EDITORIAL

The Chickens Come Home to Roost

As the number of human deaths from avian influenza grows and as the disease spreads geographically, fears of a 21st century influenza epidemic or pandemic mount. Even if the disease does not reach epidemic proportions imminently, the fears are nonetheless well-founded. Inductive reasoning leads to the conclusion that an influenza epidemic will arise, as such epidemics have arisen many times before, including 3 times during the 20th century. The relevant questions, therefore, are when the next one will emerge and how bad it will be.1

Avian influenza is just one of dozens of zoonotic diseases that have caused and will cause considerable human fear, suffering, and death. (Indeed, some have suggested that "[a]ll human viral infections were initially zoonotic in origin,"2(p6) although the precise animal source and route of transmission to humans is often a matter of some dispute.) I cannot mention all of these diseases; thus, only some well-known examples are provided, along with the probable source. There is at least some evidence that, similar to avian influenza, severe acute respiratory syndrome arose in the live-animal (i.e., "wet") markets of China.³ Variant Creutzfeldt-Jakob disease probably arose from bovine spongiform encephalopathy (BSE).^{4,5} And the source of HIV, which causes AIDS, is widely thought to be the simian immunodeficiency virus that is found in nonhuman primates.6,7

Although some zoonoses are probably unavoidable, much human suffering resulting from zoonotic diseases could probably have been avoided had humans treated animals better. Consider, for example, the wet markets from which an influenza or severe acute respiratory syndrome epidemic may be launched. In these markets, live animals of diverse kinds are kept in large numbers and in cruelly close quarters ready for sale and fresh slaughter. The concentration of animals, their overlapping sojourns in the markets (allowing disease to spread through vast numbers of animals), and their interactions with humans (facilitating human infection) make these markets ripe for zoonoses.8 Once an epidemic starts among animals, it can spread to animals reared in less cruel conditions.

If humans did not eat wet market animals, there would be fewer of them (because fewer would be bred), the animals would not suffer from being housed in close quarters, and they would not be slaughtered. Consequently, the risk of zoonoses would be greatly diminished. In the case of variant Creutzfeldt-Jakob disease, humans would not have become infected had some humans not killed or eaten cows infected with BSE. Moreover, BSE would not spread among cattle if humans did not process offal, including neural matter from BSEinfected cattle, to produce feed for other cattle, a practice prompted by the volume of cattle humans eat. If the plausible hypothesis that HIV resulted from simian immunodeficiency virus is indeed true, then the most likely causal route of transmission was

through infected simian blood during the butchering of these animals. The butchering itself was most likely for the purposes of providing nonhuman primate meat ("bushmeat") for human consumption, a practice that continues today.

It is unlikely, of course, that those who make use of animals in the above ways will recognize their treatment of animals as maltreatment. However, there is good reason for characterizing it as such. There is now an ample body of philosophical literature that compellingly demonstrates that the ways in which most humans treat animals is wrong.9-12 Almost all humans can now not only survive but also thrive without consuming animal flesh or using animal skins and furs. Thus those who persist in these practices treat the most important animal interests-interests in continued life and the avoidance of suffering-as less important than very trivial human interests, including carnivorous gastronomic experiences.¹³ Even those who deny that there is anything wrong with treating animals in this way should now recognize that thwarting important animal interests sometimes causes considerable harm to humans, even if some minor human interests are satisfied along the way.

It is curious, therefore, that changing the way humans treat animals—most basically, ceasing to eat them or, at the very least, radically limiting the quantity of them that are eaten—is largely off the radar as a significant preventive measure. Such a change, if sufficiently adopted or imposed,

EDITORIAL

could still reduce the chances of the much-feared influenza epidemic. It would be even more likely to prevent unknown future diseases that, in the absence of this change, may result from farming animals intensively and from killing them for food. Yet humanity does not consider this option. Insofar as the focus is not on cures for the resultant diseases, attention is only given to lesser preventive measures. Some of these, such as slaughtering animals before they are brought to markets, may bring modest improvements to the treatment of animals. However, other preventive measures, such as developing a vaccine, do not require humans to improve their treatment of animals at all.

Indeed, the curative and many of the preventive measures on which humans focus are ones that often involve further suffering and death for animals. For example, because humans have contracted diseases from maltreating animals, others then experiment on animals in a bid to find either a vaccine or a cure for the diseases that result from the maltreatment. Although these medical interventions are being developed, millions of animals are culled, often painfully, in the hope of preventing imminent disease or epidemic in humans. Even those who think that experimenting on animals for human medical benefit is not wrong should be at least somewhat troubled by such experimentation when the ailment it seeks to fix could have been prevented. They should be even more troubled when the relevant prevention would have been to take animal interests more seriously. In response, it may be said that even if current diseases could have

been prevented, they were not, and thus scientists must do what they can now to minimize human suffering and death. Whether or not one agrees with this argument, it cannot justify failing to take the preventive measures now that would obviate the need for employing them repeatedly in the future. Failure to think ahead cannot repeatedly be excused.

Humanity's continued consumption of animals is not only morally problematic but also highly imprudent. Preventive action that focuses exclusively on the proximate causes of disease and plague is more risky than long-term preventive action that attends to equally crucial upstream causal factors. To rely on neutralizing a proximate cause leaves little or no room for error. The longer view, by contrast, enables one to prevent a threat before it becomes imminent. Thus, there are many more opportunities for prevention.

Humans have suffered a great deal as a result of the mistreatment of animals, but that does not make the human suffering a punishment for the mistreatment; it is merely a consequence. Speaking of a causal connection does not imply an intentional agent administering the consequent as retribution for the antecedent. In any event, those humans who suffer are not just the ones responsible for animal mistreatment. Innocents are often adversely affected. When the (infected) chickens come home to roost, it may be another person, possibly from the next generation, who suffers or dies from avian influenza. Those who consume animals not only harm those animals and endanger themselves, but they also threaten the well-being of other

humans who currently or will later inhabit the planet.

To switch avian images, it is time for humans to remove their heads from the sand and recognize the risk to themselves that can arise from their maltreatment of other species.

David Benatar, PhD

About the Author

David Benatar is with the Department of Philosophy, University of Cape Town, Rondebosch, South Africa.

Requests for reprints should be sent to David Benatar, Department of Philosophy, University of Cape Town, Private Bag X3, Rondebosch, 7701, South Africa (e-mail: David.Benatar@uct.ac.za).

This editorial was accepted March 22, 2006.

doi:10.2105/AJPH.2006.090431

References

1. Osterholm MT. Preparing for the next pandemic. *N Engl J Med.* 2005; 352:1839–1842.

2. Weber J, Alcorn K. Origins of HIV and the AIDS epidemic. *MedGenMed*. 2000;2(4):1–6.

3. Guan Y, Zheng BJ, He YQ, et al. Isolation and characterization of viruses related to the SARS coronavirus from animals in Southern China. *Science*. 2003;302:276–278.

 Will RG, Ironside JW, Zeidler M, et al. A new variant of Creutzfeldt-Jakob disease in the UK. *Lancet*. 1996;347: 921–925.

 Scott MR, Will RG, Ironside J, et al. Compelling transgenic evidence for transmission of bovine spongiform encephalopathy prions to humans. *Proc Natl Acad Sci USA*. 1999;96: 15137–15142.

 Gao F, Bailes E, Robertson DL, et al. Origin of HIV-1 in the chimpanzee Pan troglodytes troglodytes. *Nature*. 1999;397:436–441.

7. Sharp P, Bailes E, Chaudhuri RP, Rodenburg CM, Santiago MO, Hahn BH. The origins of acquired immune deficiency syndrome viruses: where and when? *Philos Trans R Soc Lond B Biol Sci.* 2001;356:867–876.

8. Webster RG. Wet markets—a continuing source of severe acute respiratory syndrome and influenza? *Lancet*. 2004;365:234–236.

9. Singer P. Animal Liberation. 2nd ed.

New York, NY: Random House Trade; 1990.

10. Reagan T. *The Case for Animal Rights*. Berkeley: University of California Press; 1983.

11. DeGrazia D. *Taking Animals Seriously.* Cambridge, England: Cambridge University Press; 1996.

12. Rowlands M. *Animals Like Us.* London, England: Verso; 2002.

13. Benatar D. Duty and the beast: animal experimentation and neglected interests. *QIM.* 2000;93:831–835.