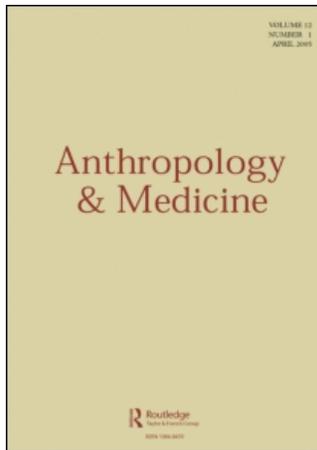


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RESEARCH ARTICLE

Ethnography of epidemiologic transition: Avian flu, global health politics and agro-industrial capitalism in Thailand

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This paper situates the ethnography of avian flu within the geo-political context of a new epidemiologic transition. Drawing on anthropological experience and insight, this paper examines areas of enquiry in which an ethnographic approach could contribute to a better implementation of prevention and control measures. Within the context of newly emerging diseases and accelerated globalization, the task of ethnography needs to extend far beyond the local. This paper reveals two major global issues that the ethnography of epidemiologic transition must take into consideration: (1) Global agro-industrial capitalism, and (2) global politics in the context of international health organizations and multi-national drug companies. The case of Thailand poses a question of how the strength of ethnographic practice could be deployed to account for the reality of the global–local interface of the new epidemiologic transition.

Keywords: epidemiologic transition; ethnography; globalization; avian flu

Introduction

The global outbreak of avian influenza serves as a persistent reminder of the advent of a new epidemiologic transition. As suggested by Barrett et al. (1998), the recent resurgence of infectious diseases marks the third epidemiologic transition. Distinct from the first, which is associated with a rise of infectious diseases during the Neolithic Revolution, and the second, marked by the shift to chronic diseases associated with industrialization, the third transition is characterized by newly emerging, re-emerging and antibiotic-resistant pathogens in the context of accelerated globalization processes. In addressing this new problem, anthropologists have been challenged to prove the relevance of anthropological knowledge in contributing to disease prevention and control.

Based on experiences of avian influenza in Thailand, this paper examines areas of inquiry through which ethnographic approaches could contribute to a better implementation of prevention and control of local disease outbreaks. Traditionally, ethnographers have contributed to public health efforts by conducting in-depth qualitative investigations of the local people and communities whom diseases and subsequent public health measures affect. The new geo-politics of disease globalism, however, has necessitated ethnographic investigation to extend beyond the local. This paper suggests two major global phenomena to which those who wish to conduct an ethnography of avian flu must pay more adequate attention: (1) Global agro-industrial capitalism, and (2) global health politics in international organizations and multi-national drug companies. The case of

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Thailand poses the question of how the strength of ethnographic practice could be deployed to account for the reality of the global–local interface of the third epidemiologic transition and thus contribute to a better understanding of and more effective action programmes on the epidemic at different levels.

The epidemic and its contexts

As of May 2007, Thailand had reported 25 cases of laboratory-confirmed avian influenza infection and 17 deaths (WHO 2007a). As in other affected countries, most of the cases have had a history of direct contact with sick or dying poultry. As raising free-range poultry is common throughout rural areas in Thailand, the bird flu epidemic in Thailand is concentrated in the central and lower northern regions where animal husbandry of poultry and especially of free-grazing ducks is intensive (see Gilbert et al. 2006 and Songserm et al. 2006). In October 2004, *Time* magazine's Asia edition added an extra element of alarm to the situation when it reported an incident of possible human-to-human transmission among a family in Kamphaengpet Province (Walsh 2004).

According to this widely read report in *Time*, the outbreak began when the family's chickens began to suffer unusual deaths in early August 2004, forcing the head of the household, a man named Somsak, to cull and bury all his birds. Despite this precaution, Somsak's 11-year-old niece Sakuntala soon developed a stomach-ache and a mysterious fever. Somsak took her to a nearby clinic on 2 September, at which point nurses dismissed her illness as a common cold. Five days later, however, Sakuntala was unable to walk and was vomiting blood. She was sent to the district hospital, and her mother, Pranee Thongchan, was summoned from her work in a garment factory near Bangkok to comfort her. Pranee took care of her daughter through the last night of her life, and Sakuntala was cremated two days later. Doctors there did not diagnose the child as having bird flu – she was listed as dying of dengue fever. At the funeral, Pranee became ill. She visited a clinic, but, like her child, was sent home. She then returned to Bangkok. Two weeks after her daughter's death, Pranee died and became the country's tenth confirmed victim of bird flu.

On 28 September 2004, a joint investigation undertaken by the World Health Organization (WHO), US CDC and Thai government confirmed what scientists studying the H5N1 bird-flu virus had long feared: Pranee had not contracted the disease from chickens. She had almost certainly caught it in the hospital while nursing her dying daughter. As reported in the *New England Journal of Medicine*, human-to-human transmission of the virus was suspected (Ungchusak et al. 2005). Although most victims of avian flu were identified as being infected through direct contact with sick chickens, there has been enormous concern about the possibility of human-to-human infection from close contact with cases of severe infection, as was suggested by the case of Pranee.

The responses to this avian influenza outbreak and others in Thailand took place within a specifically Thai socio-political context. As early as November 2003, stories of massive deaths of chickens in the central provinces rapidly spread, and the sale of chickens in local markets sharply declined. Although a veterinarian at Chulalongkorn University found the H5N1 virus in several dead chickens from Nakhon Sawan, Deputy Minister of Agriculture Newin Chidchob insisted that the massive death of poultry was in fact caused by a few cases of 'chicken cholera'. Only after three humans were afflicted by the virus was the government forced to admit that there was an outbreak of avian flu in the country.

There is evidence that this late admission concerning the presence of a fatal strain of the avian flu was due to the fact that Thailand is the world's fourth-largest poultry

exporter, with export revenues reaching \$1.2 billion in 2003. Bangkok-based agricultural-export conglomerate Charoen Pokphand, or CP, was the largest producer of poultry in Asia at the time of the 2003 outbreak. Owned by Dhanin Cheavaranont, who expanded his family's seed shop in Bangkok's Chinatown into one of the world's largest agri-business groups, the conglomerate now has 10,000 contract farmers in Thailand and 100,000 employees around the world. CP's role in Thailand also extends far beyond the economic realm. In 2001, Dhanin's son-in-law was appointed Deputy Commerce Minister in the Thai government. The Thai government itself was led by Thaksin Shinawatra, a telecommunications billionaire whose coming to power was described by economist Pasuk Phongpaichit as signifying 'a new consolidation of big business and politics' (2003, 18). As historian and social commentator Mike Davis puts it, 'On the eve of the plague... Thailand was governed by a crony coalition of the telecommunications and livestock industries' (2005, 101).

The government's denial of the presence of a bird flu epidemic amidst mounting evidence of massive deaths of chickens – while a son-in-law of the biggest agri-business group in Thailand was sitting in the cabinet – has led to allegations among farmers and in the press that CP supported the government in covering up the news of the epidemic's outbreak. Delayed admission of the bird flu outbreak allegedly gave the large agri-business exporters several months to process and sell their inventory as well as to disinfect their plants. During the 2004 epidemic, as new cases and fatalities surfaced, 60 million chickens and ducks were slaughtered in Thailand. Most of the culled poultry belonged to small farmers or contract raisers, such as Somsak and his family, who could never afford the construction of the sort of closed poultry farming system that the government demanded and with which large agri-business companies could comply. While the epidemic caused devastating damage to small farmers, it created a unique opportunity for big agri-business to re-structure the nation's poultry industry.

Situating the epidemics: The third epidemiologic transition

The advent of the third epidemiologic transition has been supported by a number of studies that show an ominous resurgence in morbidity and mortality from new and old infectious diseases (see Lederberg, Shope and Oaks 1992; Morse 1995) and the growth of multi-drug resistant strains of pathogens (see Lewis 1994). Pinner et al. (1996) note that in the US, age-adjusted mortality from infectious disease increased by 40% from 1980 to 1992, and the US CDC has compiled a list of 29 pathogens that have emerged since 1973 (Satcher 1995).

The new context of rapid globalization that has emerged in the past few decades has made the third epidemiologic transition especially alarming. Statistics from the World Tourism Organization show that some 1 million persons per day travelled from their homes by air in 1995. International travel has steadily increased at an average of 6% per annum over the past 30 years (International Air Transportation Association [IATA] 2003). The rapid spread of emerging and re-emerging infectious diseases has often been attributed to global changes such as the increasing mobility of populations on a global scale.

Localizing the global epidemic: The need for local knowledge

The global media coverage of the avian flu outbreaks shows how the seriousness of the epidemic has been recognized globally. The lack of understanding of local perspective

and response, however, suggests an acute need of timely and in-depth ethnographic research. As epidemic outbreaks are conceived as threats to global and national economic growth, policy attention and research funds have focused mainly on scientific and medical research – which tends to adopt an institutional and corporate point of view. Little attention is paid to local experiences of survival, coping and adaptation to crisis.

Although the need for research from medical perspectives is widely recognized (Stöhr 2005), a deeper anthropological knowledge of local circumstances is also crucial in developing effective strategies for preparedness, the management of emergency situations, the delivery of aid and services, and the facilitation of healing for catastrophe victims. One of the strengths of the ethnographic approach lies in its unique ability to provide an understanding of local practices relevant to risk, preparedness and responses. With the goal of enhancing local capacity to respond to new epidemics, a few areas of local knowledge could be readily identified as crucial in enhancing the effectiveness of local public health actions, as follows.

Local perception of risk and vulnerability

Understanding how local communities perceive risk and vulnerability is important for raising disease awareness and increasing preparedness capabilities within these communities. While sensitivity to and awareness of risk contributes positively to preparedness, excessive sensitivity could distort risk perceptions and lead to a hyperbolic reaction.

Behavioural practices pertaining to risk

From poultry farming to cooking, various economic and cultural practices play a part in accentuating risk. Knowledge of such local practices of both agri-business and local villagers would be useful in identifying risk behaviours and developing appropriate educational programmes.

Inequity and local empowerment

Understanding how political-economic forces that are driving the epidemic play out and are concealed at a local level is crucial for formulating people-based solutions. Local explanatory models could be both empowering tools for resistance and hegemonic tools that obfuscate political and economic causes of epidemics. Ethnographic inquiry could reveal the fault lines likely to cause problems in the systems as well as disclose how global processes could reproduce and thus manifest themselves in the local sphere.

Individual, community and institutional responses

The ways in which individuals and groups react to various stages of an epidemic need to be understood within local contexts. Strengths and weaknesses in coping and adapting should be identified and assessed, as should the responses of public health institutions and medical professionals, which sometimes inadvertently worsen the situation.

Local sources for healing and recovering

Pre-existing moral and religious practices could be important resources for healing and recovery from catastrophic experiences. Human response to disaster often involves confrontations with difficult existential questions. Providing culturally acceptable forms of explanation for the disaster can be crucial for regaining emotional stability. Cultural expressions of grief and mourning as well as other forms of social support are also essential elements of recovery in the aftermath.

New global contexts: Global health politics and the agro-industrial capitalism

While traditional anthropological information about local customs and practices is essential, in the context of a global disease phenomenon, anthropologists also have an obligation to examine how non-local forces and local forces interact. The fact that most avian flu victims have been local villagers who contracted the disease from their own backyard fowl should not blind us to the non-local forces that could increase their risk as well as accentuate their suffering. It is noteworthy that rich countries so far have failed to come forward with adequate financial and medical support for avian influenza prevention and control efforts, even though these more developed countries could benefit from resource-poor countries being well-prepared and thus able to provide an epidemic firewall against the global spread of infection. Failure to act quickly and adequately may be due in part to the fact that the poultry industries in developed countries could take advantage of the massive culling of chickens and the subsequent potential collapse of the developing world's poultry industries. Part of the shortfall of aid that has occurred in response to avian flu outbreaks may have resulted from lobbying by the Western poultry industry (Davis 2005, 166). Such an obstruction of assistance in public health and veterinary measures could result not only in a failure of epidemic control, but also in the creation of unnecessary human suffering. Thus, these political economic issues must be investigated and addressed.

Global health politics is also affecting the production of avian influenza vaccines. In January 2005 the WHO executive board meeting was informed that vaccine development has moved forward, 'but not with a speed appropriate to the urgency of the situation' (WHO 2005). Two years later, in March 2007, Mike Leavitt, Secretary of the US Department of Health and Human Services, commented that, in regards to the global effort to increase vaccine supplies, 'current global capacity to produce a vaccine to respond to an influenza pandemic is insufficient to meet the global need, especially in developing countries' (Leavitt 2007).

The problem of vaccine production is not only a technical problem but also a global and political problem. As Indonesian Health Minister Siti Fadilah Supari has stated, while developing countries supply H5N1 samples to WHO collaborating centres for analysis and preparation for vaccine production, they are unlikely to have access to the resulting vaccines. 'Previously, WHO used a mechanism that was not fair for developing countries', Supari said at a press conference in Jakarta on 27 March 2007. 'We think that mechanism was more dangerous than the threat of pandemic H5N1 itself' (WHO 2007b). Even more damaging is that there is evidence that donated viruses were being used for commercial activities, without obtaining appropriate permission. Indonesian health officials have complained that they were not informed, nor was their permission sought or obtained, when companies in industrialized countries used virus samples to make commercialized products (Khor and Shashikant 2007).

Just as the global expansion of cosmopolitan medicine has provided an opportunity for the trans-national pharmaceutical industry to gain a great deal of power, the Livestock Revolution has also created a platform for the domination of global agribusiness. While millions of small farmers' chickens were being culled, huge multinational livestock companies, many with ties to governments, appear to have exploited the crisis to re-structure poultry production to their advantage. The two-pronged global dominance of the trans-national pharmaceutical industry in global health politics and the new regime of economic accumulation have become new contexts in which the response to, and impact of, the third epidemiologic transition must be understood.

Conclusion: Towards an ethnography of epidemiologic transition

The strength and contribution of anthropological studies to public health and epidemic control are evident here: In part, understanding how communities work is vital for designing local epidemic control. However, the third epidemiologic transition, which has taken place in the midst of accelerating globalization and intensifying global politics, has necessitated that ethnography be put into practice within a wider perspective. While we need to localize global crises in order to be more capable of handling epidemic outbreaks, we are at the same time called to account for global forces that accelerate epidemics, retard their containment or deepen human suffering. The case of Thailand thus poses a question of how ethnographic practices could be re-invented to account for the reality of the global-local interface of the third epidemiologic transition. By investigating not only how local practices affect epidemic spread and control, but also how they in turn are affected by global political and economic forces, anthropologists can provide a broader and more effective contribution to the implementation of successful public health measures for infectious diseases and the overall improvement of global health.

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