For anyone who thinks of influenza as a biomedical problem with biomedical solutions, there is a lesson to be learned from Laura Spinney’s book on the 1918 flu pandemic, *Pale Rider*: anthropology is a tool to be used to understand why disease control methods are not accepted by communities, and understanding anthropology—and the associated socioeconomic impact of pandemics—is just as much an integral aspect of the control of influenza as is the provision of antiviral drugs and vaccines. Combining epidemiology, anthropology, and meticulously researched evidence, Spinney documents the so-called Spanish flu, underscoring the impact the disease had on the world as it was in the early twentieth century, and how that has influenced and shaped modern history and science. The 1918 pandemic is still used today as a benchmark for the potential of novel influenza viruses—those flu viruses that enter humans by breaching the species barrier between the animal and human kingdoms.

With the advent of antibiotics to treat bacterial superinfections, antivirals that appear to be effective if given early enough in a flu infection, and the potential to rapidly develop new seasonal vaccines each year, mortality among people with seasonal influenza has decreased. Although mortality from novel, nonseasonal influenza viruses such as the virus that caused the 1918 pandemic remains higher, medical interventions have also effectively decreased their associated mortality. But the lessons from anthropology remain. In fact, it could be concluded from *Pale Rider* that the Spanish flu pandemic will remain a benchmark not only because of its associated widespread mortality, but also because of the social and economic disruption that it caused—disruption that continues to be associated with seasonal and pandemic influenza today.

As a history of science, politics, religion, and the arts, *Pale Rider* is a fascinating read for health and science professionals and the general public alike. By 1918, scientists had discredited the theory of miasma (“bad, foul smelling air”) as the cause of disease; they were beginning to understand the germ theory and had identified bacteria as the cause of many infections. But penicillin—the first antibiotic—was only discovered a few years later, and first used in humans in the 1940s. The idea that disease could be caused by a contagion much smaller than a bacterium—a filter-passing organism that could cause disease—was just gaining recognition by 1918, though technology did not allow for full viral discovery until later in the twentieth century.

And in 1918, as Spinney points out, much of the world was at war, with troops deployed across Europe, transported from and to the United States, England, France, Germany, India, and elsewhere. Furthermore, immigrants and disempowered populations around the world were living in squalid tenements and environments. With the world in such a disheveled state, many people accepted the flu pandemic of 1918 as an act of God, as punishment for their sins and for allowing the inequalities that had developed throughout the world. In the Spanish city of Zamora, the bishop defied a health authority ban on mass gatherings and ordered citizens to gather and pray for an end to the pandemic. The rate of death in Zamora was listed as the highest in Spain, so much so that by October 1918 wood for coffins was hard to come by. Spinney also makes deductions about when influenza first appeared in humans. Understanding that novel flu viruses—those considered to have pandemic potential—require an animal host in which to live and reproduce, and close contact with susceptible humans in order to breach the species barrier (thus becoming what’s called a zoonotic dis-
Spinney concludes that disease has long played a part in shaping society and will continue to do so despite advances in medicine and technology. Worrying ly, Spinney is less confident about the anthropological advances—or lack of them—in the fight against infectious diseases, which are at least as important in dealing with pandemics as medicines and vaccines. As evidence, she draws attention to the religiously motivated antivaccination movements of 1918 and the antivaccination movements of today. She also draws parallels between Confucianism and filial piety in China hampering quarantine efforts because a child’s first allegiance is to a sick parent, not to authorities who wanted to establish isolation or quarantine procedures; she sees similar impediments today in efforts to fight Ebola and other disease outbreaks.

Spinney is explicit in presenting worst-case pandemic scenarios to emphasize why the world should not become complacent about infectious disease. She highlights the importance of an anthropological as well as a biomedical approach to infectious disease prevention and control. Human encroachment on forestry and spreading urbanization appear to be increasing the rate at which zoonotic diseases emerge in humans; climate change is associated with unexpected outbreaks of known infectious disease; and common diseases such as measles, which were nearly eliminated in the United States and Europe, have reappeared due to factors such as antivaccination movements that are threatening the lives of children and young adults. Pale Rider offers lessons for us all, and it is hoped that they will help lead us and our political leaders to more seriously confront the threats posed by infectious diseases.

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A Modern Plague. By Nabila Shaikh, David L. Heymann. Review of. Combining epidemiology, anthropology, and meticulously researched evidence, Spinney documents the so-called Spanish flu, underscoring the impact the disease had on the world as it was in the early twentieth century, and how that has influenced and shaped modern history and science. Plague is one of the deadliest diseases in human history, second only to smallpox. A bacterial infection found mainly in rodents and associated fleas, plague readily leaps to humans in close contact. Plague outbreaks are the most notorious epidemics in history, inciting fears of plague’s use as a biological weapon today. Stages of plague. For hundreds of years, what caused plague outbreaks remained mysterious, and shrouded in superstitions. A Modern Plague? With warmer weather on the way in the United States, a disease that has already claimed hundreds may soon become an epidemic. The Bible shows there is a reason for this—and that it will only become worse! Learn the why behind the headlines. Subscribe to the Real Truth for FREE news and analysis. Subscribe Now. I’m already subscribed. While walking his dog, an Atlanta, Georgia man found a hawk, which, when examined by authorities, tested positive for West Nile Virus.