

# Bird Flu, Pandemic Flu, and Poultry Markets: Playing Ostrich or Talking Turkey?

by Peter M. Sandman and Jody Lanard



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We get emails almost every week from officials asking: “Is it possible to prevent the drop in poultry consumption in countries when H5N1 avian influenza arrives?” Our answer: No. Absolutely impossible. It’s as simple as that. No charge.

But hardly anyone asks: “Is it possible to *mitigate* the drop in poultry consumption? Is it possible to speed up the recovery, to reduce the dip?” Those questions have much more hopeful answers than the first question. The hopeful answers are informed by well-known risk communication principles that have been ignored, so far, in every country that has discovered an H5N1-positive bird.

We hope this column will help address the “chicken communication” issue — as distinct from the pandemic communication issue — and the important relationship between the two. The Western Hemisphere still has time to do it right. And even in Europe, Africa, and Asia, it’s not too late to improve.

We have four reasons for devoting a column to this topic, arguably of interest mainly to poultry producers.

1. What happens to chicken consumption matters. We’re not mainly worried about the fortunes of a handful of huge agribusinesses, though they have thousands of low-paid employees whose fortunes are tied to theirs. But we are worried about the survival of millions of small farmers. (Some farmers in Nigeria, India, Italy, and elsewhere have committed suicide after their businesses were ruined by the public’s temporary unwillingness to buy chicken and eggs.) And we’re worried that chicken is the main source of protein for countless people around the world who cannot easily switch to more expensive meats — and who cannot eat chickenfeed.
2. Consumers’ over-reaction to the very low human health risk from bird flu (in birds) has been widely noted by commentators — many of whom have used it to claim that people are over-reacting also to the entirely different risk of a (human) flu pandemic. Since we think the pandemic risk is much more serious than the food safety and food security risk, we need to address the distinction.
3. The ineffective ways governments and companies have tried to reassure people that it’s safe to eat poultry are pretty typical. They provide an excellent case study of how not to do risk communication — and an excellent opportunity to talk about what might work better.
4. Most importantly, effective communication about a possible future (human) flu pandemic is greatly damaged by its entanglement with communication about what is already happening to millions of birds and a tiny number of very unlucky humans. It will be extremely difficult to do a good job of telling people what kind of “bird flu” we really need to worry about more until communicators start doing a better job of telling people what kind of bird flu most of us probably don’t need to worry about at all. Very bad “chicken communication,” in other words, is getting in the way of adequate pre-pandemic communication.

This column will address two fundamental errors that bird flu communicators keep making.

***The first error is to confuse avian influenza (the bird disease we face already) with pandemic influenza (the human disease we may face soon ... or years from now). This starts as linguistic confusion, but it leads inexorably to confusion about facts and logic as well.***

The “Right Now” problem — avian influenza in birds — afflicts millions of birds, plus a few hundred stunningly unlucky humans. It is the most deadly widespread poultry disease in recorded history, so it is an enormous problem for many governments, veterinarians, bird lovers, and poultry farmers. But in terms of public health, it is a small problem. By contrast, the “Some Day” problem — pandemic influenza in humans — may afflict millions of people, if and when it happens. It is a potentially huge public health catastrophe that is keeping experts awake at night around the world.

Calling both of these problems “bird flu” has been a monumental mistake. And instead of taking the blame for this communication error, officials blame the public (and the media) for getting it wrong.

***The second error is to talk to poultry consumers about the tiny but non-zero human risk of catching avian influenza in ways that are over-reassuring, unempathic, insulting, and in some cases simply dishonest.***

It is inevitable that many people will worry excessively about this infinitesimal risk, for a while. Instead of anticipating and validating this adjustment reaction, and guiding it from poultry avoidance to pandemic preparedness, officials have too often just ridiculed people for their fear of eating poultry ... and thus have prolonged that fear.

In several previous columns (see our [“Pandemic Flu and Other Infectious Diseases Index”](#) for a list), we have focused on communications about pandemic influenza — a hypothetical but potentially huge Some Day risk. This time we want to address the problems of communicating with poultry consumers about the other bird flu, the risk that’s smaller but not in the least hypothetical, the disease that infects poultry easily but infects people only with the greatest difficulty. (Readers of the earlier columns will note that we, too, have sometimes muddled the two kinds of bird flu.)

Not addressed in this column is the extremely crucial task of raising avian influenza awareness among backyard farmers around the world. While millions of poultry consumers are excessively worried about bird flu in birds, millions of poultry farmers are still insufficiently worried. Among the risk communication challenges here: teaching backyard farmers how to improve biosecurity practices, convincing them to report outbreaks quickly, and disseminating strategies to reduce the number of bird-to-human contacts. We are working on these issues in other venues, and we are not ready to write up what we are learning. It is a harder and more serious problem than encouraging people to keep eating chicken.

## *Column Index*

### **Disentangling Avian Influenza from Pandemic Influenza**

1. Two Bird Flus
2. Clarifying the Vocabulary (and Taking the Blame)
3. Typical Language Confusions
4. Muddling the Logic
5. Bird Flu Communication Lessons

### **Being Candid and Empathic about the Human Risk of Avian Influenza**

6. Over-Reassurance about Poultry Safety
7. Ignoring Mistrust — and the Case for Mistrust
8. Contempt for the Public — Sure, That'll Help a Lot
9. The Bird Flu Adjustment Reaction
10. The Uganda Letter

**It's the Risk Communication, Stupid (Whoops!)**

## **Disentangling Avian Influenza from Pandemic Influenza**

The public's excessive fear of catching bird flu from poultry is grounded in a fundamental conceptual error. Many people have come to believe that birds carry the H5N1 pandemic. And huge numbers of people have come to *feel*, without quite thinking it through, that H5N1-positive birds bring the pandemic closer when they arrive. How did people get this mistaken impression? From the careless communication efforts of countless experts, officials, and journalists.

To see where this error comes from, and to start figuring out how to correct it, we need to go back to 1997.

### **1. Two Bird Flus**

When the H5N1 strain of avian influenza showed up in Hong Kong in 1997, it killed a lot of chickens and six people. Never before had influenza been known to jump directly from birds to humans. Fearful of a possible pandemic, health authorities took the extreme step of ordering the slaughter of every chicken in Hong Kong. The H5N1 virus virtually disappeared for a few years, only to reappear — again in many, many birds and very few people — in Southeast Asia in 2003. Since then it has spread throughout Asia, then to Europe and Africa. It is almost inevitably on its way to the Americas.

The H5N1 bird flu strain is both incredibly contagious and incredibly deadly to domestic poultry (it is much less deadly to wild birds, at least so far). It is also incredibly deadly to humans — but not very contagious. Catching the H5N1 virus from a bird that has it is really, really difficult; millions of sick and dead birds have given the disease to just over 200 people so far. Catching the H5N1 virus from a person who has it is even more difficult. A few of the virus's 200-plus victims had no known contact with sick birds, and had prolonged, intimate

contact with an avian flu-infected relative. Most experts think there has probably been very limited human-to-human transmission in some of these cases.

This is the current problem: A disease that spreads wildly among some species of birds and only with great difficulty to humans, posing a huge threat to the poultry industry and a tiny risk to public health.

The name most officials and reporters have given to this problem is “bird flu.”

There’s another problem. Flu viruses aren’t very stable. They keep changing, both through mutation (one virus changes its genetic makeup) and through reassortment (two different viruses exchange genetic material). One worrisome possibility is that the H5N1 flu virus might mutate or reassort in a way that makes it able to spread easily from birds to humans. That would mean that “zoonotic” flu (a zoonotic disease is an animal disease caught by a human), currently pretty rare, could become common.

But the far worse worry that has really captured the experts’ attention is the possibility that H5N1 might someday mutate or reassort into a new and fully human influenza virus, able to spread easily from one human to another. If that happened, the result would almost certainly be a worldwide flu epidemic — a pandemic. One worst case, almost beyond imagination, would be a flu virus as contagious and deadly among humans as H5N1 already is among poultry. That would be an unprecedented public health catastrophe, far worse than the famous Spanish Flu pandemic of 1918. Also possible, and far less scary: a new and fully human influenza virus that launches a pandemic much less deadly than 1918’s, more like the nearly forgotten pandemics of 1957 and 1968. No one knows how bad the next flu pandemic will be.

The name most officials and reporters use for this still-hypothetical problem: “bird flu.”

We tell people that many experts are incredibly worried about bird flu, which could be a public health disaster, overwhelming hospitals and disrupting just-in-time supply chains. And we tell people bird flu is spreading inexorably from country to country and will almost inevitably get to our country too. We are less than clear that these two sentences, both true, are about different bird flus.

Understandably, people overreact to the risk from poultry when the first H5N1-positive bird is found in their country (or their neighborhood). And understandably, people underreact to the risk of a pandemic *until* the first local bird is found. We have taught them, mistakenly, that it’s about the birds.

Imagine the following “trick question” on a public opinion survey: “Which country do you think is likelier to face a human flu pandemic — Indonesia, where bird flu has already spread widely through the local chicken population, or the United States, where not a single H5N1-positive bird has so far been discovered?” The correct answer is that both are equally likely to face a pandemic; a pandemic by definition would reach both countries. It is likelier to *start* in Indonesia because there are more sick birds there to launch it, and because there are more close bird/human contacts. But that doesn’t make it any less likely to spread to the U.S.

How many people would get this question wrong? Most, we think — and not just those who haven’t been paying attention. In fact, people who are paying attention to bird flu media coverage may actually be likelier to have “learned” that pandemic flu is carried by birds, is already serious in Indonesia, but hasn’t yet reached the U.S.

A virologist wouldn’t get the question wrong. But an emergency response professional or a health communication professional? Very likely. At a recent crisis communication seminar in

New York, a hospital public information officer, born in Indonesia, told one of us (Sandman): “Thank God at least the birds aren’t here in New York yet. But I’m really worried that Indonesia may have a pandemic.”

The half-formed belief — or feeling — that birds bring the pandemic risk closer is not usually stated that explicitly. But it shows up indirectly in surveys, when people are asked how likely they think they are to catch bird flu from birds, and how likely they are to stop eating chicken if outbreaks of “bird flu” occur in their country.

In an April 2006 Associated Press survey of U.S. concerns about avian and pandemic influenza, for example, 35 percent of respondents said that they were somewhat or very concerned that they, or someone in their immediate family, might “catch the bird flu.” (The question was located in a section of the survey that was referring to bird flu in birds.) Other surveys show that more than 50 percent of Americans would either reduce the amount of chicken they eat, or stop eating chicken altogether, if “bird flu” outbreaks were to occur in the U.S.

It isn’t absolutely clear what mental model this confusion leads people to have of a birdborne pandemic. Apparently they don’t imagine that local H5N1-positive birds are going to infect one or two people, who will then infect millions more. That image ought to lead people to take all the more seriously pandemic preparations such as stockpiling food and medicines, rather than making them worry excessively about poultry consumption. Our best guess is that, without quite thinking it through, people are imagining that millions of people will get sick from exposure to sick birds. That seems most consistent with what happens: a strong impulse to stop eating chicken, and not much motivation to take any other precautions.

Some of the identification of bird flu with pandemic flu is inevitable, a result not of linguistic confusion but of universal psychological phenomena. So even medical experts who know better end up imagining that their country’s pandemic risk depends on the location of the nearest sick bird.

At a pandemic communication workshop in the Caribbean, for example, a very smart chief medical officer insisted to one of us (Lanard) that the chance of a pandemic really would go up if her country found an H5N1-positive migratory bird; after all, she said, that’s one more source of contact in the world. We challenged her with a thought experiment: Suppose the same day that your country finds its first H5N1-positive bird, two other countries announce that they have successfully controlled 35 H5N1 outbreaks half a world away. Has the probability of a pandemic gone up or down that day? The smart doctor had no trouble understanding statistically that fewer outbreaks in the world mean lower pandemic risk. But she admitted she still *felt* like the pandemic would be closer when an infected bird reached her country.

Still, the linguistic confusion hugely exacerbates the problem. This half of the column is focused on ways to address and help correct the linguistic confusion. We will talk more about the psychology of bird flu fears in the column’s second half.

## **2. Clarifying the Vocabulary (and Taking the Blame)**

It would be wonderful if experts, officials, and journalists would confine their use of the terms “avian influenza” and “bird flu” to influenza strains that circulate among birds. When an occasional human being gets a disease that circulates among birds, it’s okay to call that “bird flu” too; in fact, it helps emphasize that something weird and unusual has happened. But if H5N1 ever mutates or reassorts so it can pass easily among humans, the resulting virus

will be a brand new human flu. (It may or may not be a bird flu as well — that is, it may or may not still pass easily among birds.)

Call this hypothetical Some Day pandemic “the Hong Kong Flu” after the 1997 outbreak. Or call it simply “pandemic flu” — maybe “panflu” for the convenience of headline writers. Calling it “bird flu” confuses everything.

Similarly, it would be wonderful if experts, officials, and journalists would confine their use of “epidemic” and “pandemic” to outbreaks among people — the “demos” in those two words. There is no H5N1 influenza epidemic or pandemic right now; there are fears that a mutation or a reassortment could lead to one later. What we have now is an influenza “epizootic,” well on its way to becoming an influenza “panzootic.” (Many say it’s a panzootic already; it’s on three continents.) These are the terms for outbreaks among animals. Just to complete the vocabulary lesson, a “zoonotic” disease is a disease that jumps the species barrier from animal to human. When a farmer gets bird flu from close contact with sick birds, that’s a case of zoonotic influenza.

We do not expect “zoonotic” to catch on; “epizootic” and “panzootic” are lost causes too. These vocabulary battles have already been lost. It is too late to rescue “bird flu” from being used to describe three vastly different problems: the ongoing H5N1 epizootic; the extremely rare H5N1 zoonotic infection; and the feared influenza pandemic that may or may not be launched by the H5N1 virus.

Nor are we going to be able to stomp out the ambiguous use of terms like “bird flu pandemic” to describe both what’s happening right now to millions of birds (misusing “pandemic”) and what might happen some day to millions of people (misusing “bird flu”). Even if senior officials and medical beat reporters stop misusing these terms, newbie officials and reporters (and headline writers) will keep making the same mistakes.

We may need to introduce awkward workarounds like “bird bird flu” and “human bird flu”; “pandemic in humans” and “pandemic in birds.”

Of course, the experts who have used “bird flu” (or “avian influenza”) to mean both the Right Now bird disease and the Some Day human disease (and the extremely rare zoonotic crossover) weren’t confusing the rest of us on purpose. They knew what they meant. Most of the time, when talking to each other, they knew what their colleagues meant too, recognizing from the context when the meaning was shifting from bird bird flu to human bird flu and back again. But far too often health communicators, emergency response professionals, journalists, the general public, and other non-experts didn’t know to look for the shifts. And confusion was born.

One of the most basic principles in risk communication — in all communication, in fact — is that you cannot correct an error without first pointing it out. And it’s easier to point out an error if you take the blame — which in this case is entirely appropriate. It is not the public’s fault that people think birds carry bird flu pandemics. That’s what we taught them. We need some boilerplate paragraphs something like this:

Many of us (officials and experts) are responsible for seriously confusing the public about the term “bird flu,” because we have used it to mean two different diseases, often without being clear which disease we meant. If you are confused about this, it is our fault, not yours.

The term “bird flu” is properly used for the disease that has killed millions of birds and very few people so far, a disease that people very rarely catch. That kind of bird

flu is not a serious public health risk, though it is extremely deadly to the few people who catch it. The current risk to humans is small, and it comes mostly from contact with sick or dead birds infected with bird flu.

The same term, “bird flu,” is also sometimes used for a new human influenza that might result if the existing bird flu mutates into a form that can spread easily from one human to another. Regardless of where in the world this mutation were to occur, that second kind of bird flu could spread throughout the world in what scientists call a “pandemic.” If it turned out very deadly as well as very infectious, it could kill tens of millions of people, possibly even more. Nobody knows when or even if this will happen, but experts think it is important to prepare, just in case. If it does happen, the risk will come from other people, not from birds.

So there are two kinds of bird flu — the existing disease that afflicts mostly birds, and the hypothetical disease that might someday endanger us all. Experts admit they would have been smarter to call the second one “pandemic flu” instead of “bird flu.” By the time the virus mutates so it can start a pandemic, it will be very much a human flu.

The confusion may get worse before it gets better. Most experts think all strains of influenza originate in birds, from which they spread (or don’t spread) to pigs, dogs, cats, humans, and other species. Any flu strain that made the jump to people years ago and is now endemic in the human population is at no risk of being called bird flu; it’s one of the familiar human strains that make up the seasonal flu outbreaks we face each winter. But any strain of bird flu that manages to make the jump to humans now will end up being called bird flu. (If it stops along the way in another species, that will affect its name; thus the “swine flu” of 1976, which ended up jumping to just a few humans.)

It is conceivable that we could face a pandemic launched by one bird flu virus and an epizootic of a different bird flu virus (in birds, of course) at the same time. A recent tabletop exercise conducted jointly by the U.S. Departments of Health and Human Services and Homeland Security assumed just this scenario: H5N1 remains a widespread bird disease, while another influenza strain entirely blindsides the world with a pandemic.

Our Right Now problem, in short, is an H5N1 avian influenza epizootic or panzootic. Our Some Day problem isn’t just a possible H5N1 flu pandemic; it is an inevitable H?N? flu pandemic.

### **3. Typical Language Confusions**

Here is a typical example of how experts, officials, and journalists misuse these terms and thereby confuse the two problems. On February 14, 2006, Reuters reported on a speech by U.S. Secretary of Health and Human Services Michael Leavitt at a national summit on pandemic preparedness for business leaders. The story included this paragraph:

“Avian flu, when it occurs, will severely test the best-laid plans ... and many companies are not making any plans at all,” Leavitt told a conference on business preparedness for the anticipated bird flu pandemic. *[Reuters, February 14, 2006]*

Of course “avian flu” is already occurring. The problem that will severely test the best-laid plans is the Some Day problem, not the Right Now problem. If it comes, it will be a human flu pandemic, not a “bird flu pandemic.”

On March 17, 2006, similarly, the Associated Press reported: “Leavitt is traveling across the country promoting local preparedness for a potential bird flu pandemic. No cases of the disease have been detected in the United States.”

What does the second sentence actually mean? Is the reporter telling us:

that no birds have yet been found in the U.S. with flu? *[false]*

that no birds have yet been found in the U.S. with the current strain of H5N1? *[true]*

that no humans have yet been found in the U.S. with the current H5N1 strain? *[true]*

that there is already a (human) pandemic but it hasn’t reached the U.S. yet? *[false]*

that there is no pandemic anywhere right now? *[true]*

that the U.S. has never had a flu pandemic? *[false]*

Of course neither the reporter nor the casual reader thought through these various meanings and decided which one the sentence was meant to convey. The reader shouldn’t be blamed for getting the misimpression that a pandemic is on its way, carried by birds. It’s hard to say whether the reporter had that misimpression or not. Surely Secretary Leavitt did not have that misimpression — but he made far too little effort to make sure he didn’t give it to others.

The same AP story later talks about Illinois state health officials who conducted a practice drill for coping with “a fictitious bird flu outbreak.” Were they practicing for an outbreak in birds or an outbreak in humans? Given a later sentence that the exercise revealed a “need for more coroners and tough decisions about the distribution of vaccinations and medical equipment,” the drill presumably focused on humans. (We will leave for another time the question of what it means to worry about how to distribute a still nonexistent vaccine.)

When Singapore did a practice drill for a potential bird flu outbreak, it really was about birds. The government ran an agricultural exercise, not a public health exercise. Participants practiced culling poultry as quickly and safely as possible. But when Illinois drilled for “a fictitious bird flu outbreak,” it was practicing for a human influenza pandemic. Both Singapore and Illinois are so far free of H5N1 — in both birds and people. You’d never know from the Illinois AP story that these are two separate issues.

If an actual outbreak of avian influenza (in birds, of course) occurs in Illinois, residents will have been primed to consider it far more dangerous than it is — to humans. Many will hesitate to eat chicken for a while. And officials will no doubt harangue them about how safe it is to eat chicken, and how irrational they are to think otherwise. No one will remember the years-long set-up for the public’s initial reaction: hundreds and hundreds of official statements and news articles using the ambiguous term “bird flu” to apply both to a Some Day human pandemic and to a Right Now bird epizootic.

Or consider a February 28, 2006 *Daily Mail* (London) business story by Tessa Thorniley. The confusion starts with the headline, “Deutsche says bird flu threat is overcooked.” Anybody want to guess which bird flu threat Thorniley is talking about? As you read the article’s first four paragraphs, keep guessing, along with our guesses in brackets.

As ever, brokers are taking a pragmatic approach to bird flu. Deutsche Bank has even drawn up a list of those companies most likely to be struck down with the virus.  
*[Agricultural companies devastated by bird flu in poultry? Non-ag companies devastated by a human pandemic? No way to tell.]*

Experts reckon it is a case of when, not if, the killer HN51 strain reaches our shores. *[Well, so far H5N1 is a killer strain almost exclusively in poultry. We must be talking about bird flu in birds.]* France is in a flap and has started a mass vaccination programme *[that's in poultry; there's no human vaccine yet]* after the flu was found in a turkey farm. The flu has already affected poultry in Germany, Italy, Austria and Greece.

Bracing investors for a pandemic — and the ensuing disruption to international trade, goods shortages, crumbling stock markets, air travel grinding to a halt — would be too alarmist. *[Okay, now we've switched to talking about a pandemic. It's even pretty clearly signaled.]* Instead, Deutsche says the risks to equity markets are clear but is forecasting a mild impact that will hit the likes of British Airways..., hotelier Millennium & Copthorne..., Cadbury Schweppes..., and tobacco stocks as duty-free sales slump. *[Got it: Deutsche Bank is making predictions about a mild (human) pandemic.]*

With the worst of the virus confined to Asia, long-haul airlines and big international hoteliers are far more exposed than domestic ones. *[Here's an unheralded switch back to bird bird flu; obviously there's no reason to expect the worst of a (human) pandemic to be in Asia.]* Cadbury would suffer as 'impulse driven' buying is reigned *[sic]* in. *[Wait a minute, bird flu (in birds) isn't going to hurt candy and beverage sales; we must be back in (human) pandemic territory.]* The bank most at risk is Standard Chartered..., which has a big presence in Asia. *[If we're in Asia this must be bird bird flu.]* *[Non-bracketed sections are from the Daily Mail, February 28, 2006]*

Of course this may not be careless writing. Perhaps Tessa Thorniley simply has no idea bird flu and pandemic flu aren't the same disease. If so, she probably got that impression from officials who did know they aren't the same disease, but who were less than careful about the words they used.

We'll give you just one more example, a May 19, 2006 Associated Press story. This time you provide the annotations. When is reporter Lara Jakes Jordan writing about bird bird flu, and when is she writing about human pandemic "bird flu"?

### **Doctor: States Unprepared for Bird Flu**

WASHINGTON — Bird flu will hit the United States — it's only a matter of time — and not all states are ready to respond to the deadly virus, the Homeland Security Department's top doctor warns. Dr. Jeffrey Runge, homeland security's chief medical officer, said "it's not a matter of if, but when" bird flu enters the country. But it won't pose a critical threat until the virus can spread consistently between people, he said.

In an interview Thursday with The Associated Press, Runge said states with experience in dealing with hurricanes or terrorist attacks are more ready to face bird flu....

He did not identify those that have been slow to prepare, but said state and local governments must carry most of burden of planning for an outbreak, including readying emergency medical workers, providing hospital beds and setting up treatment centers outside of immediate disaster areas....

Scientists believe the flu most likely would be carried into the United States by a wild bird migrating from a country that has had an outbreak.

Runge credited agriculture inspectors and poultry producers with adopting tough security standards to prevent visitors from exposing fowl to the virus. He recalled hearing from an inspector that “it was tougher to get into a chicken coop than it was to get into our DHS headquarters.” [AP, May 19, 2006]

Of course it isn't just news stories that confuse bird bird flu and human bird flu. So do many health department websites and brochures. And so do the vast majority of public opinion surveys we have seen. How should you answer questions about how alarmed you are about bird flu, or how likely you think it is to come to your community, or what precautions you are taking against it? It depends, of course, on which kind of bird flu you think the questioners are referring to. (Don't try asking. They won't say and probably don't know.) And so we get news stories like an October 2005 report that two out of three Norwegians “are convinced that bird flu will come to Norway,” but “only six percent” say they are afraid of being infected themselves. If six percent expect to catch it from birds, that's a gross overestimation of the risk. If six percent expect to get sick during a pandemic, if it comes, that's a stunning underestimation of the risk.

The inadvertent lesson taught by this linguistic confusion in public opinion surveys, health department educational materials, and endless news stories is the same mistaken lesson: Birds carry bird flu and threaten a pandemic ... but not till they get here.

We are not claiming that there are lots of news stories in which experts explicitly say that the risk of a pandemic will increase when a local H5N1-positive bird is found. That kind of explicitly dead-wrong story is rare.

What's common is a story in which one paragraph says that a bird with bird flu will eventually turn up here, another paragraph says that the experts are worried about a bird flu pandemic that could kill millions, and yet another paragraph says that some 200 people in other countries have already caught bird flu from sick birds, and half of them died. People are used to the atomistic, disjointed nature of journalistic discourse; they know journalism gives them factoids and they're supposed to connect the dots themselves.

So they do. They come up with the simplest coherent narrative that can be constructed from the reported facts. And they rarely encounter a paragraph that goes out of its way to say that it's the wrong narrative, that there are two bird flu problems not one, that the current small health risk from sick birds is distinct from the much larger future pandemic risk.

Naturally, this misunderstanding exacerbates people's fear of birds. It sets us up to be more frightened than appropriate when we see a dead bird on the street or in a field. And once a dead bird somewhere nearby turns out to have H5N1, it sets us up to be more frightened than appropriate when we are asked to cook a dead bird or eat one that someone else cooked.

And it sets us up to be less inclined to take action now on more useful pandemic precautions — stockpiling food and medications, teaching our children good hand hygiene, planning how we can temporarily do our jobs and live our lives with increased social distance, etc. After all, if “bird flu pandemics” are transmitted by birds, then we don't really have to worry until the sick birds get to where we are. At a recent crisis communication seminar in the Seattle area, somebody commented to one of us (Sandman) that “the pandemic will probably reach the U.S. first in Alaska, and then the birds will fly down to the Northwest.” That's the Hitchcockian image millions of Americans have right now: pandemic-carrying migratory birds, on their way to North America, where they will infect our local chickens and then us. When they get here, our pandemic risk will soar. Until they get here we're safe.

This confusion is by no means confined to the general public. In recent avian and pandemic influenza crisis communication trainings around the U.S. and in six other countries, we have consistently encountered participants who have unconsciously absorbed the mistaken impression that their area won't face a serious pandemic risk until their area finds an H5N1-positive bird. We have talked with health communication specialists who have written dozens of "bird flu" news releases, website articles, and the like, who still have this misimpression. We have talked with agricultural officials who have the same misimpression — and who therefore pooh-pooh pandemic health warnings from sister agencies: They are confident they can keep an avian flu outbreak from spreading widely through local flocks ... so there can't be much reason to worry about a local pandemic.

The confusion of pandemic flu with bird flu is a bigger piece of the flu risk communication problem in the developed world than it is in the developing world, where pandemic warnings are much less prominent. In the developing world, government officials do comparatively little public communication about preparing for a possible pandemic. When they do mention it, all too often they claim that they are prepared to cope well with it if it comes — a claim that most senior officials in developed countries have learned not to make. Or worse yet, officials in developing countries sometimes claim that they are prepared to stop the pandemic at their borders. But mostly they don't talk much about flu pandemics with their publics.

The major focus in developing countries is bird flu (the bird disease) itself. Officials in the developing world are rightly focused on urging backyard farmers to adopt improved biosecurity practices, warning them that the H5N1 virus threatens to devastate their flocks and spread the epizootic to other flocks. These warnings, combined with vivid images of culling, make it very difficult to reassure people that eating poultry is comparatively safe.

The confusion that bedevils many parts of the developing world, in other words, isn't mostly the confusion of bird flu versus pandemic flu. It is the confusion of the huge bird flu risk to birds, versus the much smaller bird flu risk to those who care for the birds, versus the still smaller bird flu risk to those who cook the birds (even if they lack running water and other tools to cook them "properly"), versus the really tiny bird flu risk to those who eat the birds.

And in much of the developing world, even this confusion isn't the main problem (yet). There are still millions of farmers who haven't heard about avian influenza. There are millions more who see this new H5N1 virus as part of a western or government plot to drive small farmers out of business. There are millions more who simply deny that the calamity could happen to them. There are millions more who rightly doubt that their governments would ever follow through on promises of future compensation for poultry that must be culled now. And there are hundreds of millions who find it impossibly hard to change cultural practices that are centuries old, such as living closely with their chickens ... and eating (or quickly selling) the ones that get sick.

But in Western Europe and especially in North America, most bird flu and pandemic flu discourse is founded on a mixed metaphor: the "bird flu pandemic."

#### **4. Muddling the Logic**

This isn't just about confusing word choice. At its worst, it's also about confusing logic — in some cases, perhaps, intentionally confusing logic. The U.S. poultry industry, for example, wants U.S. poultry consumers to know that U.S. poultry is H5N1-free. True. The industry also wants us to know that U.S. poultry is likely to stay H5N1-free, because of all the precautions taken to protect U.S. flocks. This isn't as true as the over-reassuring industry

statements make it sound, but the point is a valid one. The huge “battery farms” (that is, indoor egg and chicken factories) offer chickens very little opportunity for contact with the outside world, including migratory birds that might be carrying the H5N1 virus. And the huge battery farm operators are a lot likelier than backyard farmers to monitor carefully for influenza, and to act quickly to cull their flocks if necessary. Whatever the relative merits of free-range chickens versus battery chickens, bird flu has spread mostly via backyard farms, not factory farms.

But the poultry industry doesn’t just tell us that our chickens are safe. It sometimes implies that *we* are safe because our chickens are safe. The implicit logic of its assurances: “Because our chickens are H5N1-free, you don’t have to worry about a pandemic.” This is false logic. A pandemic is unlikely to start in a U.S. battery farm, but it will quickly reach the U.S. population if it starts in a backyard farm in Asia or Africa, transmitted thereafter not by birds but by people.

It is also dangerous logic. It is dangerous to public health, because it suggests that there is little reason to prepare for a pandemic until U.S. birds start getting sick. And it is dangerous to the poultry industry itself, because it suggests that if and when U.S. birds start getting sick, our pandemic risk will escalate rapidly ... and the source of the risk will be birds. Then, as chicken sales plummet, the industry will belatedly try to explain that a few U.S. flocks infected with the H5N1 virus don’t really change people’s risk very much — not the risk of a pandemic and not the risk of eating chicken. The logic of “you’re safe because we don’t have any sick birds” is inescapably also the logic of “now that we have some sick birds you’re no longer safe.” Industry statements that claim the former will have trouble morphing into statements that deny the latter.

We have seen country after country go through this sequence. Industry and government spokespeople work hard to give the impression that their country’s birds will never get H5N1 bird flu, and imply that therefore the pandemic can never reach their country. Then a local bird or two is diagnosed with H5N1. Then poultry sales collapse, as people understandably imagine that they could easily “catch the pandemic” if they ate a pandemic-carrying chicken. And then industry and government spokespeople complain that the public is being irrational.

The most explicit official “not our problem” claim we have seen came from Bahrain, a small Persian Gulf country. In April 2005, Bahrain’s disease control chief, Mona Al Mousawi, told a *Gulf Daily News* reporter: “For rare diseases like [avian influenza], which do not affect us, we are not concerned.... We do not import birds from these regions so it will not affect us.” Dr. Al Mousawi told the reporter that Bahrain had no plans to stockpile Tamiflu, and had no specific plan for dealing with a pandemic, because “WHO is only warning about epidemics in certain regions.”

(Please note: Six months later, Bahrain’s *Contingency Plan for Pandemic Influenza* was published — under the signature of Dr. Mona Al Mousawi. Learning happens.)

Such claims turn up in western countries as well. Here is an October 6, 2005 Associated Press story, headlined “Farmers Call Avian Flu Safeguards Adequate.” (In fairness, it is the worst such story we have seen in the U.S. so far.)

Eastern Shore poultry farmers pleaded for calm this week after President Bush said he’s growing more concerned about avian flu possibly spreading to people. Farmers and state officials say current safeguards are adequate to prevent a pandemic of the disease in humans.

“There’s reason for concern, of course, and it’s not something we should ignore, but I don’t think it poses a great threat in this country. We’re ahead of the curve,” said farmer Doug Green, who raises 100,000 broilers in Princess Anne [Maryland]....

Scientists say it’s only a matter of time before a worldwide influenza outbreak. Concern is rising it could be triggered by the avian flu called H5N1.

That virus has killed or led to the slaughter of millions of birds, mostly in Asia, but also in parts of Europe. It has killed only about 60 people, mostly poultry workers, because so far the virus does not spread easily from person to person....

But poultry farmers said the nation is safe, for now, from a deadly outbreak in people. The strain of bird flu that sickened humans in Asia has not been discovered in the U.S.

A spokeswoman for Salisbury-based Perdue Farms Inc. said American farmers are far better suited than Asian farmers to contain bird flu before it spreads to people. Julie DeYoung said the differences include less contact between humans and the birds, more hygienic slaughtering processes and fewer opportunities for domestic birds to roam, which can spread disease.... [AP, October 6, 2005]

Another story, this one from the May 13, 2006 *Sand Mountain* [Alabama] *Reporter*, is headlined: “Bird flu doesn’t alarm local poultry industry.” Consider this revealing line: “If the avian flu strain ever does reach the U.S., chicken growers are confident it likely won’t ever reach their isolated chickens, let alone humans.” The possibility that a flu pandemic could reach U.S. humans without first infecting U.S. chickens simply doesn’t compute.

Usually the claim that we’re safe from a pandemic as long as local birds are healthy isn’t quite this explicit. But it’s implicit in story after story, especially in agricultural news releases talking about “Asian bird flu” (as the U.S. industry likes to call it). These stories undermine pandemic preparedness now. And they set us up for an overreaction when H5N1 is diagnosed in local birds.

## 5. Bird Flu Communication Lessons

Here are three communication lessons for countries in which no H5N1-positive birds have been found yet.

**A. Don’t lean too heavily on the fact that you’re H5N1-free so far.** Anything you say is true “because” no local birds have been found with H5N1 will seem untrue after a local bird is found with H5N1. So ground your case for the safety of poultry consumption in facts that won’t turn on you the first time you find an H5N1-positive bird:

Bird flu is hard for people to get, even if they have intimate contact with sick birds.

The poultry industry is working hard, and effectively, to keep bird flu from spreading in its flocks; we can’t guarantee that the H5N1 virus won’t appear from time to time, but we really can guarantee that it will stay rare, especially in large flocks that are kept indoors.

The poultry industry is also monitoring its flocks carefully, so H5N1-positive birds are almost certain to be found before they get to market.

Careful meat handling and thorough cooking add yet another margin of safety.

So eating chicken really is pretty safe. We're tempted to add that you're likelier to choke on a chicken bone than succumb to bird flu, but even though that's statistically true, it's far too flip for a risk that understandably frightens people.

So far we haven't found our first H5N1-positive bird in this country. That's another reason to feel that eating chicken is pretty safe. But sooner or later we'll find one, and eating chicken will still be pretty safe.

None of the above means that our country is safe from a human flu pandemic. A pandemic that starts anywhere in the world is bound to reach us too, even if our birds stay H5N1-free.

**B. Explicitly distinguish bird flu from pandemic flu.** One crucial key to persuading people that eating chicken isn't terribly dangerous is to explain to them what experts think *is* terribly dangerous — the possibility that somewhere in the world H5N1 will mutate or reassort so that it can spread easily from human to human. Every time we tell people that bird flu (in birds) isn't a big deal, we need to tell them that pandemic flu (in humans) is. And every time we tell people that pandemic flu is a big deal, we need to tell them that bird flu isn't.

It is a huge mistake to keep reassurances about eating poultry and warnings about a possible pandemic in separate messages. Especially given the vocabulary confusions, it makes the pandemic warnings sound overwrought, and leaves them subject to misinterpretation: Are we warning about the birds? And it makes the reassurances about catching bird flu from poultry sound like denials of the pandemic flu warnings — so they are all too easily dismissed as special pleading on the part of an industry or a government that apparently doesn't want the public to be afraid of anything.

Too often officials really *don't* want the public to be afraid of anything. In late May 2006, the big bird flu story was a human cluster of eight members of the same Indonesian family, all infected with H5N1 avian influenza. This is the largest confirmed cluster to date, and the first cluster that looks like there have been three generations of human-to-human transmission. Seven of the eight infected relatives died. But an Associated Press reporter paraphrased WHO epidemiologist Steven Bjorge as saying that “there is no reason for alarm because rare cases of human-to-human transmission have been observed previously.” This was basically true. But before the Indonesian cluster, many officials had been saying that there was no reason for alarm because human-to-human transmission had not been observed (or conclusively confirmed) yet. The public repeatedly gets the impression that officials minimize any new reason for alarm.

Back in the 1980s, one of us (Sandman) worked with a chemical plant manager in Texas, who used to meet routinely with contingents of neighbors worried about emissions. He would point out the window of the factory's conference room at the sphere in which elemental chlorine was stored. “That's what I'm worried about,” he'd say. “I'm certainly prepared to talk about the steps our company is taking to reduce chronic emissions, but what keeps me up at night is that chlorine sphere right there. If that sucker goes, so does half the town.” His warnings about a possible chlorine explosion provided essential context for his reassurances about routine emissions. He wasn't claiming the plant was safe. He was explaining which parts of the plant he considered dangerous and which he didn't.

Government and poultry industry spokespeople need to do the same thing. The Some Day risk of a flu pandemic is a lot more dangerous than the Right Now risk of a flu epizootic. And the Some Day risk of a flu pandemic may have come a little closer to reality after the largest

human cluster to date and the first evidence of a possible human-to-human-to-human chain of transmission.

Obviously, distinguishing bird flu from pandemic flu will remain important after you have found your first H5N1-positive bird — or even your fiftieth H5N1-positive bird. Though the risk of being a chicken farmer will rise if the local prevalence of the virus rises, it will still be true that eating chicken is very (though not completely) safe. The big risk to the general public will still be the possibility of a mutation or reassortment anywhere in the world, leading to a pandemic. But it's a lot easier to make this point before you find your first positive bird.

**C. When talking about bird flu in birds (as opposed to human pandemic flu), distinguish explicitly where the risk is high and where it is lower.** This third lesson applies especially to developing countries, but it is relevant also in the developed world.

The risk to birds is huge — and, therefore, so is the economic risk to farmers who keep birds, and the nutritional risk to people who depend on chicken as their main source of protein.

The risk to animals that routinely eat dead birds — cats, for example — is smaller than the risk to birds. But it is non-trivial.

The health risk to farmers who keep birds (and their families) is much, much smaller, but it is extremely frightening. You really don't want your children cuddling a dying chicken.

The risk to people who cook poultry is smaller still, but it's there, at least in theory. Safe cooking practices are worth recommending, but they are hard to implement even in the developed world. A cook who hasn't got hot running water, who doesn't know where her chicken came from, and who knows that it might have been smuggled to market by a farmer who was supposed to cull his sick birds, isn't crazy to worry a little.

The lowest risk, though still not quite zero, is borne by those who eat a chicken somebody else cooked, and cooked thoroughly.

In making the point that pandemic risk is a lot bigger than poultry risk, it is also important not to overstate the safety of poultry. We will turn next to this second important mistake of chicken risk communication: over-reassurance bordering on dishonesty — and sometimes crossing the border. As we will see, it keeps company with another communication misbehavior: criticizing the public for its normal adjustment reaction to the local discovery of H5N1-positive birds.



## **Being Candid and Empathic about the Human Risk of Avian Influenza**

For readers who are reading only the second half of this long column, we will start by disentangling the language of bird flu one more time (and briefly, this time!). Then we will talk about poultry safety risk communication.

H5N1 avian influenza is a bird disease that's already spreading widely in the bird population. Very rarely it jumps directly to a human being. Once in a blue moon it spreads to a close contact of that person. So far, that is as far as this terrible virus gets

into the human population; it hardly gets into the human population at all. When it does, it doesn't get loose. It hits a dead end. That is "bird flu," a disease that is almost entirely a problem for birds.

Pandemic influenza is a currently nonexistent human disease that may someday result if the H5N1 avian influenza virus (or some other new influenza virus) mutates or reassorts in just the right way. Once that happens, the pandemic virus will be a fully human influenza virus, spreading easily from human to human. Even if people still call it "bird flu," it will be very much a human flu — and it may (or may not) be a deadly enough human flu to launch a public health catastrophe.

In the meantime, we face a much tinier but nonzero human health risk: the risk of catching bird flu from infected birds. It has already happened to 200-plus people. It could happen to you ... but it's a long shot. How do chicken communicators talk about this risk, and how should they talk about it?

## **6. Over-Reassurance about Poultry Safety**

All over the world, poultry industry spokespeople and government agriculture officials insist that there is no risk — none — in eating poultry. Here's a typical statement, this one from U.S. Secretary of Agriculture Michael Johanns on March 4, 2006: "Poultry is safe to eat. Cooking poultry will kill the virus. It is as simple as that."

Similarly, Nigerian poultry veterinarian Stephen Adejoro told an April 2006 panel discussion on bird flu that "Nigerians should go ahead and eat chickens.... [I]t's not a foodborne disease, it's a disease you can contract by aerosol, not by eating cooked food.... Chicken is safe for Nigerians and we cannot afford not to eat chicken. Media should not ... create anxiety on the minds of people."

Now it is certainly true that thoroughly cooked poultry has no live influenza virus left, and therefore no risk of carrying influenza. The same is true of thoroughly cooked beef and *E. coli* — but we doubt that Johanns would claim that there is no *E. coli* risk from eating beef, nor would Adejoro deny that *E. coli* in a rare hamburger can cause foodborne illnesses.

For that matter, the most common human illness attributed to poultry is salmonellosis, caused by the *Salmonella* bacterium. (It also shows up in other foods, but poultry and eggs are the main offenders.) Working under Johanns in the U.S. Department of Agriculture is the USDA's Food Safety and Inspection Service. Here are some excerpts from the [FSIS web page on Salmonella](#):

*Salmonella* is the most frequently reported cause of foodborne illness. In 1996, the Centers for Disease Control and Prevention (CDC) documented 39,027 cases....

Salmonellosis, or a *Salmonella* infection, is the illness that can occur if live *Salmonella* bacteria enter the body, usually through eating foods containing the bacteria. Salmonellosis is one of the most common bacterial foodborne illnesses, but many cases could be prevented by proper food handling practices.... Not all cases of foodborne illness are reported, but experts believe that anywhere from 696,000 to 3.8 million people contract salmonellosis each year....

Follow these guidelines for safe food preparation:

**CLEAN: Wash Hands and Surfaces Often**

Wash your hands with warm water and soap for at least 20 seconds before handling food and after using the bathroom, changing diapers, and handling pets.

Wash your cutting boards, dishes, utensils, and counter tops with hot soapy water after preparing each food item and before you go on to the next food.

Use plastic or other non-porous cutting boards. These boards should be run through the dishwasher — or washed in hot soapy water — after use.

Consider using paper towels to clean up kitchen surfaces. If you use cloth towels, wash them often in the hot cycle of your washing machine.

### **SEPARATE: Don't Cross-contaminate**

Separate raw meat, poultry, and seafood from other foods in your grocery shopping cart and in your refrigerator.

If possible, use a different cutting board for raw meat products.

Always wash hands, cutting boards, dishes, and utensils with hot soapy water after they come in contact with raw meat, poultry, and seafood.

Never place cooked food on a plate which previously held raw meat, poultry, and seafood.

### **COOK: Cook to Proper Temperatures**

Use a clean thermometer, which measures the internal temperature of cooked foods, to make sure meat, poultry, casseroles, and other foods are cooked all the way through.

Cook to Safe Temperatures.... All poultry should reach a safe minimum internal temperature of 165° F....

When cooking in a microwave oven, make sure there are no cold spots in food where bacteria can survive. For best results, cover food, stir, and rotate for even cooking. If there is no turntable, rotate the dish by hand once or twice during cooking....

### **CHILL: Refrigerate Promptly**

Refrigerate or freeze perishables, prepared foods, and leftovers within 2 hours or sooner.

Never defrost food at room temperature. Thaw food in the refrigerator, under cold running water, or in the microwave. Marinate foods in the refrigerator.

Divide large amounts of leftovers into small, shallow containers for quick cooling in the refrigerator.

Don't pack the refrigerator. Cool air must circulate to keep food safe. [*Salmonella Q&A, USDA website, last modified April 3, 2006*]

One of us (Lanard) recently read out some of these instructions at avian and pandemic influenza conferences in five countries. Then she asked her audiences how many of them had followed all the instructions the last time they cooked a chicken or a turkey. Only a few hands went up. Yet one of the most common bird flu messages is that “properly cooked poultry is safe” from bird flu. This is quite a different emphasis from the USDA's emphasis on its Salmonella web page, which stresses that to be safe from Salmonella you have to take

many careful steps to cook your poultry properly. The paradoxical pun is also the truth: Properly cooked poultry is rare.

Poultry consumers are still a lot less likely to catch bird flu than Salmonella — not mostly because they cook their poultry properly but because of two other reasons: (a) In the developed world, there is only a very small risk that H5N1-infected birds will enter the food chain; and (b) Most of the very limited data about human cases of H5N1 bird flu suggest that the victims did not catch it from eating poultry, even though they may have eaten birds that were infected and incompletely cooked. But because the situation is so new, uncertain, and evolving, it is hard for normal people to accept categorical reassurance about these facts.

In the developed world it is actually quite feasible to cook poultry “properly” — though most of us cut corners most of the time. For many food preparers in the developing world — often without hot running water, often short of fuel — following the USDA instructions simply isn’t possible. (This is particularly an issue in countries that prefer their chicken on the rare side, like Vietnam. It is less of a problem in countries where most people like very well-cooked chicken, such as India and most Caribbean countries.)

And what about restaurant chicken? Or restaurant eggs? Or restaurant dishes in which pieces of chicken are thoroughly covered in sauce, making it impossible to tell whether they have been thoroughly cooked? Or restaurant salad dressings, stuffings, eggdrop soups, and other dishes in which a raw or half-cooked egg may have been used?

But let’s assume the best: A chicken so thoroughly cooked that no H5N1 virus could possibly have survived. Great — eat it with confidence. But is it safe to be the cook, who had to handle the raw chicken? Is it safe to shake hands with the cook? Is it safe to eat an uncooked peanut butter sandwich that came out of the kitchen where the chicken was prepared? What little information exists suggests that the answers to these questions are probably a qualified, tentative “yes.” But the questions are rarely even considered by officials who are content simply to recite the mantra that “properly cooked poultry is safe.” And the worries behind questions like these deserve much more respect than they typically get in official communications.

The same is true, perhaps even truer, of food industry communications. Here is a typical example, from a March 20, 2006 joint news release from three U.S. organizations, the National Chicken Council, the National Turkey Federation, and the Egg Safety Center:

Consumers can have complete confidence in the safety of the poultry products they enjoy at home and away from home. “This is a poultry health issue, not a food safety issue,” said Michael Doyle, Ph.D., director, center for food safety, University of Georgia. “Bird flu in poultry does not pose a food safety risk because it is highly unlikely sick poultry would be slaughtered for consumption, and thoroughly cooking meat and eggs would destroy the virus. You cannot get avian influenza from properly handled or cooked food.” [*California Poultry Federation Website, March 20, 2006*]

Who is the audience for a message like this one?

1. People who know all the rules for the proper cooking of poultry, and follow them religiously.
2. People who don’t know the rules, but are ready to learn and obey.
3. People who eat out and have reason to believe the restaurants they patronize follow all the rules.

4. Or, of course, people who can be misled into thinking normal, routine, not-really-“proper” cooking will do.

How do such messages sound to people who don't always cook poultry properly (which appears to be most people)?

Since OF COURSE you already follow safe cooking procedures, you have ABSOLUTELY nothing to fear. Thus, if you ARE concerned, you are a FOOL.

Or perhaps:

If you LISTEN CAREFULLY to our instructions, and DO EVERYTHING we say, you will have ABSOLUTELY nothing to worry about. Even if you don't, there is still VIRTUALLY NO RISK of catching bird flu, but you might catch Salmonella. If you don't follow these instructions, you are a FOOL.

We're not claiming that there is a high risk of catching bird flu from eating (or cooking) chicken. The risk is tiny. It is tiny because the vast majority of chickens don't have bird flu in the first place, and because bird flu transmits to humans only with great difficulty. It isn't tiny because cooking (normal as opposed to meticulous cooking) is guaranteed to kill the virus. It certainly isn't tiny because bird flu is not a foodborne illness (if Salmonella is foodborne, then bird flu, which is found throughout the bodies of infected poultry, can be foodborne too). And tiny isn't the same as zero.

Has anyone contracted bird flu from food? Yes, although the case hasn't been proved beyond a shadow of a doubt. Two Vietnamese brothers got the disease after drinking raw duck blood. (This wasn't a dare or a wager. Duck blood pudding is a delicacy in parts of Southeast Asia.) Any other cases? Well, lots of cats and other animals have apparently gotten bird flu from eating infected birds — but they also had contact with the feathers and dust from those birds, so this pathway, too, hasn't been nailed down beyond dispute. Any cases transmitted by cooked poultry? Not that we know of. But there have certainly been humans infected with H5N1 who had no known contact with sick or dead birds, fueling speculation that one possible source of their infections could have been less-than-completely-cooked poultry. And many of the human victims who had close contact with live infected poultry also ate the poultry after it was cooked, so it is often hard to be sure which route of transmission led to their illnesses.

All these uncertainties didn't stop the (U.S.) National Turkey Federation from making this claim in a November 1, 2005 news release: “So far, with only one known, unconfirmed exception, humans have acquired H5N1 HPAI [high-pathogenic avian influenza] only from very close contact with infected, live birds.” As of mid-May 2006, this piece of dishonest over-reassurance was still on the NTF website.

The World Health Organization generally shares the view of most experts that food probably isn't a significant pathway for human H5N1 cases. But unlike the National Turkey Federation, it hasn't ruled it out altogether. Still, the first time we saw WHO proactively mention food as a possible pathway was on May 24, 2006, as it tried to make sense of the stunning infection of eight members of the same Indonesian family (seven of whom died). The infections occurred over an extended period, making it hard to imagine that all eight people were infected by the same sick bird. Human-to-human transmission looked likely, and even human-to-human-to-human transmission looked possible (an alarming first of its kind). In that context, the possibility of transmission via food didn't seem so scary to contemplate. And so Canadian Press reported:

The WHO has suspected that in rare cases bird flu may have passed from one person to another, although people usually catch it from poultry. Experts have long believed the virus is spread when people breathe it in — possibly in dust from bird droppings or in droplets sneezed or coughed by humans into the air.

But it remains unclear how the virus spreads in family groups — whether through respiratory systems, food, infected surfaces or a combination, [WHO spokesman Gregory] Hartl said. “When you get all of these things together, it becomes perhaps more likely.” [CP, May 24, 2006]

But back in April 2006, riffing on the well-known Vietnamese duck blood case without quite mentioning it, Colin Blakemore of the (U.K.) Medical Research Council told BBC radio that the only bird flu food risk he could imagine would be from “drinking swans’ blood.” This came a day after a dead swan in Scotland was diagnosed with H5N1 — Britain’s first case. *Nature* reporter Declan Butler commented in an April 10 article that “Blakemore’s sound bite ... echoes a slew of recent reassurances by governments worldwide.”

Butler didn’t join in these reassurances. Headlined “Bird-flu experts question advice on eating poultry,” his article acknowledges that “the risks are low compared with those associated with contact with diseased birds.” But it notes that “many flu scientists are concerned that ... there is not enough evidence to say that the virus cannot be transmitted by eating infected poultry.” It quotes Japanese virologist Masato Tashiro on the point: “Direct evidence of oral infection is lacking, but so too is proof against.”

It’s worth noting that Blakemore has not always been so over-reassuring about the risks of poultry consumption. After H5N1 bird flu broke out all over Turkey in late 2005, Blakemore told the *Daily Mail* on January 9, 2006 that “there is no evidence that it is transmitted by eating the meat, but it is certainly a possibility.”

In response to a different controversy, mad cow disease, Blakemore was even more willing to take the risk seriously. He himself gave up eating beef in 1987 because of BSE concerns, and he later criticized U.K. government mad cow over-reassurances, writing that “it does a disservice both to scientific advice and to the general public’s intelligence to disregard the possibility of danger when the scientific evidence is still unclear.”

Think about that last Blakemore quotation as you consider a March 2006 scientific paper published by the European Food Safety Authority. The front page has the EFSA’s policy conclusion:

On present evidence, humans who have acquired the infection have been in direct contact with infected live or dead birds. There is no epidemiological evidence to date that avian influenza can be transmitted to humans through consumption of food, notably poultry and eggs. [EFSA Press Statement, March 23, 2006]

The rest of the 29-page report is much more carefully hedged. Attentive readers learn that there is reliable though circumstantial evidence that several animal species are infected with H5N1 bird flu via food; that edible tissues of H5N1-positive birds have shown high viral loads; that diarrhea shows up in clinical descriptions of some human H5N1 cases, sometimes without many respiratory symptoms; and that it’s not possible to exclude the gastrointestinal tract as a possible “portal of entry.” The body of the report — unlike the summary and the news release — also acknowledges that some infected humans have had no known contact with infected birds.

In other words, the body of the EFSA report is comparatively balanced, but the EFSA summary and news release — the documents that many journalists actually read and reported — are over-reassuring. We would say dishonestly so.

This is reminiscent of the infamous “Rasmussen Report,” issued by the U.S. Nuclear Regulatory Commission in the 1970s. Although the report purported to be an independent study of the safety of nuclear reactors in U.S. power plants, the goals of protecting the industry and reassuring the public overpowered the goals of assessing the risk and informing the public. The former goals were accommodated by means of an executive summary that glossed over reactor safety problems that the report itself conceded — albeit reluctantly, incompletely, and as invisibly as possible.

Prodded by the Union of Concerned Scientists and other anti-nuclear groups, the NRC issued a follow-up report in January 1979, repudiating much of the earlier document. *The New York Times* reported that the NRC decided “to reject totally the Rasmussen Study’s summary ... based on a finding that the summary ‘is a poor description of the contents of the report.’” When the Three Mile Island accident happened two months later, the discredited Rasmussen Report was a significant piece of context as reporters tried to figure out how dangerous the accident was and which sources they could trust.

The following description of the Rasmussen Report, from Daniel Ford’s book *The Cult of the Atom*, could have been written about the EFSA report on poultry safety:

[A]s one moves from the very technical material ... to the Executive Summary ... a change of tone as well as of technical content is evident.... In the “back” of the study, there are cautionary notes, discussion of uncertainties in the data, and some sense that there may be important limitations to the results. The qualifications successively drop away as one moves toward the parts of the study that the public was intended to see.  
[*The Cult of the Atom, 1982*]

Ford’s book adds: “In the months following the study’s completion, the honesty of the official summary ... became the most controversial issue.” That hasn’t yet happened to the EFSA poultry safety report, but it won’t be shocking if it does.

Again, we’re not predicting that eating poultry will turn out to be a major pathway for H5N1 bird flu infections. Odds are it won’t. That’s why industry and government sources like the EFSA give themselves permission to commit the risk communication sin of overconfident over-reassurance. In the words of an earlier column, devoted to overconfident over-reassurance about mad cow disease, they are “[misleading toward the truth](#).”

But overconfident over-reassurance tends to backfire sooner or later. Sometimes it backfires right away, simply because it’s not credible. People sort-of know they’re not that meticulous about how they cook their poultry, and not-quite-consciously take note of the loophole in all those reassurances about “properly” cooked chicken. Sometimes it backfires down the road, when it is proved “wrong.” Imagine a case — just one documented case — of someone catching bird flu from a carelessly cooked chicken. Eating poultry will still be a tiny risk. But the people who over-reassured us will no longer have standing to say so. Their protestations that they specified *properly* cooked chicken won’t help a bit.

Actually, it won’t even take a documented case of foodborne bird flu to produce this credibility meltdown. What will happen the first time a western country has a human bird flu case, confirmed as H5N1, with no known exposure to infected live or dead poultry? New York City had a bizarre “no known exposure” human case of H7N2 avian influenza in

November 2003, when virtually no one was sensitized to this issue. Imagine that happening with H5N1 sometime in the near future, after H5N1 arrives in-country. Imagine an H5N1 diagnosis in a single city-dweller who didn't keep parakeets or feed the pigeons in the park. Speculation will go around that the only possible exposure was food. "But they said that couldn't happen! They said only intimate contact with infected live or dead birds could possibly lead to human illness! Were they incompetent? Or were they lying?"

Neither. They were just over-confident and over-reassuring. But their credibility will tank, and the public's fear of eating chicken will soar.

## **7. Ignoring Mistrust — and the Case for Mistrust**

The European Food Safety Authority should know this already. It is well-established that European consumers are (even) more worried about food risks than American consumers, and (even) more skeptical about official reassurances that some particular food is safe to eat. This is the legacy of a long litany of over-reassuring official pronouncements, most obviously (but not uniquely) regarding mad cow disease.

A February 2006 "Eurobarometer" [study](#) of public attitudes toward food risks, for example, found that "47% of [European] citizens think that when deciding on priorities, authorities would favour the economic interests of producers over the health of consumers." The study also found that "54% think that their health concerns are taken seriously by the EU and 55% believe that authorities react quickly" — which the authors considered "a strong level of confidence in public authorities' actions in the field of health." Think about how low this sets the bar: If just over half the European public thinks health authorities take health concerns seriously, that's considered an encouraging finding. As for the private sector, the study reported that farmers, food manufacturers, and food retailers were among the least trusted sources, well below government officials.

The sponsors of the "Eurobarometer" study: the European Union's Directorate-General Health and Consumer Protection and the European Food Safety Authority.

The mistrust is higher still in much of Asia and Africa, the other two continents that have faced bird flu outbreaks so far. Many consumers in the developing world assume that their farmers and food retailers will try to sell sick chickens — either peddling them in the local markets or smuggling them across the nearest border. They assume also that their government won't be able to stop this from happening, may not even try very hard, and will undoubtedly claim that it isn't happening and wouldn't really be dangerous anyway. These assumptions are borne out by experience.

In virtually every developing country that has seen a bird flu outbreak, two of the big issues have been how to persuade or coerce farmers to report outbreaks early, and how to persuade or coerce them not to evade the poultry culls that are instituted to control the disease. It is almost universally agreed that culls are unlikely to succeed unless farmers cooperate, that farmers are unlikely to cooperate unless they are compensated for the birds they are being asked to kill instead of selling, and that many governments do not immediately come up with the money (though they often promise they will).

(A side note: "Compensation" is the way this issue is usually discussed, but it is the wrong frame. Many people suffer when bird flu comes to town — truckers, retailers, restaurateurs. It is only the farmers that governments consider reimbursing for their loss, because it is only the farmers whose cooperation is desperately needed. The goal isn't compensation; it is to "incentivize" farmers to report their outbreaks quickly and consent to culls. There is a one-

syllable synonym for “incentivize” in this context that is on everybody’s mind but rarely makes it into the news reports.)

Here’s the start of a more or less typical story about an effort to cull infected and exposed poultry in Egypt:

NAWA, Egypt, March 28 (Reuters) — Mohsen Rizq insists there is no poultry left in his village after a local [human] died of bird flu two weeks ago, but the cacophony of squawking coming from a locked shed and the droppings in his backyard give him away.

In another home nearby, in the village of Nawa some 30 km (19 miles) north of Cairo where Egypt’s first bird flu fatality was recorded, a father refused to acknowledge a large duck in the front room of his hovel, where several infants were playing.

“There is no more bird flu here, thank God. We killed all the birds,” the man said, as he tried to block the clearly visible duck from view.

Peasants in Nawa say they know the risks of bird flu and how it can be avoided. But poverty means they refuse to slaughter their fowl, even though the virus has killed two of their countrymen and infected two or possibly three others. [Reuters, March 28, 2006]

Farmers aren’t the only ones who may delay reporting a suspected bird flu outbreak. Look at India. On February 18, 2006, bird flu came to India. Well, bird flu obviously must have come to India sooner than that — but on February 18 the Maharashtra State Health Ministry issued a press release acknowledging that some local birds had tested positive for H5N1. As far as we know there were no prior announcements, nothing along the lines of: “It looks like it might be bird flu. We’ll be testing. In the meantime....” And then: “It’s definitely influenza, but we don’t know what kind yet. Meanwhile....” And then: “Bad news — it’s H5. We’ll have the N in another week. On the assumption it’s probably N1....” That’s how you build trust. In Maharashtra, as in so many other places, no announcements were made until the final results were known.

And of course it was next to impossible to initiate additional biosecurity precautions while the pending tests were secret.

You don’t have to go to India to find examples of governments that delay or withhold news of bird flu outbreaks. In our home state of New Jersey, state officials temporarily shut down a live-bird market in April 2006 because some birds there had tested positive for avian influenza. The first of two state news releases about the outbreak emphasized that the strain involved was not N1. Neither release mentioned what the H was (or for that matter what the N was, other than it wasn’t N1). In May, somebody in state government leaked to the British science magazine *Nature* that it was, in fact, H5.

In influenza testing, it is a lot quicker and easier to test for H than for N. New Jersey officials almost certainly knew for a week or so that they had an outbreak of “H5N?”; while waiting to learn the N they kept mum. This was a low-pathogenic outbreak, not terribly dangerous to birds, much less to people. But if New Jersey officials were too nervous to tell the public promptly — or ever — that they had a low-path H5 outbreak, it is not hard to believe that they’re likely to delay or withhold more serious information as well. Such secrecy can destroy more than just trust. It impedes precaution-taking, potentially allowing the disease to spread while the state is waiting for final test results.

One potentially beneficial outcome of the New Jersey story: It led the USDA to reveal that there is not yet a federal policy on how (or even whether) to announce preliminary results about avian influenza outbreaks in the U.S. Now is the time to suggest a policy grounded in the World Health Organization's "[Outbreak Communication Guidelines](#)" and [good risk communication practice](#): Inform early.

Meanwhile, back in Maharashtra, the government's surprise announcement begins with a denial, and is thoroughly over-reassuring:

There is no case of avian influenza in human beings. There have been some poultry deaths reported in Navapur taluka in Nandurbar district of Maharashtra. Some samples collected from the poultry have been found to be positive for H5N1 virus i.e. avian influenza. There is no need for panic. Situation is under control.

Government is taking adequate precautions to segregate healthy birds from infected birds. Control measures as per international guidelines have already been initiated....

Birds within the infected zones comprising three to four square kilometers will be culled, destroyed and buried in deep pits and covered with earth. Another five to seven square kilometers area outside the infected zone will be under intensive surveillance where vaccination of poultry against bird flu will be taken up. [*Press Information Bureau, India, February 18, 2006*]

But if Indian government officials were too slow to speak and too reassuring to be trustworthy, that was nothing compared to Indian poultry interests. Here's a day-two story from the Statesman News Service, entitled "MNCs [multinational corporations] exploiting bird flu." In it industry spokespeople deny that there is any bird flu in India, accuse the government of not having done any tests, speculate that it's all a plot by multinational drug companies to sell vaccine, and insist (falsely) that every human bird flu death so far has been a bird handler.

NEW DELHI, Feb. 19 — With bird flu coming to India, the poultry industry today claimed there was no scientific evidence of bird flu and accused multi-national companies of trying to cash in on the panic situation.

The National Egg Coordination Committee and Venkateswara Hatchery have rubbished claims of avian flu but said it could be Ranikhet disease that was affecting poultry chicken, a common phenomenon during this time of the year.

"It is not bird flu. We have the best labs. Not one case of bird flu has been detected," a senior NECC official said while reacting to the panic across the nation. On orders given to cull thousands of poultry chicken in some areas of Maharashtra, the NECC has demanded that the government should at least submit one sample and test it.

The NECC suspected a nexus of MNC drug manufacturers who want to sell their products by spreading the rumour of avian flu. "If you give the vaccine now, it will show positive results of bird flu," the NECC said. Venkateswara Hatcheries CEO, Mr OP Singh, said "I do not believe there is flu. We have reports that all the results were negative. So there is no scientific basis to bird flu." ...

At least 90-odd persons in some 30 countries who have so far died of this virus were bird handlers and no single human-to-human transmission has taken place. The commercial angle to the whole bird flu business "should be looked at very carefully," he said. [*Statesman News Service, February 19, 2006*]

Would you buy a used car from this industry? How about a chicken it told you was healthy? Even in the village of Kubu Sembelang, Indonesia, the place with the scariest human bird flu outbreak yet, many people deny the problem. Eight members of the same family were infected, and the specter of human-to-human-to-human transmission was raised by mainstream officials for the first time, rattling not just medical reporters and their readers but also stock markets. The world watched with bated breath.

And the village itself? As reported in the *Korea Herald*:

Residents of the village have rejected the labeling of their area as the site of a bird flu cluster. Around 100 villagers, mostly chicken traders, protested outside the provincial council building in Medan, insisting Karo regency was free from bird flu....

The protest's coordinator, Leo Irfan Purba, said the people were hurt by what they considered stigmatisation.

"We cannot take this. Karo people are being discredited...."

During the protest, the villagers slaughtered several chickens, and, joined by several councilors, fried and ate them. [*Korea Herald, May 24, 2006*]

When bird flu emerges in such countries, it is natural for people to start avoiding chicken. Moreover, it is wise of them to do so, at least for a while. (Remember, these are precisely the countries where it is least feasible to cook your chicken "properly," where hot running water is more the exception than the rule.) Yet the governments invariably insist that the culls are working, that the situation is under control, and that properly cooked chicken is safe anyhow.

And then they stage media events in which political leaders and national celebrities publicly eat chicken. Among risk communication professionals this is sometimes called "doing a Gummer." In 1990, trying to assuage mad cow disease fears in the United Kingdom, Agriculture Minister John Gummer publicly fed his four-year-old daughter a hamburger at a Suffolk boat show and assured the public that British beef was "perfectly safe." An October 2000 BBC story commented that "the burger episode turned him into a figure of fun and led to a lasting public mistrust of government pronouncement on food scares — notably Tony Blair's reassurances on genetically-modified food."

But that doesn't stop prime ministers and movie actors from chowing down on chicken in the vain expectation that this will prove to consumers that they should do likewise. Every time we get word of one of these media chicken extravaganzas, we picture what would happen if somebody managed to interrupt the festivities with a chicken of his own. "Wait, Mr. Prime Minister, eat this drumstick instead!" Of course no reasonably self-protective politician would eat food from a source that hadn't been properly vetted. "No, I can't, I don't know where it comes from," he might be forced to reply. Exactly.

In much of the world it is impossible to know for sure where chicken comes from. To pick just one example out of hundreds, consider longstanding poultry smuggling from India to Bangladesh. On April 2, 2006, the *Khaleej Times* reported: "Border guards have seized and killed more than 100,000 chickens smuggled into [Bangladesh] from India over the past two weeks in an attempt to prevent bird flu from entering the country, said Syed Rezaul Gani, a spokesman for the Bangladesh Rifles, the country's border security force."

The illegal sale of banned animals and foods is a potential bird flu problem everywhere, not just in the developing world. Between January 2005 and May 2006, for example, European Union customs authorities intercepted 21 illegal consignments of Chinese frozen uncooked

poultry. An April 13, 2006 story in the *International Herald Tribune* was headlined: “Smugglers undercut fight against bird flu.” Reporter Elizabeth Rosenthal wrote:

There is increasing evidence, experts say, that a thriving international trade in smuggled poultry products — including birds, chicks, eggs, meat, feathers and other products — is making a substantial contribution to the spread of the H5N1 bird flu virus....

“No one knows the real numbers, but they are large; behind illegal drug traffic, illegal animals are No. 2,” said Timothy Moore, an official at the University of Nebraska who has advised the U.S. government on agricultural disaster planning. “And there is no doubt in my mind that this will play a prominent role in the spread of this disease. It looks to be the main way it is spreading in some parts of the world.” ...

Many experts are convinced that the illegal import of infected chicks introduced the virus into Nigeria, setting off Africa’s first and largest epidemic, which is limited to poultry farms and has not affected wild birds.

This week, Vietnamese health officials said chickens smuggled over the border from China had reintroduced bird flu into their nation, which had reported no cases for four months....

“We’re aware that the risk to public health can be hidden in these containers, but thousands of containers pass through Italian ports and it is impossible to inspect them all,” said Mario Pantano, director of the Police Health Service in southern Italy, who said his staff had found hidden poultry products stuffed into shoes....

Although many countries attribute the spread of H5N1 to migratory fowl, many ornithologists say the evidence often points to smuggling. “We believe it is spread by both bird migration and trade, but that trade — particularly illegal trade — is more important,” said Wade Hagemeijer, a bird flu expert at the Netherlands-based Wetlands International, which has been studying the role of migrating birds.

[*International Herald Tribune, April 13, 2006*]

And what about farmers and bird handlers in western countries? Some miscellaneous news items:

In February 2006, Greek officials fined a farmer 6,000 euros after discovering that he had let his chickens and ducks loose in his yard, instead of slaughtering them as he had assured the authorities.

In March 2006, Israeli officials ordered the slaughter of hundreds of thousands of turkeys in the Negev region. And Negev police detained one truck driver for questioning after getting reports that thousands of Negev poultry were being sold to Thai nationals working in the central Arava region. The *Jerusalem Post* reported that “police suspect a last-minute attempt ... to unload poultry before the quarantine on flu-infected kibbutzim takes effect.”

In several Caribbean countries where backyard farms are the norm, Haitian immigrants go to great lengths to hide their illegally imported prized fighting cocks from officials.

Similarly, U.S. readers may recall that a professional drummer and drum-maker from New York City came down with inhalational anthrax in February 2006, apparently after

smuggling raw goatskins for his drums out of the Ivory Coast. Unlike influenza, anthrax isn't contagious between people, and the drummer was the only victim.

The bottom line in all this is depressingly consistent. Whether you focus on the developed world or the developing world, on governments or poultry companies or farmers or villagers, there are reasons not to trust what we're told about bird flu risks.

People and institutions under pressure sometimes stumble into making untrustworthy claims without quite realizing what they are saying. But often enough, untrustworthy claims are planned in advance — role-played, tabletopped, exercised. We were recently shown an unpublished document describing a U.S. government tabletop exercise to prepare for a possible influenza pandemic. According to the document, technical experts participating in the exercise informed the other participants that any attempt to close U.S. borders would be medically futile. Political experts decided that it was nonetheless politically essential to make the effort. All the participants agreed that it was appropriate to tell the American people that “sound science” was dictating the government's precautionary actions.

Mistrust, moreover, isn't just about whether you trust the integrity of governments and the poultry industry — whether you think they'll tell you the truth. It is also about whether you trust their technical ability to do what they keep claiming they can do. In this case, that means not just their ability to determine quickly and reliably which chickens are H5N1-free and which might be diseased, but also their ability to understand a novel and ever-changing virus thoroughly enough to be sure which exposure pathways are hazardous and which are not.

Scientists keep discovering new influenza risks that prior scientists said were unlikely. Until 1997, experts were confident that avian influenza could not jump directly from birds to humans without going through a “mixing vessel” like a pig. Until recently, they were confident that cats couldn't be infected, and that migratory birds couldn't be asymptomatic carriers over long distances. They were wrong. Now they are confident that eating a cooked chicken infected with bird flu is extremely safe. How completely do you trust them on this point, when knowledge and the bird flu virus itself are evolving so quickly?

Risk perception researcher Lennart Sjöberg calls this kind of trust (trust that the authorities know what they're doing) “epistemic trust”; one of us (Sandman) often calls it “knowability”; practical risk communicators normally call it “uncertainty.” It applies not just to the experts' and the authorities' uncertainty (especially the uncertainty they try to deny), but also to the public's own uncertainty. Thus a recent study of Salmonella fears and food purchases by Ruth M.W. Yeung and Joe Morris, published in the May 2006 *International Journal of Consumer Studies*, found (unsurprisingly) that people “choose the option of not to buy when they find it was difficult to determine which chicken products were more or less likely to be contaminated.” Faced with a supermarket or a street vendor offering them a chicken of unknown origin, in other words, people understandably hesitate.

Yeung and Morris link mistrust, knowability, voluntariness, and several other outrage factors when they note further that “the involuntariness of taking risk would correspondingly affect consumer risk perception...; this is especially so as some consumers perceived that risks were associated with profit seeking in the supply chain, from which they gained little.”

Mistrust does vary from one country to another. So does the evidence that mistrust is justified. But wherever you live, you have some reason to mistrust the government, the poultry industry, and your own ability to protect yourself. None of this is ever acknowledged when government and industry officials tell people they are idiots for being afraid of chicken.

## 8. Contempt for the Public — Sure, That’ll Help a Lot

Telling people they are idiots is a surprisingly common risk communication strategy. Nobody actually argues that it helps. We certainly never see it on “message maps” or pre-planned lists of key messages. But it leaks out. All too many government and industry leaders can’t resist.

The main thrust of this column is to make a case that when people temporarily avoid poultry in response to the arrival of H5N1 in their vicinity, their technically unnecessary “over-reaction” is understandable and defensible — and less their fault than the fault of the experts and the authorities. They’re not being idiots.

But even when people *are* being idiots, telling them so is seldom the best way to get them to stop.

Most parents of young children quickly learn what to do when a child is having trouble sleeping because of goblins in the closet. It doesn’t help to tell your child that there is no such thing as goblins so turn off the light and go to sleep. Instead — if you want a good night’s sleep — you turn on all the lights, take your child by the hand, and go on a goblin hunt together. If you have mastered the principle of the [risk communication seesaw](#), you might even persevere in your goblin hunt for a while after your child has lost interest and is ready for bed.

And that’s goblins — not bird flu, a real risk (two real risks, actually) that has provoked thousands of headlines.

On February 18, 2006, the *Los Angeles Times* ran an article by Livia Borghese and Jia-Rui Chong entitled “‘Bird Flu Psychosis’ Is Catching.” The article’s subtitle is even more interesting than its title: “Despite efforts of health officials, anxiety is spreading with the virus in Western Europe.”

Ah, anxiety, not psychosis. Which raises the question: Why would health officials want people not to be anxious about bird flu — or at least about its possible descendant, pandemic flu? That question is never addressed in the article, which begins as follows:

Western Europe has been preparing for months for the arrival of bird flu, with health officials urging calm in the face of the spreading virus.

Apparently, some people weren’t listening very well.

“The feathered death — it has landed,” blared a headline from the Berlin tabloid *BZ*.

“Bird flu psychosis,” was how Italian television channel Rai News 24 described the national mood.

The lethal bird flu, known as H5N1, crossed into Western Europe this week for the first time with the discovery of infected birds in Italy, Greece, Germany and Austria. On Friday, France reported it had a probable case of bird flu in a dead duck.

Since first emerging in Hong Kong in 1997, the virus has spread across Asia; it reached Turkey in October. European health officials prepared emergency plans and began getting the word out that the virus only rarely infected humans.

Despite their reassurances, the reality of the virus’ arrival has sent parts of the continent into hyperventilation.

Since the beginning of the week, the Italian Health Ministry reported, it has received more than 13,000 phone calls to a special bird flu hotline to report dead birds or ask for advice.

Health Minister Francesco Storace on Monday toured the southern provinces where infected swans had been found. “We have to keep calm,” he said, the Italian media reported. “The problem is restricted to wild waterfowl. The illness has not affected poultry, and we can continue to eat chicken.”

Nevertheless, poultry sales have plunged 70%.... [LA Times, February 18, 2006]

Health Minister Storace, by the way, himself used the term “psychosis” at least twice to describe the public reaction to bird flu’s arrival in Western Europe. On February 11, 2006, after bird flu turned up in the south of Italy, he said: “There is no reason to change eating and behavioural habits.... There’s no need for chicken psychosis.” On March 4 he said: “We have ... a very strong bio-security network that can give certainty and safety to citizens. So this psychosis is not justified.” Both statements were posted on “Italy on Line,” a semi-official news service provided “on behalf of the Italian Prime Minister’s office.”

Storace wasn’t alone. A German broadcaster published a column stating: “Bird flu psychosis is spreading faster than the virus itself.” And an Indian headline proclaimed: “Loss due to Bird Flu psychosis put at Rs 3000 cr” [almost \$700 million U.S.]. We have a collection of “psychosis” references in bird flu stories. References to “panic,” “irrationality,” and “hysteria” have been too frequent to bother collecting. Notice what is being considered psychotic, panicky, irrational, and hysterical: feeling anxious, calling a hotline, eating less poultry.

Telling people that they’re stupid or crazy to worry when birdborne H5N1 comes to town is bound to backfire.

Instead, officials should be telling people that they are wise to worry about H5N1; that it is natural to transfer their initial worry to poultry consumption, at least for a while; that there are other precautions against H5N1 that are much better than not eating chicken; and that of course it will take some time, some learning, and some trust-building before most of us are ready to resume eating chicken as usual.

To speed that process, experts should be validating that people are wise — not stupid or crazy — to ask questions like these:

Now that it is relevant to me, what is bird flu, anyway?

Exactly how safe is it to eat chicken?

Why? Who says so? Can I trust them?

Do the experts really know what they are doing?

Do my leaders care more about me or more about farmers?

It takes a while for normal people to figure these things out. In time, most people in most countries seem to get it right, and at least in western countries chicken consumption starts to bounce back. It’s useful to tell people that too. Then, after (not before!) they have had a chance to get some answers to their personal safety questions, it’s a good idea to draw on their altruism as well: “Our country’s poultry farmers will be very grateful when you feel like eating chicken again, because they’re really suffering right now.”

Along the way, it is also important to remind people about proper poultry handling and cooking practices. But that should not be your main message on Day One. The bird flu risk communication prescription includes at least three spoonfuls of empathy for every spoonful of instruction.

## 9. The Bird Flu Adjustment Reaction

In other words, when people are going through an adjustment reaction, risk communication best practice is to validate their adjustment reaction and guide them through it — with empathy rather than contempt.

We have written about [adjustment reactions](#) before and we won't repeat it all here. In a nutshell, people typically come to grips with a new risk (new to them, anyway) in stages. A very early stage is likely to be apathy — just not noticing. This is often followed by denial — willfully not noticing, preserving that blissful ignorance just a bit longer, imagining that the problem is not personally relevant.

Then comes the adjustment reaction stage. Think of it as the “Oh, NO!” stage if you like, sometimes even the oh-my-God-we're-all-gonna-die stage. In this stage, people put their normal preoccupations aside for a while to make mental space for the new risk. They go into crisis mode. They become temporarily hyper-vigilant, collecting monumental amounts of information — including plenty of misinformation — about the situation they're confronting. Long before they know a lot (in some cases before the experts know a lot either), they make some preliminary decisions about ways to protect themselves. And then they implement some of these preliminary precautionary strategies:

9/11 — stay out of tall buildings; don't fly in airplanes; scan for terrorist-looking people  
mad cow disease — don't eat beef

West Nile Virus — stay indoors; use a lot of insect repellent; demand local spraying programs

SARS — avoid Chinese restaurants; wear surgical masks when in public; don't go to hospitals if you can help it

bird flu — stay away from dead birds; don't eat chicken; start building a pandemic stockpile of food and water

Most of these are short-term precautions; they last a few weeks or months and then die out. Some continue over the long term and become habitual. Some of them are ineffective precautions — they feel right, they're common sense, but there's not a lot of evidence they work. Some of them are effective, but taken prematurely — they will be the right thing to do if and when the risk gets close, but there's no need yet. Some of them are just right.

All of them are rehearsals. They are cognitive rehearsals, a way of learning what you need to know about an unfamiliar and scary topic. They're logistical rehearsals, a way of deciding and practicing how you'll cope when the time comes. And they're emotional and psychological rehearsals, a way of girding up your loins so you'll be fully functional when you need to be.

Adjustment reactions, in short, are useful. They get people ready to cope. You can't instantly switch into effective crisis mode without first going through an adjustment reaction. You can go through it early and be ready to cope when the crisis reaches your doorstep. Or you can go through it after the crisis reaches your doorstep — which means you won't be quite ready to cope when the need to cope is most urgent.

The unavoidable conclusion: The right time to have an adjustment reaction is before you face the crisis itself.

Whether they come early or late, adjustment reactions can't be stopped. They are almost reflexive, autonomic. Critics of some particular adjustment reaction will often say it's a "knee-jerk over-reaction." They are partly right, but they have forgotten that when your doctor tests your reflexes, he or she is hoping you have them. It's your "knee-jerk" reactions that enable you to pull your finger back quickly from a hot stove, without stopping first to figure out whether that burning feeling is really dangerous or not.

Some people have had their initial adjustment reactions to avian influenza long before the H5N1 virus reaches (or reached) their countries. You can read examples of people's pre-crisis adjustment reactions in some of the postings on [Flu Wiki discussion forums](#) — sometimes a little frantic at first; then focused and pragmatic; then (as they settle in for the long haul) calm, not nearly so obsessed, and empathic and helpful in response to newbies who are still in the frantic stage. These are the people least likely to confuse bird bird flu with human bird flu. They know they're worried about a possible pandemic, not a birdborne illness, and most of them have no plans to quit eating chicken when bird bird flu arrives in their developed countries.

But lots of people have their adjustment reactions to avian influenza only after it reaches their vicinity in the form of an H5N1-positive bird. They are likely to pay too much attention to dead bird sightings in the neighborhood, and too little attention to human disease clusters halfway around the world. This leaves the authorities three choices:

1. Ignore the adjustment reaction, and it will take its own course, gradually fading as people get used to periodic outbreaks in poultry, and as they come to trust that human cases really are rare. In the process of learning that bird bird flu isn't the serious human risk they thought it was, they may also "mis-learn" that pandemic flu isn't a serious risk either.
2. Ridicule the adjustment reaction, and it will get more rigid. It will still eventually attenuate. But the period of excessive fear of eating poultry will be more intense and more prolonged than it would otherwise have been. And the confusion of bird flu and pandemic flu may become that much harder to disentangle.
3. Empathically guide the adjustment reaction. First validate it — people don't listen much to experts who are calling them psychotic — and then construct an "illuminated path" for people to walk from their current focus on chickens to a new and more useful focus on pandemic preparedness. (We call this risk communication game "Donkey" — see "[Games Risk Communicators Play: Follow-the-Leader, Echo, Donkey, and Seesaw.](#)")

The first local H5N1-positive bird, in short, is a teachable moment, a chance to launch people on the road to pandemic preparedness. If you think a pandemic is a real and scary threat, that's crucially important to do. Diminishing the damage to poultry sales is a side-benefit.

Whatever you do, there is still going to be *some* damage to poultry sales. Pause for a moment, and think about dying chickens — not just chickens dying of a horrible viral infection, but healthy chickens in the "cull zone" being gassed, poisoned, burned, buried, choked, decapitated, bagged, and composted by western experts in moon suits or impoverished farmers with their bare hands. Not one or two chickens — chickens by the millions.

Think about watching this on television through four or five news cycles. In response, understandably, some viewers become consciously afraid of catching bird flu by eating

chicken. They have not had time to absorb both the shock (all those dead chickens!) and the reassuring information (people can't catch bird flu easily). Yet officials are demanding that they get over the shock and master the information instantly — which simply isn't possible. Other viewers are more revolted and upset than consciously afraid. They turn their minds away from the disgusting spectacle of the chicken cull. Then they decide what they want for dinner. They may not even notice that they haven't got much appetite for chicken.

Disgust at the thought of eating sick animals is probably hard-wired in our genes; people who didn't mind eating sick animals tended not to survive long enough to reproduce. Of course culture or hunger can sometimes overcome the disgust. Both of us grew up with an old Eastern European proverb: "When a poor farmer eats a chicken, one of them is sick." Still, there's nothing weird about reluctance to eat a chicken that might have H5N1. What's weird is that officials all around the world fail to anticipate or understand that reluctance.

In the weeks after the South Asian tsunami of 2004, many survivors were reluctant to eat locally caught fish, normally a staple of their diets. In that case the underlying feeling wasn't mainly fear that eating the fish might cause illness; it was revulsion that the fish might have eaten the corpses of people who perished in the tsunami. In their haste to persuade consumers to eat the fish — people needed the protein, and fishermen needed the sales — authorities insensitively ridiculed the public for its squeamishness. (For more on tsunami adjustment reactions, see "[Talking about Dead Bodies: Risk Communication after a Catastrophe.](#)")

Malaysia's *New Straits Times* got it exactly right in a magnificent January 17, 2005 editorial:

Primal fear has dealt a double-whammy to the fishing industry. Finally putting out to sea again after repairing their boats and reassembling lives so rudely shattered and washed away by the December tsunamis, they now find no one wants to eat the fish they catch because ... well, who knows where they've been, what they've seen — and eaten? The finger-in-a-fish-belly rumour that cut Penang's fish sales in half in recent days was too obviously waiting to happen, and too predictable to be true. As with all urban myths and legends, someone was bound to find a way to express, in the simplest and most graphic way imaginable, Everyman's deepest dread.

Let us not, therefore, dismiss these notions too disdainfully. The revulsion people feel at the very thought of eating an animal that has recently eaten a human being is not superstitious but primal. It is not irrational but sub-rational; it stems from the deepest and darkest recesses of the conscience, where resides, perhaps ironically, what it means to be human....

So this is a scare that must run its course.... [*New Straits Times, January 17, 2005*]

After H5N1 was confirmed in poultry in Pakistan, an April 28, 2006 news story out of Islamabad reported that the government of Pakistan "has banned the serving of chicken dishes in official functions in view of the outbreak of bird flu in parts of the country." This is the exact opposite of staging chicken-eating media events, and it makes a lot more psychological sense. Presumably the chefs who work at Pakistani official functions know how to cook chicken thoroughly. But inevitably, many in the Pakistani government didn't feel like chicken just then. Forcing it on them, or belittling them for being "irrationally" afraid, would only deepen a temporary reluctance into a firmer and longer-lasting resistance.

We have participated in many meetings on bird flu and pandemic preparedness, in countries with and without H5N1 avian influenza outbreaks. The meetings are usually at hotels, and chicken is usually on the menu. We have a firm impression that many meeting participants tended to avoid the chicken, while others made anxious jokes as they ate. Nearly everyone

knew that the risk was tiny. We doubt many participants made a conscious decision to avoid chicken. But after you spend a day talking about bird flu, the fish looks really good.

Do we eat the chicken at these meetings? Almost always — and people often comment on it. In fact, we have eaten chicken in Indonesia, Thailand, and Cambodia during serious avian influenza outbreaks. After some hesitation, we managed to enjoy it. We plan to keep eating chicken at home too, even when H5N1 makes it to the United States. On the other hand we have sent back restaurant orders a couple of times when the chicken looked a little pink, and we no longer buy chicken from street vendors in Asia. And the one of us who does the lion's share of the cooking (Lanard) is a lot more careful in the kitchen than she used to be. During her pediatrician years she witnessed several Salmonella outbreaks. They didn't change her behavior nearly as much as thinking about bird flu.

And we've been working on H5N1 risk communication for more than two years. Adjustment reactions take time.

Officials do not seem to know any of these adjustment reaction basics. Certainly they almost never acknowledge people's adjustment reactions sympathetically, although doing so would help people get through them faster. When officials are unempathic about the poultry adjustment reaction, publics are left alone with their fear, worry, and revulsion, which inevitably makes those emotions harder to get past. And officials who ridiculed their publics early on will have a much harder time leading them later, if and when a real public health crisis materializes.

At some level of consciousness, officials must know better. After all, they're the ones eating the fish instead of the chicken at all those meetings we go to.

It is worth noting, moreover, that not a single country has responded to an H5N1 poultry outbreak by slaughtering the birds, cooking them thoroughly, and then serving them to the poor. We slaughter the birds and get rid of them. Is this because we don't trust our own ability to cook the meat thoroughly, or because we doubt that thoroughly cooked meat is as safe as we claim? Presumably not. It is because we know perfectly well that people find meat potentially contaminated with the H5N1 virus — even safely dead virus — disgusting. Nobody wants to feed such meat to hungry people (though people who are actually starving have illegally dug up the buried carcasses of culled chickens in several countries). And any government or poultry industry official who proposed feeding such meat to hungry people would lose his or her job in days.

Officials intuitively know all this. They know not to suggest making "rational" use of meat that is known to have been exposed to the H5N1 virus and also known to have been cooked thoroughly. If officials understand why definitely exposed meat is incredibly off-putting, even if it's guaranteed to have been properly cooked, they ought to understand why possibly exposed meat that people have to cook themselves is also a turn-off.

And here's another piece of evidence that officials aren't as insensitive to the adjustment reaction as they act. As soon as any country experiences its first case of H5N1 — just one bird! — scores of other countries routinely ban poultry imports from that country. (A rare exception: Singapore, which imports nearly all its chicken from Malaysia, worked out in advance a segmentation of Malaysia into agricultural regions; when H5N1 reached Malaysia, Singapore banned imports only from those regions that had had cases.) Is this instantaneous trade ban psychotic, panicky, irrational, or hysterical? It is invariably represented as a science-based effort to protect public health and the health of the local bird population. Arguably it is more an effort to pander to people's adjustment reactions. Whatever it means,

a government that bans all poultry imports from an entire country because of one sick bird is in no position to be contemptuous when its population gets queasy about eating chicken because of ... well, one sick bird.

Of course when Country X bans poultry imports from Country Y because Y has had an H5N1-positive bird, it says it's being rationally cautious. Then X finds its own first H5N1-positive bird, and Country Z bans imports from X. That, X says, is irrational. Governments should at least have the presence of mind to remember their own hypocrisy — and to avoid calling their citizens irrational for instituting temporary personal “poultry bans” of their own.

These temporary personal “poultry bans,” by the way, seem to last a few weeks or months (at least in western countries) — whereas the national bans can hang on for years. As a rule sales dip, often steeply, and then they slowly recover, though not (yet) quite to their original levels. An April 26, 2006 “Motley Fool” business column by Mike Cianciolo discussed the prospects of Yum! Brands, the parent company of KFC among others. Despite bird flu concerns, profits were expanding nicely. “My one concern with Yum! Brands,” Cianciolo wrote, “is the possibility of an avian flu outbreak in the U.S. Despite the company’s efforts to ensure its products are safe, sales would no doubt be affected if an outbreak hit. However, much like in China, I would expect any negativity to be temporary and would consider any drop in its stock price a buying opportunity.”

Logically, the depth and length of the poultry sales decline should depend partly on the nature of the outbreak: How many birds are sick? Are they wild birds or backyard farm birds or factory farm birds?

It should depend partly on the management response: How immediate and how aggressive is the effort to contain the outbreak?

It should depend partly on the available alternatives: How dependent is the society on poultry as its primary meat source, and on meat as its primary protein source?

It should depend partly on trust: How trustworthy and how competent are government and industry leaders, in the public’s judgment?

And it should depend partly on risk communication: How candid and how empathic are government and industry spokespeople about the situation?

We would love to see a solid statistical analysis of poultry sales data as a function of these variables. Absent such data, we don’t have empirical evidence that candor and empathy reduce the length and severity of the poultry consumption adjustment reaction. They haven’t been tried. On the other hand, over-reassurance and contempt have been tried again and again. We have more than ample evidence that they don’t do the trick.

The [risk communication seesaw](#) may help a bit here. Decades ago, one of us (Sandman) worked on the problem of used hypodermic syringes washing up on the Atlantic Coast of the United States, apparently flotsam from seaside waste dumps. In New Jersey, government officials accurately insisted that the syringes weren’t really dangerous, and that it would be prohibitively expensive to do anything about the problem. The New Jersey public recoiled in horrified disgust, and demanded that steps be taken.

In Rhode Island, on the other hand, top state health officials got on the other side of the seesaw. “Even though the risk from used syringes is negligible,” officials told the media, “this is a disgusting thing to find on our beaches, and the Health Department will do whatever it takes to put a stop to it.” “Wait a minute,” Rhode Island citizens and editorialists responded. “If it’s not really dangerous, how much taxpayer money are you going to spend

trying to prevent it?” New Jersey ignored or mocked the disgust, and left people stuck in it. Rhode Island validated it, and made it much easier for people to get past it.

Try to imagine how a seesaw-savvy official might deal with the poultry consumption adjustment reaction.

But that’s the advanced course. Here are some simpler ways to help make this adjustment reaction shorter and milder.

**Warn people the H5N1-positive birds are probably coming.** One reason the poultry adjustment reaction is so fierce is that people are taken unawares. What does it mean when a government agriculture bureaucrat or a poultry industry spokesperson claims or implies that *our* poultry biosafety practices are so advanced we’ll probably never see an outbreak, so there is no reason to panic. It means that if and when we do see an outbreak, there is good reason to panic. Wiser officials predict that we may very likely see an outbreak or two, but (at least in developed countries) we’ll probably be able to catch it fast and control it before it spreads very far. (In fairness, we have seen a trend in this direction in the recent communication efforts of officials in some countries.)

**Explain why the outbreak won’t be terribly dangerous when it comes.** The time to tell people that a bird flu outbreak (in birds) won’t be a major threat to human health is *before* the outbreak you are predicting will probably happen eventually ... not *during* the outbreak you predicted was unlikely to happen ever! Of course you need to be careful not to overstate your reassurances. The risk will be small, not zero.

**Tell people how to reduce their bird flu risk.** Teaching people how to cook chicken properly in order to further reduce any residual risk from H5N1 is a lot more respectful than telling them they don’t need to worry about H5N1 because properly cooked chicken is safe. It’s the same information — just a different attitude. One of us (Sandman) used to work on the risk of electromagnetic fields from power transmission lines. Telling worried neighbors the transmission lines delivered less EMF to their bodies than a bedside clock made them outraged. Telling them they could reduce their total EMF by moving the clock from the night-table to the bureau made them relieved. Same information; different attitude. One sign that official attitudes are changing will be when the instructions on how to cook chicken properly drop the word “properly,” and start showing some empathy for the reality that many people (even officials) don’t always follow the prescribed protocol ... and, in fact, don’t always know what it is. The task is to show people how to cook their chicken more safely, not to make them feel inadequate in their own kitchens.

**Distinguish bird flu from pandemic flu.** This key message, too, is best delivered before the arrival of an H5N1-positive bird. It’s always hard to persuade worried people that there is nothing to worry about — especially in the face of all those news stories about possible pandemic catastrophes. It is much easier to tell them *what* to worry about — to help them distinguish two quite different risks: the one that’s big for birds, small for humans, and taking the world by storm; and the one that might someday be a huge risk to humans but doesn’t exist yet. Right along with explaining what people can do if they’re worried about catching bird flu from birds, urge them to get more worried (instead — but you don’t have to say that) about bird flu’s potential descendent, pandemic flu. In short, guide the adjustment reaction from poultry avoidance to pandemic preparedness. You can’t do that, of course, if you are aiming for zero fear. Aim instead for appropriately targeted fear — more fear of a possible future pandemic, and less fear of catching bird flu from eating poultry.

**Don't put stress on people's limited trust by over-reassuring or misleading them.** As we have discussed, trust in government agencies (especially food protection agencies) is typically not that high, while trust in food industries is lower still. Over-reassuring claims tend to backfire — claims like “every human H5N1 victim has been a poultry farmer who got it from intimate contact with sick birds” (a false claim) or “birds with H5N1 never make it to market” (another false claim) or “as long as you cook your chicken properly you have nothing to worry about” (a true claim — but most people do not cook their chicken properly).

**Validate (or at least normalize) the adjustment reaction instead of ridiculing it.** For months now we have been corresponding with a government health official of a western country who serves on international committees devoted to improving pandemic risk communication. We have been urging him to validate the poultry consumption adjustment reaction; to tell people it's a useful way of beginning to gear up for a possible pandemic; perhaps even to make use of the seesaw and tell people that eating chicken while massive culling is going on nearby really is repulsive, no matter how small the risk. He says he can't go that far. But he agrees that the adjustment reaction is normal. He is willing to say so. And he's willing to say that it will pass as people slowly get used to the New Normal and build confidence that bird flu is really, really hard to get by eating chicken. He is *not* writing key messages about how foolish people are to be upset about a vanishingly low risk. It's not easy to move large organizations, but he is trying.

The essence of the adjustment reaction is the feeling that you need to switch from business as usual to some kind of emergency footing — that a pause is necessary while you learn more about your new problem, and that special precautions will be appropriate as soon as you can figure out which precautions. When people have an adjustment reaction to a risk that's new to them, they become temporarily more alarmed about that risk (which is good), and they help themselves bear their alarm by coming up with things to do (which is also good). But in many cases they come up with the wrong things to do. So rather than ridicule their alarm and lose the teachable moment, the core task is to validate their alarm and suggest other precautions they might want to consider. “Sure, stop eating chicken for a few weeks if that's what feels right to you, while you figure out what's going on. We don't think it's technically necessary, but we sure understand the impulse. Here are some other things you can think about doing....”

## 10. The Uganda Letter

In early March of 2006, Uganda faced what looked like the country's first bird flu cases (one of many H5N1 false alarms around the world). The *Uganda Monitor*, published out of the capital city of Kampala, covered the development, reporting that various top officials were in a panic. One of us (Lanard) sent off a quick letter to the editor, subsequently published, that targeted specific messages at specific stakeholders. The letter captures much of what we have been saying in this column. Here it is:

To the Editor:

In “Bird flu scare hits Uganda”, *Monitor* reporters say that Ugandan officials have been thrown “into a panic” about the possibility that bird flu has arrived in Uganda.

But nowhere do the reporters explain why they think the officials are in a panic.

I am fortunate to have met with one of these officials — Dr. Sam Okware — at a communications conference in Singapore. I cannot picture him panicking.

**A message to the reporters:** It is insulting to falsely imply that hardworking, worried, competent officials are panicking.

It will also be insulting to imply that anxious, under-informed publics are panicking — when they are actually pausing.

**A message to farmers:** If bird flu comes to Uganda, as it probably will (or has), many people will shy away from eating poultry for a time. This will incorrectly be called “panic” and “hysteria.” In Italy, officials are even calling it “bird flu psychosis” — very insulting to their public. But it will really just be a “bird flu pause” — while people get used to a scary new situation, and while they figure out who they can trust to tell them the truth about it.

**A message to “the public”:** Don’t let anyone tell you that you are irrational or hysterical! I have eaten chicken in countries with bird flu — Cambodia, Thailand, and Indonesia. Even though I was completely convinced that fully-cooked chicken was safe, I still had a funny feeling about it at first. It was upsetting to think of all those dying birds, and the very small number of people who had gotten sick from them. After I got past those thoughts, I did enjoy the chicken. But I didn’t skip the phase of being worried and sad about it first.

This “adjustment reaction” should be respected. It is normal — especially since people do not always trust what food industry and government officials say.

**A message to officials:** If bird flu comes, I hope Ugandan officials (and reporters and farmers) will respect the normal way that normal people react to a new situation. In every other country with bird flu, so far, officials have ridiculed the public for being afraid of chicken. It would be wonderful if Uganda could be the first country in the world to respect the public’s “normal” reaction — and maybe help them get over it faster that way.

Don’t rush people. Don’t say they are irrational or panicking. Tell them you hope they will soon become comfortable with chicken again — and to cook it well when they are ready.

**A message to the Editor:** Try not to let your reporters say that officials (and later, publics) are “in a panic” unless they really and truly are. What would “Poultry Panic” look like? People trampling their own grandmothers while running away from a flock? Deciding not to eat chicken for a while — however much that harms farmers and traders — is not panic.

Good luck if bird flu comes to poultry in Uganda. It will be devastating for poultry farmers, and frustrating for officials, and upsetting for people who don’t know who to trust.

All the best,  
Jody Lanard M.D.



## It's the Risk Communication, Stupid (*Whoops!*)

There is very little, if any, advice in this column that isn't deducible from principles of risk communication that we and others have been writing about for years.

We're not claiming that good risk communication will enable societies to evade a chicken consumption adjustment reaction when H5N1 comes to town. Nothing can do that. But good risk communication, we believe, can make the adjustment reaction shorter and milder — and, more important still, can help redirect it from poultry consumption precautions of minimal public health efficacy to pandemic precautions of real public health significance.

So why do nearly all industry and government officials do it wrong?

Well, partly it's because they're going through their own adjustment reactions. Poultry farmers and industry executives, especially, respond to the arrival of H5N1 with a terrified sense that their business is doomed (which it sometimes is, at least temporarily). Government officials respond with what we have called "[fear of fear](#)," a terrified sense that the public is about to over-react dangerously. Just as citizens who are excessively alarmed about bird flu (in birds) find it difficult to assess the poultry risk accurately, industry and government spokespeople who are over-reacting to the public's over-reaction find it difficult to assess that risk accurately as well. So they are quite likely to mishandle it.

The term "risk communication" has gained a lot of currency in recent years among government and corporate officials charged with managing risk controversies. Unfortunately, they usually think it means simply teaching people the officially sanctioned facts. Many of those throwing around the term "risk communication" continue to picture the public as blank slates (at best) or hysterical morons (at worst), who should drink up expert wisdom ... if only the experts could find the perfect crystal-clear words.

As long as the people in charge continue to think that "educating the public better" is the main risk communication challenge, they will continue to push for messages that do not match the way anxious people learn.

"Educating the public" is so 1970's risk communication. It works fairly well if people are moderately interested, very trusting, and not especially concerned. It doesn't work at all if people are extremely interested, very anxious, and somewhat mistrustful.

Here is FAO consultant Les Sims, writing on the ProMed website on Feb 18, 2006. Under the title "Failures in risk communication," he is expressing his frustration that the public just doesn't get it about bird flu:

The shunning of poultry meat by consumers following the detection of H5N1 avian influenza in wild birds in Europe is yet another demonstration of our failure to provide clear information to the public regarding the risks of "bird flu". Avian influenza is not a food-borne illness, given that properly cooked meat and eggs pose a negligible risk, yet the public has not taken this message on board. Much of this has probably arisen as a result of confusion and hype in the media about the risks posed by "bird flu". [*ProMed website, February 18, 2006*]

A few days later, Mary Marshall (one of the ProMed rapporteurs) wrote that “risk communication must provide clear information to consumers that, given proper handling and cooking of meat and eggs, avian influenza is not a food-borne illness.”

We are aware of the paradox with which we are ending this column. We are ourselves trying to “educate” officials and experts about risk communication, at a time when they are pretty anxious and frustrated.

We wish government and industry risk communicators would learn that risk communication isn’t just teaching people the data and their expert opinions about the data.

We want communicators to understand that “education” by itself isn’t good risk communication when people are upset. We keep giving seminars and writing columns to that effect.

We cite lots of data (well, examples at least) supporting our expert opinion that “education” by itself isn’t the best way to cope with people’s adjustment reactions.

But many in our audience are going through their own adjustment reactions. Sure enough, our efforts to “educate” them are progressing slowly. We are learning to be more empathic and less contemptuous when officials get it wrong, despite our temptation to rail that We Told Them So. We realize that it is very difficult to master risk communication best practices while under stress.

So if you are still in the calm before the H5N1 storm, if sick birds haven’t arrived on your turf yet, try to learn this stuff now. It will be much harder to learn in mid-crisis.

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Peter M. Sandman  
59 Ridgeview Rd.  
Princeton NJ 08540-7601

Phone: 1-609-683-4073  
Fax: 1-609-683-0566  
Email: [peter@psandman.com](mailto:peter@psandman.com)

<http://www.psandman.com>

<http://www.psandman.com/col/poultry.htm>