The Great Geographical Discoveries from the Perspective of Environmental History--A book report on The Columbian Exchange

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Abstract. The Columbian Exchange, the masterpiece of the American historian Alfred W. Crosby, is honored as the founding text for researches on environmental history, in which the author Crosby explored an environmental-history perspective that was novel at the time, re-examining the historic events in the Age of the Great Geographical Discoveries including Christopher Columbus's discovery of the Americas and Europeans' colonization there, and interpreting the history by virtue of exchanges and transitions of the environment and the creatures therein. From the perspective of historical research, this ecological-history perspective represented at that time a pioneering research progress.

Keywords: The Columbian Exchange, The Great Geographical Discoveries, Environmental History, Crosby.

1. Introduction

In the researches on history, the constant expansion of the research objects serves as the eternal theme for history development. In the 1960s and ’70s, when the concept “Environmental History” was put forward to refer to the "interactions between the human cultures and the environment in the past", *The Columbian Exchange* was published as one of the most famous works in the wake of this research trend, which has been hailed as the landmark achievement in the development of environmental history.

2. The Author Crosby and the Background

Alfred W. Crosby (Alfred W. Crosby Jr., 1931.1.15 — 2018.3.14) was born in Boston, Massachusetts, United States. He graduated from Harvard University with a bachelor’s degree in history in 1952, and joined the US Army and participated in the Korean War in the same year. Later, he was stationed in the Panama Canal Zone in Latin America for over 20 months, and this period presumably made him determine the research focus and finally write this significant work. In 1961, he obtained the doctorate in history from Boston University, and, before the book’s publication in 1972, Crosby set his sights beyond history with an eye to biology, geography, medicine and globalization.

In the foreword and Crosby's introduction to the book’s 30th anniversary edition, we learn the specific background of the book. In the author's note, Crosby talked about the influence of the "1960s" on him: "Then, just as I started teaching, along came the Civil Rights struggle and the Black Power movement, which taught me that people who didn't look like me had been appallingly mistreated by people who did look like me. Then came the Vietnam War, which taught me that the world was much more than North America and Europe, that people who looked like me did not necessarily win all the wars, and that there were big pieces missing from the kind of history I was teaching.”[1] All these have extraordinarily broadened Crosby's mind, making him suspicious of those stereotyped historical research notions instilled by his teachers and worship on political history. In the midst of turbulent

[1] Alfred W. Crosby Jr., *The Columbian Exchange: Biological and Cultural Consequences of 1492*, translated by Zheng Mingxuan, CITIC Press Group, 2018.

political events, Crosby "I fled from ideological interpretations of history and went in search of the basics, life and death."[2] which has set the tone of this book, that is, to break away from conventional approaches of attaching importance to political history, discard highlighting disputes and interactions between Western colonists and aborigines, switch to focuses on the state of nature itself, and interpret the process of history from a brand new perspective. This book is undoubtedly great as the very first text in the field of environmental history, framing a new field and manifesting a new perspective at that time. However, on the other hand, this book was worthless for the people of 1972. "had difficulty finding a publisher" "The reviews in scholarly journals ranged from ungenerous to polite, and many journals did not bother to review it. Crosby's colleagues at his own university expressed some skepticism as to whether this was really history or not".[3]

3. Stories of the Old World

(1) Shocks from the New World

In the first chapter, the Crosby discusses how the New World had its initial impact on the people of the Old World. As the subtitle of the book says, "Biological and Cultural Consequences of 1492", the first wave of cultural shock was brought by the information and knowledge systems from the New World that had never been learnt by anyone in the Old World before, arriving in Europe earlier and faster than the American creatures. In the chapter's discussion part, we can see that the theological theories of European Christianity attempted to incorporate the New World into its own system, as well as the fact that the European traditional theology stepped towards collapse under the impact of such new knowledge. We can even boldly imagine that it is probably these new knowledge systems originated from the Americas that sounded the first clarion call for the Europe's Enlightenment since the 16th Century. These knowledge and phenomena, which were forced into traditional Christian theology, might have produced a severe rejection reaction in the Old World, planting a seed of doubt about Christian theology in the minds of potential thinkers and reformers in Europe and eventually resulting in the ideological transformation and liberation from traditional Christian-theology world outlook of modern Europe. However, after all, discussions in such respect is absent as this book is about environmental history in essence, and Crosby mainly regards the initial exchanges between the Old and New Worlds as the backdrop of subsequent biological exchange, which can be seen from his focuses. The main purpose of this chapter on the new knowledge systems of the New Continent is to show the natural differentiation between the Old and New Continents in terms of plants, animals, and human beings, which eventually led to the "Columbian Exchange" between the Old and New Worlds as the root cause why this large-scale biological exchange has brought such profound impact.

(2) Domesticated Animals and Plants

In the second and third chapters, Crosby discusses how the creatures of the Old World were brought to the New World and expanded their territories there. The first part mainly introduces the domesticated animals and plants representing prosperity and development, which have crossed the vast ocean to arrive in the New World and eventually change the history of the Americas via rapid propagation.

In respect of plants, seeds from the Old World were brought to the Americas from Española. Under the care of European farmers, the New World was soon covered with crops from the Old World from north to south: wheat, olive, grape, sugarcane and various fruit trees, which expanded wildly in the New World. Besides, a large number of fields were cultivated in the foothills of the Mexican Plateau and Peru. The colonists harvested food from their homeland and, for the first time, re-saw the views in the New World that were quite similar to those at home.

Nevertheless, it was the animals brought to the New World that played the most vital role in its transformation: swine, cattle, horse, and sheep. The colonists took them to the wild, either consciously

[2] Alfred W. Crosby Jr., *The Columbian Exchange: Biological and Cultural Consequences of 1492*, translated by Zheng Mingxuan, CITIC Press Group, 2018.
[3] Alfred W. Crosby Jr., *The Columbian Exchange: Biological and Cultural Consequences of 1492*, translated by Zheng Mingxuan, CITIC Press Group, 2018.

or not, making preparations for the arrival of the upcoming colonists beyond the reach of human beings. Piglets scattered on the Caribbean islands provided meat supplies to the colonists drifting on the sea; horses facilitated Spaniards' conquering of the vast territories in the New World; cattle and sheep rendered meats and plenty of raw materials for handicraft industry for the colonists. These animals have drastically transformed the nature of the Americas, enabling the colonists to enjoy basic elements to colonize and develop economy in the Americas; simultaneously, the production and lifestyle of the indigenous people and the social form of the Americas were drastically transformed as well. Compared with plants, animals of the Old World enjoyed a better acceptance among native Americans: horses helped the American tribesmen become more mobile in nomadic life, while cattle and sheep provided them with a sufficient source of income.

(3) Horrible Diseases

In another aspect, however, the Europeans brought to the Americas diseases and viruses, which denote no prosperity but devastation. This constitutes the main content of the second part of the Crosby's discussion of the gifts brought by the Old World to the New World. The impact of diseases and viruses on American society is far greater than that achieved by plants and animals brought to the Americas, and such impact is devastating and indelible. Various kinds of viruses have systematically decimated Native American settlements and destroyed the social structure of local civilizations. When the massive civilian deaths impaired the resistance of American countries such as Inca and Aztec, the dreadful mortality rate among native leaders in the face of diseases exacerbated the chaos of these countries, truly dealing a fatal blow to the American civilization. After the diseases and secondary crises brutally hit the American natives, the Spaniards were able to conquer the once great empires and civilizations with only hundreds of people.

4. Stories of the New World

(1) High-yielding Crops

In the fourth chapter, Crosby discusses the "new species" brought by the New World to the Old World, mainly high-yielding crops that were native to the Americas, including maize, potatoes, sweet potatoes, cassava, American beans, etc. The most notable effect of these high-yielding crops, which were firstly brought to Europe and then to the easternmost part of the Continent in the next century or two, was having driven the massive growth in the population of the Old World. From Ireland to China, the entire Old World started growing high-yielding crops from the Americas on a large scale, which was followed by the population continuously reaching new heights. Crosby is also outspoken about this overwhelming impact in the book, naming the title of the fifth chapter directly as "New World Serving as the Farmland of the Old World". The current understanding of high-yielding crops in the Americas is sourced, to a certain extent, from the in-depth introduction of the fact in this book.

(2) Mysterious Syphilis

In the meantime, there are also creatures not so friendly as crops that emerged in the Old World, that is, syphilis, for which Crosby devotes one entire chapter to this new disease that has a profound impact on the Old World. In this part, Crosby details how syphilis, one of venereal diseases, spread rapidly in the Old World, and looks into the profound impact of syphilis on European society. The relationship between the two sexes, social structure and religious thought have all been impacted by syphilis, which has become one of the few negative effects of the New World on the Old World.

However, this part is clearly overshadowed by other contents in the book, and even Crosby has admitted in his Note 30 years later that excessive space has been wasted on the syphilis topic only to find a balance between the Old and New Worlds or a slight black-humor "*Montezuma's Revenge*".[4] However, through Crosby's argument, we do see the idea that Crosby intends to express: in the field of biological communication, there indeed exists a sense of equality between the Old and New Worlds.

(3) Ecological Collapse of the New World

[4] Alfred W. Crosby Jr., *The Columbian Exchange: Biological and Cultural Consequences of 1492*, translated by Zheng Mingxuan, CITIC Press Group, 2018.

In the last chapter, Crosby briefly discusses the severe damage to the biodiversity in this large-scale exchange of species. While the Americas contributed a great number of high-yielding crops to the Old World, the animals they brought to the Old World seemed so useless as they disrupted the habitats and habitual nature of the original animals in the Old World; on the contrary, the destruction of the Americas by Old World species seems even more serious, resulting in extinction of numerous kinds of endemic plants and animals in the Americas in the species invasion. With the Americas becoming "more and more like the Old World", the biodiversity of the Americas has suffered a heavy blow. As Crosby writes in the last paragraph at the end of this chapter: "*The Columbian Exchange has left us with not a richer but a more impoverished genetic pool. We, of all the life on this planet, are the less for Columbus, and the impoverishment will increase.*"[5] This chapter fully uncovers the dark side of this large-scale exchange of species, which involves not only the people who died in the pandemic but also the global natural ecosystems that suffered permanent damages, which to some extent breaks away from anthropocentrism and extends the impact of human history from human beings themselves to everything that interacts with human beings.

5. Conclusion

As Crosby and many others have commented, the most crucial significance of this book lies not in the correctness and rigor of its views and arguments but in that it raises a new possibility and a perspective that has never been or is unwilling to be formally treated by historians before. From Crosby's Note 30 years later, it is not difficult to see that the professors who taught him to study history also laid emphasis on political history, which makes no difference from the Chinese tradition of history study. From this perspective, one piece of history after another is depicted as the development, upgrading or reactions of exchanges of political entities, which the genuine human history is far more than that. From the earliest studies of economic and social histories to the perspective of environmental history created by this book, historians keep on broadening their horizons and phasing out anthropocentric presuppositions.

Back to the points of this book, the environmental-history perspective initiated by it, especially the one centering on biological exchange, has enormously changed people's views on the past history, and we have successfully seen the subtle influence of people on history in the course of communication among regions. The biological exchange takes place on the earth ceaselessly, and this point of view is of more special significance in today's pandemic era. Today’s world, where humans’ footprints are seen almost everywhere, is integrated, globalized, and independent of human wishes, and the main idea of this book exactly upholds the conception of history of this status.

References

[1] Alfred W. Crosby Jr. The Columbian Exchange: Biological and Cultural Consequences of 1492 [M]. Beijing: CITIC Press Group, 2018.

[2] Charles C. Mann: 1493: Uncovering the New World Columbus Created [M]. Beijing: CITIC Press Group, 2021.

[3] Alfred W. Crosby Jr. Ecological Imperialism: The Biological Expansion of Europe, 900-1900[M]. Cambridge: Cambridge University Press, 2004.

[5] Alfred W. Crosby Jr., *The Columbian Exchange: Biological and Cultural Consequences of 1492*, translated by Zheng Mingxuan, CITIC Press Group, 2018.