern plains, I found similar discrepancies among populations estimates. Even a single person could give very different estimates. For example, initial mortality estimates for the 1782 smallpox epidemic were considerably higher than estimates made two years later. Were the early reports of explorers, traders, and missionaries on the Northwest Coast any more accurate? Unfortunately, Boyd never explains which estimates he considered most reliable. Can historical epidemiologists ever hope to find evidence to convince doubters?

Boyd's analysis in chapters eight and nine also casts doubt upon Boyd's assumption that the Northwest Coast is a microcosm. It hardly seems representative of North America. The region was home to the only sedentary hunter-gatherers on the continent, it supported the greatest population density north of Mexico, and its environment was markedly different than most of North America. In his first chapter Boyd himself explains how these facts may have made the disease history of

the region unique. Certainly the impact that malaria had on Native populations made it unusual in North America. This study may help others who are attempting to discern continental patterns, but its main contribution may be to convince others of the value of regional historical epidemiology pursued on its own merits.

One of the most promising aspects of Boyd's work is the degree to which he has uncovered evidence that addresses the consequences of disease epidemics apart from that of the demographic collapse. Unfortunately, this book is a prisoner of its scholarly pedigree. To understand how this is so, it is worthwhile to survey the historiography briefly. Until 1966, scholars generally agreed that the population of North America in 1492 was about one million. Then Henry Dobyns published an article estimating the pre-Columbian population of North America at about 12 million! In 1983 he published an expanded and revised study that raised the estimate to 18 million.[3] Dobyns's estimates unleashed a long and heated debate on the magnitude of the demographic decline brought on by disease--a debate that shows no sign of abating--but have done little to encourage research in the other consequences of diseases. A perusal of works published by Dobyns and his most persistent critic, David Henige, gives a flavor of this debate.[4] In short, the debate over the aboriginal population of North America has become an ideological one. Some researchers have argued, and Boyd evidently believes, that a reservoir of regional and microstudies will help scholars agree on continental and hemispheric population estimates. By announcing in his introduction that his book is intended to test the "'disease and depopulation' hypothesis," Boyd seems to suggest that his conclusions will discuss his findings in the context of the broader debate. Strangely, however, Boyd never gets back to this debate, and he never mentions Henige's work in the text or bibliography.

Perhaps more unfortunate is the fact that Boyd does not exploit the evidence he has gath-

ered and published regarding the spiritual and psychological impact of introduced diseases upon the Natives of the Northwest Coast. There can be little doubt that the diseases affected their victims tremendously, not only demographically, but it seems facile to suggest that the Northwest Coast "cultures" (a word Boyd does not use carefully) were devastated. Communities and cultures were very dramatically changed, but were they destroyed? Boyd's own evidence shows that the reality was not so simple. He suggests that devastating epidemics were followed by fluorescence in totem pole art and potlatching (p. 221). He has gathered and published oral traditions that account for the epidemics from what appears to be indigenous world-views. If anything, one begins to get the impression that the Native people of the Northwest Coast showed an amazing ability to cope with and explain what we may assume were incapacitating and incomprehensible tragedies. But, Boyd seems to have discounted that possibility. The opposite assumption is imbedded in his central thesis, but never defended in the book. On the contrary, in his suggestions for further research Boyd suggests that scholars should study the "deculturalization" of the Natives of the Northwest Coast (p. 275). In this discussion he argues that the Natives of the Pacific Northwest "devolved" when "the normally expected trend of cultural evolution . . . is toward increasing complexity" (p. 275).

Boyd's book is very useful in that it gives detailed reconstructions of the spread of diseases on the Northwest Coast between 1774 and 1874, and it presents intriguing qualitative evidence about the effects of these diseases upon the Natives of that region and about the responses of those people to these scourges. It is weaker in its analysis, particularly its analysis of numbers, but the book has its origins in one of the earliest works in regional historical demography in North America. As such it will help set the foundation for continental or hemispheric surveys, and it should be consulted by others doing historical demography in the Pacific and Australia. Readers should re-

member that Boyd was a pioneer in this kind of regional study. Since then he has been followed by others. [5] These scholars have followed where Boyd has led. They give us a much better understanding of unique regional and local disease histories, and they may provide the foundation for a better understanding of continental patterns. Boyd is to be commended for giving us a well-researched study, and for helping to stimulate a corpus of regional studies.

Notes

[1]. R. Cole Harris, "Voices of Disaster: Smallpox around the Strait of Georgia in 1782," *Ethnohistory* 41 (1994): 591-626. Boyd has responded to that article in his "Commentary on Early Contact Period Smallpox in the Pacific Northwest," *Ethnohistory* 43 (1996): 307-20.

[2]. Robert Boyd, "Another Look at the 'Fever and Ague' of Western Oregon," *Ethnohistory* 22 (1975): 135-54.

[3]. Henry F. Dobyns, "Estimating Aboriginal Population: An Appraisal of Techniques with a New Hemispheric Estimate," *Current Anthropology* 7 (1966): 395-416; and Henry F. Dobyns, *Their Number Become Thinned: Native American Population Dynamics in Eastern North America* Knoxville: University of Tennessee Press, 1983.

[4]. David Henige, "Primary Source by Primary Source? On the Role of Epidemics in New World Depopulation," *Ethnohistory* 33 (1986): 293-312; Henry F. Dobyns, "More Methodological Perspectives on Historical Demography," *Ethnohistory* 36 (1989): 285-99; David Henige, "On the Current Devaluation of the Notion of Evidence: A Rejoinder to Dobyns," *Ethnohistory* 36 (1989): 304-07; David Henige, *Numbers from Nowhere: The American Indian Contact Population Debate* Norman: University of Oklahoma Press, 1998. Also see Dean R. Snow and Kim M. Lanphear, "More Methodological Perspectives": A Rejoinder to Dobyns," *Ethnohistory* 36 (1989): 299-304.

[5]. I understand that Jody Decker's 1989 study of the disease history of the northern plains has found a publisher, and I hope that Paul Hackett's recently completed study of the region north of Lake Superior will also be published soon. In the meantime, scholars can consult Jody Decker, "'We Should Never Be Again the Same People': The Diffusion and Cumulative Impact of Acute Infectious Diseases Affecting the Natives of the Northern Plains of the Western Interior of Canada, 1774-1839," Ph.D. diss., York University, 1989; and F.J. Paul Hackett, "'A Very Remarkable Sickness': The Diffusion of Directly Transmitted, Acute Infectious Diseases in the Petit Nord, 1670-1846," Ph.D. diss., University of Manitoba, 1999.

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