

Comment

Not in front of the children! The controversies of science and science communication for children and youth

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In the decade of the 1990s, when I was editor of a science communication magazine for children from eight to twelve years old in Brazil – *Ciência Hoje das Crianças* (*Children's Science Today*), published by the Brazilian Society for the Advancement of Science – a curious thing happened: following my journalistic instinct of including hot and attractive topics, I prepared a report on AIDS. The report seemed so interesting to me that it became the cover topic of the issue. Later, I heard that this shocked the scientific committee. How does one talk with children about a topic that is so delicate, controversial and somewhat taboo?

Officially, this episode was never brought to my attention. The person who told me about it was one of the scientists who belonged to the scientific committee of the magazine, Angelo Machado, a researcher at the Federal University of Minas Gerais. A daring, clever man with a long trajectory of writing for children, he confessed that, upon seeing the edition of the magazine, he was startled at first. But then, he quickly replied to himself: why not?

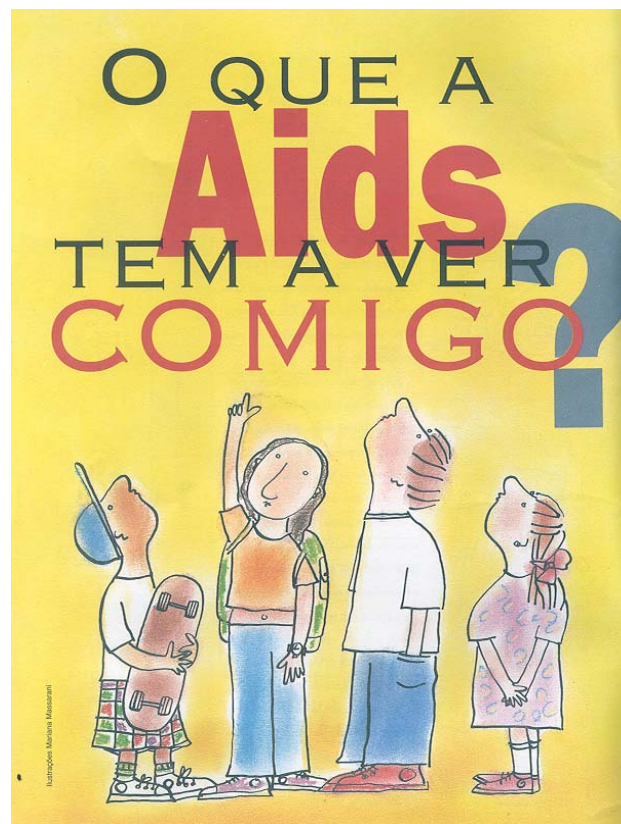


Figure 1. What does AIDS have to do with me? *Ciência Hoje das Crianças*, n. 48.

According to data compiled by the World Health Organization, one million adults and children in Brazil would be carriers of the HIV virus in 2005.¹ The Brazilian Ministry of Health has invested heavily in campaigns against the disease that are widely broadcast in high impact mass media – these campaigns include the mentioning of condoms, certainly another taboo. Thus, the subject is already being talked about. To create a glass bubble around children is not only naive; it also belittles the capacity of children to understand complex subjects and deal with the dialogue on topics of this nature.

Transgenics is another topic that has been invading the Brazilian mass media for some time now, involving great controversies. Since 1998, Monsanto has tried to introduce these cultivations in Brazil. However, because of a number of actions on the part of segments of civil society, the ban on commercializing such crops was maintained in Brazil for several years.

In 2003, the year in which the controversies became particularly intense in Brazil with regard to the subject, farmers from the Southern part of the country announced that they were illegally planting transgenic soybeans, using smuggled seeds from Argentina. According to these farmers, a large part of the soybeans of that harvest (70%) were transgenic. After announcing that the ban on commercialization would be maintained, the Lula administration decided to allow for “temporary” sale. The permission was renewed in following years until the sale of soybeans was legalized in 2005, with the passage of the Law of Biosecurity.

National surveys, however, have shown that the majority of the Brazilian society are against transgenic foods,^{2,3} with around 70% of those consulted affirming that they would prefer not to consume this type of food. Even with legal authorization, the controversies around the topic still continue today and are systematically and widely broadcast through the mass media. Clearly, the Brazilian government and the scientific community have not established dialogue with the Brazilian society.

In this context, it is worth mentioning a publication that we prepared, *Transgenics in Debate*. In this publication we sought, on the one hand, to clarify what genetically modified crops are and, on the other hand, to bring the controversies around the issue to the discussion. Initially prepared for farmers, we also prepared a version for children and youth, at the request of the farmers themselves. The version for children maintained the essence of the publication for adults – that of establishing dialogue on the topic. Along these lines, we sought to present, in the most impartial way as possible, various aspects related to the controversies and the interests that were behind the arguments being supported.



Figure 2. Cover of the leaflet entitled *Transgenics in Debate*.

Equally, we support the importance of bringing to the debate the discussion around topics such as stem cells and nanotechnology, presenting the scientific news, but also discussing controversial aspects related to the topics.

Another topic that has been gaining space in the media – and in the imaginary of children – is the question of climate change. A recent contest of children's drawings sponsored by the Ministry of Science and Technology and by the magazine *Ciência Hoje das Crianças*, with the theme of showing Earth in 50 years, showed that a large number of children associate science and technology (S&T) with something that will bring destruction to our planet, in opposition to environmental concerns, which are widely disseminated among children.

The results of the drawing contest, which brought together nearly 1,000 drawings sent by children from all over the country, are disturbing. It seems important to me that children are expressing that a misuse of S&T can have a negative impact on the planet. Yet, when we speak of establishing a dialogue with children on S&T topics and their impact on society, we are not referring to creating a new generation that simply associates these topics with destruction. A dialogue of this nature is not synonymous with pessimism.

S&T can also be the key to reverting the current situation.

It is important to speak of controversies and of the impact of S&T in society. But we cannot put aside a fundamental facet of science communication for children: to evoke their curiosity on topics of science and that which is happening around them.

Summing up: we need to establish a dialogue with children about topics of S&T, their controversies and the impacts on society. However... until what point do we establish this dialogue? And, more importantly, how do we do it?

Translated by Robert Garner

Notes and references

¹ Epidemiological fact sheet on HIV/Aids and sexually transmitted infections. Geneva: WHO, PAHO, Unaid. December, 2006.

Accessed on January 26, 2008 at http://www.who.int/GlobalAtlas/predefinedReports/EFS2006/EFS_PDFs/EFS2006_BR.pdf

² IBOPE [Brazilian Institute on Public Opinion and Statistics] (2001). Pesquisa de Opinião Pública sobre Transgênicos [Survey on Public Opinion on Transgenics]. Accessed on December 6, 2007 at http://www.greenpeace.com.br/transgenicos/pdf/pesquisaIBOPE_agosto2001.pdf

³ IBOPE [Brazilian Institute on Public Opinion and Statistics] (2002). Pesquisa de Opinião Pública sobre Transgênicos [Survey on Public Opinion on Transgenics]. Accessed on December 6, 2007 at http://www.idec.org.br/files/pesquisa_transgenicos.pdf

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