

## Food safety and risk communication: cases history and best practice (in avian flu)

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### Abstract

The paper discusses the role of institutional communication in the case of health risks and emergencies. The article is divided in three sections. The first section examines the most recent theories on risk and on its communicational aspect; the second analyses a recent state of emergency crisis, specifically the panic which stemmed from the perceived danger of an avian flu pandemic in Italy; and finally an example of best practice in the form of a food safety handbook designed and edited by the Italian Ministry of Rural Affairs, which was based on the skills and knowledge acquired during the avian flu emergency.

*Key words: health risk, health emergency, risk communication, avian flu, public communication*

### Risk communication

Recent theories on the issue of risk, and in particular food related risk, are based on the concept that the fears of contemporary society differ greatly from those experienced in previous centuries. Furthermore, the processes through which we *get scared* have also changed completely.

Our relationship with fear (in terms of death, disease and pain), superstition and religious sentiment have been progressively, but not fully, replaced with an ambiguous confidence in impersonal expert systems, which are able to identify, control and resolve any "possible" danger [1].

Until modernity, death, disease and destiny represented an inevitable prospect that had to be lived with. They were part of a "pluridimensional" and complex world that could only be partially controlled through religious practices; whereas, in the contemporary world the concept of risk provides the key to danger. It provides explanations for deviations from the standard and bares the idea that danger can be kept under control and that it is the individuals' and system's duty to arrange different means and strategies to avoid any deviation from the standard [2].

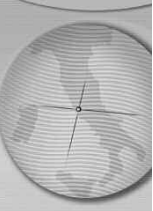
When, as individuals, we place our trust in the scientific-medical system (an eminently positivist system) to heal our worries and when we pay pathological attention to the institutional health related messages of the mass media, we are trying to bring our more or less veiled hypochondriac impulses back into a rationalist framework.

It is on the very unbalanced tension between the rational and the irrational that risk communication moves: a form of communication which connects subjects characterized by a deep

information asymmetry, and who ground their communication and trust agreements on this very disparity in knowledge.

What are we talking about when we talk about risk and danger? In her book Lupton [2] describes the origin of the concept of risk and its changes over the centuries: until the modern age, the term referred to natural events or objective hazards independent of human control, which could, at least, intervene on their outcomes or try to prevent any damage. Along with the progressive industrialization and rationalization of production led by scientific progress, the term risk was connected to the increasing ability of human beings to control, measure and predict natural and social rules. Modernity brought about the concept of risk as a positive or negative event whose probability can be statistically calculated: the dangerous deviant event, in the past confined to the realm of good luck, bad luck and fate, becomes mathematically determinable. Nowadays, especially in common language, the words risk, uncertainty, threat and danger tend to become blurred, so that the idea of the statistical calculation or assessment of the risk itself is getting weaker.

It is a distortion of terminology that, far from simply invading the realm of the spoken language, is reaching into the field of sociology. Beck [3] and other sociologists of the "risk society" use the term risk to refer to the deep state of insecurity which post-modernity is facing. The term hazard in Beck and Giddens regains a somewhat pre-modern meaning, where risk is not calculable and global self-destruction replaces natural disasters within our everyday fears.



Apart from this constructivist and structuralist reflection, where a deep process of systemic criticism is involved, it is clear that in analysing the process of communicating a risk the difference between risk and danger, and between risk communication or crisis management is vital for setting good communication practices.

According to a largely accepted definition, danger refers to the source of possible harm to a person's health. That is, an event happening and bearing some more or less governable outcomes.

We use the term risk, instead, when there is a probability that a specific danger could result in real harm to one's health. It is the probability of a harmful event, which can be ascertained through risk analysis and in which factors that are able to reduce it, can be assessed [4].

At the same time, we can recognize two kinds of communication: crisis communication and risk communication. The first includes the communication strategies employed during emergencies brought about by unexpected events which destabilize the organizational routines of the (social and media) system affected [5]. Risk communication, instead, can be defined according to the Codex Alimentarius Commission (founded in 1963, FAO and OMS) as: *an interactive exchange of information and opinions concerning risk among risk assessors, risk managers, consumers and other interested parties* [6].

This definition, which reduces risk communication to the public communication of the probability of a hazard, is increasingly replaced by the idea that the discrepancy between real risk (the objective probability of a dangerous event) and the risk perceived by an *audience* (the degree of danger social actors ascribe to a phenomenon) results from an informative and cognitive gap between the sender and the receiver, which is also nourished by the discursive intervention of the media

According to the top-down model of risk communication [7] (Figure 1), the establishment of a communicative relationship that is able to reduce any possible distortion process (for example by employing pedagogic, institutionalised or centralised communication strategies) guarantees the success of the message. Despite its tendency to intervene in the actual process of risk assessment and reduction, this model still has some limitations, namely the reduction of communication to its cognitive efficiency.

The most recent literature tries, on the one hand, to debate the issue from an anthropological, symbolic and cultural point of view [8], while, on the other hand, adopts a systemic approach, that

also takes into account those "vulnerable" aspects of social contexts [5].

On the one hand, this means recognizing that risk is not simply the probability of an event, but also its strength and effect. Mary Douglas, an anthropologist who dedicated great part of her work to the issue of risk [8], points out how it is culture that drives Risk Assessment: the value ascribed to the (feared and foreseen) outcomes of risk involves primarily cultural issues, more than statistics and case histories.

While on the other hand [5] risk perception becomes the factor that connects individual behaviour and media representation, as well as social interactions between individuals and the groups to which they belong, the features and history of societies and the institutional organization.

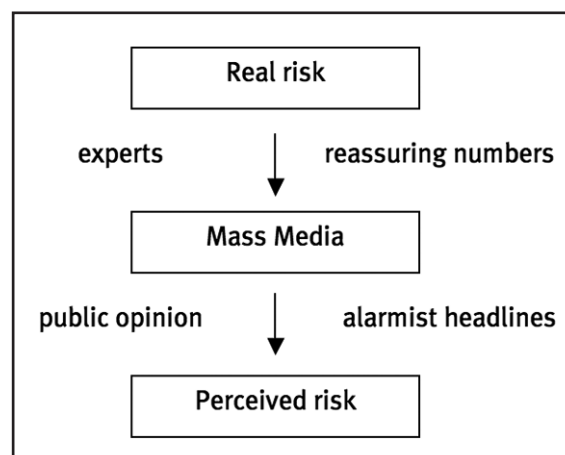
Therefore risk communication ceases to be a neutral message which carries scientific-medical information, and turns into a medium that needs to be embedded into the process of pre-comprehension of the structures and of the cultural-systemic dynamics.

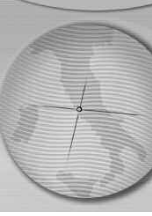
The probability of a particular risk then varies according to the differing capacity of a system to react to an emergency state and not simply according to the possibility of an event to occur: from this perspective, therefore, we need to find tools that are able to prevent and control risks, through the management of the efficiency of the system, which could then regularize the information flow among those subjects who form the communicative chain of risk and emergencies: institutions, the media and citizens.

#### A case history: "Avian flu" coverage in Italy

Between August 2005 and March 2006 the Italian press and television stations paid a great

Figure 1. The top-down model of risk communication [7]





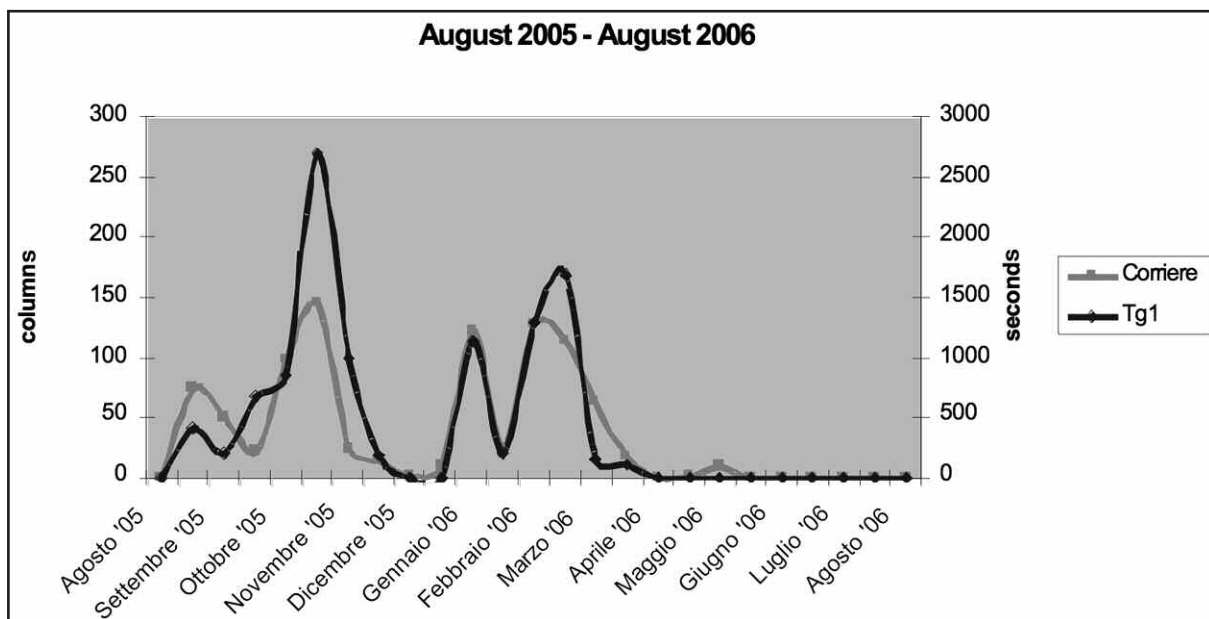
deal of attention to the information being relayed on the spread of the H5N1 virus and the possible pandemic effects on human beings. The analysis of the information relating to this topic based on the main national newspaper (*Corriere della Sera*) and from the most popular national news broadcasts (Tg1) provided some insights into the problematic aspects of risk communication by institutions and enabled an assessment of the consequences on Italians' food consumption behaviour.

From a quantitative perspective, the information flow can be represented as in the following graphs (Figure 2); on a macro level, these graphs demonstrate the appearance of this topic in August 2005, its disappearance in March 2006, and two peaks which were reached during October-November 2005 and January-February 2006. The data concerning the appearance and disappearance of the issue are relevant primarily to the scientific community and to institutions' communication personnel. Since the 18<sup>th</sup> and 19<sup>th</sup> of August, after the alarm had been raised by the journals *Lancet*, *Nature* and *Science*, representatives of International Organizations (OMS, European Commission), national governments (Ministry of Health in Italy) and healthcare organisations have been called upon to provide an account of the Italian population's level of safety. Within this framework, information was made available, to a large degree, by the announcements made by institutional representatives. In a similar way, the disappearance of the issue from the Italian

circulation coincided with the resignations of the Minister, Storace, and the *ad interim* undertaking of the Health Ministry by the Prime Minister Berlusconi.

With regards to the level of the contents of the information communicated, the two peaks seen coincide with two differing *approaches* of the virus, the first concerned the discovery of the infection in Europe and nearby Turkey; and the second the arrival of infected migratory species in Italy. The data collected from this time corresponds to the maximum emphasis which was placed on the issue, and can be clearly demonstrated in the behaviour of consumers: Figure 3 demonstrates that the high level of media coverage directly corresponds to a fall in the consumption of chicken, in terms of both families purchasing, and their average consumption. It has to be noted that the facts that generated the above mentioned media coverage did not have anything to do with, nor did it have any impact on the safety of the Italian breeding industry or the meat available in the market place. Consumers' risk perception however is very different from the risk assessments undertaken by the scientific community and propagated by the varying institutions, despite the fact that perception is based on information which also includes those scientific assessments and institutional declarations. In other words, even if part of the information flow was dedicated to institutions providing reassurance, the very fact that "avian flu" was mentioned contributed to a behaviour which was inconsistent with the information being transmitted and which seemed

Figure 2. Avian flu: media coverage



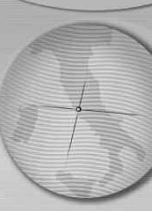
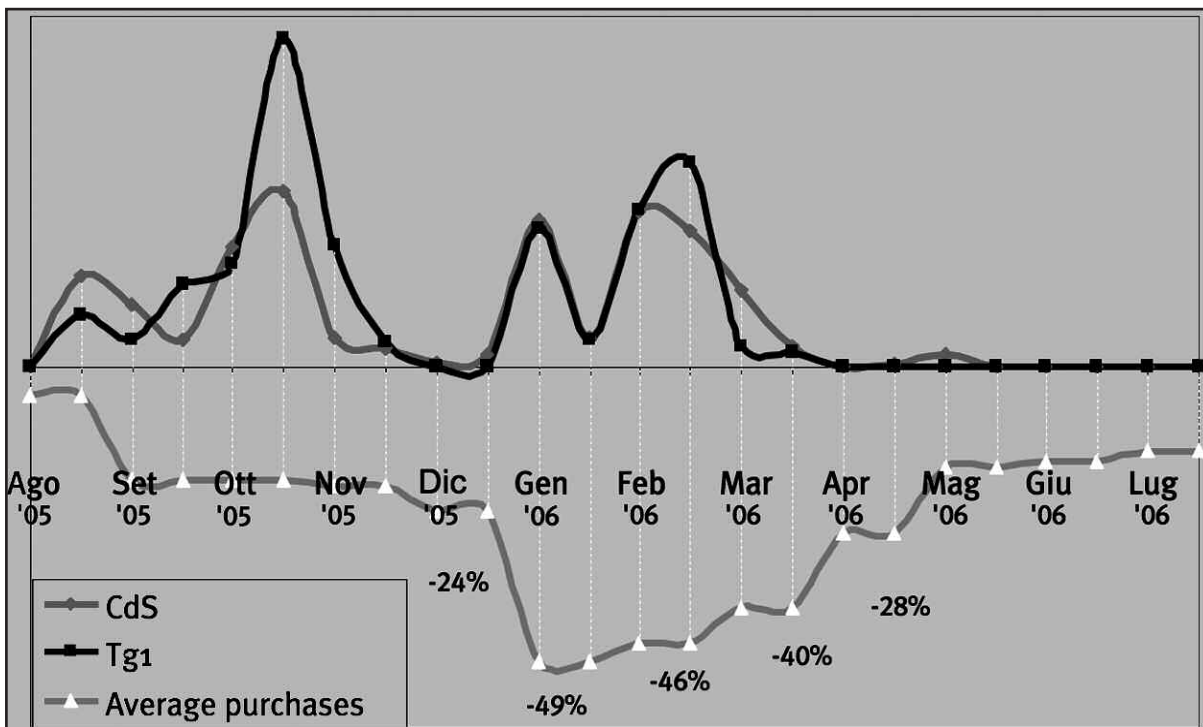


Figure 3. Media coverage and variation of chicken consumption



Average purchases [our elaboration of Osservatorio ConAv scarl's dates]

irrational, as well as being harmful to the relevant sectors of the national economy. Furthermore, there was another consumer behaviour stemming from a similar mechanism, which represents the other side of the audience's response to the avian flu risk, which was the purchase of huge quantities of antiviral drugs. Finally, we have to consider that both of these consumption phenomena (both negative and positive) have become part of the media's information agenda, causing a short circuit between information and behaviour which gave greater visibility to the latter and ascribed to the act of purchasing the value of a possible response to risk.

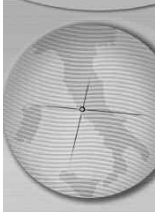
Apart from the quantitative data and those related to contents, the quality of the information deserves to be further investigated; from the viewpoint of the representation of the avian flu risk, the language and the rhetoric of the information are key components. Of extreme interest, for example, is the semantic ambiguity, if not true lexical confusion, of the term "vaccine", widely employed to refer to different medicines - from seasonal flu vaccine to the vaccine for chickens, to the preventive treatment of those working in the breeding sector, to the vaccine against a presumed mutant virus, to the antiviral medications themselves.

The typical invisible nature of viruses and the threat of a pandemic outbreak are features associated, both in an explicit but above all

implicit form, with the invisibility and the threat of someone that "plots" behind the back of a western society: the terrorist and, more in general, the "alien danger". The further threat that looms over the modern (and western) world is terrorism (international and global): H5N1 is as "invisible and threatening" as al Qaeda.

The "alien danger" is linked with the theme of space and invasion. Space is thematised starting from the migration pathways of birds, from the sequence of cases of ill birds and from the (possible) spreading of the virus, and it is considered in an inclusion/exclusion context, where the creation of embargoes, origin labels, quarantine, and border checks is a preparatory measure not to allow the virus to "penetrate" "our" space.

Since the virus does not have "visible" routes, the migratory paths of birds (carriers or non-carriers of the virus) represent the (possible) routes of H5N1 spread. In this way the routes become a metaphor of the virus's propagation routes: the bird becomes the virus, the migrations become the infection. Prevention does not appear to focus on the virus, but rather against the birds which define the space in which the avian influenza virus is spread. From this there has been the attempt to define our country as a risk-free zone, by showing the distance from the other countries directly involved in the emergency. A



clear attempt to differentiate ourselves and protect ourselves from the *Other*.

Linked to the feature of “space” is the “time” feature: terms like “a race against time”, “delay”, “reducing the timeframes”, “it’s only a matter of time” return with a given continuity. The idea is that time cannot be controlled because it is subject to laws that are beyond the control of science and politics.

In general, there is the idea of time being a fundamental variable of the crisis: the time of the birds’ migrations and spreading the disease among the population; the time for the virus to mutate, the time necessary to produce the antiviral products; the time to test the cures and to produce the vaccine; as well as the quarantine time.

The “crisis” generated by avian influenza is so marked by the theme of time and space: the *countdown* and waiting for the *invasion*, and of its governance, as well a tool that dictates the rhythm of the “countdown”. The avian influenza phenomenon appears to be particularly well-suited to the daily monitoring of an event with a persistent level of emergency and from this point of view it can be readily integrated within the production logics relating to information. The news media, which lives on the value of rhythm and update, is found to be a tool that is intimately associated with this idea of the crisis, and they assign themselves the task of “managing” the emergency level, with constant alternating tones: some tend to maintain the level of high alarm, to respond to news worthiness logics, others tend to control the level by managing the news to achieve a calming effect. In this way, in the eyes of the reader, the news media nominates itself as the party designated to manage the level of anxiety of the readers.

A further element of uncertainty for the reader in the construction of the avian influenza “story” is represented by the denial and confirmation dynamics of the news. Some suspect reports of cases of avian influenza entail a technical delay time before being confirmed due to the analyses which confirms the actual presence of the virus. In a number of cases this involves “losing the news” from the point of view of building up the information. It is as if too much time elapses between the initial news and the confirmation (or denial) to enable the ‘newsmaker’ to return to the news with the same degree of intensity: something new (perhaps a new alarm) will have precedence in the article. This mechanism creates a further sense of uncertainty regarding the news. Furthermore, the institutions, within the framework of their areas of jurisdiction (not

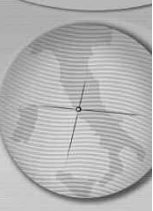
always well-defined), have been pro-active in trying to calm public opinion when managing the third wave of the crisis. The excessive emphasis on institutional communications has probably caused the media to broaden the attention paid to avian influenza.

Summing up, what can we learn from the Italian “avian lesson”? First of all, that media communications are powerful in creating a level of consciousness about hazards but they are contradictory in creating a correct risk perception: the more you talk about it, the higher the perceived risk; format (frequency, coverage etc.) is often more important than contents; and swinging between warning and reassuring produces confusion and distrust. But media discourses seem to be powerless in leading consumer behaviour: people trust in “expert systems” to identify hazards but are less likely to trust in them in terms of risk evaluation; they seem more likely to decide their behaviour for themselves, translating it into a “to buy or not to buy” decision.

Secondly, that there’s a great difference between crisis communication and risk communication: the first one faces facts, the second faces probability and public statements about probability. Information is shaped by this difference: in crisis communication, demand for information comes first with the media and institutions replying to the demand; in risk communication, supply of information comes first and gives rise to the demand for information; coming first with the supply of information defines the framework in which the news will be interpreted and therefore there is the need to pick the right moment: if given too soon, it may turn “risk” into “emergency” without the full facts and then later be accused of being useless.

#### **Best practice: correct information on food risks**

It may be interesting at this point to investigate the communication strategy adopted by one of the ministries in charge of the avian flu epidemic risk, the Ministry of Rural Affairs. Based on some experts’ reflections and on the findings of the research described above (in spite of it still being in the initial stages), the Ministry commissioned a handbook from FriCom, the task force placed at the disposal of the Università Cattolica del S. Cuore in order to produce the information on food risks. Such a commission implied the will to respond to widespread social anxieties with a medium-term strategy. This medium-term strategy was not intended, obviously, to replace, but rather to join other and more punctual and immediate kinds of institutional responses, required by the



state of emergency as well as the need for an urgent communication tool.

The process of writing the handbook was undertaken in three stages. The first stage consisted of data and the collection of opinions, through interviews of experts and heads of relevant institutions, such as national institutional research centres on food and nutrition (INRAN and CNSA); producers' associations (Federalimentari, Una); and consumers' associations (Altroconsumo, Federconsumatori). In addition it also included interviewing two scholars qualified on the issue of risk, who had backgrounds in psychology and sociology, respectively. The data collected was analysed in order to reach a coherent and unitary corpus, which was divided into three parts: a theoretical part, concerning the main causes of food risk; a practical section, comprised of the correct practices to reduce household risks when storing, using and cooking food; and finally, a section which was comprised of reflections on risk communication, its various subjects and practices.

During the second stage, the work group processed the data collected in a first draft of the handbook, selecting a publishing service that had a lot of experience in the field of information publication. The main concept of the project, established at this stage, was that the vast majority of food risks depend on in-household behaviours and thus these can be dramatically reduced if the level of awareness is raised. Furthermore, instructions on the choice of information channels had to be provided, explaining the role of (international, national and local) institutions in charge of food safety.

In the third stage, the final draft of the handbook was completed, paying particular attention to the tone and layout style. The aim was to provide reliable and reassuring information, with clear instructions expressed in a calm tone. Great attention was paid to the handbook's format and its appearance, to minimize the risk of it not being well received. From this same perspective, the title is significant: instead of a more neutral or cold expression (such as a "Handbook for defence against food risks") we opted for "What risk is there?" which in Italian sounds as efficient, as well as familiar and reassuring, thus suggesting the non-anxious tone of the product.

The material given to the Ministry was then transferred into PDF format and published online on the Ministry's website, thus combining the push logic of distribution in traditional channels to a pull logic i.e. that is it is downloaded by interested associations and citizens.

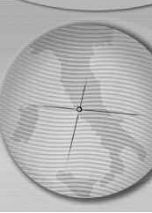
The account of the procedures necessary to complete the handbook (whose efficiency has not, so far, be empirically tested) provides a way to read, at the end of this article, our previous reflections on risk communication from a more practical perspective. The issue of communication's efficiency in the field of health has always been hot [9]. What we want to do here is to offer a summary model of the processes that lead institutions in planning and managing their communication in risk or emergency conditions (see Figure 4).

The model has to be read starting from the top-left square: the starting point is the context, which is determined by both objective (connected to situations, changes and hard factors) and subjective factors (in the sociological sense of collective subjectivity). Obviously, some hard factors happen to be partly engendered by collective behaviour (think of pollution), but it is also true that the individual and society on the one hand inherit a situation they are not responsible for, and that, on the other, they can contribute to its worsening through their collective behaviour.

Proceeding anticlockwise, following the pointers, the second square shows how society interprets a given context in terms of risk or emergency. Society does so through its institutions (nowadays above all at an international level, from OMS onwards), but also through the flow of information in the public sphere, both through direct communication amongst citizens, and the mediation of the media. The shift from social reality to its interpretation can obviously involve, an over or under-estimation, largely determined by the possible gap between institutional assessment and public opinion. The issue of avian influenza in Italy provides an emblematic case in this respect.

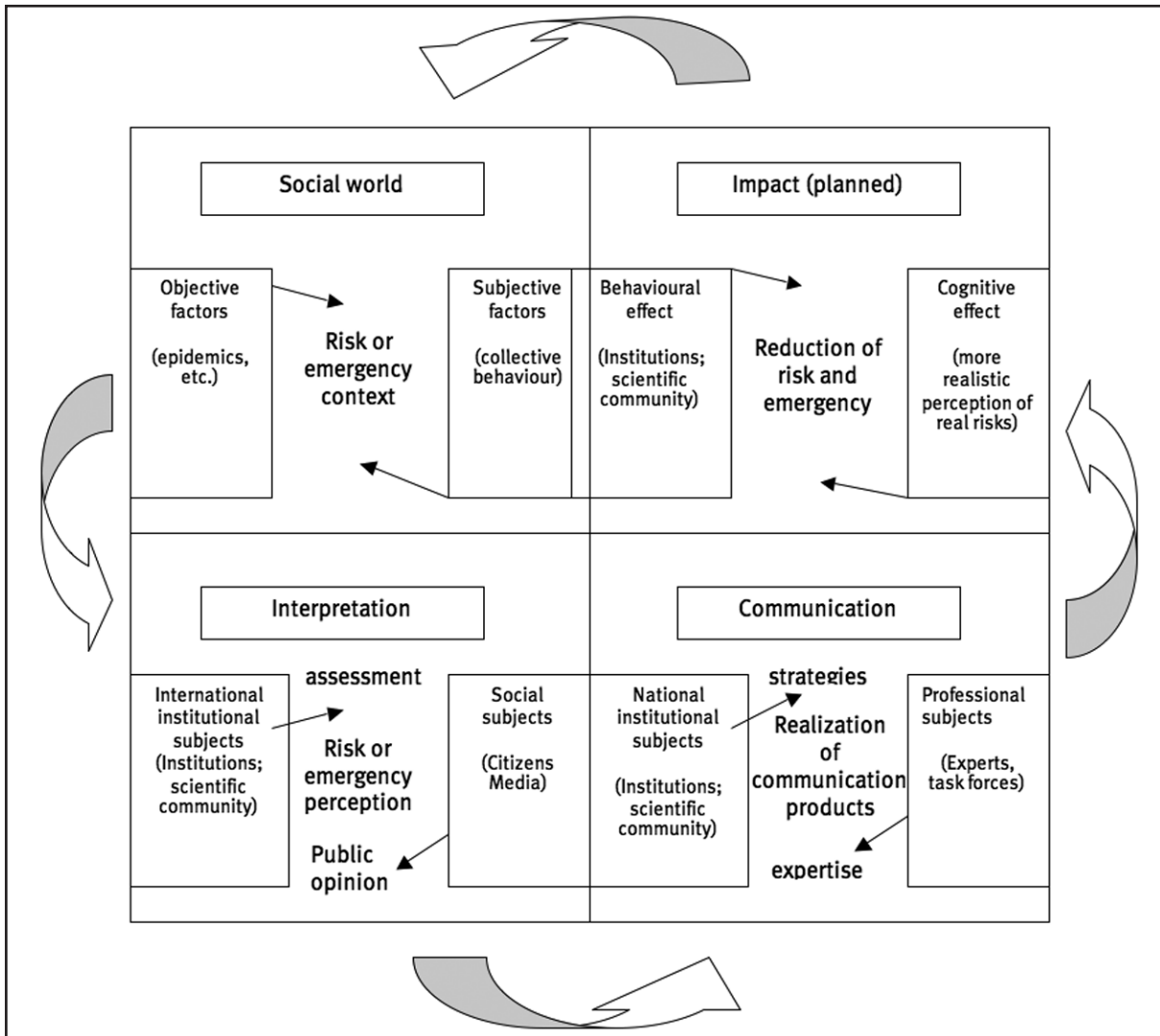
The third square shows how institutional communications undergo planning and are then carried out: national and local institutions make use of experts and task forces in the field, given the relevance of local expertise in communication strategies. For example, risk perception varies from country to country (as we have seen with avian flu), and it is therefore obvious that a communication strategy targeted at that specific problem needs to consider national peculiarities.

The fourth and last square shows the aims of the communication, which are at the same time cognitive (the diffusion of correct information), and pragmatic (to promote a positive, and expected, change in behaviour). We can argue that in a state of emergency the second type of aim is prevalent, though cognitive aims can never be neglected.



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Figure 4. The process of institutional communication in a state of risk or emergency



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