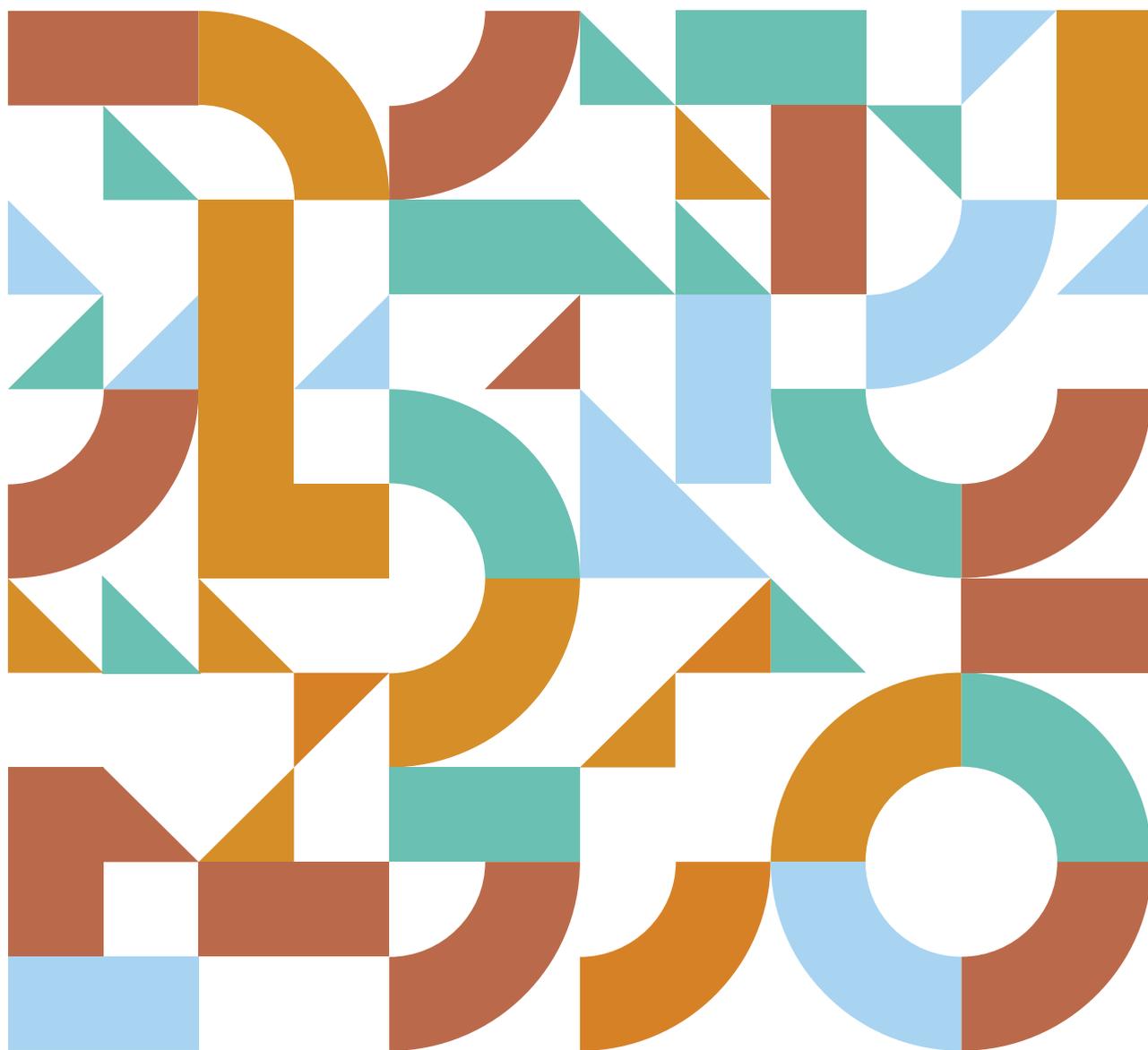


What European Policy For Diseases of Animal Origin?

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Is a New Deal Between Europe and Africa Possible?

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FOREWORD

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Foreword

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Care is conducive to wellbeing, as much for the animals with whom we share our lives as for fellow humans. Yet there can be no caring that does not involve close physical contact, and with it, the exchange of pathogens. Sickness, for humans and animals alike, has always been a part of life. Yet we live in a world of nation states whose first responsibility is to protect their citizens from both internal and external threats, including the threat of infectious disease. This is done through the apparatus of security.

Yet the more elaborate the apparatus, the more it takes on the character of bureaucracy and technoscience, the more it conflicts with the ethos and practice of care. The very proximity of humans and animals that allows for conviviality appears from the security perspective as a lightning rod for infection, with responses ranging from isolation or incarceration to the massacre of entire populations.

As this article shows, it is imperative, for the sake of continued coexistence with the animals on which our collective future depends, to temper biosecurity with care. And this means drawing on the wisdom of the hunters, herders, farmers and fishers who work with animals, and whose livelihood depends on them.

They know their animals better than anyone. We should listen to them.

What European Policy For Diseases of Animal Origin?

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The European continent is facing an unprecedented health crisis of zoonotic origin. Covid-19 first appeared in China two years ago when a coronavirus – which until then had been spreading among the bat population – was transmitted to humans, affecting a non-immunized human population in unpredictable ways. Though the first reactions of European states were initially based on sovereigntist reflexes, such as border closures and lockdown of populations, there was European coordination for the purchase and distribution of vaccines. This coordination is also necessary for sharing information on the monitoring of SARS-Cov2 mutations and preparing European societies for the emergence of new zoonotic diseases.

Because health crises of animal origin are increasing due to extensive movement of human and animal populations in and between different continents, future scenarios must be developed in order to anticipate the necessary measures to manage outbreaks of zoonotic diseases. Yet three recent examples of animal diseases show that these scenarios have not been thoroughly thought through.

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Thinking about viruses being transmitted across species implies taking into consideration all issues arising from these pathogens. They not only reveal the vulnerabilities in human societies, whose functioning is disrupted by these outbreaks, but also the fragilities of the environments in which they appear. Animals cannot be regarded as goods whose free movement is overseen by European institutions; they must be regarded as living beings caught up in relationships in which diversity and evolutionary potential must be preserved. Before examining the three animal diseases that Europe is currently facing, it is worth recalling the previous crisis of «mad cow disease». While this crisis from the 1990s played a structuring role for European integration, it raises the question of what lessons were learned for future scenarios.

Mad Cow

This crisis began with the discovery in 1995 of the transmission of a pathogenic protein – the prion – from cattle to humans through beef consumption. The symptoms of this disease, called bovine spongiform encephalopathy, had been known for two centuries in sheep under the name of scrapie which is characterized by the animal's loss of balance and death resulting from the degeneration of brain cells. But the observance of these symptoms in humans, classified as a new variant of Creutzfeldt-Jakob disease, was novel. Transmission of this

disease was facilitated by a lower heating temperature of animal meal, a recycling technique used in industrial livestock farming since the beginning of the 20th century. By lowering this temperature for the sake of profit, the British beef industry introduced a threat to the entire European continent to which it was a major exporter.

At that time, there was much uncertainty about the prion's behavior in the human population due to the fact that it had only been observed in a presumably remotely related disease – kuru – from New Guinea, and because symptoms occurred following a long incubation period after consuming meat. Catastrophic predictions were made projecting between 500,000 and one million deaths. In the end there were 223 deaths, 177 of which were in the United Kingdom. These figures were based on the number of cattle affected by BSE, which reached 100,000 in the United Kingdom in 1993.

The level of uncertainty led to dramatic measures. Between 1996 and 1999, the European Commission imposed an embargo on the export of British beef and meat-and-bone meal. France, citing precautionary principle, extended this embargo until 2002, leading the United Kingdom to challenge it in the European Court of Justice. The British government launched a campaign of wide scale culling of all cattle old enough to develop the disease – nearly 4 million animals – whereas France implemented a policy of selectively culling herds in which animals had tested positive. Systematic testing measures in slaughterhouses led to a decrease in the epizootic disease. At the end of the 2000s, about 60 cases were still being found each year in the United Kingdom.

The mad cow crisis led to a lasting fracture in trust between consumers and meat producers, and to a reconsideration of the domestication contract between humans and cattle. Though livestock farming is an exchange between consumer goods (meat, leather, milk, etc.) and care, the massive culling of animals suspected to be carrying a pathogen which poses a danger to humans replaces these real goods with partially imagined evils. The validity of meat consumption is being questioned by urban citizens who see an opportunity to reduce their meat consumption and move towards a vegetarian diet. Farmers have been deeply shaken by a crisis that revealed the increasingly difficult nature of their working conditions and the unbearability of a progressively invisibilized killing process.

Avian flu

The avian flu epizootic arrived in Europe in 2005 against a backdrop of globalized trade, revealing the European continent's interdependence with the Asian and African continents because it was wild birds that were identified as carriers of an influenza virus capable of spreading from the avian population, where it is constantly mutating, to humans. It also highlighted the poultry industry's extensive production chains as transmission was confirmed between regions connected by factory farming practices, such as the United Kingdom and Nigeria, or areas of domestic poultry smuggling along the Trans-Siberian Railway.

This influenza virus is transmitted from birds to humans and has different symptoms with sometimes dramatic consequences for humans. The H5N1 virus was identified in Hong Kong in 1997 where it infected thousands of domestic

poultry (through digestive tract breakdown) and a dozen people, two-thirds of whom died (from respiratory illness). The 1918 influenza pandemic was invoked to predict a possible 50 to 100 million deaths if the H5N1 virus was able to successfully spread among humans. Millions of poultry were culled in the various countries where the H5N1 virus was found in order to contain it to the avian population. However – and perhaps due to these strict measures – the H5N1 virus has rarely spread to human populations, and the number of human victims stands at about 500 deaths for 800 infected individuals.

Influenza virus mutations lead to intense monitoring in order to avoid the emergence of a new strain that is transmissible to humans. The H5N8 virus arrived in Europe from Asia in 2015 where it has become endemic and causes outbreaks each year on poultry farms. Since November of 2021, more than 150 outbreaks of H5N1 non-communicable to humans have been found in the south-west of France and poultry have been culled in more than 100 communities.

Poultry farmers have been made responsible for preventing this influenza virus from being introduced into their farms through biosecurity measures such as cleaning areas at the entrance of farms. Viewing a farm as an enclosed, protected space has raised questions about free-range farms that may bring domestic poultry and wild birds into contact. Temporary “shelters” were imposed, but these are at odds with animal welfare if the animals are confined for too long. Factory farms benefitted from these biosecurity measures as they seem to be better protected against outside threats, even if practices in these factory farms make them more vulnerable to an influenza outbreak if the virus manages to get in. Farmers are deeply concerned about the forms of genetic selection that these biosecurity measures promote because culling a flock may lead to it being replaced by species that may be more tolerant of confinement, but less diverse. A choice is therefore made during emergency measures between biosecurity and biodiversity on farms.

African swine fever

Without being communicable to humans, African swine fever ravages pig farms and leads to spread comparable to the avian flu. Known for a century among animals of the suidae family in Africa, the disease arrived in Europe in the 1960s where it was contained; it subsequently caused contagious outbreaks in Eastern Europe after 2007. In China, it tore through nearly half of pig farms, leading to a global increase in the cost of pork. The African swine fever virus is currently spreading in the wild boar populations of Eastern European, leading to concern among veterinary authorities that it will spread to pig farms.

The Czech Republic, in April 2018, and Belgium, in October 2020, were the first countries to be declared free of African swine fever after experiencing outbreaks in their wild boar populations. This required them to establish safety zones around wild boar that had been discovered to be carrying the virus, and to cull wild boar within that zone. Hunters were recruited for this screening and culling effort, aiming to leave no trace of the virus in the area inhabited by the wild boar. This recruitment had an uncertain effect on the hunters: it increased their social standing in popular hunting regions but contradicted their attachment to the land and its non-human inhabitants.

For pig farmers, the potential of African swine fever being transmitted by wild

boar is a worst-case scenario that may warrant costly measures. The price of pork has fallen in regions threatened by the disease, while meat exporting regions have seen prices rise due to the decrease in global supply. But measures imposed on pig farms run counter to certain practices: in Brittany, for example, a region which is free of the fever, dual fencing has been imposed on open air farms in order to prevent contact between animals of one farm and another. In Denmark, where most pigs raised are exported, pig transport vehicles that return empty are systematically cleaned at the border. A barrier was built between Denmark and Germany to prevent wild boar from crossing into the peninsula.

Chronic wasting disease (CWD)

If the zoonotic risk of CWD is currently not yet proven (nor disproven), this new prion disease has authorities on several continents concerned about its progression in cervid populations. In 2016, the first European case of CWD was detected in Norway to general surprise. This epizootic was first discovered in 1967 in a mule deer on a farm in Colorado, USA, and has not ceased to spread among captive as well as wild cervids. Its recent detection in Norway in a small population of wild reindeer is far from insignificant due to its close proximity to the world's largest reindeer herd belonging to the Sami, the indigenous people from the northern part of the Fennoscandian Peninsula.

CWD is a prion disease – like bovine spongiform encephalopathy or scrapie in sheep – affecting the cervid's central nervous system and causing neurodegenerative problems. This disease, which is both fatal and incurable, is the most dangerous of the prion diseases and is transmitted through saliva, blood, urine, and feces. A major challenge lies in its ability to survive and contaminate the environment for several years. Today, 20 reindeer, 14 elk, and 2 red deer – all wild – have tested positive for CWD in Europe (in Norway, Sweden, and Finland). The only way to detect the prion consists of taking a sample from a dead individual.

After the first CWD case was detected in Norway, governments imagined the worst-case scenario. A drastic decision was consequently made for the concerned region: the culling of more than two thousand wild reindeer. This measure shocked farmers because its application to domestic reindeer would without a doubt mean the end of their livelihood. For the moment, farmers are working with national authorities in the monitoring and collecting of samples, but they are dependent upon scientific expertise without being able to integrate their own understanding of animal health. Despite the fact that no cases have been found in the Sami reindeer herds, CWD has already influenced the methods and practices of Sami reindeer husbandry.

The unique character of this herd in Europe, as much as on the zootechnic as cultural level, seems to present a major challenge to national and European health authorities given the weak level of control these authorities have over the number and movement of animals. Consequently, the paradigm in which national and European health authorities are used to operating and the health authorities find themselves facing a dilemma: how can an epizootic risk be controlled without bureaucratic control of farming methods?

Scenarios for animal health in Europe

This series of health crises of the past twenty-five years has led national and European authorities to develop scenarios in order to prepare for the next zoonoses. These scenarios involve avoiding emergency measures by taking into account similarities from previous crises. This has led to veterinary authorities staging a crisis situation to define the sequence of actions. Reflection on these scenarios must then integrate social science observations for the policy dimension of managing zoonotic crises.

A distinction can be made between more authoritarian scenarios and more democratic scenarios in function of the integration of all actors concerned by the crisis, from the production to the consumption of animal products, and the confrontation of different knowledge and lifestyles tied to the relationship between humans and non-humans. As such, the management of bovine spongiform encephalopathy can be qualified as authoritarian as farmers were subject to emergency measures; the same was true for the first outbreaks of avian flu. Conversely, in the more recent outbreaks of avian flu and in the management of African swine fever in Belgium and the Czech Republic, poultry and pig farmers, bird watchers, and wild boar hunters have been included in measures designed to contain outbreaks. As for CWD, it lies at a somewhat ambiguous halfway point since farmers are involved in monitoring, but carrying out programs designed without their input.

The primary problem is defining zones in which preventative measures will be applied. These zones must not be defined only by epidemiological criteria, but also by integrating the practices of those who live in contact with the animals. The movement of free-range poultry or pigs, or cross-border reindeer migrations must therefore be taken into account. On a spectrum going from epizootic to zoonosis to pandemic, the smallest degree of transmission can thrust all actors into a new health reality which imposes other standards and perceptions on the farming of the animals concerned.

The management of the Covid-19 pandemic shows that the authoritarian approach tackles the health crisis from the top, based on a hierarchy of knowledge, without sufficiently taking into account other local or empirical vision or knowledge. Though this is easier to implement within a national chain of command, this option is not as effective because it increases the mistrust of a disengaged and disaffected population towards authorities and their solutions.

Uncertainty and urgency are inherent to the health crisis, but these elements paralyze all horizontal dynamics, justifying it by a lack of sufficient time to put a dialogue in place. However, it is vital that these questions be dealt with other than in an emergency situation in order to instill mutual trust between the different actors concerned and to develop an appropriate management plan which does not rely solely on scientific knowledge, but on a variety of approaches, visions, and knowledge (inter- and trans-disciplinary). Even though management plans exist, each health crisis shows the improvised nature of society's response to the emergence of a disease within a territory. Integrating a number of actors and their knowledge beforehand could be a means for diversifying those in charge of health challenges. The implementation of plans based on democratic health management would make it possible to move away from a

reaction mechanism to an anticipation of epidemics and epizootics.

The series of health crises that Europe has experienced created new relationships between humans and animals, which tend to be irreversible. It is therefore essential that decisions about epizootics and zoonoses be made in a thoughtful manner as they offer new democratic opportunities to raise health questions from an ontological and structural point of view. Europe holds a central place in the global movements of wild and domestic animals between Asia and Europe. It can set an example in the discussion of zoonotic crises by integrating into its risk regulation the social and cultural dimensions of human-animal relationships. The practices at stake are not traditions that have been overtaken by modernity, but resources for diversity to face future ecological challenges.