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A Closer Look at the History of Epidemics in Japan
With Focus on Ann Bowman Jannetta's Book[1]

نظرة فاحصة في تاريخ الأوبئة باليابان

عبد الرزاق العيساوي

Abderrazzak Elassaoui

(Morocco),

assaoui86@gmail.com

الملخص: تتناول هذه الورقة البحثية تاريخ الأوبئة في اليابان في الحقبة الحديثة، بالاستناد إلى كتاب جانيتا بومان المعنون ب "الأوبئة والموت في اليابان في بداية الحقبة الحديثة". تكمن أهمية هذا الكتاب في اعتماده على مقاربة تاريخية مقارنة؛ تروم دراسة تاريخ الأوبئة باليابان من منظور غربي، بغية استخلاص بعض خصوصيات الأوبئة باليابان وانعكاساتها على المجتمع الياباني إبان الحقبة المدروسة. كما تتجلى أهمية هذا الكتاب في كونه وظف مجموعة من الوثائق التاريخية اليابانية غير المطروقة سابقا. والواقع أننا انطلقنا في هذه الورقة من الوضع الوبائي الحالي، إذ حاولنا البحث عن تفسير لقلة حالات الوفيات الناتجة عن فيروس كورونا في اليابان مقارنة بدول أوروبا الغربية. وعلى العموم، فقد قدم كتاب جانيتا بومان التفسيرات الآتية: أولا، الموقع الجغرافي لليابان. ثانيا، إجراءات الحجر الصحي الصارمة المعتمدة من قبل السلطات في اليابان إبان هذه الحقبة. ثالثا، توفر المدن اليابانية في الحقبة الحديثة على بنيات تحتية مهمة، مثل المجاري المائية الضخمة. رابعا، الأعراف والتقاليد اليابانية .

الكلمات المفتاحية: الأوبئة، اليابان، الموت، التاريخ الاجتماعي، الحقبة الحديثة

Abstract:

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This paper deals with the history of epidemics in Japan, with focus on Ann Bowman Jannetta's book that was entitled ¨epidemics and mortality in early modern Japan¨. The important of this book resides in its comparative/historical approach; it contains several issues that concern Western European history, for example, it poses an important issue of whether the epidemics of bubonic plague that periodically devastated the populations of Europe between the fourteenth and seventeenth centuries caused similar havoc in Japan. In terms of documentary materials, this study uses contemporary descriptive accounts and buddhist temple death registers to reconstruct the history of important epidemic diseases in early modern Japan. Generally, these paper have led us to several conclusion, they are as follows: Firstly, Japan had a low virus death rate because of the geographical location of Japanese archipelago in east Asia. Secondly, it is very possible that inspection procedures and quarantine methods used by the Japanese authorities were effective in preventing infectious diseases. Thirdly, it is very likely that the sanitary conditions of Japanese cities responsible for preventing the spread of diseases. In Tokyo, for example, there was good drainage, perfect closets, in addition, all excrementitious matter was carried out of the city by men who utilize it for farming in their rice-fields. Fourthly, Japanese customs may also have helped in reducing the incidence of infection from enteric diseases in Japan.

Introduction *:*

Despite medical progress, nations around the world are still unable to stop the spread of covid-19. *It is noteworthy* that *the severity of this virus varies from country to country*. For example, Italy, Spain and France witnessed *huge human and economic losses* because of the outbreak of covid-19. Japan, by contrast, doesn't have a high death rate due to covid-19. It is well known that Japan has many of the conditions that would make it vulnerable to covid-19, and it has never adopted the energetic approach to tackling the virus that some of its neighbours did. However, Japan's covid-19 death rate is generally *much lower than* those of the United States and the European countries. As a result, international media *posed the following question:* Why does Japan have a low virus death rate? Of course, this

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question spawned dozens of theories. *The most important, in my opinion, is what the* deputy prime minister Taro Aso said, when he had been asked by leaders of other countries to explain Japan's success. He said: "I told these people: 'Between your country and our country, mindo (the level of people) is different." And that made them speechless ."[2]

In this article, I will try to answer the above question by using a historical perspective. I am going to *shed light on* the history of epidemics diseases in Japan through Ann Bowman Jannetta's book that was entitled Epidemics and Mortality in Early Modern Japan. Its purpose is to answer the following two questions: What are the infectious diseases that cause epidemics before the opening of the country to Western trade in the mid-nineteenth century? How did these diseases affect mortality and population growth in Japan during Tokugawa period? *in order to have fruitful discussion, this book is based on historical-comparative research, it contains several issues* that concern Western European history, for example, it poses an important *issue* of whether the epidemics of bubonic plague that periodically devastated the populations of Europe between the fourteenth and seventeenth centuries caused similar havoc in Japan. In terms of documentary materials, this study uses contemporary descriptive accounts and Buddhist temple death registers to reconstruct the history of important epidemic diseases in early modern Japan.

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Hence, this material adds a new dimension to this study. it is possible to combine the very detailed information contained here with the general, impressionistic evidence provided by contemporary studies.

1. The Basic Terminology

An epidemic is *one* of the *most commonly used terms* in this book. According to the New Shorter Oxford English Dictionary, an epidemic is a disease "normally absent or infrequent in a population but liable to outbreaks of greatly increased frequency and severity", or "temporary but widespread outbreak of a particular disease."[3] Another standard dictionary, Webster's New Collegiate, gives another and somewhat broader definition: "Excessively prevalent."In this way, I state that the world witnessed many epidemics since ancient times such as smallpox, measles, and cholera, etc. those epidemics led to raising mortality rate. Thus, Malthus suggested that epidemic diseases played an important role in limiting population growth in preindustrial societies. *In other words*, recurring mortality crises were the mechanisms by which people and the resources that sustain them were brought into equilibrium. It is necessary to take into *consideration that* modern diseases understanding and categorization differ significantly from those of past ages and places. For instance, when people of the sixteenth century spoke of a great pox they have meant what we now call syphilis. It is also important to point out here that the virulence of a disease is a measure of its ability to injure its host. In this way, *we can distinguish two aspects* of virulence: 1) pathogenicity, which refers to the severity of a disease as measured by morbidity and

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mortality; and 2) invasiveness, which refers to the ability of the parasite to invade tissues.

Ann Bowman Jannetta's book contains another main term, pandemic, which means an epidemic on a very wide geographical scale, perhaps worldwide, or at least affecting a large area of the world. One of the most famous pandemic is the bubonic plague, that struck Europe in the latter half of the fourteenth century[4]. We should also mention here the Spanish flu of 1918 and 1919, which killed an estimated 20 to 40 million people worldwide. This large number of deaths reflects *the high transmissibility of* a disease pathogen. Generally, there are four general means by which infectious diseases can be transmitted: 1) contact transmission, which includes direct and indirect contact; 2) common vehicle transmission, which includes vehicles such as food and water; 3) airborne transmission, by droplet nuclei or dust; and 4) vector transmission, usually by means of insect vectors that transmit a pathogenic agent from one host to another of the same or different species.

In this connection, *we* should *mention another word which is an* endemic disease, which means disease with regional features, that is close related to natural environment, human life, and production. In the endemic volume of China's first set of medical encyclopedia, it defined endemic diseases as one which was relatively stable and frequently reoccurred within certain regions[5]. It is worth mentioning that occurrence and prevalence of endemic diseases brought serious detriment to the health, life and production of the residents living in endemic disease areas, and affected national prosperity and local economic development.

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In this regard, we need to remember that China was once one of the worst-affected countries by endemic diseases in the world, characterized by multi-types, high prevalence, serious public health hazard, and wide distribution. Generally, endemic diseases can be classified into four categories according to the pathopoiesis, including geochemical diseases, natural focus diseases, specific lifestyle-related diseases, and endemic diseases of unknown causes[6].

2. Epidemics in Modern Early Japan

This study is based on varied sources to trace the history of important epidemic diseases in Japan. *These sources are not able to* identify an epidemic by name or even by type as in European records. However, the Japanese sources improve over time, and by the Tokugawa period a high proportion of epidemics can be attributed to well-known diseases. In this regard, we should mention the outstanding book entitled *Nihon shippei shi* (A history of Japanese epidemics), which represents the lifework of Fujikawa Yu in the early twentieth century. This work provides an annotated chronology of references to epidemics in Japan from the earliest known reference in 93 A.D to the end of the Tokugawa period in 1867. Citations from the Japanese texts are given, the original source is identified, and the references are compiled in order by year. In addition, Fujikawa devotes a chapter to each of the most important epidemic diseases and analyzes the evolution of the terminology used to record them. It is *important to indicate here that before Fujikawa's work,* there was no Japanese parallel to the substantial European literature on epidemics, although references to epidemics were scattered throughout

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the voluminous source materials of premodern Japan. It would be quite correct to say that emergence of Fujikawa work was an epoch-making for the Japanese research on epidemics and its history. Thus, the *Subsequent works sought to* develop a keen interest in Western medicine and its history. Consequently, the Japanese scholars became well informed about the germ theory of disease, and well convinced of the need for a comprehensive history of infectious diseases in Japan.

Based on the above mentioned sources, the most significant epidemic diseases of the Edo period is smallpox. Yamazaki Tasuku, a medical historian and student of Fujikawa Yu, wrote in the 1930s that: ¨Smallpox is one of the old epidemics in our country. We have more medical books about this disease than almost any other particular disease¨[7].

The term "smallpox" was coined in England to distinguish this disease from the "great pox," which in the late fifteenth and early sixteenth centuries was the common name for syphilis. For Japan, It is difficult to find a clear and *precise definition of* smallpox in the pre-Tokugawa accounts. In this way, The Japanese account that describes an epidemic of smallpox in 735 A.D uses the Chinese description. One of the manifestations of this confused disease resides in the fact that the Japanese accounts *experienced considerable difficulty in* distinguishing between smallpox and measles. However, by the sixteenth century, *there was no longer a difficulty* in distinguishing between these two diseases in the accounts and literature of the Tokugawa period. The common

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Japanese word for smallpox was *mogasa*, which could be written in several different ways[8].

Moreover, the Japanese sources indicate that Japan during the Tokugawa period *experienced* measles. It is one of the most contagious of all human diseases, particularly in late winter or early spring. It was occurred most often in areas with large populations, and least often in communities that had little contact with population centers. The first signs of illness are fever, malaise, and headache. At the same time, or shortly thereafter, catarrhal symptoms—inflammation of the respiratory tract, with sneezing, coughing, and nasal discharge—are manifested. According to the above mentioned Japanese sources, the measles epidemics were infrequent, occurring at intervals of about twenty to thirty years. *This may be partially due to* the fact that Japan was an island nation, far from the major sea lanes, with extremely limited contact with other population centers. In the sixteenth century, when there was increasing contact with neighboring countries and new contact with Europeans, measles epidemics occurred more frequently. Generally, The Japanese sources show that measles'mortality for the Tokugawa period as a whole was lower than other countries that were exposed more frequently. The popular Japanese name for measles is *hashika* that was used as early as the Kamakura period (1192-1333), and it is still the common term for measles today.

In addition to the above mentioned diseases, this book dealt with enteric infections, such as dysentery, typhoid fever, amoebic dysentery, and bacillary dysentery. *It's well known that* these diseases were an

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important cause of death in most premodern societies, and Japan was no exception. The enteric infections are caused by microorganisms that enter the human host through the month and multiply in the human bowel. *We will focus here on the* dysentery, as the most important type of enteric infections in Japan during this period. The primary symptom is watery diarrhea with no blood in the stool, which recurs with increasing frequency, and which results in enormous loss of water from all tissues. This is often accompanied by severe vomiting, painful abdominal cramps, a drop in body temperature, and a characteristic darkening of the skin caused by cyanosis. The earliest Japanese reference to dysentery is an account that mentions an epidemic in Kyoto in 861 A.D. Fujikawa did find accounts of dysentery epidemics for several years, such as an account written in 1708 mentions that dysentery was spread in several localities; another occurred in the autumn of 1746 that spread to surrounding areas, and affected young children and old people most severely. A typical account, written in 1841, states that "this summer was very hot and in the fall dysentery was prevalent."[9] It is worth pointing out that Cholera, a dysentery-type epidemic that first became important as a world disease in the nineteenth century, does not appear in the Japanese records until 1822. The exact route by which cholera entered Japan in 1822 is unclear. Some accounts claim that cholera reached the port of Nagasaki from Java; others state that it came by way of China and Korea to Shimonoseki. In 1858, Japan witnessed the second cholera epidemic. Contemporary accounts claim that cholera was brought to Japan when the

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U.S. warship *Mississippi* came into Nagasaki from China carrying a cholera patient[10].

We should also mention that influenza was *one* of the *most common infectious diseases in Japan.* Fujikawa identified twenty-one of these influenza-type epidemics in pre-Tokugawa accounts, the earliest epidemic appearing in records of 862 and 863 A.D. The contemporary accounts of the Tokugawa period described twenty-seven influenza epidemics. It is obvious that influenza epidemics reached Japan fairly often, because the influenza virus mutates and can be carried by people of all ages. Influenza is, also, highly contagious, and it is noted for its ability to sweep very rapidly over vast areas[11].

Unlike European countries, Japan didn't experience epidemic of plague until the *end of the nineteenth century*. In 1899, the first known cases of bubonic plague in Japan occurred in Kobe and Osaka. *This plague* was carried along the railway routes to Hong Kong and other port cities. The plague, then, reached Japan, where it was regarded as a new disease at the time. It was called *"pesuto"* from the Italian or French, and written in *katakana*, the writing system used for foreign words.

The Japanese sources shows that epidemic typhus was unknown in Japan until the late nineteenth century. *We can say that* its absence in Japan during the period of the Tokugawa *linked to* the need for the disease-causing organism to have a full complement of hosts and vectors that may not have been indigenous to Japan. *It is quite possible that* its appearance was *associated with Japan's opening* up to the

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Western world. It was called *chifusu*, the Japanese equivalent of the Western word "typhus," and it also was written in *katakana.*

2. The History of Epidemic Diseases in Japan

Ann Bowman Jannetta's Book stresses that there are no studies pertaining to Japanese epidemics in Western historical literature**.** As a result, nothing was known in the West about the history of epidemic diseases in Japan itself. Even in Japan, there is a *great confusion about* epidemic diseases, due to the absence of Japanese literature on this subject. *In fact* it is so *difficult to* find *a plausible explanation of this case, but it can be said that* epidemics are not regarded as an important topic in Japanese history, because Japan is afflicted with more than its share of natural disasters. Earthquakes, volcanic eruptions, tidal waves, and typhoons are relatively common occurrences. Put differently, Japanese scholars showed little interest in the subject. *As we have mentioned above, the Fujikawa's work* which was published in the beginning of the 20th century, *laid the foundation stone* of *Japanese research on* The history of epidemic diseases. Indeed, Fujikawa was the perfect person to undertake such work. Although, he was descended from an established family of physicians, his primary interest, apparently formed at a very young age, was history. Particularly, the history of epidemic diseases in Japan. He was born in 1865, a little more than a decade after the Western powers had forced the opening of Japan to foreign trade. In 1897, at the age of 32, Fujikawa, like many of his countrymen, went to Europe to study. He studied medicine and the history of Western medicine in Germany for approximately ten years, receiving a degree in

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medicine as well as a Doctorate of Letters from Jena University. As a result of his sojourn in Europe, Fujikawa was exposed to the influx of Western ideas, and he developed a keen interest in Western medicine and its history. Generally, Fujikawa's work was continued by several scholars such as Yamazaki Tasuku[12]. In 1931, Tasuku published a book entitled *History of Epidemics and their Prevention in Japan*, which include an examination of the methods that were used to prevent or contain epidemics.

Ironically, the Japanese materials for studying the epidemics of the premodern period are excellent. Japan has some of the best population records of the preindustrial world that may *allow researchers to trace* the history of important epidemic diseases. We can distinguish different types of sources: Contemporary descriptive accounts, records of the investigation of religious sects, registers of residents, nationwide population statistics, and private records, which include family genealogies and temple records. *Here, we will focus* on two types: Records of the investigation of religious sects and temple records, as they are the most important for historical research. Records of the investigation of religious sects are village census records, which were compiled annually in each village. They are the basis for village, provincial, and national level data, and they have been used, almost exclusively, to estimate birth rates, death rates, population size, and population growth rates for the late Tokugawa period. For the Buddhist temple death registers, they are local or regional sources during the Tokugawa period. *It is well known that* everyone was required to be affiliated with a Buddhist temple, and when a

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member of the temple died, a memorial service was held, and his death was registered to assist his passage into the next world and to protect his descendants from misfortune. *Hence,* Ann Bowman Jannetta's Book is based on data from two temple registers; the first is temple of Sendai, in northeastern coast of Japan. The second is Temple of Hida, situated in an extremely mountainous part of central Honshu. The registers contain *very important information, which provide scholars a window* into a better *understanding* of mortality in these two regions during the Tokugawa period.

3. Conclusion

Of immense significance in these analyses is the fact that Ann Jannetta's book tried to avoid *stereotypical* preconceptions *resulting from Eurocentric and ideological bias in European studies towards the Japanese society. It* emphasizes that there is a great difference between epidemic diseases in Western Europe and Japan. For example, *epidemics were not important in Japan, they were not a major mortality factor in Japan, at least until 1725.* In 1600, Japan had one of the world's most densely settled populations. Estimates at the beginning of the seventeenth century range from 10 to 18 million people, and during the first century of rule by the Tokugawa shogunate, Japan's population doubled, reaching approximately 30 million people by 1725. The most remarkable example was the city of Edo, which is believed to have been the largest city in the world, with approximately one million inhabitants by the early eighteenth century.

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Here we come to a very important question: Why was the demographic or psychological impact of this disease less severe in Japan than it was in Europe*? In fact, it is difficult* to give a *categorical answer* to this *question, but I would suggest some debatable explanations. Firstly, the geographical location of Japanese archipelago in east Asia, which is* composed of four major islands; Hokkaido, Honshu, Shikoku and Kyushu and over 3,000 lesser islands. As a result, Japan remained relatively isolated geographically, and its people had little contact with population centers outside East Asia. Even contact with East Asian populations was relatively limited before the mid-nineteenth century. Of course, this isolation from the major world trade routes provided a *cordon sanitaire* that prevented major diseases from penetrating Japan until the mid-nineteenth century. In contrast, Europe's contact with African and Middle Eastern populations was considerable after 1000 A.D, and with the New World and Asia after 1500. This led to rapid transmission and widespread of diseases epidemic diseases in Europe. Although it seems obvious that geographic isolation protected Japan from many diseases, much more is still to be learned about the nature of Japan's contacts with the outside world before Japan's disease history can be fully understood. Secondly, *it is very possible that* inspection procedures and quarantine methods used by the Japanese authorities *were effective* in *preventing* infectious diseases. In this regard, we can mention the absence of cholera epidemics in Japan between 1822 and 1858, even when it managed to spread the world wide many times during this period. Thirdly, *it is very likely that* the sanitary conditions of Japanese cities responsible for

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preventing the spread of diseases. Some studies asserted that the death-rate of Tokyo was lower than that of Boston, London, and other European cities because of the *great interest* taken in public *health matters in Tokyo. For example, there was* good drainage, perfect closets, in addition, all excrementitious matter was carried out of the city by men who utilize it for farming in their rice-fields. In the European and American cities, by contrast, the sewage is allowed to flow into coves and harbors, polluting the water and killing all aquatic life[13]. Fourthly, Japanese customs may also have helped in reducing the incidence of infection from enteric diseases in Japan. It was customary to boil drinking water in Japan and to eat only food that was cooked. There were also religious taboos against eating meat[14].

Subsequently, it is difficult for scholars to gain access to Japanese literature on the history of disease. *As we mentioned earlier*, the starting point for Japanese historical studies was the epidemics at the beginning of the 1920s. *This is completely contrary to what happened in European societies, as we notice that* literature on the history of disease appeared relatively early, and provided an important *accumulation over* many *years*. Indeed, *we should pay attention* to some *issues* that are *addressed in this study, particularly those* closely *related to reasons of absence of* Japanese literature on the history of disease. *The study confirmed that* the absence of Japanese literatures were due to lack of interest. In contrast, the Japanese source materials for studying the epidemics of the premodern period are excellent. Significantly, *this study tried to avoid any distortion in methodology and historical understanding, however, we may say that it*

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was, relatively, influenced by Eurocentric prejudices. *For example it severely criticizes the late emergence of Japanese research on* the history of disease, ignoring that *Japan in modern period, similar to* non-Western country, was a *traditional and backward country. It is* well *known that* Japan witnessed the Meiji restoration in 1868, which began the process, called a "revolution from above", it is a comprehensive restructuring of Japanese society by its own ruling group. Then, Japan, gradually, entered into the category of "modern industrial society. Generally, the birth of modern research in Japan came with the introduction of western studies in the Meiji era[15].

[1] Ann Bowman Jannetta. *Epidemics and Mortality in Early Modern Japan (*Princeton, N.J*:* Princeton University Press, 2014).
It is relevant here to mention that Ann Bowman Jannetta (born 1932) is an American academic, historian, author, Japanologist and Professor of History Emerita at the University of Pittsburgh.
[2] Rupert Wingfield-Hayes. "Coronavirus: Japan's Mysteriously Low Virus Death Rate", retrieved on 7 September 2020 from: <https://www.bbc.com/news/world-asia-53188847>.
[3] See: J. N. Hays. *Epidemics and Pandemics: Their Impacts on Human History* (Santa Barbara, Calif.: ABC-CLIO, 2005).
[4] For more information about effects of this bubonic plague on European society, see:
Joseph P. Byrne. *the black Death* (London: Greenwood Press, 2004).
[5] Dianjun Sun (ed.), *Endemic Disease in China* (Singapore: Springer, 2019), p.2.
[6] Ibid., p. 4.
[7] Ann Bowman Jannetta. *Epidemics and Mortality in Early Modern Japan, p. 70.*
[8] The process was quite similar to that which took place in Europe; the same problems arose and similar modifications took place. For example, in medieval Europe, smallpox and measles were believed to be different manifestations of the same disease.
[9] Ann Bowman Jannetta. *Epidemics and Mortality in Early Modern Japan. p. 149.*
[10] *For more detail about* cholera in Japan, See: D.B. Simmons. *Cholera Epidemics in Japan. With a Monograph on the Influence of the Habits and Customs of Races on the Prevalence of Cholera* (China: Imperial Maritime Customs, 1879).
[11] See: Hayami Akira. *The Influenza Pandemic in Japan, 1918-1920: The First World War between Humankind and a Virus*. Translated by Lynne E. Riggs and Takechi Manabu (Kyoto: International Research Center for Japanese Studies, 2015).

[12] In December 1942, Yamazaki Tasuku was appointed as the fifth chairman of the board of trustees of Japanese Society for the history of Medicine.
[13] Ann Bowman Jannetta. *Epidemics and Mortality in Early Modern Japan .p. 202.*
[14][14] Dave Hueston. "Japanese customs: A go-to guide in this brave new coronavirus world?", retrieved on 23 Apr. 2020 from: <https://www.japantimes.co.jp/news/2020/04/23/national/japanese-customs-coronavirus-world/>.

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[15] Hilary Conroy Sandra T.W. Davis, and Wayne Patterson (eds.). Japan *in Transition: Thought and Action in the Meiji Era, 1868-1912* (Rutherford : Fairleigh Dickinson University Press; London : Associated University Presses, 1985).

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