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About	O Globo (The Globe) is a Brazilian broadsheet newspaper based in Rio de Janeiro, Brazil, with a readership of 1.2 million people. O Globo is the most prominent print publication in the Grupo Globo media conglomerate - Brazil's largest media group - and is described by TMNW Worldwide as "the leading quality daily newspaper in Rio de Janeiro" ( <a href="http://www.tmnw.com/premium-network-global-reach/premium-latam/premium-brazil-rio">http://www.tmnw.com/premium-network-global-reach/premium-latam/premium-brazil-rio</a> ).
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In the context of the Global Symposium on Artificial Intelligence being held in Rio, the article identifies Sandra Cortesi as an expert in the field of the relationship between youth and digital technologies. With a focus on Artificial Intelligence (AI), the reporter asks Sandra about the risks to children and young people brought by the rapid development of AI. In the interview, Sandra gives advice about the policy changes needed to ensure that AI technologies are beneficial, and provides some tips about parenting in the digital age.

## **We still need to define how to create and use artificial intelligence systems, says researcher**

*Coming from Harvard, Sandra Cortesi is in Rio to attend a symposium on progress in the area and its inclusive integration of digital technologies*

*by Cesar Baima*

08/11/2017

RIO - Sandra Cortesi studies the relationship of children and young people with digital technologies and social media at the Berkman Klein Center for Internet & Society at Harvard University. She is in Rio to participate in the "Global Symposium: Artificial Intelligence and Inclusion", which takes place from Friday to Thursday at the Museum of Tomorrow, in Rio's Center, where about 200 experts from more than 40 countries will discuss how the advances in the area are changing the world. Sandra is also one of the only [5] participants in the main public activity of the symposium: the panel "Life in the future", which will happen tomorrow from 6.00PM. Check out the interview she gave to GLOBO:

**We are seeing the first generation of so-called "digital natives" coming into adulthood, people who grew up in a world connected 24 hours a day to the internet through a variety of devices. How has this affected their psychological and social development and how can artificial intelligence (AI) enhance the influence of these technologies on the development of children and young people today and in the future?**

As we all know, in many parts of the world, young people are accessing digital technologies more and more rapidly, and they have learned a great deal about how to use them, with an almost sense of urgency. So it comes as no surprise that it has had a huge impact on all areas of their life, shaping various domains such as identity, friendships, relationships, as well as the way they learn and express themselves. It's not that much different from what is happening with adults. But when we consider the impacts of AI, we still do not have many studies about its influence on children and young people. There are two areas we are just starting to explore: AI in education and learning, such as the development of AI tutors or virtual assistants; and AI in the well-being of young people and children with algorithms that can detect their moods - if they are depressed or are having suicidal thoughts - as a prevention strategy or intervention.

**You mentioned the use of algorithms to help identify the moods of young people. Today we see technology creating what is called "digital bubbles", which in a way "limit" our access to information according to what the technology estimates to be within our interests and preferences, thus reinforcing ideologies and cognitive biases. Does the introduction of AI in these algorithms risk further exacerbating this phenomenon?**

Clearly AI has and will have an increasing impact on the performance of these algorithms, which are already strongly influencing the information we see on social media, such as Facebook. This will not disappear and will most likely intensify, again affecting not only young people but also adults. And that's why meetings like this symposium are so important. We need to discuss whether we want these algorithms to be defined in a way that has a positive outcome for society, such as whether they should be fair and inclusive, taking into account issues such as diversity, etc. This is something that we are not seeing much of so there is plenty of room for improvement. In addition, the algorithms need to be more transparent. We need to know how they "choose" the information they are presenting to us, how they were created, and what their parameters are. In time we will have more to say about what we see and how these algorithms are created. Ideally, in the future people will be able to give their opinion on the design and implementation of these AI-based algorithms.

**So AI could be used to improve these algorithms, making them, so to speak, more "sensitive," that is, more open and aware of the diversity of information available in order to break these "bubbles," or instigate them to leave from them?**

I'm generally optimistic, but at the moment I think the odds are 50-50, that is, AI algorithms can both reinforce these bubbles and help break them. So we have a great responsibility as a society to work together on this. And by society I mean not only young people but also their families, teachers, technology companies, policymakers and decision makers, all talking collectively to find out what kind of world we want to create, how we want to shape these algorithms. At the moment we can go either of these two ways. This can get better or worse, and now is the time to shape this, this is the time to be having the discussion. Currently, most of these decisions are being made basically by few of these actors. Developers talk to each other about what types of algorithms they want to create. Policymakers talk to each other about how to regulate the use of these algorithms, but in general the people who are most impacted by these technologies are not participating in the conversations. So once again events like this symposium are important for bringing together people from different fields and areas, different actors to have this kind of discussion.

**We are also beginning to discuss what kind of relationship children today are building with digital assistants such as Siri, Alexa and Cortana, and how this can affect their psychological and social development by accelerating it in some areas, for example by risking making them more "bossy", anxious and impatient. How can advancement in artificial intelligence technologies affect this?**

It's an interesting question, but again it's too early to tell where this will lead us. I think it will be a bit of both. On the one hand we will be so accustomed to talking to an AI that we will forget how to say "thank you" and "please", as this is not necessary when asking for something from Alexa, and maybe we will stop being kind even with our friends and family, changing our relationships with other humans. But that can also go the other way, with something like Alexa asking you to be kinder. She may, for example, identify a tone of voice as aggressive and say something like "hey, you could be nicer to me," or maybe "you can ask for it again in a more polite way by saying 'please' and thank you'". And again, this will depend a lot on how we're going to design these technologies and what we're going to want them to do. Will they have a social interest or will they only serve commercial interests?

**And beyond relationships, how can these AI technologies affect our decisions and choices? Will we see a replacement of the old "dad knows everything" or "Mom knows what's best" for something like "AI knows everything"? Will we start from a life aided by a guided life, determined by digital technologies? Will we ever trust that an AI really knows what is best for us?**

In simple matters, such as listing facts and data, digital technologies are already more reliable than humans. But I think for a long time we will trust or want a second opinion from someone we know, someone we have a relationship with. But it's hard to say. We already have domains that are considered to be essentially human where AI is more reliable than us in decision making because humans have always had and will always have biases and blind spots when they analyze other humans and make choices. I'm curious myself. We will certainly see decisions being made or taken with the help of AI, more than we do today, and in various areas of life, such as what people see on social media, what courses to enroll in at school. We already see judges using AI systems to know what decisions to make in court, or doctors using AI systems to analyze imaging tests and decide treatments. So it is something that will permeate various fields of life with an increasing impact. But I also think humans will continue to look to other humans for many things.

**So, even as AIs become increasingly accurate in their decisions, will humans continue to seek the opinions of other humans?**

Yes, especially in situations involving emotions, such as who I should choose as my partner, or with whom should I work. Technology can make suggestions based on algorithms and predictions, but in the end, in decisions involving emotions, AI will be deficient.

**And what can parents do, or should they, do in their children's relationship with digital and AI technologies? What about the rights of children and young people to build their own digital identity and have some privacy in this field?**

Well, firstly being a parent is one of the most difficult jobs out there. I think the first thing parents need to know is to identify which technologies they are least familiar with and try to find out what kinds of new tools are available and being used by young people. From there, have an honest conversation with your kids about what they are doing, what they like most in a way that's not about creating rules and forbidding them from using things. I always encourage parents in their dinner conversation or at other times to ask their children not only what their day was like but also include questions such as whether they saw something interesting online, whether they made new connections or friendships on social networks, what sites they find interesting so as to include technology in their conversation in a natural way, to talk about this strange thing that a parent may not be as familiar with as their child. Research shows that regulatory approaches, in which parents, for example, prohibit children from using something, do not work and are counterproductive, because if the child wants to use that technology, they will find a way to do it without their parents knowing. So you have to create a family culture that includes technology, not just saying "this can [be used]", "this can not".

**How to participate**

*The Global Symposium on Artificial Intelligence and Inclusion will be held between November 8 and 10 in the Museum of Tomorrow, with the participation of invited researchers only. Entries for the public panel "Life in the future" that takes place on Thursday are open on the site <[www.museudoamanha.org.br](http://www.museudoamanha.org.br)>*