

The Swine Flu Scare Story

a compilation of articles prepared by

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Totnes, Devon, England
Wednesday 7th April 2010

1. Shakespeare's Greatest Achievement by Bill Bryson

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William Shakespeare was born into a world that was short of people and struggled to keep those it had. In 1564 England had a population of between three and five million - much less than three hundred years earlier, when plague began to take a continuous heavy toll. Now the number of living Britons was actually in retreat. The previous decade had seen a fall in population nationally of about six percent. In London as many as a quarter of the citizenry may have perished.

But plague was only the beginning of England's deathly woes. The embattled populace also faced constant danger from tuberculosis, measles, rickets, scurvy, two types of smallpox (confluent and haemorrhagic), scrofula, dysentery, and a vast, amorphous array of fluxes and fevers - tertian fever, quartan fever, puerperal fever, ship's fever, quotidian fever, spotted fever - as well as 'frenzies', 'foul evils' and other peculiar maladies of vague and numerous type. These were, of course, no respecters of rank. Queen Elizabeth herself was nearly carried off by smallpox in 1562, two years before William Shakespeare was born.

Even comparatively minor conditions - a kidney stone, an infected wound, a difficult childbirth - could quickly turn lethal. Almost as dangerous as the ailments were the treatments meted out. Victims were purged with gusto and bled till they fainted - hardly the sort of handling that would help a weakened constitution. In such an age it was a rare child that knew all four of its grandparents.

Many of the exotic-sounding diseases of Shakespeare's time are known to us by other names (their ship's fever is our typhus, for instance), but some were mysteriously specific to the age. One such was the 'English sweat', which had only recently abated after several murderous outbreaks. It was called 'the scourge without dread' because it was so startlingly swift: victims often sickened and died on the same day. Fortunately many survived, and gradually the population acquired a collective immunity that drove the disease to extinction by the 1550s. Leprosy, one of the great dreads of the Middle Ages, had likewise mercifully abated in recent years, never to return with vigour. But no sooner had these perils vanished than another virulent fever, called 'the new sickness', swept through the country, killing tens of thousands in a series of outbreaks between 1556 and 1559. Worse, these coincided with calamitous, starving harvests in 1555 and 1556. It was a literally dreadful age.

Plague, however, remained the darkest scourge. Just under three months after William's birth, the burials section of the parish register of Holy Trinity Church in Stratford bears the ominous words *Hic incepit pestis*, 'Here begins plague', beside the name of a boy named Oliver Gunne. The outbreak of 1564 was a vicious one. At least two hundred people died in Stratford, about ten times the normal rate. Even in non-plague years, 16 percent of infants perished in England; in this year, nearly two-thirds did. One neighbour of the Shakespeare's lost four children. In a sense William Shakespeare's greatest achievement in life wasn't writing Hamlet or the sonnets but just surviving his first year.

extracted from Shakespeare: the world as a stage by Bill Bryson (Harper, London, 2007, ISBN-13 978-0-00-719790-3).

2. Swine Flu: Bringing Home the Bacon by James Ridgeway

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Mon April 27, 2009 in Mother Jones

As the world gears up once again for a flu pandemic that may or may not arrive (it actually seems possible this time), we might want to remember some of the lessons of the last flu scare. One of these is that there are winners as well as losers in every high-profile outbreak of infectious disease. First and foremost among them, of course, is *Big Pharma*, which can always be counted on to have its hand out wherever human misery presents an opportunity to rake in some cash.

In 2005, I reported on the bird flu scare for the *Village Voice* in a piece called *Capitalizing on the Flu*. We can realistically hope that our current federal government will improve upon the bungled effort made by the Bush Administration to prepare for the onslaught of avian flu - which fortunately didn't materialize. But certain aspects of the crisis are likely to be repeated, and profiteers will surely waste no time in gathering at the trough.

Then, as now, one of the two effective antidotes was a drug called *Tamiflu*. But this silver bullet came with side effects, as well as a high price tag. As I reported in 2005:

With no vaccine in sight, the US government, along with others, is belatedly stocking up on *Tamiflu*,¹ a drug that supposedly offers some defense against bird flu. But last week Japanese newspapers told how children who were administered *Tamiflu* went mad and tried to kill themselves by jumping out of windows. In a cautionary statement the *FDA* noted 12 deaths among children, and said there are reports

¹ In New Zealand anyone going to the chemist with flu symptoms can get their *Tamiflu* needs met across the counter. The UK government's contingency plan envisages that anyone who starts to cough and splutter would ring a flu hotline, where a nurse would give a diagnosis over the phone and then prescribe the drugs which a nominated 'flu buddy' would pick up from the chemist.

of psychiatric disturbances, including hallucinations, along with heart and lung disorders. *Roche*, the manufacturer, is quoted by the *BBC* as stating that the rate of deaths and psychiatric problems is no higher among those taking its medication than among those with flu. The company is increasing *Tamiflu* production to 300 million doses a year to meet demand.

There are other reasons people are leery of *Tamiflu*. Given the rip-offs in Iraq and after the hurricanes, people are understandably interested in knowing just who is going to get rich off the plague. *Secretary of Defense* Donald Rumsfeld, himself former *CEO* of drug company *Searle*, currently owns stock in the one company that owns *Tamiflu* patents - to the tune of at least \$18 million. Rumsfeld says he understands why people might question his holdings, but selling them would raise even more questions. So he is hanging on to what he's got. A report by *Citicorp* at the time described which pharmaceutical manufacturers and other companies stood to make money:

'Winners could include drug makers such as *Gilead Sciences*, *Roche*, *GlaxoSmithKline*, and *Sanofi-Aventis*. Other possible winners are hospital chains such as *Rhoen Klinikum*, cleaning-products makers such as *Henkel*, *Ecolab*, and *Clorox*, as well as home entertainment companies such as *Blockbuster* and *Nintendo*.

'In order for the pharmaceutical companies to profit from making flu vaccine in the administration's \$7.1 billion pandemic flu plan, Bush now is proposing to ban liability suits against them except in cases of wilful misconduct. As for those injured by a flu vaccine, possible lawsuits remain an open question.

'With a worldwide market estimated at more than \$1 billion, there's big money in a flu plague. *Kimberly-Clark's* Chinese subsidiary is already ramping up manufacture of new lines of medical masks, wipes, and hand-washing liquids, according to *Business Week*, with consulting firms *Kroll* and *Booz Allen Hamilton* selling flu preparedness advice to companies and governments. "Crisis is an opportunity as long as you see it first," *Pitney Bowes's* Christian Crews tells the magazine.'

Of course, that was then, and this is now. In the coming days we're bound to discover who's pulling in the pork this time. But even before the US markets open this morning, early indications aren't hard to find: "Fears of a potential pandemic are bringing down stock markets around the world today," public radio's *Marketplace reports from London*. "...but two big pharmaceutical companies are getting a boost from the news":

"Shares in Switzerland's leading drug maker, *Roche*, are up nearly 4 percent this morning. The company says it's scaling up production of *Tamiflu*. The drug's been show to be an effective vaccine against the virus. In the UK *GlaxoSmithKline*, which manufactures its own vaccine against deadly flu viruses, is also gaining in the markets. *Glaxo's* drug is called *Relenza*..."

Both drug makers have been approached by the *World Health Organization* about their readiness to deploy stocks in the case of a pandemic. *Roche* says it stands ready with 3 million treatments, but warned further production could take up to eight months.

3. Capitalizing on the Flu by James Ridgeway

© 2005 *The Nation*

Flu pandemic would spark enough fear to make it a greed pandemic
The Nation in Washington, DC - on Tuesday, November 15th 2005
 Additional reporting: *Isabel Huacuja and Ali Syed*

President Bush's vague plan for coping with a serious outbreak of bird flu is based largely on fear and greed. There is no secret about this. He seeks to get people's attention by scaring the citizenry with visions of millions of people dying from a pandemic so bad it leads to martial law, mass quarantines, restrictions on travel, and so on. He wants to encourage private business to meet the crisis by producing more of existing drugs such as *Tamiflu* to combat a flu plague and entice the drug companies to work harder and faster to make a vaccine by ensuring its profitability.

The answer to a bird flu pandemic is not a passive first-world population riveted to the TV, watching one person after another drop dead across the world as sickened birds fly closer and closer and finally land in our midst. The answer lies in effective communication at all levels among different nations, through their medical establishments, scientists, and spotters, so that as soon as sick or dead birds are found, the birds in surrounding areas can be culled. This is a job for the *World Health Organization*, which is part of the *United Nations*, the organization Bush and his ambassador, *John Bolton*, are determined at all costs to wreck.

While developed countries race to lay in supplies of antiviral drugs, there is little interest in the animals themselves and in animal-human interaction where flu can begin and spread. The *WHO* and *Food and Agriculture Organization* have only 40 veterinarians between them. "Reducing human exposure requires education about handling poultry and a fundamental change in cultural attitudes towards human- animal interactions and husbandry in many parts of the world," writes *The Lancet*, the British medical journal. "In some African countries, people sleep in the same places as poultry. In

Southeast Asia, 'wet markets,' where live poultry are traded and slaughtered on the spot, pose a risk of human transmission. And in Central Asia and Eastern Europe, hunting of wild birds may have played a major part in the spread of avian influenza."

Changing the interplay of animals and humans may meet considerable resistance among small poultry farmers in poor countries, who face the loss of whole flocks in a mass culling. If farmers are offered too little to cull their birds, they won't do it. And if too much money is proffered, "the money will be an incentive to deliberately infect their flocks," Milan Brahmbhatt, the *World Bank's* lead economist for East Asia and the Pacific, told *The Lancet*.

The overall effect of a pandemic in Asia will be to drive small poultry farmers out of business and open the way for U.S.-style industrial chicken farming, with ownership concentrated in the hands of a few. Among the major exporters are China and Thailand (Southeast Asia now accounts for about a quarter of the world poultry business). Most of their chickens go to Japan. Many countries are banning imports from these two nations, and that is running up the price of chickens worldwide and promising to up exports from such places as the US, Brazil, and the EU.

A serious effort to stave off a pandemic also means stopping the pharmaceutical companies from scaring people to make more money. It is by now well-known that the drug companies provide huge sums of cash to politicians - \$133 million to federal candidates since 1998, according to the *Center for Public Integrity*, with upwards of \$1.5 million going to Bush, the top recipient. The industry operates an elaborate lobby in Washington that in 2004 spent \$123 million and employed an army of 1,291 lobbyists, more than half of whom were former federal officials. The industry's sales machine aims to bypass doctors with TV and other advertising aimed directly at the patient, appealing to his or her judgment over that of a physician.

In the case of making and marketing drugs to combat flu, the results are disastrous. The industry claims it can't make flu vaccines because there is no money in it. When asked about last year's flu vaccine shortage by CBS's Bob Schieffer, Bush said the industry was fearful of damage suits concocted by ambulance-chasing lawyers. He explained the shortage this way: "Bob, we relied upon a company out of England to provide about half of the flu vaccines for the United States citizen, and it turned out that the vaccine they were producing was contaminated. And so we took the right action and didn't allow contaminated medicine into our country." This was not true. The American inspectors had approved flu vaccine shipments from a US producer's British company. It was British inspectors who blocked shipment of the questionable vaccine from the American firm.

With no vaccine in sight, the US government, along with others, is belatedly stocking up on *Tamiflu*, a drug that supposedly offers some defense against bird flu. But last week Japanese newspapers told how children who were administered *Tamiflu* went mad and tried to kill themselves by jumping out of windows. In a cautionary statement the FDA noted 12 deaths among children, and said there are reports of psychiatric disturbances, including hallucinations, along with heart and lung disorders. Roche, the manufacturer, is quoted by the BBC as stating that the rate of deaths and psychiatric problems is no higher among those taking its medication than among those with flu. The company is increasing *Tamiflu* production to 300 million doses a year to meet demand.

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A flu pandemic could mean a reduction in travel. A recent *Citicorp* report says likely economic losers would include airlines (such as *British Airways*, *Lufthansa*, and *Air France*), insurers like *AXA*, and luxury-goods conglomerates such as *Richemont*.

The report adds: "Winners could include drug makers such as *Gilead Sciences*, *Roche*, *GlaxoSmithKline*, and *Sanofi-Aventis*. Other possible winners are hospital chains such as *Rhoen Klinikum*, cleaning-products makers such as *Henkel*, *Ecolab*, and *Clorox*, as well as home entertainment companies such as *Blockbuster* and *Nintendo*."

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If all Bush wants to accomplish is to see the drug industry make more money, any fight against the flu will be uphill.

4. Conspiracy Theories of Laboratory Origins Abound by Mike Adams

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Perhaps due to the genetic makeup of the fast-spreading H1N1 strain of influenza -- which includes genetic elements from bird flu, swine flu and human flu spanning three continents -- there is considerable speculation that the origins of this virus are man-made.

It's not an unreasonable question to ask: Could world governments, spooked by the prospect of radical climate change caused by over-population of the planet, have assembled a super-secret task force to engineer and distribute a super virulent strain of influenza designed to "correct" the human population (and institute global Martial Law)?

Technically, it's possible. The US military, all by itself, has the know-how to engineer and unleash such a virus. That doesn't mean they've done so, however. It would be an astonishing leap into crimes against humanity to intentionally unleash such a biological weapon into the wild.

Then again, governments of the world have routinely engaged in crimes against humanity, haven't they? The US, for example, dropped nuclear bombs on civilian populations in Japan. Israel rained white phosphorous on Palestinians, Hitler exterminated countless Jews, and Americans fired millions of rounds of depleted uranium rounds into targets in Iraq and Afghanistan. Unleashing a viral biological weapon in Mexico City is no great leap beyond what governments have already done to achieve their goals.

Throughout human history, virtually all the great crimes against humanity have been carried out by governments -- mostly in the name of peace, prosperity and security, by the way. So let's be clear about one thing: Governments are certainly capable of doing this if properly motivated. Let there be no question about that. Is there any hard evidence of laboratory origins?

As of this moment, I have not personally seen any conclusive evidence of laboratory origins for this H1N1 swine flu. I am open to the possibility that new evidence may emerge in this direction, however, and I am suspicious of the genetic makeup of the virus as one possible indicator of its origins.

I am not a medical specialist in the area of infectious disease, but I have studied microbiology, genetics and a considerable amount of material on pandemics. What seems suspicious to me is the hybrid origin of the viral fragments found in H1N1 influenza. According to reports in the mainstream media (which has no reason to lie about this particular detail), this strain of influenza contains viral code fragments from:

- Human influenza
- Bird Flu from North America
- Swine flu from Europe
- Swine flu from Asia

This is rather astonishing to realize, because for this to have been a natural combination of viral fragments, it means an infected bird from North America would have had to infect pigs in Europe, then be re-infected by those some pigs with an unlikely cross-species mutation that allowed the bird to carry it again, then that bird would have had to fly to Asia and infected pigs there, and those Asian pigs then mutated the virus once again (while preserving the European swine and bird flu elements) to become human transmittable, and then a human would have had to catch that virus from the Asian pigs -- in Mexico! -- and spread it to others. (This isn't the only explanation of how it could have happened, but it is one scenario that gives you an idea of the complexity of such a thing happening).

5. And after much effort, Man created swine flu by Ben Macintyre

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From The Times on April 30, 2009

If you abuse nature by mass-producing meat in appalling conditions, you pay the price by incubating diseases

I once worked on a chicken farm. Actually "farm" is far too gentle a word for the way these chickens were raised, and "factory" sounds too clinical. This was the seventh circle of chicken hell, a clucking, stinking, filthy production line with just one aim: to produce the maximum quantity of edible meat, as fast and as cheaply as possible, regardless of quality, cruelty or hygiene. The creatures were raised in vast hangars, living on a diet of hormones, antibiotics and cheap grain, thousands crushed together in their own dirt under artificial light, growing from chick to slaughter size in a few grim weeks. (The most accelerated lifespan is now just 40 days.)

That was on a kibbutz farm more than 20 years ago, in the midst of what we can now see as a revolution in livestock production, when science, economics and human appetite combined to forge intensive animal farming on an industrial and global scale. Those mass-produced chickens were evidently ill. Air had to be pumped into the foetid shed to stop them suffocating. They still died at a pitiful rate, from heart attacks and stress, their bones often too weak to carry the

weight of their artificially enlarged bodies. These were “wastage”. The carcasses were kicked into a pile, and eventually removed by digger. One did not need to be a scientist to know that something very sick was being produced in that shed.

As swine flu spreads, and fear spreads faster, it is worth remembering that this, and other animal-to-human viruses, are partly man-made, the outcome of our hunger for cheap meat, the result of treating animals as if they were mere raw material to be exploited in any way that increases output and profits. There is a tendency to see a flu outbreak, like the plagues of old, as an unstoppable natural event, a scourge visited on Man from above. But there is nothing natural about this form of disease: indeed, it stems from an abuse of nature.

Vast modern pig farms, like the huge poultry plants across the globe, are ideal incubators of disease, and many scientists believe that viral mutation can be directly linked to intensive modern agricultural techniques. With enfeebled animals packed into confined spaces, pathogens spread easily, creating new and virulent strains that may be passed on to humans. When dense populations of factory-farmed animals exist alongside crowded human habitations, the potential for disaster is vastly greater. The stress of such vile living conditions makes mass-produced animals more vulnerable to contagion, while the concentration on a few, high-yield breeds has led to genetic erosion and weakened immunity. We have created an environment in which a mild virus can evolve rapidly into a much more pathogenic and contagious form.

Six years ago virologists warned that swine flu was on “an evolutionary fast track”. A US Public Health report last year pointed to “substantial evidence of pathogen movement between and among these industrial-scale operations”. A year earlier the UN food agency predicted that the risk of disease transmission from animals to humans would grow with increasingly intensive animal production. During the latest bout of avian flu, governments and the livestock industry were quick to blame wild birds and small-scale farms for spreading the disease. With hindsight, it appears that poultry in backyard flocks were markedly more resistant to a virus that has been traced directly to huge factory farms. Food celebrities such as Jamie Oliver and Hugh Fearnley-Whittingstall have raised public awareness of the way modern meat is produced. But such campaigns tend to focus on the bland taste, ethical or environmental issues such as the toxic waste produced by factory farming, or the amount of water needed to produce a single kilo of beef (16,000 litres).

Far less attention has been paid to the more direct threat to public health posed by industrialised meat production, in which the basics of animal husbandry have been ignored. This, in turn, can be traced to the astonishing transformation in the world's meat-eating habits. Humanity is more carnivorous today than ever before, thanks to selective breeding techniques, low world grain prices, global distribution networks and the Chinese economic boom. In 1965 the Chinese ate just 4kg of meat per head per annum: today the average Chinese citizen consumes 54kg a year. The number of animals on the planet has increased by nearly 40 per cent in the past 40 years, but instead of being dispersed across countryside these food units are increasingly concentrated into compact industrial blocks. The number of pigs has trebled to two billion. There are now two chickens for every human.

Industrialised food production has changed the world's diet, providing a cheap and plentiful form of protein. Yet it comes not only at a moral and environmental cost but also in terms of world health: the silent germs mutating and evolving amid the filth. Factory farming is necessary to feed a hungry world. But doing so without also unleashing new diseases requires far more global co-operation on biosecurity, much tighter international regulation of the meat trade and, above all, a change in the way we produce animals for food. Mass-produced meat can kill you, even if you never eat it.

In 1953 British textbooks insisted that the war against germs had been won by antibiotics, declaring “the virtual elimination of infectious disease as a significant factor in social life”. Accepting that premise, Michael Crichton's *The Andromeda Strain* imagined the world under assault from a microbe from outer space. Today the world is once again under attack from infectious diseases. The latest plague does not come from God, or from other planets. It does not simply come from infectious animals and rogue microbes. It also comes from Man.

6. These vast excremental hells by Mike Davis

© 2009 The Guardian

Published in the Guardian on Tuesday 28 April 2009

Mike Davis is the author of *The Monster at Our Door: The Global Threat of Avian Flu*

Since its identification during the Great Depression, H1N1 swine flu had only drifted slightly from its original genome. Then in 1998 a highly pathological strain began to decimate sows on a farm in North Carolina and new more virulent versions began to appear almost yearly, including a variant of H1N1 that contained the internal genes of H3N2 (the other type-A flu circulating among humans).

Researchers interviewed by *Science* worried that one of these hybrids might become a human flu (both the 1957 and 1968 pandemics are believed to have originated from the mixing of bird and human viruses inside pigs), and urged the

creation of an official surveillance system for swine flu: an admonishment, of course, that went unheeded in a Washington prepared to throw away billions on bioterrorism fantasies.

But what caused this acceleration of swine flu evolution? Virologists have long believed that the intensive agricultural system of southern China is the principal engine of influenza mutation: both seasonal “drift” and episodic genomic “shift”. But the corporate industrialisation of livestock production has broken China’s natural monopoly on influenza evolution. Animal husbandry in recent decades has been transformed into something that more closely resembles the petrochemical industry than the happy family farm depicted in school readers.

In 1865, for instance, there were 53m US hogs on more than 1m farms; today, 65m hogs are concentrated on 65,000 facilities. This has been a transition from old-fashioned pig pens to vast excremental hells, containing tens of thousands of animals with weakened immune systems suffocating in heat and manure while exchanging pathogens at blinding velocity with their fellow inmates.

Last year a commission convened by the *Pew Research Center* issued a report on “industrial farm animal production” that underscored the acute danger that “the continual cycling of viruses...in large herds or flocks [will] increase opportunities for the generation of novel virus through mutation or recombinant events that could result in more efficient human to human transmission.” The commission also warned that promiscuous antibiotic use in hog factories (cheaper than humane environments) was sponsoring the rise of resistant staph infections, while sewage spills were producing outbreaks of E-coli and pfiesteria (the protozoan that has killed 1bn fish in Carolina estuaries and made ill dozens of fishermen).

Any amelioration of this new pathogen ecology would have to confront the monstrous power of livestock conglomerates such as *Smithfield Farms* (pork and beef) and *Tyson* (chickens). The commission reported systematic obstruction of their investigation by corporations, including blatant threats to withhold funding from cooperative researchers.

This is a highly globalised industry with global political clout. Just as Bangkok-based chicken giant *Charoen Pokphand* was able to suppress inquiries into its role in the spread of bird flu in southeast Asia, so it is likely that the forensic epidemiology of the swine flu outbreak will pound its head against the corporate stonewall of the pork industry.

This is not to say that a smoking gun will never be found. But what matters more (especially given the continued threat of H5N1) is the larger configuration: the *WHO*’s failed pandemic strategy, the further decline of world public health, the stranglehold of big Pharma over lifeline medicines, and the planetary catastrophe of industrialised and ecologically unhinged livestock production.

7. Mad journalism disease - more contagious than swine flu? by Simon Jenkins

© 2009 *The Guardian*

Published in the Guardian on Thursday 30 April 2009

The death rate from flu, even in Mexico, is still at about the normal rate, yet 'Armageddon' headlines abound

Mad journalism disease is now raging through the media. According to a report in the *Guardian*, Mexico's swine flu outbreak has moved to potential "Armageddon" status. There is simply no limit to the hysteria that scientists and their allies are able to generate round a health scare. People dying from wars, accidents and even routine diseases such as *Aids* and *MRSA* get no coverage. The death rate from flu, even in Mexico, is still at about the normal rate. Yet the mention of the words death and virus in the same sentence is enough to wipe all proportion from the reporting mind. Any risk, however minuscule, is worth an Armageddon headline. It is a field day for scaremongers.

There is no shred of evidence that this flu is worse than other strains or other diseases that have been similarly hyped in the past, notably *CJD*, *Sars* and *avian flu*. Adding the prefix "as yet" to "no evidence" does not get the hyperbolist off the hook. In cases where there is some sense in raising public consciousness to alter behaviour, as was the case with *Aids*, then stirring public panic might be justified. There is no such sense in the case of Mexican flu. Those very few people who were infected and travelled elsewhere have responded to drug treatment. I imagine more come back from Mexico with ‘*Montezuma's revenge*’.

The number of recorded deaths in Mexico itself appears to be on a par with mortality from other strains of flu, from which tens of thousands die worldwide each year, usually from the complication of pneumonia. It is highly likely that some Britons will get ill from this new flu. It is possible that some, very unlucky, ones will die from it. There is a ‘risk’, as the pundits claim, that this will happen. But how great is that risk? On any available likelihood it is millions to one. Gone is all sense of proportion?

A lot of politicians, scientists and doctors are now getting free publicity. Drugs companies and mask manufacturers are making a killing, despite public advice that masks are pointless. On the other hand travellers, parents and children are being needlessly terrified and those involved in the travel business are being punished with a massive loss of revenue, utterly unrelated to the likelihood of their customers getting ill.

The scaremongering will not diminish that likelihood in any way. At this juncture in the recession, to impose multi-million pound costs on an industry and endanger thousands of jobs is irresponsible. The only disease that needs stamping out is mad journalism. At a time like this the media should shut up, report facts and tell people what they can do, not create statistically inflated hypotheticals and fantastical scenarios.

8. Swine flu and hype - a media illness by Ben Goldacre

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Published in the Guardian on Wednesday 29 April 2009

Even if the predicted millions don't die, a risk is still a risk - and that's why I've turned down everyone from the BBC to al-Jazeera

First it was the emails, and the tweets. This is all nonsense about the aporkalypse, surely? Just like with *Sars*, and bird flu, and *MMR*, is this all hype? The answer is no, but more interesting is this: for so many people, their very first assumption on the story is that the media are lying. It is the story of the boy who cried wolf.

We are poorly equipped to think around issues involving risk, and infectious diseases epidemiology is a tricky business: the error margins on the models are wide, and it's extremely hard to make clear predictions. Here's an example. In Glasgow in the 1980s, less than 5% of injecting drug users were HIV positive. In Edinburgh at the same time, it was almost 50%, even though these two places are only an hour apart by train. Lots of people have got theories about why there should have been such a huge difference in the numbers of people infected, and there's no doubt that it's fun to try and come up with a plausible *post hoc* rationale. But you certainly wouldn't have predicted it. Maybe some bloke with HIV got off the train at Edinburgh station instead of Glasgow on a whim, some fateful day in the early 1980s. Maybe there was a different culture among heroin users, or services. Nobody really knows.

We face the same problem with swine flu. All people have done is raise the possibility of things really kicking off, and they are right to do so, but we don't have brilliantly accurate information. Someone has said that up to 40% of the world could be infected. Is that scaremongering? Well it's high, and I'm sure it's a bit of a guess, but maybe up to 40% could be. Annoying, isn't it, not to know. Someone has said 120 million could die. Well I suppose they could: I'm sure it was done on the back of an envelope, by guessing how many would be infected, and what proportion would die, but I don't think anyone's pretending otherwise.

You could no more predict what will happen here than you could have predicted the enormous disparity in HIV prevalence between Glasgow and Edinburgh. Everyone is just saying: we don't know, it could be bad, and the newspapers are reporting that. Sure there's a bit of vaudeville in the headlines, but they're not saying things that are wrong, and do you really know actual, real people, normally pretty solid, who are suddenly now panicking?

By Tuesday, pundit-seekers from the media were suddenly contacting me, a massive nobody, to say that swine flu is all nonsense and hype, like some kind of blind, automated nay-saying device. "Will you come and talk about the media over-hyping swine flu?" asked *Case Notes on Radio 4*. No. "We need someone to say it's all been over-hyped," said *BBC Wales*. I assumed they were adhering, robotically, to the "balance" template, but no: he kept at it, even when I protested and explained. "Yeah, but you know, it could be like *Sars* and bird flu, they didn't materialise, they were hype." Simon Jenkins suggested the same thing. It's not true, I said. They were risks, risks that didn't materialise, but they were still risks. That's what a risk is. I've never been hit by a car, but it's not idiotic to think about it. Simon Jenkins won't be right if nobody dies, he'll be lucky, like the rest of us. Do people think this flappily in casinos? The terrible truth is yes.

In the time that I have been writing this piece - no embellishment - I've had similar calls off *This Week* at the BBC ("Is the coverage misleading?"), *Al-Jazeera English* ("We wanted to talk to someone on the other side, you know, challenging the fear factor"), the *Richard Bacon Show on Five Live* ("Is it another media scare like *Sars* and bird flu?") and many more. I'm not showing off. I know I'm a D-list public intellectual, but I just think it's interesting: because not only have the public lost all faith in the media; not only do so many people assume, now, that they are being misled; but more than that, the media themselves have lost all confidence in their own ability to give us the facts.

9. All Systems Go by Andrew Jack

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Published in the Financial Times on May 1 2009 with additional reporting by Gillian Tett.

An external event strikes. Fear grips the system, which, in consequence, seizes. The resulting collateral damage is wide and deep.

A description of the coming flu pandemic, or the events of the past 18 months in the world of finance? As the *World Health Organisation* on Wednesday night raised its level of alert and instructed countries around the world to "immediately now activate their pandemic preparedness plans" following the spread of an aggressive flu virus from Mexico, intriguing parallels between ways to address a public health crisis and a shock to the financial system are becoming increasingly apparent to officials and policymakers. The lessons from these could prove critical to the success of efforts to minimise the H1N1 infection's impact. The decisions taken in coming months by international agencies,

national governments, local authorities, employers and individuals alike will be the first real "stress test" of an unprecedented and still fragile structure of pandemic preparations built up since the early part of the decade.

Much of the architecture of today's system dates from the 2003 outbreak of severe acute respiratory syndrome. This was swiftly followed by fears of a widespread outbreak of the "bird flu" H5N1 virus. Both helped mobilise a sharp rise in worldwide funding for pandemic preparations. Yet the lack of any immediate outbreak led to "flu fatigue". Public concern gave way to a sense that sufficient preparations were in place and alarmists were crying wolf.

Similarly, in the financial world, continued economic expansion generated a sense of hubris that militated against tougher regulation. In a further link, the financial crisis itself - and efforts to rein in public expenditure even before the credit crunch began in summer 2007 - may have helped slow pandemic preparations and squeezed the ability of medical systems to respond. In the UK, *Treasury* scepticism over the past two years delayed the purchase of extra supplies of antiviral drugs and antibiotics, leaving the government scurrying to place fresh orders this week.

Looking to the future, the pandemic may further slow down tentative signs of global economic recovery, as declining travel, falling workplace productivity and rising healthcare costs add to the pressures on companies, consumers and markets already struggling and deeply sensitive to further psychological setbacks. Olivier Blanchard, chief economist at the *International Monetary Fund*, warned yesterday that the impact of the pandemic could be "quite drastic" in some countries. The employees and internal systems of the beleaguered financial services sector will be directly affected, providing a test of whether its preparations for a pandemic were better than its highly inadequate anticipation of the economic crisis unleashed last autumn.

The rise in globalisation that drove the expansion in international finance in recent years has also helped frame the conditions for the pandemic. Increased air travel, for example, has helped spread infection far and wide, illustrated in the initial outbreaks of H1N1 outside Mexico: from a honeymooning couple in Scotland to school-children returning home to New York and New Zealand. Distinctions between the financial crisis and the flu pandemic are that, with the former, there was - with no over-arching international organisation - little planning for a severe downturn and the more alarmist warnings of a few critics were brushed aside by the majority.

In recent years, by contrast, there has been general consensus in the public health community, co-ordinated by the *WHO*, that a pandemic was a matter of "when not if", and plans - albeit of variable quality - were being put in place for an event seen as inevitable. Now, as those plans are activated around the world for the first time, the question is how far they will prove effective, given that the responses of individuals and institutions as the threat of infection begins to affect daily life are unpredictable.

Just as the flu virus itself is constantly evolving genetically, so the financial services sector is continually inventing instruments. In health, too, there has been frenetic and complex innovation in recent years that is poorly understood by the vast majority of the population, creating a gulf between them and the tiny minority with understanding. That requires considerable trust, which can swiftly crumble and trigger panic when faith in the few collapses. As a senior accountant says: "Most people don't know how modern medicine works - all that stuff about DNA and what is inside pills. They have to trust their doctor. There are parallels there with finance. So much relies on trust."

The dangers of the lag after widespread unofficial information and before any official response were starkly demonstrated by the saga of *Northern Rock*, the UK bank. A media leak on the *BBC* of its problems in mid-September 2007 caught the authorities on the hop. They presented no convincing explanation of the scale of its problems, triggering a run on deposits. When Sir Callum McCarthy, former head of the UK's financial regulator, tried to tell consumers any panic was "irrational", it simply sparked greater fears. By the time the government finally stepped in four days later to guarantee deposits, customers had lost faith in almost anything it said, sparking deep cynicism about the health of other banks including many small British building societies.

The lessons include the need to recognise and respond to the fact that information travels at lightning speed around the world; and, in the internet era, vague reassurances that the authorities are in charge no longer work. "A hundred years ago, people would be reassured by a solemn statement from the *Bank of England*," says a senior European regulator. "That doesn't work now - people want evidence. Messages have to be short and clear. People want a website they can go to, hard facts."

Embracing the explosion in information, one critical aspect of pandemic preparations that followed *Sars* was the adoption of the *International Health Regulations*. That, for the first time, gave the *WHO* the power to use data from non-official sources that warned of a potential infection rather than relying on its member states.

Initial indications suggest that the agency, as well as regional affiliates and national health authorities such as the *US Centers for Disease Control and Prevention* were relatively slow to react, picking up on warnings in the Mexican media of outbreaks some days after they were identified by specialist analytical companies that raised the alarm. "My big

question about how things have developed is around surveillance and warning," says a senior official co-ordinating the British pandemic response, who adds that the UK escalation was triggered by its own observations of activity by the CDC rather than any formal WHO notification. "If we had had even two more weeks' warning, we could have had better efforts to contain the infection and more time to distribute drugs."

Writing this week of the "striking" similarities between the 2003 Sars outbreak and the collapse of *Lehman Brothers*, Andrew Haldane of the *Bank of England* and author of the scenario sketched at the top of this article, notes that a modest "triggering event" is augmented by a media frenzy that transcends border. Similarities between crises in public health and finance are "no coincidence" as both are "manifestations of the behaviour under stress of a complex adaptive network".

So far, while struggling with huge media demand, the WHO has provided regular updates, although the data on its website have often appeared modest and belated. While it is early days, the public response around the world to H1N1 appears calm, despite anecdotal reports of panic-buying of masks and efforts to obtain antiviral drugs. One risk is that such patterns escalate as the effects of the virus become widespread. More worrying are the cracks appearing in the fragile mechanisms of solidarity between governments. Just as there was disagreement over fiscal stimuli and measures for international financial regulation following the crisis, so there are divergences about how to respond to a pandemic.

Even before the WHO posted advice this week that restricting travel was pointless, many countries were imposing a range of variants that did precisely that. Some countries, such as Egypt, have diverged even further from the science, with calls to slaughter pigs despite no evidence that they present a risk of spreading the infection. As the pandemic advances, there will be far greater potential for clashes over different national policies towards vaccine manufacture, drug stockpiles and distribution, the provision of medical treatment and so on.

For now, the response has gone largely to plan, and appeared smoother than the response to the financial crisis. But it is only just beginning. As Angus Nicoll from the *European Centre for Disease Prevention and Control* puts it: "With flu, you have to plan for the worst, prepare for the worst and hope for the best." The best laid and most rational plans for the pandemic are - as in finance - still grounded in a good deal of faith.

10. The history of swine flu - and clues to its future by Clive Cookson
Financial Times on May 1 2009 03:00

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"Unpredictable" seems to be the word used most often by experts to describe the outbreak of swine flu. Scientists now concede that a pandemic is almost certainly imminent but they insist that they cannot predict its timing or how serious it will be. All this talk about uncertainty should not disguise the astonishing amount that researchers have learnt about the new H1N1 viral strain, using the latest techniques in molecular biology, since an unusual outbreak of flu in Mexico came to the attention of the world's health authorities a couple of weeks ago.

By last weekend, when the general public was becoming aware of the pandemic threat, the *US Centers for Disease Control and Prevention* in Atlanta was already completing the genetic sequences of flu virus samples taken from patients in California and Texas. (Flu virus genes are composed of RNA rather than the related DNA that makes up the genome of almost all other organisms.)

Since Monday, anyone has been able to download the full RNA sequences from the public *GenBank* database. For the uninitiated the viral genetic code is gibberish - "atgaaggcaat" is a typical short stretch - but for experts it can tell a fascinating tale of infections that have shaped the virus. The Mexican strain is a complex mixture of components from viruses that originated in infections of pigs, people and birds - but there is no doubt that the dominant contribution comes from pigs, says Brian Willett, a virologist at *Glasgow University*.

"This virus almost certainly does originate in pigs," says Professor Willett. "Mexican pig farms are a very strong candidate for where it started." Hence the controversial decision by the *World Health Organisation* to call it swine flu - to the dismay of pig farmers, who have been hit with a global slump in pork sales and bans on meat imports from Mexico and the US in some countries as a result.

A porcine origin does not mean the current outbreak is circulating among pigs today, experts insist. Now that the virus is spreading among humans, people face an immensely greater risk of catching Mexican flu from other people than from pigs. Scrutiny of the viral genome - and comparison with other flu viruses - is also beginning to give scientists clues about its likely behaviour and effects on people. These seem to be reassuring.

The Mexican strain currently lacks some of the molecular characteristics associated with the most virulent viruses - adding to the emerging epidemiological evidence that it causes mainly mild illness. Experts believe the apparently high mortality rate in Mexico is the result of vast under-reporting of less severe cases.

But that is now. The future is, of course, unpredictable. Flu is a notoriously fast-changing virus, and it may mutate into a much more dangerous form. Or it may turn out to be less lethal than normal seasonal flu, which kills 500,000 people in a bad year



11. Good Flu Weather by Paul Simons

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Whatever happens in the current outbreak of swine flu in the UK, the disease may not peak until this winter. In the 1957 pandemic, the flu arrived here in summer but nothing much happened until the following winter, and in the 1968-69 outbreak it took about a year to take hold. Winter is also the time for the usual flu outbreaks, but why the season makes any difference to the disease is not well understood.

One idea is that people spend more time indoors in winter so they are more likely to infect each other. And because there is less sunshine in winter, the ultraviolet rays in sunlight are less likely to destroy the virus. But the weather could play a more direct role. When we cough or sneeze, tiny droplets carrying the virus shoot into the air and hang around until they drop to the ground or get breathed in by someone else.

One idea is that because the flu virus is coated in a hard, fatty material it is protected in cold weather. But when the virus is inhaled its coating melts in the warm airways inside the body and infects cells. Another reason could be that the mucus in the airways normally flows up to clear out contaminants. But mucus thickens as cold air hits the upper airways, making it more difficult to expel the virus.

12. The 2006 Pandemic Scare by William Shepherd

© 2006 *Shepherd Chronicles*

Yesterday in the car my chauffeur told me the gruesome tale of the pigeon killed outside her window by a sparrow hawk...Nature raw in tooth and claw. Today the newspapers are full of bird flu. My sentiments tend towards those of Littlejohn...formerly of *The Sun* but now of *The Daily Mail*...herewith his comments.

‘For months now we’ve been building up to the news of the first case of bird flu in Britain. There’s nothing like a good health scare and it’s been a while since we had a decent epidemic. Mad cows, foot-and-mouth, salmonella in eggs. We love it. Helicopters are scrambled, front pages cleared, exclusion zones cordoned off, temporary mortuaries prepared, emergency action plans implemented. I’m surprised the dead swan hasn’t been given a nickname. [How about Cyril? Ed]. ‘If the Government handles this as well as foot-and-mouth there won’t be a bird left in Britain by the weekend. There’ll be bonfires of budgies, pyres of parrots, conflagrations of cockatoos everywhere. Exports of British chickens will be banned by the *EU* and cost the British taxpayer billions. I don’t want to put a dampener on all this excitement but it is birds who get *Bird Flu* but no matter. The *Chief Veterinary Officer* has imposed a *Wild Bird Risk Area* east of Perth between Aberdeen and Edinburgh. That should keep them out. Within *DEFRA’s* 1500 square mile exclusion area are 175 poultry farms, three million birds and a quarter of a million free-range chickens.’

In the post today was the April issue of *Purton Today* with its banner headline *Making Local Government Local and Serving the Lydiards, Hook, Minety and other local beauty spots*. It's as good as any local paper in this land or any other. I really must persuade the editor to accept my offer of blog space *here* for this monthly journalistic *tour-de-force*. The editor has bird problems. Here is John Papworth from his *Perambulator Column*.

'Unfortunately the *Anti-Fox Hunting Bill* recently quite uselessly passed in what is left of our *Parliament* and its powers after the unelected commission of fixers, schemers, bribers, plotters and deceivers of *Brussels* have done their secret nefariousness, omitted to include any prohibition of foxes hunting chickens. I only had six fine ladies, and all of them recycling all my kitchen left-overs, and laying eggs as though on a permanent parade for that sole purpose. Then one day a friend rang to say would I like to give home to a cockerel. I thought that was a splendid idea and had visions of lots of little chicks running all over the place.

'Well, the cockerel duly arrived, a fine, proud, imperious-looking fellow with a huge gold crest, a majestic beak like a Roman Emperor's nose and a steely glare in his eye like a churchwarden on the warpath; and he had lots of feathers on his legs as though wearing trousers. Since he had six wives I decided to call him Henry, but the fact is, despite the magisterial arrogance of his deportment he proved to be made of less sterner stuff. His wives bullied him mercilessly, constantly stole his food, chased him away and generally made his life a misery.

'But other forces were at work to also make it shorter, to say nothing of the fate of two of his wives; the neighbouring field seems one of those places the local hunt has neglected, legally or otherwise, for Mr Reynard flourishes there and one day I found a wide scatter of feathers as all that remained of them, and then I found Henry himself half devoured and no longer the cock of the walk.'

Not one to cry over spilt milk John Papworth found a new source of hens and another male bird...Henry IX. *Local reports* tell me they are settling in well but the new Henry is just as timid and afraid of his wives as his unfortunate predecessor. But it is early days. Perhaps Purton will be seeing lots more little chicks running around before long.

Meanwhile a few hundred miles north of Wiltshire *DEFRA* officials are scurrying around testing any swan they can lay their hands on. *DEFRA* is the country's front-line defence against this avian conspiracy to take over the world. If the media-induced mass hysteria is justifiable then this is just a little worrying. Cyril's carcass was spotted on 29th March. It was rotting and had clearly been dead for some time. It took sixteen hours for *DEFRA* to react as the alert was phoned in outside office hours. And then the media needed seven days to coordinate their proclamation of a *National Panic*. But let me end this weblog on a helpful note. If you are in the habit of flaunting the *Royal Prerogative* and eating swan for *Sunday Lunch* make sure you cook it properly. *Virus H5NI* is killed by cooking.

Friday 7th April 2006 at <http://williamshepherd.blog.co.uk>

Pity Debby Reynolds...*Her Majesty Government's Chief Veterinary Officer*. Now the *Royal Society for the Protection of Birds (RSPB)* and *New Scientist* are going for her too. It seems there is a device called a *Rapid PCR* machine that can carry out instant diagnosis of diseases like swine fever, foot-and-mouth disease and...yes you got there before me...avian flu. A dozen of these located across Scotland might put the taxpayer back a few hundred thousand pounds but if the technology works and the technicians know how to use it, then Debby's avian suspects would be diagnosed at £3 a time in six hours instead of six days.

But the conspiracy thickens. The *New Scientist* reports that 6% to 7% of birds should test positive for mild forms of bird flu distinct from the *H5NI strain*. *DEFRA* found only two cases of low-pathogenicity bird flu in 3343 samples collected in December - 0.06%. Hmmm! Dr Björn Olsen homed in on storage and collection. 'Swabs should be immersed in a saline solution and then frozen,' he tells the scientific journal. *DEFRA* shoves them at the back of the fridge and hopes for the best...or perhaps the worst. We are hearing murmurings from *DEFRA* about the need to bring free-range flocks indoors, to end organic farming and to 'monitor'...but never introduce...vaccination. Cock-up or Conspiracy? The *DEFRA* website sets the tone. Here from *DEFRA's Guidance on Avian Flu*. 'Signs of disease may include increased mortality'. Er...duh!

Wednesday 12th April 2006 at <http://williamshepherd.blog.co.uk>

13. Mexican Flu Outbreak created in the lab by Clare Swinney

© 2009 Clare Swinney

April 30, 2009

In a report on *YouTube* (URL: <http://www.youtube.com/watch?v=GBeKB7aKzOs>) Dr Leonard Horowitz says that the evidence the Mexican 'swine' flu was created in a laboratory and released deliberately is undeniable. Author of *Emerging Viruses: AIDS And Ebola: Nature, Accident or Intentional?*, Horowitz says the swine-bird-human flu strain, reported to be found first in Mexico in late-March 2009, could have only come from Dr James S. Robertson and his

colleagues in association with the *US Centres for Disease Control* and vaccine manufacturer *Novavax, Inc*, which was ready to profit from the release he says. Nobody else takes H5N1 Asian-flu infected chickens, takes them to Europe, extracts their DNA, combines their proteins with H1N1 viruses from the 1918 Spanish flu isolate, additionally mixes in some swine-flu genes from pigs, then reverse engineers them to infect humans, he said. A report in *Medical News Today* revealed that *Novavax* was working on a vaccine for an avian flu pandemic in 2005 and an article at *News-Medical.net* mentioned they began human clinical testing of a pandemic flu vaccine in August 2007. Also, in a news release dated 14th April 2009, shortly after the first reported case of 'swine flu', their vaccine was being touted as being able to protect against the 'highly pathogenic H5N1 avian influenza strain'. Stated the Vice President of *Vaccine Development* for *Novavax* in this report, the vaccine "has significant implications for both pre-pandemic and pandemic preparedness."

14. The Predictable Pandemic by Debora MacKenzie

© 2009 *New Scientist*

Flu infects many animals, including waterfowl, pigs and humans. Birds and people rarely catch flu viruses adapted to another host, but they can pass flu to pigs, which also have their own strains. If a pig catches two kinds of flu at once it can act as a mixing vessel, and hybrids can emerge with genes from both viruses.

This is what happened in the US in 1998. Until then, American pigs had regular winter flu, much like people, caused by a mutated virus from the great human pandemic of 1918, which killed pigs as well as at least 150 million people worldwide. This virus was a member of the H1N1 family - with H and N being the virus's surface proteins *haemagglutinin* and *neuraminidase*.

Over decades, H1N1 evolved in pigs into a mild, purely swine flu, and became genetically fairly stable. In 1976, there was an outbreak of swine H1N1 in people at a military camp in New Jersey, with one death. The virus did not spread efficiently, though, and soon fizzled out.

But in 1998, says Richard Webby of *St Jude's Children's Research Hospital* in Memphis, Tennessee, swine H1N1 hybridised with human and bird viruses, resulting in 'triple reassortants' that surfaced in Minnesota, Iowa and Texas. The viruses initially had human surface proteins and swine internal proteins, with the exception of three genes that made RNA polymerase, the crucial enzyme the virus uses to replicate in its host. Two were from bird flu and one from human flu. Researchers believe that the bird polymerase allows the virus to replicate faster than those with the human or swine versions, making it more virulent.

By 1999, these viruses comprised the dominant flu strain in North American pigs and, unlike the swine virus they replaced, they were actively evolving. There are many versions with different pig or human surface proteins, including one like the Mexican flu spreading now, with H1 and N1 from the original swine virus. All these viruses still contained the same 'cassette' of internal genes, including the avian and human polymerase genes reports Amy Vincent of the *US Department of Agriculture (USDA)* in Ames, Iowa (*Advances in Virus Research*, vol 72, p 127). "They are why the swine versions of this virus easily outcompete those that don't have them," says Webby.

But the viruses have been actively switching surface proteins to evade the pigs' immunity. There are now so many kinds of pig flu that it is no longer seasonal. One in five US pig producers actually makes their own vaccines, says Vincent, as the vaccine industry cannot keep up with the changes.

This rapid evolution posed the "potential for pandemic influenza emergence in North America", Vincent said last year. Webby, too, warned in 2004 that pigs in the US are "an increasingly important reservoir of viruses with human pandemic potential". One in five US pig workers has been found to have antibodies to swine flu, showing they have been infected, but most people have no immunity to these viruses.

Our immune response to flu, which makes the difference between mild and potentially lethal disease, is mainly to the H surface protein. The Mexican virus carries the swine version, so the antibodies we carry to human H1N1 viruses will not recognise it. That's why the *CDC* warned last year that swine H1N1 would "represent a pandemic threat" if it started circulating in humans. The avian polymerase genes are especially worrying, as similar genes are what make H5N1 bird flu lethal in mammals and what made the 1918 human pandemic virus so lethal to people. "We can't yet tell what impact they will have on pathogenicity in humans," says Webby. It appears the threat has now resulted in Mexican flu. "The triple reassortants in pigs seems to be the precursor," Robert Webster, also at *St Jude's* told *New Scientist*.

While researchers focused on livestock problems could see the threat developing, it is not one that medical researchers focused on human flu viruses seemed to have been aware of. "It was confusing when we looked up the gene sequences in the database," says Wendy Barclay of *Imperial College London*, who has been studying swine flu from the recent US cases. "The polymerase gene sequences are bird and human, yet they were reported in viruses from pigs."

So where did the Mexican virus originate? The *Veratect Corporation* based in Kirkland, Washington monitors world press and government reports to provide early disease warnings for clients, including the *CDC*. Their first inkling of the disease was a 2nd April report of a surge in respiratory disease in a town called La Gloria, east of Mexico City, which

resulted in the death of three young children. Only on 16th April - after Easter week, when millions of Mexicans travel to visit relatives - reports surfaced elsewhere in the country.

Local reports in La Gloria blamed pig farms in nearby Perote owned by Granjas Carroll, a subsidiary of US hog giant *Smithfield Foods*.² The farms produce nearly a million pigs a year. *Smithfield Foods*, in a statement, insists there are “no clinical signs or symptoms” of swine flu in its pigs or workers in Mexico. That is unsurprising, as the company says it “routinely administers influenza virus vaccination to swine herds and conducts monthly tests for the presence of swine influenza.” The company would not tell *New Scientist* any more about recent tests. *USDA* researchers say that while vaccination keeps pigs from getting sick, it does not block infection or shedding of the virus.

All the evidence suggests that swine flu was a disaster waiting to happen. But it got little research attention, perhaps because it caused mild infections in people which didn’t spread. Now one swine flu virus has stopped being so well-behaved.
For the latest updates on swine flu go to www.newscientist.com

15. How to Survive a Potential Killer by Debora MacKenzie

© 2009 *New Scientist*

There are three approaches to an infectious disease: you can survive it (or not), kill off the bug responsible, or best of all, prevent it. If swine flu goes pandemic, what should we do?

First, there’s treating it. The Mexican swine flu resists older antiviral drugs like *rimantadine*. It is still susceptible to the *Tamiflu* and *Relenza* in national stockpiles - such as they are - but virologists were shocked this past flu season when ordinary human H1N1 spontaneously developed near-total resistance to *Tamiflu*. Swine H1N1 could well do the same, particularly if it starts swapping genes with the human virus.

Our best hope might lie in monoclonal antibodies, which could both prevent infection and help fight it. These immune proteins can be engineered to recognise a specific virus, and then churned out in production plants. Several research groups have made monoclonal antibodies to H5N1 bird flu from the antibodies of survivors, and these have protected mice against H5N1. The same trick should work for swine flu - and once developed, large amounts could be produced in a matter of weeks. Several companies are already mass-producing flu monoclonals for ordinary H5N1, and could be switched to swine flu.

Then there are treatments that help you survive flu symptoms directly. Flu kills mainly by triggering a cytokine storm - runaway inflammation in the immune system. The steroids normally used to reduce inflammation don’t work, because they also suppress the immune responses you need to fight the virus. Last year, researchers in Hong Kong reported that combining *Relenza* with two readily available non-steroidal anti-inflammatory drugs called COX-2 inhibitors helped save mice from H5N1. This year, US researchers had similar success with an experimental anti-inflammatory drug.

Ultimately though, no one wants to catch a potentially lethal virus and it’s pretty hard to hide from pandemic flu. That leaves vaccines. Right now these are made from killed or weakened flu viruses. But growing them takes time: *New Scientist* has seen part of a confidential report for the *International Federation of Pharmaceutical Manufacturers and Associations* which says that in the next four months we can make a billion doses of pandemic vaccine at best, but more probably 340 million doses. This is not nearly enough for the world’s people. Very few countries have vaccine production plants, and people in those that don’t could get little vaccine or none.

Other kinds of vaccine could be cooked up much faster in more countries. DNA vaccines are loops of DNA coding for the surface genes of the flu virus. Once injected in to the skin, these are taken up by immune cells and turned into proteins. In the process, the immune cells learn how to recognise and fight the viruses that usually express those proteins - and even slightly different ones that might emerge as a pandemic evolves.

Peter Dunnill of *University College London* calculated in 2006 that the entire world could be vaccinated with a mere 150 kilograms of DNA vaccine, and called for a global task force to scale up production. It didn’t happen. Meanwhile, several groups are looking for a universal vaccine that will work against all flu, once and for all. Several proteins common to all flu viruses show promise in animal and early human trials, and more were recently found that might prompt strong immune responses. Protein vaccines could be made in existing factories in the quantities needed. Under normal circumstances that wouldn’t happen without years of testing - but circumstances may no longer be normal.

16. Flu, Mostly Mild, Has Spread Across US, Officials Say by Denise Grady

© 2009 *New York Times*

Published in the *New York Times* on May 3, 2009

Victoria Burnett contributed reporting from Madrid, Ian Austen from Ottawa and Anemona Hartocollis from New York.

² Many of La Gloria’s residents say that local pig farms are to blame for the virus’s mysterious appearance. *Granjas Carroll*, a breeder 50 percent-owned by *Smithfield*, has 77 pig-breeding and rearing units in the region that produce about one million animals a year, or 10 percent of Mexico’s pork consumption [Ed].

Swine flu has become widespread in the United States, with 226 cases in 30 states and more expected to turn up in additional states in the next few days, federal health officials said Sunday. "I think it's circulating all over the US," Dr. Anne Schuchat, the interim deputy director for science and public health at the *Centers for Disease Control and Prevention*, said in a news conference. "The virus has arrived, I would say, in most of the country now." The good news, Dr. Schuchat said seasonal flu, it appears to infect an unusually high percentage of young people. The median age of patients is 17. "Very few confirmed are over 50," Dr. Schuchat said. "They tend to be younger. Whether it will pan out in the weeks ahead we don't know, but it is a pattern that looks different from seasonal influenza.", is that most cases in the United States have been mild, and health officials in Mexico said that cases there seemed to be leveling off. But Dr. Schuchat said, "I don't think we're out of the woods yet."

She said the virus, called H1N1 by scientists, had a number of unusual features that were cause for concern. It has flared up at a time of year when the flu season is normally ending. It is new, so people probably have little or no resistance to it. And unlike the common types of

Of 30 people hospitalized in this country, she continued, a high proportion are older children and younger adults, a big change from the age groups that generally have the highest risk of needing hospital care for flu: the elderly and the very young. She said scientists at the *CDC* were preparing a 'seed stock' from virus samples that could be used for a vaccine. Similar work began several weeks ago to make a vaccine to protect pigs from the H1N1 virus, said Dr. John R. Clifford, the chief veterinary officer for animal health for the *Department of Agriculture*. He said the new virus had never been found in pigs in this country. But pigs in Canada have contracted it from a human, indicating that the animals are susceptible.

Triple test is the latest challenge for the global health body

The response to the H1N1 flu outbreak now spreading from Mexico around the globe is a high-profile triple test for a recently appointed boss, a young set of rules and a well-established institution. For the *World Health Organisation*, founded just over 60 years ago, it is the latest in a series of important contributions to public health, which have included the elimination of smallpox, the introduction of the *Tobacco Convention* to spur tougher anti-smoking measures, and efforts to accelerate treatment for HIV patients across the developing world. The challenges it faces include politics, bureaucracy and several failed public health campaigns including an attempt to eradicate malaria and a lengthy effort to fight polio that remains incomplete.

Its preparations for a pandemic have been reinforced by the adoption in 2007 of the *International Health Regulations*, which theoretically give it greater powers including certain rights to encroach on national sovereignty in fighting disease. But the biggest test is perhaps a personal one for Margaret Chan, the discrete Hong Kong-raised civil servant who took over as director-general of the *WHO* in 2006 after a tough election campaign triggered by the sudden death of her predecessor. She must mobilise her own staff and delicately negotiate with top politicians around the world to work for the common good.

Key components of the WHO's role in tackling the flu pandemic include: (1) to track and assess the risk of the virus; (2) to mobilise countries to plan and react; (3) to agree public health measures to respond; (4) to co-ordinate the development of flu vaccines; and (5) to establish medical treatment guidelines.

Worldwide, laboratories have now confirmed 898 human cases of the new swine flu in 18 countries, according to the *World Health Organization*. Outside the Americas, the country with the most cases is Spain, with 44. All but four involved people who had recently traveled to Mexico and all are recovering, the *Spanish Health Ministry* said. The ministry said it would tighten controls at airports on Monday, but did not say how. Passengers arriving from affected areas have been filling out health questionnaires, and cabin crews have been supplied with gloves and masks.

The possibility that H1N1 might be passed back and forth between humans and pigs was discussed at a *World Health Organization* news teleconference from Geneva on Sunday. Canadian officials reported on Saturday that an infected farm worker had spread the virus to pigs in Alberta.

Peter K. Ben Embarek, a food safety scientist with the health organization, said there was also a risk that the disease could go the other way: that people who worked closely with sick animals on farms or in slaughterhouses could catch it from the pigs. In the past, he said, people have caught other types of swine flu from contact with infected pigs. "Of course that could happen again here," Dr. Ben Embarek said, adding that it was important to avoid exposing people to sick animals - and also to avoid exposing pigs to sick people. Dr. Ben Embarek and other health officials reiterated that it was safe to eat properly cooked pork and also cured pork products like ham. "You can continue to eat safely your prosciutto," he said.

The cases in the pigs in Canada were detected because of a policy introduced months ago in Alberta, which requires farmers and veterinarians to report all cases of flu in pigs to the government. But Jurgen Preugschas, the chairman of the *Canadian Pork Council*, said the country's decision on April 24 to increase oversight of the pork industry, in response to the H1N1 outbreak, probably led health officials to react quickly to the report from the Alberta farm.

In the United States, farmers are not required to report flu in pigs to the government. Dr. Clifford said that influenza was endemic in pigs in this country. Every year, he added, some pigs sick with the flu are tested and the virus is analyzed, and the new strain of H1N1 has never been found in pigs in this country. "Just like people have flu seasons, so do pigs, normally in fall and winter," Dr. Clifford said, adding that vaccine is widely used, and that some 58 million doses were produced last year for pigs in the United States. If a new vaccine is produced to prevent H1N1, it will be up to individual hog producers to decide whether to use it.

In New York, researchers are still trying to figure out why so many students at *St. Francis Preparatory School* in Queens became infected; 59 cases, all of them mild, have been linked to the school. Nancy Clark, assistant commissioner for environmental disease prevention at the *New York City Health Department*, said one suspect, a new ventilation system at the school, did not appear to be a cause. "We inspected many components of it, and generally found it to be in good condition and clean," Ms. Clark said.

17. Airlines Seek to Reassure Passengers in Outbreak by Caroline Brothers

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Lufthansa has placed a doctor on board each of its flights to Mexico; American Airlines has issued medical kits to cabin crews; British Airways is distributing face masks; and Alaska Airways is removing pillows as fears of a flu pandemic rattle the global aviation industry.

The last thing needed by an industry that was already spiraling toward a \$4.7 billion loss this year, according to the *International Air Transport Association*, was another health scare like the *SARS*, or severe acute respiratory syndrome, virus or the avian flu outbreaks that have hit airlines in the past 12 years. So carriers are doing their utmost to reassure passengers that in the absence of travel restrictions by the *World Health Organization*, air travel is still safe, while accommodating those who may not wish to fly. So far, cancellations have been minimal, European airlines say, though the situation is more complicated in the Americas.

An industry that has learned the lessons of previous epidemics - the avian flu crises in 1997 and 2004 and the outbreak of *SARS* in 2003 - is better prepared this time around, while improved communication on the progress of the disease means that travelers are less inclined to panic, the air transport group said. "It was a much more hysterical situation than we're seeing now," Tony Concil, a spokesman for the group, said, recalling the *SARS* crisis of 2003, when information about the disease was patchy. Traffic to Asia fell 50 percent, and about 24 percent worldwide, in the three months ending in May that year. "In the *SARS* crisis we had countries saying 'We won't fly to Asia,' and countries with no *SARS* cases were impacted," Mr. Concil said.

Still, Giovanni Bisignani, the association's chief executive, warned last week that the timing of the swine influenza outbreak "could not be worse" for an industry already wound tight by a shrinking economy that had sent passenger demand into a nose dive. It was too soon, he said, to measure the fallout.

Air Canada has canceled all its flights to three destinations in Mexico until June 1. *Continental Airlines*, the biggest US carrier that flies to Mexico, said it would temporarily cut its capacity there by 40 percent. *American Airlines* said it was watching demand in response to the outbreak, officially known as influenza A (H1N1). Cuba, Ecuador and Argentina temporarily suspended flights to Mexico, while *Alaska Airways* said it was removing blankets and pillows from all its planes. In Asia, *Cathay Pacific*, the biggest carrier in Hong Kong, said it would allow cabin staff members to wear face masks at work, reversing a previous decision. China has suspended flights from Mexico to Shanghai, *Xinhua*, the official Chinese news agency, said Saturday.

In Europe, a French travel agency association, the British tour operator *Thomas Cook* and charter companies like the German-owned *First Choice* and *Thomson* have withdrawn their Mexican vacation offerings. But the *European Commission* said last week that it did not have the authority to ban flights to Mexico. *Lufthansa*, which has one daily flight to Mexico, has mobilized half of its 60 staff doctors, placing one on board each of its flights there. "The doctor is there to answer passenger questions and to identify suspicions of flu during flight and to act to handle the situation before landing," said Thomas Jachnow, a *Lufthansa* spokesman in Frankfurt. Communication among the health authorities, the airlines and the airports has greatly improved from five years ago, he added: "We learned the lessons from *SARS* and from bird flu."

Richard Hedges, a spokesman in London for *American Airlines*, said the airline had issued to cabin crews health kits consisting of masks, gloves and medical equipment. *British Airways*, with four flights a week to Mexico, is distributing face masks to passengers so they can comply with a Mexican request for passengers to cover their faces as they go

through Mexican airports. Although reservations on the British flights are holding up “pretty well,” according to Paul Marston, a spokesman, like many airlines it is also offering nervous passengers alternative dates and destinations, like Antigua.

The airline group, known as *IATA*, has reissued its health guidelines to airlines. They range from advising maintenance crews how to clean air filters safely to instructing cabin crews on how to isolate ill passengers. Aircraft since the Boeing 747 have air filter systems that work vertically, in sections five rows wide, rather than down the length of the cabin. Some European airlines are facing cancellations nonetheless. *Air France-KLM*, the biggest carrier in Europe, has 10 flights a week to Mexico and an additional 7 through its codeshare partner *Aeroméxico*. While flights are operating normally, *Air France-KLM* is feeling the impact of a decision Wednesday by the French travel agent association *SNAV* to halt all group travel to Mexico this month. “We are seeing some departures canceled,” said an Air France spokesman, Nicolas Petteau.

An official from *Aéroports de Paris*, which manages Roissy-Charles de Gaulle and Orly airports, said that baggage handlers frightened of contagion refused to unload bags from a *Corsair* flight arriving Saturday from Cancún, Mexico, and roughly 10 other flights from Spain that may have carried transit passengers from Mexico. Passengers on flights that arrived as of 5 p.m. at Orly airport waited for up to two hours for their luggage, which was finally unloaded by airport staff including supervisors and check-in line managers, said the official, who declined to be identified and was not authorized to speak to the media on behalf of *ADP*. “One of our doctors came and told them there was no risk of contamination, and we suggested they could wear masks and gloves to unload the bags, but they maintained their position,” the official said. The baggage handlers returned to work Sunday, unloading flights from Spain. The next flight from Mexico was to arrive Monday.

Mr. Jachnow said *Lufthansa* had experienced few cancellations so far; its return flights, meanwhile, were full. “We are in a state of nearly normal operations and only a couple of passengers have asked for rebooking,” he said. *Singapore Airlines* is allowing free itinerary changes worldwide. Mr. Hedges, the spokesman for *American Airlines*, said that the airline had activated its “storm policy” for passengers flying to Mexico, allowing them to change routes or dates without charge. As the second-biggest U.S. carrier flying to Mexico, after *Continental*, *American* was “reviewing demand levels on a constant basis,” Mr. Hedges said Friday. *Continental*, with a total of 450 flights a week to 29 cities in Mexico, said Friday that it would continue flying to those destinations but would use smaller aircraft. The reductions will shrink the airline’s overall capacity by 2 percent.

Xinhua reported Sunday that 68 passengers and crew members on the same Shanghai-bound flight as a 25-year-old Mexican man later diagnosed with the A (H1N1) flu had been located and placed in quarantine in Shanghai. None have displayed any flu symptoms, *Xinhua* said. The Mexican flew into Shanghai on *Aeroméxico* flight 098 and then to Hong Kong on *China Eastern Airlines* flight MU505, where he was being treated. In Hong Kong, officials were tracing the passengers of the Hong Kong leg. About 200 guests and 100 workers at the Hong Kong hotel where he stayed have been confined to the premises for a week, *Reuters* reported from Beijing.

18. Look hard enough and you’ll see strange things by Jacob Goldstein

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‘Seven cases of a weird new swine flu have been confirmed in people in Texas and California, *CDC* officials said this afternoon. Everybody has recovered, though one person was hospitalized. All of the cases have occurred in the past month or so. People do occasionally get infected with strains of flu that mainly infect pigs. But the strain in these cases appears to be spreading from person to person, which is the kind of thing that catches the attention of public-health officials. None of the people who were infected had contact with pigs, as far as officials know. And there are two pairs of cases where the human-to-human transmission seems clear: a father-daughter pair and two boys in Texas who attended the same school.

The flu virus mutates promiscuously, and this strain is no exception. Officials said that, in addition to genetic material associated with North American swine flu, the strain has gene segments associated with European and Asian swine flu, North American avian flu and human flu.

The *CDC* first described the strain earlier this week, when officials reported two cases in children in southern California. Here’s the *CDC*’s write-up of those cases. The fact that five more cases have now been confirmed isn’t an indication of the rate at which the flu is spreading; rather, it’s the result of intensive surveillance by the *CDC* and state health officials to try to figure out exactly what’s going on. And that surveillance is likely to lead to more confirmed cases in the coming days, Anne Schuchat, a *CDC* respiratory diseases expert, said on a press call this afternoon.

Indeed, the very fact that this strain was identified in the first place is likely the result of the way flu surveillance has increased in the past few years. The first two cases were both detected by special programs - one at a Navy facility that was studying a new kind of flu testing, and another at a project set up to do intensive surveillance around the U.S.-

Mexico border. "We haven't seen this strain before, but we haven't been looking as intensively as we are these days," Schuchat said. In addition to genetic material associated with North American swine flu, the strain has gene segments associated with European and Asian swine flu, North American avian flu and human flu.

19. Swine Flu Created in Lab as Bio-Weapon? by Lajla Mlinarić Blake

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Published: April 27, 2009

The swine flu virus, Ebola and HIV viruses were created artificially as military biological weapon

According to the belief of two renowned reporters who spoke with top officials at the *UN* and *WHO*, the epidemic of the new strand of swine flu virus in Mexico is the result of an artificially created pathogen, the *Online Journal* reported. The reporter from Mexico City claims that one of the leading UN scientists discovered certain joint transmission vectors, that is, the transmission of the swine flu virus is similar to the transmission of the Ebola virus and of the HIV/AIDS virus, which indicates that they were genetically modified with the aim of being military bio-weapons.

The UN scientist is convinced that the swine flu virus, A-H1N1, and Ebola and HIV viruses were in fact manufactured biological weapons. As proof, they state that the usual process of transmission is that the virus is transmitted from a pig to a human, which is not the case in this outbreak because no case of a pig being infected with the A-H1N1 virus has been registered. Furthermore, the A-H1N1 virus partly contains American pig genes, partly human and bird flu strains and the virus of the Euro-Asian swine flu.

The other reporter, from Jakarta, claims that *WHO* leaders are worried that the current swine flu virus has been genetically modified to be transmitted from one species to another because of the fact that the A-H1N1 virus contains the genetic material of the H5N1 virus, that is, bird flu. Allegedly, American scientists exhumed the body of a woman who died of the Spanish flu in 1918 and used the genetic material of the flu virus as the basis for the creation of the H5N1 virus through genetic manipulation. All this happened in laboratories at the Fort Detrick military base from which the new strain of anthrax, called *ames*, originated.



20. The Trouble with Tamiflu by Fred Burks

© 2009 National Intelligence Examiner

May 1, 2009

Fred Burks served as personal language interpreter to Clinton, Bush, Cheney, Gore, and others in secret meetings.

The *CDC* recommends *Tamiflu* for prevention and treatment of swine flu, as they did with the avian flu several years ago. Yet at the height of the avian flu scare, European researchers conducted a review of numerous studies of anti-viral medications, which was then published in the prestigious medical journal *Lancet* on Jan. 19, 2006. According to this review of 51 randomized controlled trials, *Tamiflu* was useless against the avian flu and many other flus. Contrary to the *CDC*, their recommendation was not to use *Tamiflu*. As reported in *Time* magazine and the *Wall Street Journal*, the study's authors found no "credible evidence" that *Tamiflu* works against avian flu. Contrary to the *CDC*, their recommendation was not to use *Tamiflu*.

Intense media coverage of the swine flu has driven a pandemic wave of fear across our nation and world. Following the *CDC*'s recommendations, people with a cough or a cold are staying home from work, some paralyzed by fear that they might die in the impending pandemic being predicted by newspapers and TV news programs around the world. Yet what or who is really behind the swine flu and this pandemic of fear? And why is the *CDC* recommending *Tamiflu* for

prevention and treatment when its use with avian and other flus has been found to be ineffective in numerous studies? And most important, what can we do about it?

The *CDC* website states, "*CDC* recommends the use of *oseltamivir* or *zanamivir* for the treatment and/or prevention of infection with these swine influenza viruses." *Oseltamivir* is *Tamiflu*, the same drug recommended for the avian flu only a few years ago. Yet *Tamiflu* has been shown numerous times to be ineffective against avian flu, which in case you haven't noticed, never came close to being a pandemic. Excerpts from a Dec. 4, 2005 *Times of London* article on the experience of a top avian flu expert are revealing:

A Vietnamese doctor who has treated dozens of victims of avian flu claims the drug being stockpiled around the world to combat a pandemic is 'useless' against the virus. Dr Nguyen Tuong Van runs the intensive care unit at the *Centre for Tropical Diseases* in Hanoi and has treated 41 victims of H5N1. Van followed *World Health Organisation (WHO)* guidelines and gave her patients *Tamiflu*, but concluded it had no effect. *Roche*, the company that makes *Tamiflu*, has sold stockpiles of the drug to 40 countries and insists there is clear evidence it will protect against a future flu virus. However, it stresses the drug must be given within 48 hours to be effective. The *WHO* admitted *Tamiflu* had not been widely successful in humans.

As the media was spreading fear about the avian flu around the world, the *CDC* came out with the *Tamiflu* recommendation, yet provided little evidence of its effectiveness. Only later was the recommendation seriously questioned. How could the *CDC* be so confident in its recommendation without significant research? How can health officials claim *Tamiflu* is effective with any certainty now, when the current rash of swine flu cases were discovered such a short time ago?

Using the avian flu again as a point of reference and caution, *CBS* and *Associated Press* reported on Dec. 12, 2005 that some avian flu victims died after developing resistance to *Tamiflu*: In a development health experts are calling alarming, two bird flu patients in Vietnam died after developing resistance to *Tamiflu*, the key drug that governments are stockpiling in case of a large-scale outbreak. The experts said the deaths were disturbing because the two girls had received early and aggressive treatment with *Tamiflu* and had gotten the recommended doses.

And then there were the deaths not from the flu or drug resistant strains, but from the side effects of *Tamiflu*. According to a report in Australia's respected *Sydney Morning Herald* on March 1, 2007, there were 18 juvenile fatalities linked to side effects of *Tamiflu* in 17 months. And though the US media largely failed to report it, Japan banned *Tamiflu* for teenagers that same month. According to the official *Tamiflu* website, "people with the flu, particularly children and adolescents, may be at an increased risk of self injury and confusion shortly after taking *Tamiflu* and should be closely monitored for signs of unusual behavior."

Yet governments spent billions of dollars stockpiling *Tamiflu* even after all this information was reported. According to a Feb. 2, 2007 *New York Times* report, the US government at the time was creating a \$1.4 billion stockpile of *Tamiflu*, while admitting that "it is useful only when taken within the first 48 hours, and *Tamiflu*-resistant strains of the flu have already been found in Vietnam and in Egypt." That's \$1.4 billion tax dollars being spent on a drug of questionable effectiveness. Other countries cumulatively also spent massive amounts on the drug.

According to the pharmaceutical company which owns exclusive distribution rights to the drug, *Roche Laboratories*, *Tamiflu's* shelf life is 48 months, so all the medications stockpiled may eventually be useless. How many hundreds of millions of dollars will go to waste? How much more money will flow into the coffers of the major pharmaceuticals as a result of the current scare? And why are so few questioning the recommendation of *Tamiflu* to prevent and treat swine flu when conclusive studies have not been carried out?

As a result of all the fear built up around the avian flu a few years ago, stock prices for *Roche* and *Gilead Sciences*, the pharmaceutical company which developed *Tamiflu*, soared when the drug was recommended by the government as the best treatment. And few know that Donald Rumsfeld was chairman of the board of directors of *Gilead* from 1997 until 2001, when he was appointed *US Secretary of Defense*.

Gilead stock increased so much that Britain's respected daily newspaper *The Independent* reported on March 12, 2006 that Rumsfeld alone "made more than \$5m (£2.9m) in capital gains from selling shares in the biotechnology firm that discovered and developed *Tamiflu*. \$5 million is a nice little profit on one drug. The article further points out that *Tamiflu* is "the drug being bought in massive amounts by Governments to treat a possible human pandemic of [avian flu]." Here are other key excerpts from that revealing article on *Tamiflu*:

The drug was developed by a Californian biotech company, *Gilead Sciences*. Mr Rumsfeld was on the board of *Gilead* from 1988 to 2001, and was its chairman from 1997. He then left to join the Bush administration, but retained a huge shareholding. The 2005 report showed that, in all, he owned shares worth up to \$95.9m, from which he got an income of up to \$13m. The firm made a loss in 2003, the year before concern about bird flu started. Then revenues from *Tamiflu*

almost quadrupled [in 2004], to \$44.6m, helping put the company well into the black. Sales almost quadrupled again, to \$161.6m last year [2005].

The massive stockpiles of *Tamiflu* built up by governments around the world to combat the impending avian flu pandemic were never needed. The pandemic never came close to happening. As reported by the *WHO* on April 23, 2009, the total number of confirmed deaths worldwide due to avian flu since 2003 was 257. For comparison, the *CDC* estimates that influenza alone causes over 36,000 deaths every year in the United States. Yet look at all the profits generated by the massive amount of fear spread through the media for the pandemic that never happened.

In the current swine flu scare, *Gilead*, *Roche*, and the politicians invested in them are gifted with another major opportunity to fleece the public as their stocks soar and governments again move to stockpile this drug of questionable effectiveness. How much can we trust government when huge profits are at stake? How much influence do the lobbyists of the huge pharmaceuticals have over our elected representatives? And is there a possibility that the government might even have had a hand in the creation of both the avian flu and swine flu? These are questions that warrant media and public attention as this current wave of fear spreads.

Regarding pharmaceutical lobbyists, a 2007 *CBS News* article states, "Congressmen are outnumbered two to one by lobbyists for an industry that spends roughly a \$100 million a year in campaign contributions and lobbying expenses to protect its profits." Dr. Marcia Angell, the former editor in chief of the prestigious *New England Journal of Medicine*, has stated, "Over the past two decades the pharmaceutical industry has moved very far from its original high purpose of discovering and producing useful new drugs. Now primarily a marketing machine to sell drugs of dubious benefit, this industry uses its wealth and power to co-opt every institution that might stand in its way, including the *US Congress*, the *FDA*, academic medical centers, and the medical profession itself." Dr. Angell has penned a scathing essay on the widespread corruption in medicine which should be required reading for all citizens.

A surprisingly inspiring, well researched article of only two pages on the respected *WantToKnow.info* website shows how fear is used by certain wealthy, elite groups to manipulate public perception and rake in the profits. Along similar lines, a revealing 2006 article in the *Christian Science Monitor* questions the pandemic of fear created by government and media in relation to the avian flu:

Americans consider the United States to be a country where debate flourishes. Yet with regard to avian flu, hyped sound bites predominate. When President Bush asked *Congress* for \$7.1 billion toward "pandemic flu preparedness," even his critics replied "not enough." What is lacking in the overall discussion about pandemic flu is disagreement, criticism, and skepticism - once the bedrock of science - from researchers willing to question and test the data. There are better ways to promote America's health than selling sickness through the language of fear.

Even in the middle of the avian flu scare, some experts claimed that the flu was not a threat and was being used as hype. As one newspaper prophetically commented in late 2005, "Dr. Marc Siegel, a practicing internist and associate professor of medicine at the *New York University School of Medicine*...isn't buying into the scare scenario. 'If anything is contagious right now, it's judgment clouded by fear,' Siegel said." Even a *New York Times* article questioned all the fear hype. And now, is the swine flu much different just a few years later?

In a most excellent article on the current swine flu crisis, popular health analyst Dr. Joseph Mercola states: "This isn't the first time the public has been warned about swine flu. The last time was in 1976, right before I entered medical school. I remember it very clearly. It resulted in a massive swine flu vaccine campaign. Within a few months, claims totaling \$1.3 billion had been filed by victims who had suffered paralysis from the vaccine. The vaccine was also blamed for 25 deaths. However, several hundred people developed crippling *Guillain-Barré Syndrome* after they were injected with the swine flu vaccine. Even healthy 20-year-olds ended up as paraplegics. And the swine flu pandemic itself? It never materialized."

For a list of excellent recommendations on how to protect yourself from the swine flu without dangerous drugs and vaccinations, see the list at the end of Dr. Mercola's highly informative article, which has already received well over 700,000 views in the three days since it was posted.

21. The Cochrane Review

© 2009 Guardian

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It was a sight that would have gladdened the heart of Dr Severin Schwan, chief executive of *Roche*, one of the biggest drug companies in the world. A long line of well-heeled parents assembled on a bank holiday weekend at a British private school, *Alleyn's* in south London, patiently waiting their turn to receive a packet of *Roche's* drug *Tamiflu* from staff. Five pupils had been diagnosed with swine flu and the school had been closed. The pills were intended to stave off infection among the children who had been sent home.

The board of *Roche*, a Swiss-based company which has globalised the name it inherited from its founder, Fritz Hoffman-La Roche in 1896, must be laughing. It has a drug which has become a household name and been stockpiled by the millions of boxes all over the world, against a potential pandemic that the *World Health Organisation (WHO)* warns is almost upon us. *Roche* has supplied governments with 220 million courses worldwide. The UK has stored enough to treat half the population. And yet *Tamiflu* is of limited use.

There are two drug contenders to reduce the impact of a flu pandemic - *Tamiflu* (oseltamivir) and the *GlaxoSmithKline* (GSK) drug *Relenza* (zanamivir), which is similar but more complicated to use because it must be inhaled - not easy if people have breathing problems. But *Relenza*, too, is being stockpiled around the world, to the delight of a small Australian company called *Biota Holdings* - the company that developed *Relenza* and licensed it to GSK. *Biota's* share price leapt 16% last week when GSK announced it had sold \$46 million-worth of the flu drug, giving *Biota* \$32.2 million in licensing fees.

Relenza and *Tamiflu* are known as neuraminidase inhibitors (NIs). Two other, older flu drugs, amantadine and rimantadine, are now of little use because flu viruses have become resistant to them over the years. Nobody claims *Tamiflu* and *Relenza* cure flu, but they were licensed after trials that showed they mitigated its severity and reduced the length of the illness by about a day. Unfortunately, you have to take them within 48 hours of symptoms starting. The government's contingency plan envisages that any of us who start to cough and splutter would ring a flu hotline, where a nurse would give us a diagnosis over the phone and then prescribe the drugs which our nominated 'flu buddy' will pick up from the chemist. But the most important element of this arrangement, some will say, is that it keeps the flu sufferer out of the way of the rest of us.

Dr Tom Jefferson, of the *Cochrane Collaborative* in Rome, headed the most authoritative, non drug-company conducted (and therefore without the vested interests) review yet done on the flu drugs. He is appalled that such drugs could be widely used and relied on as the solution to a flu pandemic at the expense of things that really work - like washing your hands dozens of times a day. The *Cochrane Review*, carried out in 2006 but regularly updated, most recently this year, says the NIs do not stop people becoming infected, although they do decrease the amount of virus sprayed from people's noses when they sneeze all over you in the bus or office. They can also reduce the complications of flu, such as bronchitis and pneumonia. The review concluded that they might be of some help in a pandemic, but strongly recommended they should not be handed out routinely or used for normal winter flu outbreaks.

To Jefferson's horror, however, the *WHO* has recommended that the drugs should be used against seasonal flu - the usual forms of flu that hit us every winter - so that doctors get used to giving them, and patients to taking them, ahead of a pandemic. "Wide-scale use of antivirals and vaccines during a pandemic will depend on familiarity with their effective application during the inter-pandemic period," it reasons. "It is more than madness," says Jefferson. "Especially as we don't know what the real reasons for that recommendation are." Doctors who work for the drug companies, carrying out their studies or sometimes simply allowing their name to be attached to the paper, also advise *WHO*, he points out.

He argues that there is a very real possibility of resistance developing to the drugs if they are handed out like *Smarties*. Viruses are clever organisms, and evolve super-fast and efficiently. Treat a virus with drugs and you must hit it hard enough to eliminate it. If the dose is not strong enough, or the patient stops taking the drug mid-course, the virus will evolve into a form that can overcome the drug. It is then a resistant strain. This is a major problem with the Aids virus, HIV, for which many new drugs have had to be developed. Bacteria behave the same way - penicillin, once a wonder drug, is now of little use.

Jefferson points out that although *Tamiflu* is only eight years old, resistance has already set in. Last year a strain of winter flu was circulating in the US that was found to be resistant to *Tamiflu*. In the South East Asia bird flu outbreak, there was resistance among 16% of children given the drug and among two out of eight Vietnamese people aged between 8 and 35, according to the *Cochrane Review*. This resistance is inevitable, says Jefferson, if you believe in the theory of natural selection, in which organisms evolve to overcome threats to their survival. "We know that has already happened with *Tamiflu*. It has happened with amantadine, which has been around since the 60s." Of course, governments and the public want magic bullets. There is a belief that where there is an illness, there must be a cure. Handing out drugs reduces panic. People are more likely to stay put at home where they cannot infect too many people if they feel they are being treated. And there is a role for *Tamiflu* in severe and complicated cases caught early. But Jefferson balks at the idea of drug hand-outs at schools. "The spread will stop, but only because the children have been sent home," he says.

The most important trial in disease prevention of the last 50 years was carried out in 2005 by a US doctor called Stephen Luby. "For that he should receive a Nobel prize," says Jefferson. Luby carried out a randomised trial in squatter settlements in Karachi, promoting hand-washing in half the families. Children under five who regularly washed their hands had half as many episodes of diarrhoea, impetigo and acute respiratory infection. It saved lives. If the big pandemic hits, washing hands will save more lives than *Tamiflu*, he predicts.

Meanwhile *Tamiflu* is sought everywhere. In 2005, *Roche* asked for help in manufacturing enough of the stuff to satisfy world demand and it got 300 offers from other manufacturers. It has now established nineteen partners to produce the drug in ten locations on three continents. It has also given licences to Indian and Chinese generic companies to make it for the developing world. If only it really was a miracle cure.

22. Swine flu is meat industry's latest plague

GRAIN, April 2009

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<http://www.grain.org/articles/?id=48>

Mexico is in the midst of a hellish repeat of Asia's bird flu experience, though on a more deadly scale. Once again, the official response from public authorities has come too late and bungled in cover-ups. And once again, the global meat industry is at the centre of the story, ramping up denials as the weight of evidence about its role grows. Just five years after the start of the H5N1 bird flu crisis, and after as many years of a global strategy against influenza pandemics coordinated by the *World Health Organisation (WHO)* and the *World Organisation for Animal Health (OIE)*, the world is now reeling from a swine flu disaster. The global strategy has failed and needs to be replaced with a public health system that the public can trust.

What we know about the situation in Mexico is that, officially speaking, more than 150 people have died from a new strain of swine flu that is, in fact, a genetic cocktail of pig, bird and human influenza strains. It has evolved to a form that is easily spread from human to human and is capable of killing perfectly healthy people. We do not know where exactly this genetic recombination and evolution took place, but the obvious place to start looking is in the factory farms of Mexico and the US.³

Experts have been warning for years that the rise of large-scale factory farms in North America has created the perfect breeding grounds for the emergence and spread of new highly-virulent strains of influenza. "Because concentrated animal feeding operations tend to concentrate large numbers of animals close together, they facilitate rapid transmission and mixing of viruses," said scientists from the *US National Institutes of Health (NIH)* in 2006.⁴

Three years earlier, *Science Magazine* warned that swine flu was on a new evolutionary "fast track" due to the increasing size of factory farms and the widespread use of vaccines in these operations⁵. It's the same story with bird flu. The crowded and unsanitary conditions of the farms make it possible for the virus to recombine and take on new forms very easily. Once this happens, the centralised nature of the industry ensures that the disease gets carried far and wide, whether by faeces, feed, water or even the boots of workers.⁶ Yet, according to the *US Centres for Disease Control and Prevention (CDC)*, "no formal national surveillance system exists to determine what viruses are prevalent in the US swine population."⁷ The same is true of Mexico.

Communities at the epicentre

Another thing we know about the swine flu outbreak in Mexico is that the community of La Gloria in the state of Veracruz was trying to get authorities to respond to a vicious outbreak of a strange respiratory disease affecting them over the past months. The residents are adamant that the disease is linked to pollution from the big pig farm that was recently set up in the community by *Granja Carroll*, a subsidiary of the US company *Smithfield Foods*, the world's largest pork producer.

After countless efforts by the community to get the authorities to help - efforts which led to the arrest of several community leaders and death threats against people speaking out against the *Smithfield* operations - local health officials finally decided to investigate in late 2008. Tests revealed that more than 60 per cent of the community of 3,000 people were infected by a respiratory disease, but officials did not confirm what the disease was. *Smithfield* denied any connection with its operations. It was only on 27 April 2009, days after the federal government officially announced the swine flu epidemic, that information came out in the press revealing that the first case of swine flu diagnosed in the country was of a 4-year old boy from the community of La Gloria on April 2, 2009. Mexico's *Minister of Health* says a sample taken from the boy was the only sample taken from the community that Mexican officials retained and sent for

³ The pig industry in Mexico, like its counterpart in the US, does not want the disease to be called "swine flu" on the grounds that it is being transmitted not from pigs but directly between people. (Their main concern, of course, is a pork market that is fast collapsing from the stigma.) And some Mexican officials, like the Governor of Veracruz, are telling the public that the virus came from China though there is no evidence to support this claim.

⁴ Mary J. Gilchrist, Christina Greko, David B. Wallinga, George W. Beran, David G. Riley and Peter S. Thorne, "The Potential Role of CAFOs in Infectious Disease Epidemics and Antibiotic Resistance," *Journal of Environmental Health Perspectives*, 14 November 2006.

⁵ Bernice Wuethrich, "Chasing the Fickle Swine Flu", *Science*, Vol. 299, 2003

⁶ Pro-poor Livestock Policy Initiative, "Industrial Livestock Production and Global Health Risks," FAO, 2007: http://www.fao.org/ag/againfo/programmes/en/pplpi/docarc/pb_hpaiindustrialrisks.html

⁷ CDC, April 21, 2009 / 58 (Dispatch);1-3: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm58d0421a1.htm>

laboratory testing, which later confirmed that it was swine flu.⁸ This despite the fact that a private risk assessment firm in the US, *Veratect*, had notified regional officials from the *WHO* about the outbreaks of the powerful respiratory illness in La Gloria in early April 2009.⁹

On 4 April 2009, the Mexican daily *La Jornada* published an article on the struggle of the community of La Gloria, with a photo in which a young boy is holding a placard at a demonstration with a picture of a pig crossed out and the words "Danger: Carrolls Farm" written on it in Spanish.¹⁰

About influenza pandemics in general, we know that proximity of factory pig farms and factory poultry farms increases the risks of viral recombination and the emergence of new virulent flu strains. Pigs held near to chicken farms in Indonesia, for instance, are known to have high-levels of infection from H5N1, the deadly variant of bird flu.¹¹ Scientists from the *NIH* warn "that increasing the numbers of swine facilities adjacent to avian facilities could further promote the evolution of the next pandemic."¹²

While it has not been widely reported, the region around the community of La Gloria is also home to many large poultry farms. Recently, in September 2008, there was an outbreak of bird flu among poultry in the region. At the time, veterinary authorities assured the public that it was only a local incidence of a low-pathogenic strain affecting backyard birds. But we now know, thanks to a disclosure made by Marco Antonio Núñez López, the *President of the Environmental Commission of the State of Veracruz*, that there was also an avian flu outbreak on a factory farm about 50 kilometres from La Gloria owned by Mexico's largest poultry company, Granjas Bachoco, that was not revealed because of fears of what it might mean for Mexico's export markets.¹³ It should be noted that a common ingredient in industrial animal feed is "poultry litter", which is a mixture of everything found on the floor of factory poultry farms: fecal matter, feathers, bedding, etc

Could there be a more ideal situation for the emergence of a pandemic influenza virus than a poor rural area, full of factory farms owned by transnational corporations who care nothing for the well-being of the local people? The residents of La Gloria have tried for years to resist the *Smithfield* farm. And they tried for months to get authorities to do something about the strange illness hitting their people. They were ignored. Their voices did not register a single blip on the radar of the *WHO's* global emerging disease surveillance system. Nor did the bird flu outbreaks in Veracruz trigger a response from the *OIE's* global disease alert system. News only broke out haphazardly from private sources.¹⁴ This is what passes for global surveillance.

Corporate bias

It is not the first time and it will not be the last time that corporate farms conceal disease outbreaks and put people's lives at risk. It is the nature of their business. A couple of years ago in Romania, *Smithfield* refused to let local authorities enter its pig farms after residents complained of the stench coming from hundreds of dead corpses of pigs left rotting for days at the farms. "Our doctors have not had access to the American [company's] farms to effect routine inspections," said Csaba Daroczi, assistant director at the *Timisoara Hygiene and Veterinary Authority*. "Every time they tried, they were pushed away by the guards. *Smithfield* proposed that we sign an agreement that would oblige us to warn them three days before each inspection."¹⁵ Eventually, it emerged that *Smithfield* had been concealing a major outbreak of classical swine fever on its Romanian farms.¹⁶

⁸ Andrés T. Morales, "Cercos sanitario en Perote, tras muerte en marzo de bebé por gripe porcina," *La Jornada*, 28 April 2009:

<http://www.jornada.unam.mx/2009/04/28/?section=politica&article=012n2pol>; Tracy Wilkinson and Cecilia Sánchez, "Mexico tries to focus on source of infection," *Los Angeles Times*, April 28, 2009.

⁹ Dudley Althaus, "World's queries have no answers," *Houston Chronicle*, 27 April 2009.

¹⁰ Andrés Timoteo, "Alerta epidemiológica en Perote por brote de males respiratorios," *La Jornada*, 4 April 2009.

¹¹ David Cyranoski, "Bird flu spreads among Java's pigs," *Nature* 435, 26 May 2005

¹² Mary J. Gilchrist, Christina Greko, David B. Wallinga, George W. Beran, David G. Riley and Peter S. Thorne, "The Potential Role of CAFOs in Infectious Disease Epidemics and Antibiotic Resistance," *Journal of Environmental Health Perspectives*, 14 November 2006

¹³ Piden cercos sanitario ante epidemia, *SPI/ElGolfo.Info*, 24 April 2009: <http://www.elgolfo.info/web/lo-mas-nuevo/37017-piden-cercos-sanitario-ante-epidemia-.html>

¹⁴ Tom Philpott first broadcast the possible connection between the swine flu outbreak and the *Smithfield* operation in Veracruz from his US-based blog on 25 April 2009: <http://www.grist.org/article/2009-04-25-swine-flu-smithfield/>

¹⁵ Mirel Bran, "Swine Plague: Romania Criticizes American Group's Attitude", *Le Monde*, 15 August 2007, translated by Leslie Thatcher (Truthout).

¹⁶ GRAIN, "Viral times - The politics of emerging global animal diseases", Seedling, January 2008.

In Indonesia, where people are still dying from bird flu and where many health experts believe the next pandemic virus will emerge, authorities can still not enter large corporate farms without the permission of the company.¹⁷ In Mexico, authorities deflected calls to investigate *La Granja Carroll* and accused the residents of La Gloria of spreading infection because “they use home remedies instead of going to the health centres to cure their flu.”¹⁸

Factory farms are time-bombs for global disease epidemics. Yet, there are still no programmes in place to deal with them, not even programmes of independent disease surveillance. Nobody on high seems to care, and it's probably no coincidence that these farms tend to be located amongst the poorest communities, who suffer dearly to get the truth out. Worse still, so much of our food supply now comes from this bloated system that the main task of government food safety agencies now seems to be to calm fears and keep people eating. *Smithfield* is already on the financial brink and just last week was negotiating for China's largest agribusiness company, *COFCO*, to take it over.¹⁹

In the meantime, the pharmaceutical industry is making a killing from the crisis. The US government has already opened an emergency window in its authorisation system to allow antivirals like *Tamiflu* and *Relaxin* to be used more widely on flu sufferers than allowed. This is great news for *Roche*, *Gilead* and *GlaxoSmithKline*, who hold monopolies on the drugs. But even more importantly, a swathe of smaller vaccine producers like *Biocryst* and *Novavax* are seeing their share prices shoot through the roof.²⁰ *Novavax* is trying to convince both *CDC* and the Mexican government that it can come up with a swine flu vaccine in as little as 12 weeks if the testing rules remain relaxed.

Sea change needed

Clearly, the global system for dealing with health problems brought on by the transnational food industry is completely upside down. Its surveillance system is a bust, frontline public health and veterinarian services are in a shambles and authority has been handed over to the private sector, which has every interest in maintaining the status quo. Meanwhile, people are told to keep indoors and to keep their fingers crossed for *Tamiflu* or a new vaccine that they may or may not get access to. This is not a tolerable situation; action for a sea change is needed, now.

In the specific case of the swine flu epidemic in Mexico, change can start with an immediate, transparent and thorough independent investigation of corporate pig and poultry farms in Veracruz, across the country and throughout North America. The people of Mexico need to know the source of the problem so that they can take adequate measures to cut the epidemic off at its roots and to ensure that it does not reoccur.

At the international level, the expansion of factory farms has to stop and be put into reverse. They are the hotbeds for pandemics and will continue to be so as long as they exist. It is probably pointless to call for a complete shift in the *WHO*-led global strategy, since the experience with bird flu demonstrates that neither the *WHO*, nor the *OIE*, nor most governments are going to take a hard line on corporate farming. Once again, it is people who are going to have to take the lead and protect themselves. Across the world, there are thousands of communities fighting against factory farms. These communities are on the front lines of pandemic prevention. What we now need is to turn these local fights against factory farms into a global movement to abolish them.

But the swine flu disaster in Mexico is also about a larger public health problem. The threats to consumer safety that are an inherent part of the industrial food system are compounded by a global trend to completely privatise health care, which has destroyed the capacities of public systems to properly respond to crises, and by policies to encourage migration to mega-cities where sanitation and public health policies are woefully inadequate. (The outbreak of swine flu hit Mexico City, a metropolis of more than 20 million people, just as the government cut off water supplies for much of the city's population, particularly the poorest sections.) The fact that surveillance of disease outbreaks has to come from private consultancy firms, that governments and *UN agencies* can sit quiet on that information and that we have to depend on a handful of drug companies to produce half-tested but fully-patented relief for our suffering should tell us that things have gone too far. We need not only food but public health systems that truly have some public agenda and public accountability to them.

Going further

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¹⁷ See “Box 2. Bird flu in Indonesia and Vietnam” (by GRAIN) in Edward Hammond, “Indonesia fights to change WHO rules on flu vaccines,” Seedling, April 2009: <http://www.grain.org/seedling/?id=593>

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See the *GRAIN* resources page on bird flu for the following articles (<http://www.grain.org/birdflu/>):

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23. Not Pig Rearing - corresponding with the Minister by William Shepherd

© 2007 William Shepherd

Rt Hon David Miliband MP
Secretary of State,
Department for Environment, Food and Rural Affairs (DEFRA),
Nobel House, 17 Smith Square, London SW1P 3JR

16 May 2007

Dear Secretary of State,

My friend, who is in farming at the moment, recently received a cheque for £3,000 from the Rural Payments Agency for not rearing pigs. I would now like to join the "not rearing pigs" business.

In your opinion, what is the best kind of farm not to rear pigs on, and which is the best breed of pigs not to rear? I want to be sure I approach this endeavour in keeping with all government policies, as dictated by the EU under the Common Agricultural Policy.

I would prefer not to rear bacon pigs, but if this is not the type you want not rearing, I will just as gladly not rear porkers. Are there any advantages in not rearing rare breeds such as Saddlebacks or Gloucester Old Spots, or are there too many people already not rearing these?

As I see it, the hardest part of this programme will be keeping an accurate record of how many pigs I haven't reared. Are there any Government or Local Authority courses on this? My friend is very satisfied with this business. He has been rearing pigs for forty years or so, and the best he ever made on them was £1,422 in 1968. That is - until this year, when he received a cheque for not rearing any. If I get £3,000 for not rearing 50 pigs, will I get £6,000 for not rearing 100?

I plan to operate on a small scale at first, holding myself down to about 4,000 pigs not raised, which will mean about £240,000 for the first year. As I become more expert in not rearing pigs, I plan to be more ambitious, perhaps increasing to, say, 40,000 pigs not reared in my second year, for which I should expect about £2.4 million from your department. Incidentally, I wonder if I would be eligible to receive tradable carbon credits for all these pigs not producing harmful and polluting methane gases?

Another point: These pigs that I plan not to rear will not eat 2,000 tonnes of cereals. I understand that you also pay farmers for not growing crops. Will I qualify for payments for not growing cereals to not feed the pigs I don't rear?

I am also considering the "not milking cows" business, so please send any information you have on that too. Please could you also include the current Defra advice on set aside fields? Can this be done on an e-commerce basis with virtual fields (of which I seem to have several thousand hectares)?

In view of the above you will realise that I will be totally unemployed, and will therefore qualify for unemployment benefits.

I shall of course be voting for your party at the next general election.

Yours faithfully,

William Shepherd, Sales Director

Reply approved by the Minister and based on a draft prepared by The Very Disreputable William N. Shepherd

Dear Mr Shepherd

As you know the payments you refer to are in practice merely notional payments as the UK Government does not in fact make payments to farmers anymore...preferring to pay fines for non-payment to small farmers to the European Union. Big land-holding companies run by spivs and hustlers in the City of London are of course paid promptly. Why don't you buy shares in one of these hedge funds instead? It will involve you in much less work than keeping track of all those pigs you plan not to rear.

I also feel I should advise you that we have persuaded some friends of New Labour over at British Petroleum to pilot a Government-backed project to reallocate set-aside land (as well as beyond-the-pale and over-the-top useless agricultural land) to the cultivation of jatropha plantations. These plantations will play a vital part in 21st British Economy and are an essential part of your government's response to Global Warming. Why not get in on one of these Public-Private Partnerships? Returns are likely to be comparable to the ground nut scheme that was such a great success in East Africa after the Second World War. The idea has been specially recommended by Sarah Brown who is very good at PR and feels it would look bad if all the good soil in the country was used for the rich to drive their cars while the poor are starving.

Thank you for pledging us your vote. But frankly unless you live in one of a few dozen marginal constituencies we are not very interested in it. Politics has moved on since you read your Civics Primer in sixth-form college. Nowadays we politicians do what the central bankers (and their side-kicks at the commercial banks) tell us to do. Not ours to question why etc. etc. After all what is the point of being an Elected Dictatorship? But we are pleased to collect taxes from you as we always have bills to pay on your behalf...bills to the banks' well-paid assassins in the private equity business for

instance, all sorts of special privileges to their money laundering friends in The City of London, grants to all those men in white coats inventing climate weapons and passover bombs. So much to do so little time to do it.

Yours most insincerely

Rt Hon Hilary Benn MP,
New Secretary of State at the Department for Environment, Food and Rural Affairs (DEFRA),
Nobel House, 17 Smith Square, London SW1P 3JR.

PS. Please return the cheque for £3000 as this was issued in error due to a computer malfunction. You have not been charged for this letter but your voluntary donation of £75 has been removed from your bank account to cover Her Majesty's administrative costs in responding to your letter and will appear on your next bank statement as *The Labour Party Educational and Charitable Benevolence Fund* (Registered Address: Enterprise House, St. Anne's, Alderney, Channel Islands).

24. The Bad News: Honey, there's a masked man at the door²¹

© 2009 The Guardian

Published in the Guardian on Thursday 7May2009

Three days after returning from Florida, my husband and I developed sniffles: I immediately assumed it was swine flu. I rang NHS Direct; they were fabulous. The nurse went through our symptoms thoroughly and rules swine flu out. I was reassured. But then I developed a full-on cold and spent the next couple of days in bed.

Over the bank holiday a friend told me: "Swine flu is in the neighbourhood." There was a suspected case at the local school and her neighbour's daughter was on *Tamiflu*. By Sunday the sniffling was worse; on Monday afternoon I phoned *Camidoc*, our GP's out-of-hours service. I ran through my symptoms with the doctor. She asked if I'd like to see a doctor on call, but said it would probably take about six hours.

Ten minutes later the *Camidoc* doctor rang me back. She had spoken to her supervisor. As a precaution I'd been referred to the *Health Protection Agency (HPA)* for a swab for the H1N1 virus. I didn't know whether to laugh or cry. I said I didn't think I had swine flu - no aches or fever. But the doctor explained it was precautionary. The *HPA* would ring to talk me through the next steps and a doctor would be around to swab me shortly. Within 10 minutes the *HPA* woman rang and said the doctor was on his way. Following swabbing, she said, I would be issued with *Tamiflu*. My husband and son would not be issued it at this stage, and I must look out for any symptoms of fever among 'close contacts'. I was quarantined and told not to leave the house or allow anyone to come in, other than my husband and son, who were free to come and go as they pleased.

Before the conversation finished a masked figure was on my doorstep. "Please keep back," he said, as he struggled to get 'fully protected' on my doorstep. What on earth would the neighbours think? "You're my first one," the doctor said as he came in. He swabbed me and checked me over. Security around *Tamiflu* is tight, he said - I wouldn't be able to get it from the chemist. He wrote a sick note, jokingly saying he should refer to influenza, rather than swine flu. I felt as if I should have a white chalk cross on my front door.

Picking up the *Tamiflu* was like an undercover operation: I was given directions on where my husband had to go - he had to take his passport. Now I'm waiting for the swab results, but I've stopped watching the news - I've got my own real-life drama to keep me occupied.

25. The Good News: Princeton's Talking Bacteria by Joseph Mercola

© 2009 Dr. Joseph Mercola

Bonnie Bassler discovered that bacteria "talk" to each other, using a chemical language that lets them coordinate defense and mount attacks. The find has stunning implications for science, medicine and industry. In this video, Bonnie Bassler with Princeton New Jersey, explains an amazing new discovery - that bacteria actually communicate with each other, and once they realize that their numbers are sufficient to carry out their genetic function, they launch into action as a synchronized unit.

<http://articles.mercola.com/sites/articles/archive/2009/04/28/New-Study-Show-How-Bacteria-Actually-Synchronize-Together-to-Harm-You.aspx>

Isn't that just amazing! Who knew bacteria - single-celled, microscopic organisms-had such sophisticated mechanisms? As you likely know, bacteria are essential for your good health. They perform numerous vital functions in and on your body, such as keeping environmental hazards from entering through your skin; digesting your food; making vitamins and educating your immune system to keep bad microbes at bay.

²¹ The author has asked to remain anonymous, to avoid panicking her friends and family.

Since bacteria are single-celled organisms, they have only one string of DNA. Hence they contain very few genes, which encode the traits they're supposed to carry out. The way bacteria multiply is by consuming nutrients from their environment, grow to twice their size, and then divide down the middle.

We've known for some time that once bacteria reach a critical mass, they can overwhelm your immune system. But no one understood the mechanism behind it, until now. They've now discovered that bacteria communicate with each other using a chemical language called "quorum sensing." As it turns out, every type of bacteria make and secrete small molecules. When a bacterium is alone, these molecules simply float away.

But when there's a large enough group of bacteria, these secreted molecules increase in proportion to the number of bacteria emitting them. When the molecules reach a certain amount, the bacteria can tell how many neighbors it has, and suddenly all the bacteria begin to act as a synchronized group, based on the group behavior programmed into its genes.

But that's not all. Not only do bacteria communicate in this way between their own species; they're all "multi-lingual," and can determine the presence and strength of other bacterial colonies.

Essentially, they can count how many of its own kind there are compared to the amount of another species. They then use that information to decide what tasks to carry out, depending on who's in a minority and who's in the majority of any given population of bacteria.

This information can have any number of implications for science and medicine. For example, they're already working on a new generation of antibiotics that can jam the sensing mechanism of a specific pathogen rather than killing it. They're also considering creating pro-quorum sensing drugs that can boost the communication between beneficial bacteria to make them operate more efficiently.

There may be far more complexity to this picture than what we're currently seeing. However, the finding is an intriguing one, and may lead to all sorts of new discoveries about how your body works to maintain optimal health.

26. Squandering £300 million on Swine Flu Jobs by Jenny Hope

© 2010 Daily Mail

Published in the Daily Mail on Wednesday 7th April 2010



Up to £300million of taxpayers' money has been wasted on swine flu jobs that were never needed. Ministers ordered 90million doses of a vaccine last year at a cost of £540million as panic over the illness gripped the country. But as the 'pandemic' failed to materialise it soon became clear that the order was far too large. The *Department of Health* tried to get out of the enormous contract but the drug firm, *GlaxoSmithKline*, refused to back down. Yesterday the Government announced it had signed a compromise deal that caps the number of shots of *Pandemrix* at 34.8million - but, astonishingly, at twice the price first agreed. It means the Government will pay for two-thirds of the original deal but only receive just over a third of the doses.

The mild nature of the illness meant only 5.1million doses have been used. The deal was yesterday criticised by the Tories and pressure groups, who said it proved the Government had mismanaged the seven-month outbreak. The *Department of Health* ordered enough vaccine to cover the entire population, with three-quarters to be supplied by *GlaxoSmithKline*. But it did not have a break clause in the contracts signed with *GSK* - unlike with the drug firm *Baxter*, which had its order cancelled for all but nine million of 36million doses. The cost of the original *GSK* order has never been revealed but at £6 a dose it could have reached £540million.

The contract is now being capped at 34.8million doses, including those already received, with a one-third cut in the price. The *Department of Health* also announced yesterday there would be no cancellation fee. Under the agreement, the Government will also purchase an as yet undefined amount of the H5N1 bird flu vaccine as well as courses of *GSK's* anti-viral flu treatment *Relenza*. Health Secretary Andy Burnham insisted that 'significant savings' had been made. 'I am pleased we have

reached an agreement that is good value for the taxpayer and means that the department has retained a strategic stockpile to protect the UK population without incurring a cancellation fee,' he said. 'This both protects the public purse and ensures the UK remains at the forefront of pandemic preparedness worldwide.'

Britain will donate 3.8million doses of the vaccine to the *World Health Organisation* for use in Africa ahead of the rainy season. Tory health spokesman Andrew Lansley accused Gordon Brown of 'seeking to bury bad news' on the day the election was called. 'This is a careless waste of precious *NHS* money,' he added. 'Labour failed to ensure there were proper break clauses in the contracts which means that British taxpayers have got an extremely bad deal.'

The *Tax Payers' Alliance* strongly criticised the mismanagement of the seven-month outbreak. Chief executive Matthew Elliott said: 'It's an outrage that the Government has squandered millions of pounds of taxpayers' cash because they did a poor job of negotiating the contract for the swine flu vaccine. That money could have gone towards life-saving drugs for *NHS* patients but instead we have a huge stock of surplus vaccines and an excessive bill for doses we never needed. While there is obviously a margin of error in any assessment of the possible need for pandemic vaccines, this is an eye-watering amount of money to waste.'

Simon Jose of *GlaxoSmithKline* said: 'Understanding of the H1N1 pandemic has significantly evolved since the declaration (of a pandemic) by the *World Health Organisation* last June and we recognise that governments' needs and public health priorities are changing. We are committed to working with them to respond to their needs as the pandemic evolves and find appropriate and fair solutions. In line with these principles, we are pleased to have reached a settlement, which has been mutually agreed as representing fair value for the UK Government and for *GSK*.'

27. Drug Firms Cash in on the Swine Flu Crisis by Tom Rawstorne

© 2010 Daily Mail

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an abridged version of the Mail's disturbing findings on how drug firms, the WHO and ministers stoked pandemic fears.

Scientists and pharmaceutical companies that profited from the swine flu scare stand accused of grossly exaggerating the risks of the outbreak. In Britain it was predicted up to 65,000 would die from the virus. The Government sprang into action and spent £1billion stockpiling anti-virals such as *Tamiflu* and ordering enough vaccines to give two doses to every man, woman and child. The *National Pandemic Flu Service* or '*Swine Flu Hotline*' was set up to take the pressure off GPs and 'diagnosed' 1.7million as suffering from the illness. Of these 1,125,000 collected free *Tamiflu* prescriptions.

The Government also launched a mass vaccination programme which gave 4.25million the jab and stockpiled between 90 and 120million doses of the vaccine. But the Doomsday scenario never unfolded. Just 457 people died of swine flu, but as 80 per cent of these had underlying health problems, only around 100 died of swine flu alone. The Government argues this relatively small impact is thanks to its prudence. But in Poland, which refused to inoculate against swine flu, only 150 people died from the illness out of a 40million population. And research suggests as many as eight out of ten people diagnosed with swine flu by the hotline did not have it. This means more than 800,000 of the million-odd packets of *Tamiflu* were given needlessly.

The *World Health Organisation* stands accused of announcing 'a false pandemic' in June last year. Critics claim the drug firms manipulated the *WHO* into downgrading its definition of a pandemic so they could cash in. In all, the companies behind the vaccines and anti-virals will pick up an estimated £4 billion windfall from swine flu.

GlaxoSmithKline has revealed sales of its H1N1 vaccine reached £835million in the fourth quarter of last year. In the same period *Novartis* notched up vaccine sales of more than £800million, the vast majority from H1N1 sales. Swiss drugs firm *Roche* reported profits up 14 per cent to £8.89billion last year, helped by sales of *Tamiflu*. These companies vehemently deny having influenced the way in which the swine flu pandemic was managed. Scientists warn it is far too early to say that the threat from the H1N1 virus is over and that next winter swine flu will return. But with a perception that the scientific community has cried wolf one too many times, the fear is that individuals will be less inclined to follow such advice.

