

THE A (H1N1) INFLUENZA. SYMBOLIC DIMENSIONS OF A PANDEMIC ARTEFACT

LA GRIPE A (H1N1). DIMENSIONES SIMBÓLICAS DE UN ARTEFACTO PANDÉMICO

ANDRÉS G. SEGUEL

Universitat Autònoma de Barcelona – Autonomous University of Barcelona

agseguel@gmail.com

Recibido: 24/VI/2012.
Aceptado: 19/XII/2012.

Abstract: The aim of the present paper is to present the symbolic features that are exposed by the concept of artefact in the context of a pandemic alarm, such as the A (H1N1) influenza. The symbolic qualities entailed by the notion of artefact are well-known within the Social Sciences: Sociology, Anthropology, Archaeology, and Linguistics. The artefact is basically not an object, but an action aimed at designing, simulating or creating a simile by means of material, technological or linguistic structures. The purpose of the present work is to unveil the symbolic dimensions that are activated by the A (H1N1) influenza as a Pandemic Artefact: a) the assumption of separating information from matter; b) the need for a material support to enable the exchange; c) the sociological reflexivity of the artefact and its agency; d) the arbitrariness of its social use, that detaches it from the design as intention.

Keywords: artefact, A (H1N1) influenza, symbolic features, reflexivity.

Resumen: El objetivo del presente artículo es el de presentar las características simbólicas que devienen del concepto de artefacto en el contexto de una alarma de pandemia, como el de la gripe A (H1N1). Las cualidades simbólicas incluidas bajo la noción de artefacto son bien conocidas en las ciencias sociales (sociología, antropología, arqueología y lingüística). El artefacto es no un objeto, sino básicamente una acción destinada a diseñar, simular o crear un símil por medio de estructuras materiales, tecnológicas o lingüísticas. El objetivo del presente trabajo es el de poner de manifiesto las dimensiones simbólicas activadas por la gripe A (H1N1) como artefacto pandémico, a saber: a) la asunción de desligar la información del asunto, b) la necesidad de un soporte material que posibilita el intercambio, c) la reflexividad sociológica del artefacto y su agencia, d) la arbitrariedad de su uso social, lo que lo separa del diseño como intención.

Palabras clave: artefacto, gripe A (H1N1), características simbólicas, reflexividad.

1. Introduction

Generally speaking, an artefact evokes some sort of connection between the human and machine ingenuity, which results in variations: of the personhood – individual, person, society, and communication –, and of the forms of the machine: ingenuity, alchemy, mechanic, information processing. It might be for this reason that some of the concepts related to this connection between human and machine are definitely similar or adjacent to the artefact, for instance artifice, automaton, and operators.

The contemporary Social Sciences tend to favor an analysis of the societies of knowledge that investigate the human/machine relationship, with a special focus on the information-processing machine. The most thorough explorations have been in the fields of Information Technology and sociotechnical spaces.

Yet, it could be asked, what is the most fruitful direction of these explorations? By resorting to the philosopher Descartes, and his metaphor of the Human Machine, in order to understand the connection human/machine – artefacts, this paper maintains that it ought to be understood within a movement that removes its artifice, mystery and sacred bond. By going beyond the mystique of the artificial, the enlightened reason enables an immediate understanding of the bond between human and machine. In this way the meaning of the question on the human/machine connection is reversed, and in the contemporary age it can be presented as follows: what type of humans clarify the meaning of the artefacts of the society of knowledge? What image of the human or society is favored by these artefacts?

Under the conditions entailed by the human-machine relationship, and following the direction traced by the previous paragraph, the example that will be covered in this article is part of the symbolic dimensions evoked by the artefacts when they indicate a certain social response. It is a global event: the pandemic of the A (H1N1) influenza, and in particular the sociotechnical space that it activated and enabled. As suggested by Bruno Latour, when addressing the issue of Louis Pasteur and the bacteria: the direction of the causality between what is to be explained and what gives an explanation is not only reversed, but also completely subverted: the contagion redefines the social maps (Latour, 2005).

The theoretical qualities of the artefacts overcome the social common sense that combines meanings and things; that is, once they have been articulated, they are not just mediators that convey a flow of information or a social cause, nor they are just a mirror through which to observe a wide representation of society. They are rather mediators that allow for a greater understanding of how different agents are related to the potential to transform their relationship.

In addition to this, the artefact flaunts a shady deal of reflexivity (Seguel & Oré, 2010) that also keeps it from being only an operator/mediator: it is the attempt of an agent to clarify the events by means of that reflexivity. Because of its artifactual nature, it activates everything that has been planned by the technological object, together with the arbitrary nature of its social drift (Seguel, 2011).

The attempt of agency of the artefact is always paradoxical, since it has some sort of ascetic quality: it is an operator of information that connects agents avoiding the use of rhetoric and the generation of hermeneutics. As suggested by the Chilean poet Nicanor Parra, the speaker of the artefact is any speaker, there is no superlative self "¡Consueta/ no: ventrílocuo!", nor there are spare parts in his/her formal elaboration. On the other hand, its temporary nature is deciduous and irreversible, and its social drift is arbitrary from a linguistic perspective. Both aspects refer to the condition of producer of reflexivity at a given time; the poetic of the artifact is not unpleasant, but rather spine-chilling. It ends and begins with a paradox: "A mí no me para nadie/mi misión es salvar al mundo"... "Ordeñar una vaca/y tirarle la leche por la cabeza", says Parra (cited in Valente, 1970).

2. Symbolic features of the artefact

If there is any relevant epistemic consideration concerning the artifact in our time, it regards an idea shared by almost all sciences: the separation between information and matter and, as a consequence, the notion of circulation of the information and its continuous codification processes.

On the other hand, it is worth noting that despite the attempt to free information from its own representation, it remains a measurement of the matter; as such, it requires a physical support,

a material dimension. As suggested by Aunger (2002), information is a measurement associated to a quality of the matter; it might not be the matter itself, but it is at least a physical quantity.

This symbolic aspect of the question is traced by a double constitutive movement of the artefact: on the one hand it is an abstraction of the matter, a separation between information and its materialization; on the other hand it needs the support through which to move, since it is the only way to allow its exchange (Wark, 2004).

The conditions of separation and need are relevant to sociological research, since they enable our understanding and monitoring of these exchanges from a new, different angle: they create attempted metaphors around the production of codifications and connections based on multiple ontologies. This symbolic quality of the artefact in our age has unsuspected consequences in important fields of sociological research. For example, to consider the socialization progress from the classical perspective would lead to the assumption that the transmission of information has a social quality. On the other hand, it is a logic that is extended and spread by means of a copy that, at the same time, does not modify the original, the logic of the replicator. In this respect, if the replication is specifically related to a social substratum, the transmission of information can only occur under certain conditions of replication. This would forcefully lead to the recognition of a true structural equivalence between the original and the copy, thus dismissing the ideas of difference and transformation of the agents.

The idea of autonomy of the information results in a special connection with the social contexts: be them the controverted online games of identity or the political claims of local communities on the Internet, the effect of this circulation of information by multiple ontologies (some authors call it virtualization) is highly reflexive. That is, under these conditions the information transforms the interpretative contexts, which might lead to excessive behaviors and other producers of simulation practices (Seguel & Oré, 2010).

In the last few years, the concept of artefact has been addressed by different disciplines (Aracil, 1998; Bijker, 1995; Clifford, 1997; Kirkpatrick, 2004; Pinch & Bijker, 2003). It has been depicted as a theoretical field that allows illustrating the complexity between information and social representation (codification), the sociological quality of information and its cultural practice. In this sense the artefact, or artefacts, are regarded as reflexive agents with the

capacity not only to combine or connect different elements, but also to process and transmit information. This feature is what differentiates the artefact from the Actor-Network Theory and from its homonym, the operator. The latter has the ability to combine and connect heterogeneous human and non-human factors; although its conditions of possibility are always material, they do not entail any level of reflexivity.

On the other hand, the artefact is not a social or a sociological object, but an element that under some conditions tries to design, simulate or produce a simulacrum of agency by means of material and/or technological structures (Seguel, 2011). For that reason one of its symbolic features is that its agency distance itself from the design as intention (nothing of what is was meant to be created in that form), combining the planning and design of the technology of information with the arbitrary nature of its use – that is to say, with its social drift (Pinch & Bijker, 2003). This contradictory quality, inherent to symbolic processes, is what enables different degrees of reflexivity of the social categories it conveys.

Then what is the connection between this idea of artefact, its symbolic features, and a pandemic that, supposedly, has specific biological causes? A brief epidemiological excursus will allow the identification of some connections between these two issues.

3. Brief excursus on 'the social aspect' of Epidemiology

Epidemics have a political dimension concerning the control and order of populations (healthy/infected); they are characterized for being sudden and unpredictable, and because they affect a significant percentage of the population with no previous warning sign (Saracci, 2010). According to Jean-Pierre Dupuy (1991), the epidemic (epi-demos) patrols the boundaries that separate society from its generalized disorder. Its evidence, that generates panic, manages to expose the social bonds that would otherwise be hidden to the sight.

On the occurrence of an epidemic, the goal of politics is to try to safeguard the figurative world of social relations, which causes the governance practices to be more explicit: for instance, how to control the disease and its manifestation, avoiding the classical population policies and the biopolitics of containment and direct control of bodies, individuals and societies. The relevance for the collective social phenomena is that, although epidemics are not

socially produced, they nonetheless affect our perception of ourselves, between us and the others.

On the other hand, History illustrates quite clearly the political consequences of epidemics, such as the tight relationship between the control of epidemics and the emergence of Latin-American nation states. As a matter of facts, the first public health policies were developed as a result of diseases such as tuberculosis, bubonic plague, cholera, and smallpox, but the political measures and local responses to this type of events did not have a common format. From these different experiences it can be concluded that epidemics imply a certain cultural grammar, related to changes within society: take, for example, the transformation in the logic of social and population control caused by the Black Plague in Europe (Watts, 1997). For this reason, an epidemic is historically constituted within a space of questioning and negotiation of social categories such as race, social class or ethnicity (Herring & Swedlund, 2010).

Although our understanding of epidemics is affected by a changing social context and cultural grammar, the definition of this phenomenon raises controversies and disputes also in the scientific field, among biomedical experts and epidemiologists. In this respect, a special role is played by the violence of the epidemic, which is measured by its mortality rate in a territory. In this way, the social and geographical incidence provides an explanatory context of the connection between the disease and the environment, a key indicator being the morbidity by geographical areas and social context (Ranger & Snack, 1992: 3).

Given the evolutionary and social variability of epidemics, epidemiology as a discipline has based most of its calculations and analyses on the effects of virulence on the populations: that is to say, on the contagion levels. By highlighting the bond between the individuals who are carriers of pathogens and the territory they live in, this aspect shows how epidemics have historically had a geopolitical reference, even more than a spatial one (Watts, 1997) – which can also be inferred from the theories of epidemiological transitions.

These are the essential features that have functioned as the basis for technological innovation in the case of the A (H1N1) influenza. As a matter of fact, in midst of the crisis the World Health Organization (WHO) announced that, as a result of the scientific and technological progress, for the first time in History the development and expansion of an epidemic could be monitored in real time (WHO, 2010).

The case of the A (H1N1) influenza, and the institutional coordination for epidemic control through protocols, rules, and technological material showed a strong globalizing trend, especially in the WHO recommendations. Therefore, two aspects became central to the question: the local population control and the monitoring of the evolution of the disease in different geographical contexts, through protocols and surveillance systems (Schillmeier, 2008).

The global alarm, fuelled and transmitted by the media by showing, on a big world map, graphics of the number of infected and dead people in every country, enabled an action that globalized its social effects by means of the visualization of the epidemic in "real time": it depicted a scenario that went beyond the reference to countries and territories.

Nevertheless, this effect is not completely casual, nor totally controlled: a study developed with the GESCIT-UAB (Tirado, Seguel & Rocamora, 2012) suggested a number of sociotechnical operators converging in order to produce the emerging effect of the global pandemic. The following paragraphs will focus on what is seen as an epidemic artefact, the A (H1N1) influenza surveillance and alert system.

4. The Epidemiological Surveillance and Alert System

The influenza surveillance and alert system is a good example of an operator relating different levels of information and connection between agents. At the same time, it has made the A (H1N1) visible to most of the world population through the media: an example is the Global Outbreak Alert & Response Network (GOARN), created in 2000, whose representation is FluNet.

Similarly to this operator, the surveillance and alert systems synthesize the information of the pathogens collected through protocols applied by the medical services, paving the way for a specific form of visualization and measurement. In the case of the A (H1N1) influenza, they translate the information into the alert levels set by the WHO. This formula gave rise to a particular controversy among experts, which stemmed from the connection between the number of infected people and the geographical extension.

In order to declare an epidemic, the surveillance and alert system considered six levels or phases, being Phase 6 the current pandemic phase. In this light, the social alarm could not have been caused by a simple misinterpretation of the scale, since this would imply that the local administrators and reporters were ignorant or malicious and the professionals poorly-informed, and that a great part of the population had alarmist and exaggerated views. In this sense, it is hard to accept that so many people were wrong.

As a result, the Interministerial Influenza Commission (ICI) of the EU, based in Brussels, declared: "Once all this is finished, the first thing that the WHO should do is modify its alert system" (NTX, 2009). Marc Van Ranst, Head of the Commission, suggested there had been confusion of the alert levels with and the threat levels. The proposal of the phases from 0 to 6 did not necessarily mean that the virus was more dangerous; it concerned its propagation on the territory: "the WHO system generated confusion; several people have wrongly associated it to a seismic system, when it is not like that. A higher phase does not mean a more dangerous virus: what changes is only the geographical space" (NTX, 2009).

Therefore an operator was created by a connection based on a communication protocol to prepare for the epidemic, together with the representation of the alarm situation through the geographical extension, and the action of the local administrations in every country: it was a surveillance and alert system, which shaped the information flow around the epidemic. The controversy was well described by Doshi (2011), who claimed that the problem was not the WHO defining the concept of pandemic, given that there is no such definition. It was rather the consideration that, within the given protocols, the different contexts and experts from the epidemiological field were flexible.

The subtle, and highly implicit, difference between the definition of a pandemic influenza and a Current Pandemic Phase has generated confusion in the media. In this sense, the preparation and prevention process of a pandemic never took into consideration a clear definition of the same – at least not the WHO; it only considered some indicators and measurements that allowed the risk precaution on the basis of an artefact, the surveillance and alert system.

5. Conclusion. The Pandemic Artefact: That virus that does not die nor kill us

From this perspective, the A (H1N1) influenza seen as a pandemic – that is, as an object generated by a level 6 sociotechnical measurement –, produces a peculiar movement of association and evidence of society. If a pandemic is a scientific object that through its connections drives other agents to do things, it mostly depends on the social space that is enabled, and somehow explained, by its connections (Latour, 2005).

Nevertheless, the social dimension as a cause (disorder, decomposition, transformation, change...) might as well be seen as inherent to the very scientific status of pandemics. In this case the social dimension was not only constituted of associations creating an elusive space, but rather of associations that had been previously established on the object of the controversy, and which were then taken for granted because of the absence of a definition of pandemic. These are the reasons why the pandemic can be regarded as an artefact: 1) the importance of the information and the protocols allowing the circulation of its evidence; 2) the transit through different interpretative levels, due to a sociotechnical system such as the epidemiological surveillance and alert; 3) its ability to describe a type of society, and make it intelligible; 4) its paradoxical effect of prevention/alarm, which develops a particular reflexivity because of the type of social agency it deploys.

The epidemic space is more than an area of contagion: the virulence affects human, social, and technical organisms; therefore it cannot be contained by quarantine measures (Van Loon, 2005). Although pandemics are essentially biological phenomena, they require a sociological gaze focused on the Pandemic Artefact. As a matter of facts, the constant alert and social risk turned the A (H1N1) from a biological problem into a problem of public health (Fassin, 2008).

In the light of this, it is worth paying attention to the figurations of the artefact, which separates the information from its medium (local, medical) and contextualizes it according to a territorial imaginary, through sophisticated systems of information processing. That is to say, it connects the feverish body of a child in the outskirts of Veracruz to a global map on the Internet, with red dots creating graphics and showing the world the paradoxical, symbolic formula for the prevention and assessment of epidemic risk.

References

- Aracil, A. (1998). *Juego y artificio*. Madrid: Cátedra.
- Aunger, R. (2002). *The Electric Meme: A New Theory of How We Think*. New York: Simon & Schuster.
- Bijker, W. (1995). *Of Bicycles, Bakelites, and Bulbs: Towards a Theory of Sociotechnical Change*. Cambridge, Mass: MIT Press.
- Clifford, J. (1997). *Routes: Travel and Translation in the Late Twentieth Century*. Cambridge: Harvard University Press.
- Doshi, P. (2011). The elusive definition of pandemic influenza. *Bulletin of the World Health Organ*, Vol 89: 532-538.
- Dupuy, J.-P. (1991). *La Panique*. Paris: Delagrangue.
- Fassin, D. (2008). *Faire de la santé publique*. Rennes Cedex: Éditions de l'École des Hautes Études en Santé Publique.
- Herring, A. D. & Swedlund, A. C. (2010). *Plagues and epidemics*. Oxford - New York: BERG.
- Kirkpatrick, G. (2004). *Critical technology. A social theory of personal computing*. Manchester: Ashgate.
- Latour, B. (2005). *Reassembling the Social. An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- NTX (2009). Fallece un hombre por Influenza. *El Imparcial*, May 10. Retrieved from: http://www.elimparcial.com/EdicionDigital/Ediciones/20090510/PDFS/General_25.pdf [5/8/2012]
- Pinch J., T. & Bijker, W. (2003). The social construction of facts and artifacts. In R. C. Scharff and V. E. Dusek (Eds.) *Philosophy of technology*. Oxford: Blacwell Publishing, pp. 221-232.
- Ranger, T., Snack (1992). *Epidemics and ideas. Essays on the historical perception of pestilence*. New York: Cambridge University Press.
- Saracci, R. (2010). *Epidemiology. A very short introduction*. Oxford: Oxford University Press.
- Schillmeier, M. (2008). Globalizing Risks. The Cosmo-politics of SARS and its Impact on Globalizing Sociology. *Mobilities*, 3 (2): 179-199.
- Seguel, A. G. (2011). Experimentar y codificar: consecuencias simbólicas del artefacto tecnológico. *Teknokultura*, 8 (1): 60-75.

- Seguel, A. G. & Oré, C. (2010). La comunidad como excusa y el territorio como información: bordes sociales de la cibercomunidad. In G. Gatti, B. Tejerina (Ed.) *La comunidad como pretexto. Las ciencias sociales ante la reactivación comunitaria de la vida social*. Barcelona: Edit. Anthropos, pp. 27-50.
- Tirado, F., Seguel, A. G. & Rocamora, V. (2012). ¿Por qué la gripe A alcanzó su condición global? Los operadores socio-técnicos de las epidemias y sus aspectos globales. *2nd meeting of the Spanish Network of Social Studies of Science and Technology (esCTS)*, 23-25 May, 2012. [unpublished]
- Valente, I. (1970). Los artefactos de Parra. *El Mercurio*, September 27.
- Van Loon, J. (2005). Epidemics space. *Critical Public Health*, 15 (1): 39-52.
- Wark, M. (2004). *A hacker manifesto*. Cambridge MA: Harvard University Press.
- Watts, S. (1997). *Epidemics and History: Disease, Power and Imperialism*. New Haven CT: Yale University Press.
- WHO (2010). *Global Alert and Response*. Retrieved from:
<http://www.who.int/csr/disease/swineflu/updates/en/index.html> [29/04/2011]