

RESEARCH ARTICLE

Responding to epidemics: the case of the Nguyễn Dynasty, focusing on the period 1802–1883

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Abstract

In the past, Vietnam was impacted by numerous epidemics, particularly during the Nguyễn Dynasty from 1802 to 1883. Based on data from the *Đại Nam Thực Lục* (1961) (The Veritable Records of the Great South), this article investigates the frequency and nature of these epidemics, identifies the types of common diseases at that time, and explores the underlying causes of these outbreaks. The study further examines the Nguyễn Dynasty's strategies for managing these health crises. During these outbreaks, the dynasty faced significant challenges, with frequent epidemics leading to high death rates, widespread social disruption, and economic decline. The dynasty's primary preventive measures, heavily reliant on spiritual practices like prayer, highlight the limited medical understanding at the time and the constraints of its socio-political framework. However, there was a progressive shift towards the incorporation of Western medical innovations, particularly in the vaccine approach to treat diseases like smallpox. This transition not only marked a critical evolution in the local healthcare approach but also set the stage for more systematic medical advancements in Vietnam during the colonial period (1884–1945).

Keywords: epidemic; Nguyễn; Dynasty; public health policy; ritual prayers; Western medicine

Introduction

In response to the global COVID-19 (coronavirus disease-2019) experience, a number of Vietnamese researchers have revisited the history of epidemics and countermeasures in Vietnam, especially during the period 1802–1883, under the four reigns of the Nguyễn Dynasty, Gia Long, Minh Mạng, Thiệu Trị, and Tự Đức, which together constitute the independence era of the Nguyễn Dynasty. During the nineteenth century, Nguyễn emperors presided over a period of significant social, political, and economic change in Vietnam (Trần Trọng Kim 1971, pp. 169–197). It was a time of a critical juncture marked by both internal upheaval and external pressures. This period also witnessed several major epidemic outbreaks, posing a significant public health challenge and forcing the Nguyễn Dynasty to develop crisis response strategies (Lữ Vi Văn 2021; Thompson 2010). The development and archival preservation of *châu bản*¹ marked a significant shift in bureaucratic record-keeping during this period. Despite some losses, these documents remain a valuable resource for researchers investigating the evolution of the Nguyễn state's administrative practices, including responses to epidemics (Ching-Ho 1962, p. 111).

Epidemics have played a pivotal role in shaping the path of human civilizations throughout history. Several key themes emerge when analyzing pandemics through a historical lens. Disease ecology and evolution can be illuminated by historical records, revealing how pathogens change over time and how

¹Châu bản (vermillion record): the Official Records of the Nguyễn Dynasty (1802–1945), preserved at the National Archives Center I, Vietnam, encompass the entirety of the court's administrative documents.

human activities like trade and urbanization facilitate their spread.² Animals are a common source of transmission for many (Magouras *et al.* 2020). Rahman *et al.* stated that more than 60% of human pathogens are zoonotic, originating from a variety of sources including bacteria, viruses, fungi, and parasites (Rahman *et al.* 2020). Additionally, pandemics consistently cause widespread social and economic disruption. They can expose societal vulnerabilities, increase inequalities, and shift power structures (Snowden 2019).

The history of pandemics is also a history of evolving public health responses. Quarantine practices, isolation techniques, and the development of vaccines have been shaped by centuries of experimentation, innovation, and the ethical and political debates surrounding disease control (Cipolla 1976). Furthermore, pandemics have profound cultural impacts, often leading to increased religious activities, the blaming of certain groups for the outbreak, and influence on artistic expression (Pesapane *et al.* 2015, p. 684; Rosenberg 1992).

Particularly, researchers have studied rules made by leaders when imposing quarantines, cleansing practices, and even religious rituals. Quarantine was first implemented in Europe in the fourteenth century, as a result of the common belief that diseases spread through bad air and dirty environments.³

However, anthropologists have found that even though these new ideas were spreading, traditional rituals to cope with disease have been continually practiced. Existing research to date suggests that fear may intensify religious practices and beliefs (Meza 2020, p. 218). For example, Cunningham describes that Christians viewed plague as punishment from God, it was unclear which specific sins were being punished (Cunningham 2009, pp. 30–31). Despite these uncertainties, the church encouraged people to engage in rituals like fasting and praying to atone for sins and seek God's mercy. In the Islamic world, Awaad *et al.* examine how Islamic religious practices and beliefs significantly influenced the responses of Muslim communities to plague outbreaks from the early medieval period to the modern era (Awaad *et al.* 2023). They highlight that in time of pandemics, such as the Black Death, Muslims often turned to religious rituals, prayers, and communal gatherings as a coping mechanism. These religious activities not only served to reinforce community bonds but also provided psychological comfort and a framework for interpreting the crises as part of a divine plan. Studying Indian responses to the smallpox epidemic in the nineteenth century, Arnold has drawn attention to many local Indian 'disease godlings,' with Sitala gaining exceptional prominence in Bengal as a mother goddess associated with smallpox (Arnold 2009, pp. 32–33). Worshipped by Hindus and initially by Muslims, this reverence stemmed from the widespread devastation of smallpox. Sitala was seen as both a protector and the cause of the disease, invoked in rituals and songs during outbreaks. In writing about the 'Spanish' Flu in South Africa, Phillips provides a comprehensive overview of how various religions reacted to the epidemic (Phillips 2009, p. 35). While Christians continued to pray despite restrictions on gatherings

²McNeill 1976; Stenseth *et al.* 2008, pp. 9–10: By analyzing primary sources and archeological evidence, Stenseth *et al.* state that plague caused at least three major pandemics, including the famous Black Death that devastated medieval Europe. While there is some debate about whether the Black Death was specifically caused by *Yersinia pestis*, recent discoveries of *Yersinia pestis* genetic material in medieval graves strongly support the commercial trade route hypothesis; Mertens 2024, p. 164: The dissemination of malaria in the Global South is evidence for the contribution of warfare and migration to the spread of diseases.

³Bulmuş 2012; Gensini *et al.* 2004, pp. 257–259: The study traces the concept of quarantine back to 1377 in Ragusa (modern Dubrovnik), where travelers from plague-stricken areas were isolated for 30 days, later extended to 40 days. Quarantine practices spread across European ports over the centuries. Milestones include the creation of dedicated quarantine stations (lazarettos) in the fifteenth century, growing scientific understanding of contagion in the sixteenth and nineteenth-century attempts at international standardization. Quarantine was also used against diseases like tuberculosis, leading to isolation in sanatoria. In the twentieth century, medical oversight increased, with organizations like the CDC handling monitoring and enforcement. The 2003 SARS (severe acute respiratory syndrome) outbreak underlined quarantine's value in the absence of vaccines, though models emphasize that timing and duration are crucial for its effectiveness; Cohn 2002: During the plagues, from the early medieval period to the eighteenth century, there were significant efforts to restrict the movement of goods and people through quarantines and stringent checks, particularly focusing on clothing, bedding, and textiles believed to be primary transmitters of the plague.

to prevent the spread of the disease, followers of Hinduism, Judaism, and Islam all acknowledged the divine role in bringing about the epidemic.

Religious reactions to epidemics are varied and complex: they are often viewed as divine punishment, while sometimes they elicit apocalyptic interpretations, especially during concurrent disasters. Even during the COVID-19 pandemic, religious rituals remained a common practice among various religious communities across many cultures.⁴ Religion and belief are thus one of several factors that shape how societies understand and respond to disease outbreaks (Osheim 2009, pp. 36–37).

The nineteenth century witnessed the most transformative advances, as the scientific revolutions in germ theory and epidemiology fundamentally upended previous paradigms. Landmark studies have chronicled groundbreaking investigations like John Snow's 1854 work definitively establishing the waterborne transmission of cholera, implementing sanitation interventions (Johnson 2006). However, vaccine policies varied widely across different regions, and anti-vaccination movements also emerged across Europe and America (Durbach 2000; Hennock 1998).

Examining how the Nguyễn Dynasty navigated public health challenges sheds light on how diseases were managed in the pre-modern era. It also reveals the complex relationship between traditional Vietnamese leadership and the growing influence of Western countries. Researchers primarily utilize the *Đại Nam Thực Lục* (1961) [Veritable Records of the Great South], a chronicle of the Nguyễn Dynasty, to explore pandemics during this period.⁵ This document (hereafter referred to as *Thực Lục*) records 300 years of history, from 1558 to 1888. Compiled by the mandarin, it provides insights into the dynasty's administrative system, historical events, natural disasters, and epidemics. However, owing to its structure, medical matters often receive only brief mention.

Several scholars have delved into this topic. Trương Anh Thuận offers insights into the Nguyễn Dynasty's epidemic situation and prevention measures (1802–1883) (Trương Anh Thuận 2018). Nguyễn Thị Dương also examines the epidemic situation and medical responses of the French protectorate government (Nguyễn Thị Dương 2021). Lữ Vĩ An has studied smallpox in Vietnam during the Nguyễn Dynasty, including the efforts to access the smallpox vaccine.⁶ Nguyễn Thị Oanh has analyzed the dynasty's reliance on ritual prayers during epidemics, exploring the role of Confucian beliefs in 'heaven-human induction' and 'Yin-Yang Harmony' (Nguyễn Thị Oanh 2023). Additionally, Vũ Đức Liêm has also studied how the Nguyễn Dynasty in the nineteenth century approached Western science and knowledge and why the Huế court in the early Minh Mệnh period changed, gradually cutting ties with the West, and sought to reorganize the Royal medical system and to strengthen knowledge of Chinese medicine (Vũ Đức Liêm 2017).

One of the researchers who had studied epidemics during the Nguyễn Dynasty the most is Michelle Thompson. She has researched the influence of the West, mainly France in the context of the Indochina countries and in the specific case of the Nguyễn Dynasty in Vietnam (Thompson 2003; Thompson 2005; Thompson 2010). When researching the Nguyễn Dynasty, she uncovered the roles of historical figures such as that of Jean Marie Despiau in the medical service, particularly bringing vaccines from Macao to Vietnam, and the integration of traditional Vietnamese medicine with Western medical practices up to 1945, focusing on how these practices influenced and were influenced by Vietnamese nationalism and the anti-colonial struggle under the Nguyễn Dynasty.⁷

⁴Meza 2020 introduces the traditional practices of Catholics during the COVID-19 pandemic in southwestern Colombia. Szałachowski & Tuszyńska-Bogucka 2021 explore the role of prayer in coping with pandemic fears.

⁵*Đại Nam Thực Lục* (Veritable Records of the Great South), vols 1–20, 2021. Tokyo: Keio Institute of Cultural and Linguistic Studies, Keio University.

⁶Lữ Vĩ An 2021 analyzes the history of epidemics and historical documents such as records of *Thực Lục* and relevant research works to examine the situation of smallpox in Vietnam during the Nguyễn Dynasty and their effort to access the smallpox vaccine in the early nineteenth century.

⁷Thompson 2003. Thompson 2010, pp. 43–44: Jean Marie Despiau served under the reigns of emperors Gia Long and Minh Mạng. Minh Mạng sent him to Macau to learn about vaccines and vaccination techniques. Despiau successfully transported the vaccine to Hue, where he vaccinated the emperor's children and also trained several Vietnamese physicians in

Current literature primarily focuses on the description of public health challenges, the adoption of Western medical practices, and the cultural and religious responses to epidemics within the Nguyễn Dynasty. However, while these studies provide valuable insights into the types of responses and interactions with Western medicine, they do not collectively evaluate the effectiveness of these strategies in a systematic way. Specifically, there is a lack of comprehensive analysis of the policies of the Nguyễn Dynasty in dealing with epidemics and the effectiveness of these strategies.

This article will address the following questions: To what extent did existing studies on epidemics under Nguyễn dynasty explore this topic? What strategies did the Nguyễn Dynasty employ to manage and mitigate epidemics during their rule from 1802 to 1883, and how effective were these strategies in controlling the spread of disease and improving the lives of the people? This study seeks to fill the gap by analyzing the *Thực Lục* and comparing findings with previous research on this topic to revisit a comprehensive picture of epidemics during the Nguyễn Dynasty and to explore the policies of the Nguyễn Dynasty in times of pandemic and the effectiveness of these strategies in managing and controlling these situations. The analysis will include comparisons and discussions with previous research. It aims to quantify and qualify the policies and the impact of these strategies on the spread of diseases and the psychology of Vietnamese people across Vietnam during their rule from 1802 to 1883. By doing so, this research will not only provide a more detailed understanding of the practical outcomes of the dynasty's health policies but also contribute to a broader historiographical understanding of pre-modern public health management in a colonial context. This approach will offer insights into the effectiveness of integrating traditional practices with Western medical innovations, set against the backdrop of evolving political and social dynamics.

The epidemics and the Nguyễn Dynasty government's countermeasures in the period 1802–1883 in the *Thực Lục*

Number, frequency, and scale of epidemics in the Nguyễn Dynasty

Researchers studying the Nguyễn Dynasty have turned to the *Thực Lục* mostly from 1990 onwards, as mentioned in the introduction. However, since 2000, there has been a significant shift in the accessibility of historical documents. The opening of the *châu bản* repository at National Archives Center I has allowed researchers to review these documents and to re-evaluate both the merits and limitations of the Nguyễn Dynasty within broader Vietnamese history.

Scholars differ about the precise number of epidemics recorded in the *Thực Lục* during the Nguyễn Dynasty period. Lê Quang Chấn identified nearly seventy outbreaks (1802–1883), while Trương Anh Thuận documented eighty. Phạm Hoàng Quân reported seventy large and small epidemics (1802–1895), and Lư Vĩ An counted 110 health crises (1802–1883) (Lê Quang Chấn 2017; Lư Vĩ An 2020, p. 20; Phạm Hoàng Quân 2020; Trương Anh Thuận 2018).

These discrepancies can be explained by two main factors. First, scholars may have used different end dates for their research periods. This explains the variation in reported outbreaks between Lê Quang Chấn (counted up to 1883) and Phạm Hoàng Quân (counted up to 1895). Second, discrepancies might arise from relying on digital versions of the *Thực Lục* available online without cross-referencing them with the original Chinese script. This can lead to errors in interpretation. For instance, Lư Vĩ An identified seven disease outbreaks during the Gia Long era (07/1804, 04/1805, 02/1814, 03/1814, 11/1815, 06/1816, and 1816–1817) (Lư Vĩ An 2020, p. 19). However, by consulting the original text, we find only three confirmed outbreaks in those years (07/1804, 03/1814, and 11/1815). Furthermore, accurately counting epidemics can be challenging when the *Thực Lục* only mentions events following an outbreak. For example, in 1839, the text states, “recently, in several provinces, around six to seven thousand people died owing to an epidemic.”⁸

vaccination. Together, Despiau and his colleagues managed to keep the virus vaccine alive and effective for at least five months, possibly longer.

⁸*Thực Lục* 12, the second reign, book 200, p. 12.

According to our analysis of the *Thực Lục* (see supplementary appendix), there were 94 recorded epidemics between 1802 and 1883. The distribution of epidemics varied across reigns: the Gia Long reign (1802–1819) had the fewest (three), followed by the Minh Mệnh reign (1820–1840) with thirty four, Thiệu Trị reign (1841–1847) with eleven, Tự Đức reign (1848–1883) with forty one, and Đồng Khánh reign (1883–1888) with five. Importantly, the true number of disease outbreaks might have been higher as a result of possible underreporting by local authorities. While epidemics often occurred every one or two years, there was a notable cluster between 1832 and 1840. Furthermore, the annual frequency of epidemics fluctuated significantly. Some years saw only one or two outbreaks, while others experienced up to five (as in 1820 and 1839) or even seven (as in 1843). Six major epidemics stand out as particularly devastating during this period: 1814, 1820, 1826, 1839, 1849, and 1857.

Not only is the number of outbreaks of the disease inconsistent, but the number of deaths is also not fully and accurately recorded. In the Minh Mệnh and Tự Đức reigns, there were the most epidemics. During the 20 years of the Minh Mệnh reign (1820–1840), the total number of deaths from epidemics was 291,225. In the great pandemic of 1820, the number of deaths across the country from Hà Tiên to Bắc Thành was 206,835. In the reign of Tự Đức (1848–1883), this number was 690,377; in 1849–1850, in the capital and the six provinces of Cochinchina, it reached 589,460. The death rate was very high; for example, in 1856 when there was an epidemic in Hanoi, five out of seven people in Tiêu Thiều village, Đông Lỗ commune, died, and in Nội Lưu commune eight out of thirteen people died.⁹ During the Đồng Khánh period (1888), in the province of Quảng Ngãi alone, from November 1887 to June 1888, there were 13,944 deaths owing to smallpox.¹⁰ According to a report based on the epidemics recorded in the *châu bản* many more women and children died from epidemics than other groups (Nguyễn Thị Dương 2022a, p. 123). The *châu bản* also reveal the seriousness of epidemics, for in some districts the number of children who died was as high as 83% of the total. For example, the number of children who died in the epidemic that occurred at the beginning of the 4th year of Tự Đức (1851) in Từ Liêm and Thượng Phúc districts was 470 out of 565 people, according to a report of the Ministry of the Household.¹¹ In the detailed report of Phạm Thế Hiển, the governor of Hà Tĩnh, on January 28, the 3rd year of Tự Đức (1850), he gave the number of children who died from the epidemic compared to the total number of deaths (counting by district) as follows: Thiên Lộc district: 360/1186; Hương Sơn district: 378/760; Nghi Xuân district: 199/797; La Sơn district: 134/777; Cẩm Xuyên district: 20/73; Thạch Hà district: 279/722; Kỳ Anh district: 119/476 (Nguyễn Thị Dương 2022a, p. 123).

It is clear, then, that the figures on epidemics and deaths during the Nguyễn Dynasty so far accepted may not be entirely accurate. These findings suggest that further research is needed to determine more precise numbers, offering a more realistic picture of disease outbreaks during this period.

Types of epidemics, origins, and causes

Types of epidemics

Examining how diseases and epidemics are named in the *Thực Lục* (see supplementary appendix), it is discovered that the *Thực Lục* uses various Chinese characters to describe epidemics, including *yì* 疫 (epidemic) or *yìqì* 疫氣 (miasma epidemic), *yì rǎn* 疫染 (infection epidemic, forty cases), *lì* 沴 (contagion) or *lì qì* 沴氣 (contagious epidemic), *lì zāi* 沴災 (epidemic disaster), *lì rǎn* 沴染 (contagious epidemic, thirty-nine cases), *lì qì* 癘氣 (epidemic miasma), *dòu* 痘 (smallpox, two cases), *zhuanran* 傳染 (infection, one case), *tiānqì yánrè* 天氣炎熱 (weather-related inflammation, one case).

Lín fùshì 林富士 uses various historical archive materials to explain the meaning of terms like *lì qì* 癘氣 (epidemic miasma) and *yìqì* 疫氣 (plague miasma), both of which refer to epidemics associated

⁹*Thực Lục* 15, the fourth reign, book 14, pp. 33b–34a.

¹⁰*Thực Lục* 19, the seventh reign, book 10, p. 22b.

¹¹Report of the Ministry of Household dated May 16, the 4th year of Tự Đức (1851), sheet 149, vol. 26, on the application for a survivorship allowance.

with foul-smelling air (miasma) (Lín fùshì 1994, p. 698). While ancient documents frequently employed the term *yì* 疫 (encompassing both *yì lì* 疫癘 ‘epidemic miasma’ and *yì* 疫 ‘epidemic disease’), the contemporary term for such illnesses is ‘infectious disease’ (Fan Xingzhun 1986). The Han-dynasty dictionary *Shuōwén Jiězì* 說文解字 defines the term *jí* 疾 (disease) as ‘Mín jiē jí yě’ 民皆疾也 (all human beings have diseases) (Xùshèn 1985, p. 335). This definition is surprisingly close to the Western medical concept of ‘communicable disease’ (often referred to as ‘epidemic’). A communicable disease spreads within a specific population and timeframe (sometimes even within a community) and encompasses both infectious diseases, transmitted through pathogens, and non-communicable acute diseases such as cancer, diabetes, and undernutrition-related illnesses (Lilienfeld and Lilienfeld 1980).

In the translation of the *Thực Lục* into Vietnamese, the terms *dịch* (epidemic) and *lệ* (contagion) have been rendered ambiguously as *có bệnh dịch* (having an epidemic; vol. 1, 612), *có dịch* (having an epidemic; vol. 1, 879, 910), *bệnh dịch* (epidemic disease; vol. 2, 70), *dịch bệnh* (epidemic disease; vol. 3, 192), and *dịch lệ* (contagious epidemic; vol. 7, 372). *Lệ khí* (contagious miasma) was left unchanged (vol. 2, 82). *Thiên khí viêm nhiễm* (weather-related inflammation) was translated as *phát lệ khí, nhân dân nhiễm bệnh* (emission of contagious miasma, people infected with disease; vol. 5, 562).

The term *dòu* (smallpox) was translated as *lên đậu mùa* (having smallpox; vol. 7, 78). In reality, aside from the term *đậu* being translated as *đậu mùa* (smallpox), which is understandable to contemporary readers, the Vietnamese translations of the words *dịch* and *lệ* from the *Thực Lục* do not specify the exact diseases they referred to. However, in some official letters from the *Nha kinh lược* (the Royal Liaison Office)¹² sent to the Northern Commissioner, the renderings of *lệ khí* in both Vietnamese and French indicate that they referred to cholera (Nguyễn Thị Dương 2022b, p. 59). The medical prescriptions provided by the *Nha kinh lược* to the Northern provinces included three remedies related to the symptoms of *thổ tả tán* 吐瀉散 (salmonella infection) in places where people are *cảm nhiễm lệ* 染癘疹 (infected) (Nguyễn Thị Dương 2022b, p. 59). This demonstrates that *dịch* and *lệ* as used in the *Thực Lục* specifically referred to diseases like salmonella, dysentery, and acute infectious diseases which spread rapidly as a result of changes in weather conditions.

The differences in naming diseases in the *Thực Lục* compared to other studies reveal that the depiction of epidemics during the Nguyễn period through secondary sources may lack accuracy. This leads to misunderstandings about the state of diseases and the medical capabilities of that time. A comparison with the *Thực Lục* suggests that the classification of diseases, and possibly the diagnostic and treatment capabilities of this period, were quite detailed and meticulous, rather than being vaguely described merely as diseases or epidemics, as indicated by other studies.

Origins of epidemics

An examination of the *Thực Lục* reveals that major epidemics occurring in 1814, 1820, 1826, 1839, 1849, and 1857 transcended local contexts, reflecting broader regional and potentially global epidemiological trends. For instance, a *Thực Lục* entry from 1820 reads:

Đặng Hưng said to the King: faced with calamity, fear is inevitable. It is the common fate of all humans. However, I heard that the epidemic spreads from the West. Why should your Majesty blame yourself?¹³

This exchange, along with research by Li Tana, suggests the 1820 Vietnamese epidemic might have been a pandemic originating in Siam (Thailand), entering Vietnam through Hà Tiên and subsequently spreading nationwide (Li Tana 2015, pp. 194–213). Supporting this notion, many existing studies demonstrate that pathogens (disease-causing agents) evolve over time. Additionally, human activities

¹²Nha kinh lược (The Royal Liaison Office): The representative agency of the Nguyễn Dynasty during the Dong Khanh period (1886–1888) located in northern Vietnam.

¹³登興奏曰遇災知懼固人君之盛德然臣聞疫自西洋來陛下何必罪己。 *Thực Lục* vol. 5, the second reign, book 4, page 3b.

such as trade and urbanization can facilitate the spread of epidemics (McNeill 1976; Mertens 2024, p. 164; Stenseth *et al.* 2008, pp. 9–10).

Causes of epidemics

Animals are one of the primary sources of global epidemics, with approximately 60% of infectious diseases in humans originating from them. It is usually caused by parasites, bacteria, or other harmful microorganisms (Rahman *et al.* 2020). Factors such as climate change, urbanization, and travel significantly influence the emergence and spread of zoonotic diseases. Human activities increase the risk of zoonotic disease transmission, such as wet and live animal markets prevalent in Asia, wild animal meat consumption, etc. (Magouras *et al.* 2020).

The relationship between epidemics, climate, and environmental conditions was also recognized in historical medical manuals. The Sui-dynasty medical manual *Zhubing yuanhou zonglun* 諸病源候總論 (General study of the symptoms of all diseases) stated as follows:

Diseases (pandemics) and climatic conditions, hot and cold diseases are all caused by the inconsistency of climate; hot and cold are contrary to common sense; storms and rains occur, fog and dew does not disperse, so people get many diseases. Regardless of the elderly or the children, the medical conditions are the same, it is like having a ghostly spirit, so it is called a plague.¹⁴

The Nguyễn Dynasty (1802–1883) in Vietnam experienced a similar situation. In the period 1802–1858, the entire country experienced heavy rains on thirty-eight occasions, as well as storms and floods, and in sixteen instances, floods resulted in broken dikes. Furthermore, from 1802 to 1883, in the North and North Central regions alone, there were thirty-eight storms, 107 floods, 108 combined storms and floods, fourteen hailstorms, nine earthquakes, and five thunderstorms. After each rainstorm, environmental sanitation was seriously affected. Moreover, many dead people were not buried properly, some even without coffins, only with a mat. These situations contributed to the further spread of disease. Floods and broken dikes damaged crops, causing people to leave their hometowns in search of food elsewhere, which resulted in the further spread of disease (Trương Anh Thuận 2018, p. 56).

According to Chinese Taoist beliefs, epidemics are caused by three factors. The first is the combination of the theory of ‘Divine induction between the universe and humans’ and the theory of ‘Retributive justice’ or ‘Karma’ (reward and punishment for one’s past behavior); the second is the imbalance of yin (negative) and yang (positive) elements, and the third is a result of the god of plagues propagating disease (Liángshāomèi 2014). Similarly, according to the *Yì chuán* 易傳, epidemics result from a combination of the Confucian concept of ‘Divine induction between universe and humans’ and the Taoist concept of ‘Retributive justice’.

In the *Lúnyǔ* (*Analects*) 論語 (The Quy family chapter), Confucius said that a gentleman has three fears, of which the first is the will of Heaven: *Kōngzǐ yuē jūnzǐ sān wèi: Wèi tiānmìng*

孔子曰君子三畏:畏天命 (『論語』季氏). In Han Confucianism, represented by Dōng Zhòngshū 董仲舒 (176 BCE-?), the ideology was developed to form a theological teleological idealism with the thesis ‘Heaven and Human have inspiration’ (Divine induction between universe and humans correspond to each other), and that all is determined by Heaven. Because of the concept of ‘heaven’ which governs the world of people and all things, the monarch or ruler who was at the top of the nation had to swear to heaven to administer judiciously. Dōng Zhòngshū also used the theories of Yin 陰 and Yang 陽 and the Five Elements as the basis of his religious idealism, which he then applied to society. He proposed a theological social theory, including the idea that order and laws of social movement are arranged and governed by the will of the Heaven, so the ruling class must understand that truth in

¹⁴Original text: “其病與時氣、溫、熱等病相類，皆由一歲之內，節氣不和，寒暑乖候，或有暴風疾雨，霧露不散，則民多疾疫。病無長少，率皆相似，如有鬼厲之氣，故雲疫癘病”。巢元方《巢氏諸病源候總論》(台北:宇宙醫藥出版社, 1975), 卷10頁12.

order to administer, and everyone must understand it to obey the will of Heaven. The basic ideology is ‘Induction of Heaven and Human’, and God as ‘the ancestor of all things’ and the ‘king of a hundred genies and angels’. God and Human have a close relationship, and the Human in their true name is to be full of goodness and perfect like the Heaven.¹⁵ In the *Hànshū* 漢書, volume 56, *Dǒng Zhòngshū*’s story is recorded as follows:

The failure of the country is due to the loss of religion, so Heaven will send natural disasters as a warning. If humans do not know how to ask themselves, then Heaven will bring disaster to cause fear. If humans do not know how to change, then disaster will come. So to know the mercy of Heaven towards the monarch is to prevent chaos (war, uprising).¹⁶

Thus, from the point of view of ‘Correlation of Heaven and Human’, ‘Induction of Heaven and Human’, natural disasters such as floods, droughts, hunger and thirst, locusts or anomalous phenomena such as solar eclipses, earthquakes, mountain shifting, land subsidence, unusual heat and cold and monstrous phenomena of flora and fauna, were not just natural phenomena but were considered to be Heaven’s punishment or warning to humanity.

Again, the *Book of Taiping* 太平經 says, “If heaven and earth get sick, that also makes humans sick; if humans don’t get sick, heaven does not get sick.”¹⁷ According to Liángshǎomèi (2014) 梁少媚, however:

The concept of ‘Induction of Heaven and Human’ is exaggeratedly understood to mean that health or sickness actually reflects the order and disorder of heaven and earth to add to the moral connotation that the accumulation of goodness is able to cure diseases of the body. All actions and crimes are recorded by Heaven, and at some point the gods in the Heaven will reward or punish those responsible. Those who do goodness will be rewarded with happiness and long lives, while those who do evil will be punished.¹⁸

Epidemics and the theories of ‘heaven-human induction’, ‘Ying and Yang harmony’ in Vietnam under the Nguyễn Dynasty

In Vietnam, Confucianism, Buddhism, and Taoism developed and flourished from the Lý-Trần dynasties (eleventh–fourteenth centuries), up to the Early Lê dynasty (fifteenth century), when the feudal government wanted to change the balance so as to favor Confucianism (Nguyễn Tài Thư 1993, p. 246). However, Buddhism and Taoism still had a strong influence on society. During the Lê Dynasty (from the sixteenth to the eighteenth centuries), the idea of ‘The coexistence of three amalgamated religions’ on the basis of Confucianism became an important trend. Confucianism at this time was not separate from Buddhism and Taoism. Up to the Nguyễn Dynasty (nineteenth century to early twentieth century), Confucianism was still revered and dominated many social and cultural aspects from the local level to the imperial court. Although influenced by Chinese Confucianism, in general Vietnamese feudal dynasties only absorbed those elements that were beneficial to national life, the country’s customs, and the rule of law, regardless of whether they came from early Confucianism, Han Confucianism, or Song Confucianism. However, before the development of science, Confucianism was powerless to deal with natural and social phenomena that had to be explained by mystical idealistic thinking. For example, in Vietnam, when a natural disaster occurred people still followed the concepts of Han Confucianism, which held that all disasters occur because the king has

¹⁵Yú zhiping (2022) 余治平, 7.3. 陰陽五行與天人感應學說,

<https://www.lifeweek.com.cn/article/82548>. Accessed October 9, 2023.

¹⁶Original text: 國家將有失道之敗、而天乃先出災害以譴告之。不知自省又出怪異以警懼之、尙不知變而傷敗、乃至。以此見天心而仁愛人君而欲止其亂也。《漢書董仲舒傳》。

¹⁷Original text: 天地病之，故使人亦病之，人无病，即天无病也。《太平经·拘校三古文法》

¹⁸Liángshǎomèi 梁少媚, 古代道教对瘟疫的认识和治疗方法, Source: <https://www.daoxuejia.com/daoxueyanjiu/202002/600.html>. Accessed September 1, 2021.

failed to fulfil his duty in governing the people thus making Heaven angry and bringing on disaster. Thus, King Minh Mệnh questioned himself, thinking that he did not have sufficient virtue and thus disturbed the harmony of heaven, with the result that epidemics broke out everywhere. He followed the theory of ‘heaven-human induction’ of Han Confucianism and the theory of ‘Ying and Yang harmony’ of Taoism: “Trẫm không có đức, trên can phạm hòa khí của trời, bốn phương có dịch đều là lỗi trẫm”¹⁹ (I lack virtue; I disturb the harmony of the heavens. Any calamity in the four directions is my fault.). The King also said that the raging epidemic was caused by the discordant climate; in this situation, the king could not deny his responsibility, but humans and heaven had a strong relation, so the occurrence of the epidemic was punishment for shortcomings. The King also used the example of a woman in Qi country who was unjustly imprisoned for three years, so it did not rain, to prove that the occurrence of epidemics is punishment of shortcomings: “Dịch lệ phát, người thường thì bảo rằng do khí hòa gây nên, mà người làm vua có thể nghĩ như thế mà tự ủy (an ủi-ND) được không? Kể ra giữa trời và người có cảm ứng thật không sai. Xưa kia có người đàn bà nước Tề ngậm oan mà ba năm không mưa, chỉ người đàn bà nhỏ mọn mà còn cảm động đến trời đất.”²⁰ (People often say that disasters are caused by cosmic energy, but can a king console himself with such thoughts? Between heaven and man, there is indeed profound harmony. In ancient times, there was a woman from the state of Tề who held a grudge, and for three years, there was no rain. It shows how deeply even an ordinary woman can move heaven and earth.)

Besides the theory of ‘heaven-human induction,’ Dồng Zhòngshū also said that the cause of miasma and diseases is unjust punishments: “Incorrect punishment will cause miasma, evil energy below will accumulate injustice. Above and below discord, ying and yang will be chaotic, demons are born from there, and strange things will also arise up.”²¹ The opinion of Dồng Zhòngshū also deeply influenced the Vietnamese mandarin class. A monarch without virtue will also make the gods angry. Not only the king, but the mandarins in the court also understood the rule of ‘heaven-human induction’ when giving advice to the king to send officers to visit places, investigate and clarify lawsuits and wrongful convictions, especially in Tonkin:

...recently, provinces have reported that 67,000 people have died from the epidemic: there might be people unfairly imprisoned making the people angry or resentful; or there may be crooks or greedy people harming the people, which would offend the harmony of heaven. Please send high-ranking officials to investigate. Whenever there is a difficult case, or a personal injustice, it must be judged immediately; if the people suffer from hardship it must be reported immediately. And moreover, please correct political virtue, to bring back harmony again.²²

However, not all courtiers’ suggestions were approved by the King. The King also harshly criticized courtiers’ opinions concerning the causes of epidemics. For example, in the summer of 1839, when an epidemic broke out, the courtiers put forward a list of temples that had had benefits conferred upon them, but in the 3rd year of Minh Mệnh (1822) the conferred temples had been purged, so, they argued, the gods had caused the epidemic. Hearing that, the King immediately disagreed. This was not the reason that made the gods punish humanity with the plague *li* 痧 [measles outbreak]: “Moreover, deposing lewd gods is to honor righteous gods, and that is appropriate for rituals, so it

¹⁹Original text: 帝曰:「朕不德上干天和四方疾疫皆朕之過」。Thục Lục 5, the second reign, book 4, page 3b.

²⁰Original text: 疫癘之作在常人謂之氣化使然、為人君者豈可以此自諉。夫天人感應之際至為不誣。昔齊婦含冤三年不雨以一婦人之微猶能感動天地。今痧氣流行寧非刑政闕失之所致乎。Thục Lục 5, the second reign, book 40, page 22a.

²¹Original text: 刑罰不中則生邪氣。邪氣積於下怨惡畜於上。上下不和則陰陽繆戾而妖孽生矣。此災異所緣而起也。《漢書董仲舒傳》。

²²Original text: 北圻疫未止 (略) 近來諸省所報疫死至六七千人、意者刑獄或有未平、民情或有堙鬱貧猾、或為民蠹致、干天和。請簡派大臣前往采訪、凡有案情難澁緊為伸理、民間疾苦即為題達。再請增修德政以為召和之本。Thục Lục 5, the second reign, book 200, page 11b.

cannot be right to say that hundreds of gods have no refuge, and so cause epidemics” (April, 20th year of Minh Mệnh [1839]).²³

In spite of differing with the courtiers about the cause of the epidemic, King Minh Mệnh and other Nguyễn kings could not overcome the Confucian idealism of ‘Induction of Heaven and Human’. Therefore, whenever the epidemics occurred, the Nguyễn kings often blamed themselves for not having undertaken self-improvement, or for administrative negligence, or for the many cases of injustice as well, that violated the harmony of heaven, causing unusual rains, droughts, and epidemics.

The behavior of the Nguyễn emperors during this time aligns perfectly with psychological studies on human behavior. In fact, regardless of societal advancements, fear tends to intensify religious practices and beliefs (Cunningham 2009, pp. 30–31). The literature review about the pray ritual of different communities during epidemics in the introduction strongly support this argument.

The countermeasures of the Nguyễn government in the period 1802–1883

Releasing people’s potential

As mentioned above, the consequences of epidemics in the period from 1802 to 1883 were very serious. The devastation of an epidemic is proportional to the extent of its spread and the loss of life and property caused by it. How did the Nguyễn Dynasty deal with epidemics?

The first countermeasures were ‘releasing people’s potential’, that is, to stop work that was not urgently needed (applied in the epidemic of July 1804)²⁴; to postpone public services so that the people could relax (in the epidemic of March 1822)²⁵; to postpone army recruitment (in the epidemic of July 1826)²⁶; and to reduce tax for the people in affected areas – especially in July 1826, the epidemics in Gia Định and from Bình Thuận to Quảng Bình caused 18,000 deaths, so King Minh Mệnh exempted people in the region from the head tax.²⁷ When an epidemic hit Hưng Yên province in August 1839, the King granted special tax exemptions: “All taxes and rice payments that should have been paid the previous year and all deferred payments of tax and rice from last winter were shifted to the summer and winter crops in the following year.”²⁸ In the reign of Thiệu Trị, the King issued many exemptions from taxes, such as for the two districts of Thọ Xương and Vĩnh Thuận in Hanoi owing to epidemics in 1836 (record of April 1841).²⁹ Moreover, the King issued an edict asking the provinces to remove the names of the dead from the record books and to repeal the personal tax for that year (April 1843).³⁰ Up to Tự Đức’s reign, tax reductions were still being implemented by the government: for example, a tax reduction was applied to the Man people in five forts of Khánh Hòa province, who had been stricken by hunger and epidemics for several years (the epidemic in 1882).³¹ Tax reductions for the people in epidemic areas were a measure of ‘releasing people’s potential’; although this measure caused reduced government income, it helped people to overcome the epidemic and stabilize their lives.

Providing medicine, arranging healthcare and providing survivor benefits

When an epidemic occurs, the provision of medicine and insurance is also an urgent measure. In 1820, when the provinces of Hà Tiên, Vĩnh Thanh, Định Tường broke out in an epidemic, King

²³Original text: 又云：「裁削封贈神祇致神無所依、因而作疹、此說亦謬。夫君為百神主、凡所在名山大川與古來忠臣烈士何曾有吝恩封。至如淫祠黷祀如黎李闔宦黃五福者豈得濫邀恩典。且黷淫神所以尊正神於禮為宜豈應以是而謂百神無依因而作疹乎? *Thực Lục* 5, the second reign, book 201, page 12b.

²⁴*Thực Lục* 3, the first reign, book 25, p. 1a.

²⁵*Thực Lục* 5, the second reign, book 14, p. 25b.

²⁶*Thực Lục* 6, the second reign, book 29, p. 1b.

²⁷*Thực Lục* 6, the second reign, book 29, p. 1b.

²⁸*Thực Lục* 12, the second reign, book 205, p. 15b.

²⁹*Thực Lục* 13, the third reign, book 7, p. 7b.

³⁰*Thực Lục* 13, the third reign, book 13, p. 13a–b.

³¹*Thực Lục* 18, the fourth reign, book 68, page 30a.

Minh Mệnh provided medicine for the sick; when Phú Yên province had an outbreak that caused 5000 deaths (see supplementary appendix), the King distributed medicines. In 1839, money was withdrawn from the state treasury to buy medicines for the people. In general, the supply of medicines to people in epidemic areas should not be delayed, so when an epidemic visited army camps, the King sent royal doctors to treat the soldiers. When the epidemic ended, the Ministry of Households was in charge of selecting good medical practitioners for reward.³²

However, according to Nguyễn Thị Dương, a survey of the Nguyễn Dynasty's *châu bản* documents shows that in all the reports and replies relating to epidemics, there was a complete absence of documents from the Royal Medical Clinic (Thái y viện), the central health agency of the court. Instead, documents relating to the responsibilities of the RMC like sending doctors to treat Thừa Thiên people or recommending treatment for people suffering from epidemics in the capital area, were all issued by the Royal Internal Office (Nội các), the King's office. This shows that the professional power of the heading medical authority was still subordinate to the RIO. And there was no link between the central and local health authorities either, though they were in the same field of practice. Even during an epidemic, provincial medical practitioners did not receive professional guidance from the center. The only locality that received direct support from the RMC was Thừa Thiên province, next to the capital (Nguyễn Thị Dương 2022b, p. 124).

The granting of death benefits (*tiền tuất*) to families who lost members in epidemics is a measure designed to help people get their lives settled. In 1832, in Đồng Xuân, Phú Yên, when 1000 people died, King Minh Mệnh issued an edict, stating: "Whoever dies, the family will be given a death allowance" (3 guans each for local registered male citizens, 2 guans for the rest, and 1 guan for all children); in 1849, Thừa Thiên province even provided coffins and clothes to the poor (July 1849).³³ The granting of death benefits to people in epidemic areas also impoverished the Nguyễn court every time there was an epidemic. Therefore, in the reign of Tự Đức, the government tightened the assessment procedure for death benefits as a response to some dishonest declarations of the number of deaths and the causes of death (December 1853).³⁴ Just a few years later, the non-local registered residents and children were not given a survivorship allowance (May 1860).³⁵ Survivor benefits for women and children were cut because the number of deaths was too high. Nguyễn Thị Dương, in article published in 2021, pointed out that lacunae in the medical system, as well as the lack of welfare policy, created favorable conditions for Christian relief work, including health care. This attracted Vietnamese to Christianity, even though during the reigns of Kings Minh Mạng, Thiệu Trị, and Tự Đức efforts were made to forbid it. Notes written by missionaries show that the number of children saved during epidemics and famines as well as the numbers of children sold and redeemed then converted to Christianity was very large (Nguyễn Thị Dương 2021, pp. 38–40). Another reason for cutting down on death benefits was that the Nguyễn Dynasty had to cede six provinces of Cochinchina to France from 1858, causing the input from taxes to be severely reduced. From the end of 1860, armed Chinese people had been infiltrating the northern mountainous area, making this a long-term unstable area. The Nguyễn government had to send troops, supplies, and food to deal with it, which also affected the financial system (Taga 2020, p. 136).

Organization of prayers

At the same time as providing medicines, sending doctors to the field, giving allowances for affected residents and suspending social activities in the epidemic areas, praying to the deities or praying for peace (*cầu an*) was also one of the main ways of responding to an epidemic. Praying (*cầu đảo*) is a ritual of praying to the gods for peace, such as for an epidemic to end, for wind and rain to come.

³²Original text: 帝令各設壇禱之、在京準於郊外設壇命官致祭為百姓祈禱、復派太醫分往軍舍 調治病兵、兵有逃死者皆緩催、及疫退命戶部察醫生之善於療治者獎賞之、*Thực Lục* 6, the second reign, book 29, p. 1b.

³³*Thực Lục* 5, the fourth reign, book 4, p. 29^a.

³⁴*Thực Lục* 15, the fourth reign, book 9, p. 53a–b.

³⁵*Thực Lục* 16, *Đệ tứ kỷ*, Q.22, tờ 26b.

According to the *châu bản*, out of 98 records of epidemics, there were 23 occasions when the court set up an altar for prayers. In 1820, King Minh Mạng conducted prayers twice when the provinces of Hà Tiên, Vĩnh Thanh, Định Tường (in May) and Bình Thuận toward Quảng Bình (in July) had an epidemic. In 1826, when an epidemic took the lives of 18,000 people (see supplementary appendix) from Gia Định and Bình Thuận to the north up to Quảng Bình, King Minh Mệnh also organized prayers to the deities. During the reign of King Minh Mệnh prayers like this were organized eight times, corresponding to the times when the highest number of deaths occurred (during the 20 years of his reign 261,814 people died in epidemics). Up to the reign of Tự Đức, whenever there was an epidemic, the King conducted prayers to the deities. During the 35 years of his reign, King Tự Đức also performed prayers ten times. But in the French colonial period (1884–1945) during the reigns of kings Đồng Khánh, Thành Thái, Duy Tân and Khải Định, prayers to the deities were discontinued, being held once in July 1890 only.

The perceived need for such ritual prayers (*cầu đảo* 祈禱) shows that King Minh Mệnh and other Nguyễn kings, along with the intelligentsia, were deeply influenced by Confucianism. The Confucianism concept of ‘heaven-human induction’ (*Tiān rén xiāngguān* 天人相關) was deeply ingrained in the Vietnamese intelligentsia to the point that it could sweep away all other thinking. Although King Minh Mệnh knew the advantages of Western medicine and recognized the mistakes of the courtiers in pointing out the causes of the epidemics, he could not overcome the ‘prejudices’ of the intellectuals who were the court mandarins or the Confucian concept of ‘heaven-human induction.’ When a natural disaster occurred, the monarch, in addition to following ‘God’s will’ to cultivate ‘righteous virtue’ to prevent disasters, adopted prayers to the deities as the first countermeasure. In fact, it was only in the Nguyễn Dynasty that the details of how the monarch set up an altar for prayers and offered sacrifices to eliminate epidemics were recorded (Lê Thị An Hòa 2018, pp. 665–666). But from 1449, the state had “started to set up altars to worship the god Sacred Capital’s Great Guardian (*Dū dàchéng huáng shén* 都大城隍神), the gods of Wind, Clouds, Thunder, Rain, and the demons not being worshiped by anyone else, to maintain the praying throughout the years.”³⁶ From the above it can be seen that at the national level, the worship of “the demons not being worshiped by anyone else” was highly valued by the court. Punishment was even given to those who did not perform the prayers and sacrifices every time a disaster occurred.

In 1803, King Gia Long ordered sacrifices for the plague, taking the months of March and December (lunar months) to drive away plagues and eliminate evil. The sacrificial rituals for eliminating plague were usually held in March and August every year, called the Na sacrifice.³⁷ When an epidemic broke out, the King himself “stayed in the palace to keep total abstinence and pray.”³⁸ At the same time, he ordered an altar set up for prayers and made sacrifices, while instructing the pagodas to set up altars (*đàn trai tiểu*, or *zhaijiào* 齋醮) for the monks and the Taoists to pray for gods’ blessings and to fight off the epidemic.³⁹

In addition to setting up altars for sacrifice, the king also selected people who had knowledge of the precepts in the Buddhist scriptures to participate in making altars in different places, training and allowing the monks to make offerings and performing rituals.⁴⁰ Here we can see the significant

³⁶Original text: 初立都大城隍神及風雲雷雨壇、無祀鬼壇以時祭祀。Đại Việt sử ký toàn thư (1998) 大越史記全書 [Complete Annals of Đại Việt], vol. IV, Lê Dynasty, book 11, 80a.

³⁷Original text: 又厲祭、周禮謂之饗祭。用季春仲秋季冬。前漢謂之祓除、後漢謂之禋祠、竝用三日五月五日十二月臘前一日。唐謂之大饗祭、用季冬。明謂之厲祭、祭用春三月清明日、秋七月十五日、冬十月初一日。自京及外依日置祭、皆所以遂疫辟惡而祭有疎數不同。今請酌定為歲二祭、在京及諸營鎮春以三月、冬以十二月祭。期前三日預告、至日祭畢放礮送之。帝可其奏命著為例。Thục Lục 2, book 22, page 7a.

³⁸Original text: 帝深以疫病為憂嘗于宮中齋戒密禱 Thục Lục 5, the second reign, book 4, page 3a.

³⁹Original text: 平順以外至廣平以疫報。帝出內帑白苧蔻并治疫藥方遣人頒給。勅諸地方設瘡祭各一壇 (略) 乃命阮文仁禱于太歲月將壇 (壇設于南郊之左第三成)、陳文能禱都城隍廟、阮文興禱會同廟。又令布施諸寺齋醮俾各為民祈焉。Thục Lục 5, the second reign, book 4, page 2b.

⁴⁰Original text: 準遴出在京諸寺僧稍通經戒者二十人竝和聲署十人前往建設齋壇、諷經作福三七日夜、每七齋僧一次、賑濟一筵。(略) 再聞北圻諸僧多有未諳科教、可催集鄰轄諸大省僧人堅持戒律者三五十人齊就寺所齋

role of the state in instructing localities to organize ritual prayers whenever there was an epidemic. As Kathryn Dyt has argued, “Ritual prayers also serve as a ritual connecting the Nguyễn Dynasty’s organizational machinery with the state administration system” (Dyt 2015, p. 33).

As measures to deal with epidemics, the court also turned to folk remedies. When there was an epidemic in Gia Định, the king ordered the people to use “hand drilling a wood with tinder” to “replace the old fire” with new fire so as to extinguish the epidemic⁴¹ [January, the Second Minh Mệnh year (1821)]. “Replacing the old fire with new” is one of the rituals said to help people get rid of diseases. Currently, in Hue, people still perform this ritual: replacing the old kitchen pedestal by a new one, then setting up a fire to create warmth at the beginning of the year to dispel diseases. “The people believe that ‘Mr Tao – the three kitchen pedestals’ is the person who is often on duty at home to protect newborn children, therefore every time, when the people feel hot or cold or even when they have a stomachache, they pray to Mr Tao to get well (and also take other medicines or other treatment). ... At the end of the year, they send off 3 old kitchen pedestals, pick up 3 new kitchen pedestals, then set up a fire to warm the kitchen at the beginning of the year” (Huỳnh Đình Kết 1998, pp. 32–33).

Initial efforts to incorporate Western medical practices for treating diseases from 1802 to 1888

Despite being relatively passive in disease prevention, the Nguyễn Dynasty made attempts to utilize Western medical approaches to fight disease. King Gia Long was especially interested in Western countries. In his *Souvenirs de Hué* (Memoirs of Hue), Michel Duc Chaigneau wrote that King Gia Long was a man who “liked to ask my father about schools and customs in France,” and that he also studied and applied Western techniques in building a navy (Chaigneau 1867).

King Gia Long was also interested in Western medicine. He believed in Western medicine in the treatment of disease. Therefore, Jean Marie Despiau, a French physician, who first arrived in Vietnam in 1795, was one of the emperor’s personal physicians beside other domestic physicians such as Nguyễn Thái Phiên who were attending the King (Thompson 2010, p. 43; *châu bản* Gia Long, volume 5). By 1816, there were only three Frenchmen in the Court at Hue. Once, a visitor from a French ship named *Henri* brought information about vaccination for smallpox. Both King Gia Long and Nguyễn Phúc Đảm were interested in this technology. In the fall of 1819, King Gia Long was ill and he invited Dr. Treillar (from the *Henri*) to the court in the hope that his illness might be able to be treated. During that time, Despiau attended the treatment in progress. When King Gia Long passed away on January 25, 1820, King Minh Mệnh did not forget the vaccine⁴² and decided to send Despiau to acquire both vaccine and its use on July 13, 1820 (Thompson 2010, p. 43). Despiau’s delegation returned to Hué in February 1821, where he immediately administered vaccines to Minh Mệnh’s children. The King allowed the establishment of a ‘vaccine center’ right in the imperial citadel, where Despiau trained several Vietnamese physicians in vaccine technology. Despiau’s and his colleagues’ impressive success in keeping the vaccine alive for five months demonstrates his capabilities and likely improved his relationship with the new emperor (Thompson 2010, pp. 43–44).

The search for a smallpox vaccine showed the great changes in the approach to Western science and knowledge of the Vietnamese people in the nineteenth century. However, owing to the deep conflicts and divisions in the Hue court at the beginning of Minh Mệnh’s reign over power, attitudes, and the ways of interacting with Westerners, Minh Mệnh gradually cut ties with the West and sought to find ways of reorganizing the Royal medical system with a reduction in the role of Westerners and improved knowledge of Chinese medicine. Jean Marie Despiau died in 1824, ending his medical

壇、觀聽科範節次及和聲署所作音樂。嗣有善緣好事各宜倣此以正禪教。 *Thục Lục* 12, the second reign, book 214, page 8b.

⁴¹Original text: 及永還諭之曰：「嘉定沴氣復作。爾歸語黎文悅令民家去舊火取新火則疾疫庶幾可弭。此古書趨吉避凶之方而昔人鑽鑿改火之遺意也。 *Thục Lục* 5, the second reign, book 7, p. 19b.

⁴²Morais 2011: For further information about the vaccination journey of Dr. Bamils from Spain to Macao, see Morais “Smallpox Vaccinations and the Portuguese in Macao,”

mission in Huế, and it seems that the dynasty later abandoned the idea of accepting vaccines or new medical achievements from the West (Thompson 2001, p. 194; Thompson 2005, p. 331).

However, the Nguyễn Dynasty, starting from the reign of King Tự Đức (1848–1883), did not abandon the adoption of Western medicine in treating epidemic diseases, especially during the outbreak of seasonal diseases. The *Thực Lục* documents two occasions when the king sent individuals abroad to study vaccination: first, in the year 1882: “Mùa hạ tháng 6, vua sai Thái y phái Cửu phẩm y sinh là Nguyễn Văn Tâm đi sang Hương Cảng học phép trồng đậu của y viện Đông Hoa”⁴³ (In the summer of June, the king dispatched the royal physician Nguyễn Văn Tâm, a prominent medical expert, to Hong Kong to study vaccination methods at the Eastern Flower Medical Institute). The second occasion was in April 1888: “Phái quan thầy thuốc tới Sứ quán học phương pháp trồng đậu, là theo lời tư bàn của viên Khâm sứ Hách-tô”⁴⁴ (an envoy of medical experts was sent to the embassy to study the methods of vaccination, following the recommendations of the ambassador Hach-to 赫蘇 (unidentified)).

Environmental hygiene to minimize epidemic diseases, although not documented in the *Thực Lục* during the period 1802–1888, was ‘legislated’ locally. For instance, starting in 1820, local authorities in villages and towns had to establish regulations prohibiting the dumping of waste and filth onto the streets; violators would be fined.⁴⁵ This demonstrates the Nguyễn Dynasty’s awareness of Western medical advances alongside maintaining traditional medical practices. During the protectorate period (1884–1925), the protectorate government also applied many measures to prevent disease in humans and cattle; isolation, patient declaration and environmental hygiene were also regularly urged by the government. However, isolation and disinfection measures often met with opposition from the people. They did not want to burn the sick person’s house and belongings, or did not declare the sick person, or secretly brought a person who had died from the epidemic location to their hometown for burial, and this caused difficulties for epidemic prevention in Vietnam. Although under colonial exploitation by France modern medicine was gradually established in Vietnam in the early years of the twentieth century, long-standing customs and lifestyles as well as the religious beliefs of the Vietnamese people were really barriers to disease prevention during the French protectorate. It shows the medical collaboration between West and East in Vietnam that Thompson has analyzed up to 1945 (Thompson 2003).

Conclusion

Based on the analysis of *Thực Lục*, *Châu bản* and other sources, this study presents a comprehensive picture of epidemics under Nguyễn Dynasty (1802–1888). At that time, the dynasty faced numerous challenges in dealing with a range of epidemics. The records from both primary and secondary materials provide valuable insights into the origins, types, and management of diseases during this time. The refined data on epidemic years, human casualties, and disease perceptions derived from the precise terminology employed in this study paints a more comprehensive picture of this era. The numerical and linguistic data extracted from the primary source *Thực Lục* offer valuable corroborating evidence for future researchers. This study also serves as a reminder of the importance of meticulous handling of both primary and secondary sources to ensure accurate and practically significant research outcomes.

⁴³*Thực Lục* 18, the fourth reign, book 67, p. 1a.

⁴⁴*Thực Lục* 19, the sixth reign, book 10, p. 1a.

⁴⁵Customs of Trung Hau Hamlet, Dong Ngac Commune Đông Ngạc xã Trung Hậu xóm lệ 東鄂社忠厚例, sanitation regulations were established in the first year of Minh Mạng’s reign (1820): “- Prohibiting the dumping of filthy and waste items... If anyone in the hamlet is found discarding rotten plants, decaying garbage, torn and dirty items, and throwing filthy and waste materials onto the paths, they will be penalized according to this regulation.” 一例戒放穢事係忠厚通行巷乃是日盡尊長老少士農貴賤同行暮夜巡防必由此路要宜清掃若內見某有放棄腐草弊物及放穢在通行巷面上並有罰及茲例 (Đông Ngạc xã Trung Hậu xóm lệ 東鄂社忠厚例, AF a2/76, page 22a, currently archived at the Institute of Han-Nom Studies, Vietnam).

To face the challenges of epidemics, despite their reliance on traditional practices, such as ritual prayers and spiritual beliefs, which were deeply influenced by Confucian, Buddhist, and Taoist ideologies, the dynasty also gradually incorporated Western medical innovations, particularly in response to smallpox. These actions reflect a complex collaboration between traditional practices and external influences, illustrating a transition in public health management from primarily spiritual to more empirical approaches as Western interactions increased. These strategies also demonstrate that the Nguyễn Dynasty, when faced with epidemics, was in the same line to the universal patterns of the world: seeking the origin and cause of the disease, responding with both spiritual measures and scientific and technological advancements as mentioned in the introduction. Studies in medicine and culture have shown that even in modern times, human strategies for coping with epidemics have not changed much; only the casualties and suffering may be less.

Another objective of this study is to assess the impact of Nguyễn Dynasty policies during epidemics. Policies that provided assistance to the people, such as providing stipends, organizing health-care, paying attention to epidemic hygiene, and acquiring vaccines, were all progressive. Although Minh Mệnh returned to mostly use traditional methods, later on the development of new methods would be implemented. The numbers and evidence do not yet fully reveal the picture of the material and spiritual life of the people, but they do suggest the gradual modernization of the Nguyễn court's response to epidemics. In future studies, we hope to find more evidence to compare and describe the lives and psychology of the court and the people under the dynasty's various policies.

Overall, while the strategies employed by the Nguyễn Dynasty were shaped by the constraints of their time – limited medical knowledge and heavy reliance on religious and ritualistic responses – they laid foundational changes that influenced the future of public health in Vietnam. The integration of Western medicine marked a pivotal shift toward more scientific approaches to disease prevention, which would evolve further under later colonial and modern influences.

Supplementary material. The supplementary material for this article can be found at <https://doi.org/10.1017/S1479591424000275>.

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