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Zika Virus, a research agenda for (thinking about) the Social and Human Health Sciences

> Afflictions are spawned in all of society, along with efforts to deal with them. And given the constant emergence and recurrences of different kinds of afflictions, that range from chronic diseases to the consequences of violence, as well as life's minor pains, every subject and social group produces and reproduces representations, practices and experiences about the suffering, anxieties, troubles and fears that affect them[1]. (p. 267)

News of a new epidemic recently swept across the globe. Two global events, the World Cup of 2014 and the 2016 Olympic Games, took place in Brazil, a country that is affected by the *Aedes Aegypti* mosquito, which carries the dengue, *chikungunya* and Zika viruses. This mosquito is a vector of many ills, as well as a epicenter of analysis. Although this small black creature with white stripes that lives in clean waters could pass unnoticed, it has nonetheless mobilized people, social relations, bodies, laws, public policies, rights, international bodies and entire nations. But the opposite is also true. The mosquito itself, this tiny being from nature was and has been (re)created by nations, by social inequality, production relations, disorganized cities, social actors, microbiology, epidemiology, clinical work and so on.

What is interesting is that in the swing of the pendulum between the creator and the creature, the words of the Argentinian anthropologist Eduardo Menéndez[1] in "Subjects, knowledges and structures" seem to ring true: we reproduce representations, practices and experiences about illnesses and thus, in the ultimate instance, we are all the time creating such illnesses. This process is exactly what interests us and serves as a basis for reflection for the social and human health sciences, to which this editorial is directed, in the belief that its broader and less focused lens challenges purely biomedical readings.

The Zika virus takes its place alongside what was avian flu in 2003, H1N1 influenza in 2009 and Ebola in 2011, a situation, according to the World Health Organization (WHO) of "emergency in international public health"[(a)]. On 1 February 2016, it officially became a global and institutional concern, but long before this the virus had already touched many silent homes in small cities, couples, loved ones and emotions, bellies and fetuses[2]. With this it seems to us that increasingly we cannot look at such a fact in isolation, either at a macro scale or through the lens of a microscope. It is not just about a subject from microbiology, from health surveillance, neurology or epidemiology. Nor is it just about the management of health policies, mayors' offices, states, fumigation policies, family health, tactics for mosquito eradication or lines of care for children and mothers affected by the virus. Not only. It also does not seem to us to only be about the consequence of social ills and inequalities that are studied and classified in the political sciences, sociology or economics. Even less so is it about the early stimulation of occupational therapy, or fetal development in the fields of gynecology and reproduction or the debate about the legalization of abortion in Brazil. Not only. Or not only, but perhaps many of these issues at the same time.

When thinking about the epidemic and the "subsequent" microcephalia in Brazil, what really stands out is how this tiny animal, the infected mosquito that has already lived for so long among us, operates at the analytical epicenter of so many varied readings and areas of knowledge. What also stands out is how the relational focus of analysis proposed by Menéndez works in these situations,

[(a)] http://www.who.int/csr/disease/en/

placing us before emergent and cross-cutting themes that, before belonging to specific territories of knowledge, blurred borders and drew together the micro with the macro, biology with the emotions, subjects to structures and so on.

If Menéndez positions himself thus when it comes to thinking about studies in collective health and/or public health, some time ago the French anthropologist, Bruno Latour[3], has written about what is called actor-network theory or symmetric anthropology in order to think about the "reaggregation of the social" and to escape from the epistemological dichotomous schemes that modern science gave us. By such a theory, Latour seeks to flee from the idea of action based on cause and consequence, using the idea of the network as events that are distributed and not connected by effects. For this reason, the network is not something that already exists; rather it is constructed on a daily basis by humans and non-humans, objects and people, with the same weight and influence. It is a proposal that is aligned to what could be thought of as post-structuralism, but even more so to ideas that seek to mark a break with what Jeffrey Alexander[4] wrote about as the pendulum of the social sciences: readings of the world that are either grounded and determined in/by structures and institutions, *à la* French School of Sociology and its supporters, or other largely Weberian readings based on the choice of the rational actor that slowly led to more recent debates about agency. Both Latour and Menéndez, as well as a host of other authors that could be cited here, call upon us to assume new ways of thinking: to go beyond the fixed categories of our modern ways of thinking and above all to think relationally, symmetrically and by reaggregating elements that had otherwise been considered distinct, going beyond the theoretic movement of the social sciences mentioned.

So, what in effect is the result of all this? The answer is still far from being clear. But in the final analysis, it can lead us to ways of understanding the world that are less classificatory and separatist, and are more transversal, emergent and trans- and/or inter-disciplinary, perhaps to ways of thinking in networks. Indeed, this terms is also used by Tim Ingold[5], another anthropologist who has sought to overcome archaic ways of understanding the world. If this movement is something more recent in anthropology, in history it is found in Foucauldian thinking and above all in his final publications about ethics and taking care of the self. But even before this, the idea is found in the idea that power always is or results from resistance, in a movement of two in one, in something that sums together, and is relational. In the fields of psychology and education, similar forces can also be cited if we think of currents in schizoanalysis and of Guattari e Deleuze's[6] notion of the "rhizome" or Edgar Morin's[7] complex thought.

However, the field of study of health cannot be untouched by a general movement of reflection about our thinking, and for this reason, recently ideas such as transdisciplinarity have begun to take hold in collective health, a field of practices and knowledges that seeks to bring together the macro view of epidemiology with the social view from the social and human sciences, and with the political and administrative structures that fall under the auspices of management and planning. This view from above, looking at the means and the actors as well as at structures, adds a greater degree of complexity to our understanding of the social phenomenon of illness and care, showing us many corners and loci for debates at the intersect with themes that were unthought of in certain areas of study.

The Zika epidemic in Brazil and elsewhere in the world leads us to address the possibility of this complex or complexifying thought which, as such, is emergent. It is through such a situation that we use the microscopic and the biological as a

means of reflecting on themes that are general and political. Otherwise, we come to this:

> The Zika virus (ZIKAV) was isolated for the first time in 1947 in rhesus monkeys in the Zika forest of Uganda. In 1948, it was found in *Aedes* mosquitos and in 1952 was isolated in humans. In 2007, the first outbreak was described in a small island in Micronesia. In 2013, there was a second outbreak in French Polynesia. The third large outbreak of the infection, which has yet to be controlled, began in the Northeast region of Brazil in May 2015. In October 2015, 14 states in Brazil reported cases of the infection and in Colombia cases were reported among locals[8]. (p. 431)

The virus was isolated in laboratories, but soon affected nations and international organizations. The virus rapidly went from being an element of nature to being an entity that afflicted social life at scale: an organism that was far from being isolated and had connected human and non-human beings, nature and culture. From the epidemic we may, for example choose to focus on its origins, its mutations, its characteristics and its journey through human beings and then through countries and continents. We may speculate about how it arrived in Brazil and who brought it into the country. On the other hand, we may wish to focus our attention on mapping the regions that are most affected and their health and social profiles, observing the regional differences and social fragmentation of contemporary Brazil. Similarly, we may choose to portray the socio-medical profile of people afflicted by Zika, in terms of age, sex, race/color, residence, number of children, marital status and so on. We could open up an historical discussion about the eradication of the mosquito decades ago and its widespread existence nowadays. We can, in other words, think deeply about *Aedes*.

Once we have cast our eye on human beings, and carried on to the theory of the actor-network, we arrive at infected people and policies for care. This covers a whole territory of studies that might include care for infected women during pregnancy, the clinical perspective on symptoms and proposed therapies, and the design of diagnostics[2]. These very studies may touch upon the fields of psychology and other areas that are concerned with the mother's emotions when she is pregnant and going to give birth to a child with a disability, the health of carers, assistance during the birth of babies with microcephalia and/or the nation state's response to such an emergency.

After the birth of the child, a whole array of questions also opens up. How do the child and mother live? What health services are made available to them and how do they effectively operate? What exactly does "precocious stimulation" consist of? What are the social readings of disability? How do women-mothers and professionals organize around the needs of the child with microcephalia? How do the states that are more and less affected relate to one another in terms of international cooperation? How does the state care for its population and protect them from the new ills brought about by the epidemic? In what ways, for example, have these families received the policy known in Brazil as the 'benefit of continued provision' from the government? In turn, one similarly arrives at the debate about legal abortion and interrupting pregnancies in confirmed cases of microcephalia, opening up space to reflect on contemporary sexual and reproductive rights and on ethics. Repercussions in the media about the epidemic and the social panic that it provokes may also, for example, be of interest to students of communication or image and sound, more generally. Thus

successively, there are many possible questions, approaches and areas of study related to Zika, which is without doubt a research agenda that is highly current.

In another sense, we light upon research about Zika found in the biological sciences and the social sciences, about its *modus operandi*, areas and parameters of knowledge and methodologies used. In the case of the design of the National Network of Specialists in Zika and Related Diseases, Renezika[b] in the Ministry of Health, multidisciplinary teams were established in order to understand the phenomenon and its multiple facets. These teams were made up of sociologists, anthropologists, doctors, epidemiologists, social workers, occupational therapists, nurses, psychologists, public sector administrators, public health professionals, and many more. All of these actors are drawn into the phenomenon that began from and has at its center the tiny mosquito, but that then branches out into so many other areas: public policies, media, mothers' movements, disability, health services, health surveillance, ethics, abortion and global health. That is without mentioning that in the interim the research methodologies also begin to become intertwined, with quantitative and qualitative focuses, participatory methodologies and focal groups. In other words, the issues range from the very large scale to those concerned with meaning at the micro level and those related to social actions.

[b] For further information, see: http://portalsaude.saude.gov.br/index.php/renezika.

Taking this research context as the starting point, even if it is somewhat prospective, but also still going on since many studies are yet to conclude, the journal Interface invites researchers from the social and human sciences in health to submit for publication their texts about Zika in Brazil, giving consideration to ideas like relationality, transversality and emergence in fields of knowledge, methodologies and research themes. With this editorial remit, we believe that the journal addresses and draws upon a much broader movement of reviewing its own way of thinking, based on a phenomenon that is highly contemporary and urgent: the Zika virus and its multiple existential connections. Taking into account not just the urgency of the response required, one can also consider that thinking is as important or even more important than knowing. The thinking proposed by Hannah Arendt[9] that seeks to understand meaning before identifying cause and consequence and thus "it is the human way of striking roots, of taking one's place in the world into which we all arrive as strangers". Thought in the social and human sciences…

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