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Protecting Our Children In Cyberspace

by

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Today I would like to write something that is very dear to me and that is protecting our children, the most vulnerable in our society. This article was motivated by the panel in which I participated at the East West Institute's (EWI) First Worldwide Cyber Security Summit held in Dallas, Texas May 3-5, 2010. Ever since I became a mother thirty years ago, I have been passionate about this topic. In the early years, I was concerned about preventing dangerous events like kidnapping and abuse and more recently I have been exploring ways to protect children in cyberspace. My eighth grade teacher, Rev. Sister Regis, repeatedly instilled into us girls – “the children of today are the citizens of tomorrow”. We need to take our duties and obligations as adults, parents, teachers and lawmakers very seriously and protect our children.

I was fortunate to be invited to participate in a panel at the National Academy of Sciences chaired by Hon. Richard Thornburgh, former Governor of Pennsylvania and former US Attorney General in 2000. My first talk to this group in July 2000 was on the application of Data Mining to detect Pornography on the Internet as well as discussing the privacy implications of data mining. Note that we are talking about 2000 when Internet was still in its first generation. We did not have online social networks. We were only beginning to have chat rooms. So from the technology point of view, it was the “old days”. So my talk was on classifying images using the classification techniques in data mining to determine whether an image was inappropriate or not. In fact, Professor Gio Wiederhold of Stanford University was also a member of this panel and he gave a very interesting talk on this topic. I also talked about the privacy problems that could arise due to data mining. Note that this was two years before DARPA's Total Information Awareness program and a year before 9/11.

I attended the press conference held in 2002 on this effort. However, I noted that within 2 years, technology had advanced rapidly. Therefore, many of the things we were looking at in the year 2000 were somewhat obsolete. I was also quite disappointed to watch a program on a PBS station a few weeks prior to this 2002 event about so little being done about preventing pornography being displayed on the Internet. In fact, I mentioned to Hon. Richard Thornburgh that one way to prevent children from watching pornography on the Internet was to stop pornography on the Internet entirely. Now thinking about it, I was rather naïve at that time. Some estimate that it is now a \$20 billion industry (likely in the US alone) and near impossible to stop it. There is too much at stake for too many parties.

So now we are in the year 2010 with significant advancements in online social networks and gaming technologies. Furthermore, we still have not solved the problem of protecting children from inappropriate content on the Internet. The meetings I attended the last two days gave me several new ideas on how we could proceed. We have many challenges including the following:

Exploiting Children in Cyberspace: Here adults use children as porn objects and make money. There are strict laws against this in many countries. But still this horrible activity is being carried out. Even more dangerous, children are being lured by adults via online social networks and raped and murdered.

Bullying children in Cyberspace: We have heard of cases where children have committed suicide due to cyber bullying. We heard of the girl who committed suicide in Boston in January 2010. We also heard of the mother of a girl bullying another girl via a social network site and drawing the latter to suicide. Still the bullies are walking away free in many cases. This is absolutely unacceptable in a civilized society.

Corrupting Children in Cyberspace: Viewing pornographic material can be terribly disturbing to children and even to many adults. Violence in movies including violent games on the web can also be very disturbing. These images could have long-term psychological damages and these very innocent children could turn into rapists and murderers when they grow up.

Distracting Children in Cyberspace: We are talking about the gaming industry. Many children are addicted to games and this is causing them to lose sleep and get failing grades. The long term effects of this are enormous to our society. In fact a former FCC (Federal Communications Commission) commissioner mentioned to me that he/she was taken on by the gaming industry.

While Cyberspace can be terribly detrimental to our children, it is also the greatest resource for our children with respect to Education, Entertainment, Enlightenment and Evolution. So many good things can be learned from the web, such as information about places, people and things. Online social networks in some ways have been great for society especially keeping in touch with friends and family. Children, through good education in cyberspace, can evolve into responsible adults. Therefore, we cannot go back to 1900, 1950 or even 2000. So the challenge is how do we move forward and take advantage of all the great technologies we have today and still have a safe society?

The answer is in the three or more P's: Policies, Parental Control, and Privacy. Policy makers have to work with lawyers to develop appropriate policies and laws for Internet use. In fact, at the EWI summit, there was a discussion about an Internet Passport. It was stated that when we travel abroad we have to carry passports. Yet in cyberspace there is no such passport. Without a doubt, policymakers and lawyers have a critical role to play. However, I feel that there is this perception that due to technology changes, we should not be focusing on technology as much. This is completely a wrong approach to take. Without technology we would not have had cyberspace. Therefore, without technology we cannot secure the cyberspace. We can have the best policies, procedures, and laws. But we need appropriate technologies. That is everyone has a critical role to play.

Parental control is a must. Parents, teachers and law enforcement have to work together and share as much information as possible. Many of us are working on assured information sharing for organizations such as the DoD, Intelligence Community, DHS and DOJ. However, we must extend this to the Department of Education also. I believe that parents have to provide the primary control for the children in cyberspace. This means parents have to be intimately involved with what their children are doing in every aspect. Parents have to spend time with their children – not have babysitters raise their children. There are many viewpoints on this from psychologists. I know that some would be furious about strong parental controls, but we need such controls. I strongly believe in children's rights. Children should not be beaten or punished. However, children should be protected and therefore parental controls are critical for the privacy and protection of the children.

It should be noted that often parents are proud for their children's accomplishments and they post information about their minor (under 18) children on their web sites. I believe that this should be a strict no-no, unless at the very minimum the files are password protected. Then the question is what should the passwords be? They should be complex enough to make them nearly impossible to break. I would love to post information about my son's accomplishments, (and he is now an adult) but I will not. My husband is even stricter than me about this. The parents who are posting information about their minor (under 18) children are exploiting their own children and essentially telling the predators, "molest my child".

The third P is Privacy. At the meetings the last two days, one young university student said that she has solicitations from those outside her circle to be friends with her. She does not like this aspect at all. I see children divulging many aspects of their lives and even the most intimate details about them in their Face Book pages. This is a complete disaster. Therefore, we need to educate our children about these dangers, be vigilant and of course have appropriate privacy controls.

So what then is the role of technologists? They are crucial. They are the ones who have to ensure appropriate privacy controls. For example, in addition to direct privacy violations, we also need agents that will monitor what the children enter, reason about the information and determine whether there could be unauthorized inferences. If so, the agent must inform the child and perhaps even the parent. A recent article in the Boston Globe (September 20, 2009) talks about various initiatives on privacy of online social networks. In the project Gadar at MIT, students were able to predict whether a person was gay or straight from his/her web pages. In the project at the University of Texas at Dallas, researchers were able to predict political affiliations from Facebook pages. In the work at the University of Maryland, the researchers were able to make some predictions about attacks on social network pages. These works show that data mining on Facebook pages can reveal many things about many people. In many cases we don't even have to do data mining. Just reading the Facebook pages can give us highly sensitive information. Therefore, we need to develop appropriate technologies to prevent the general public from making unauthorized inferences that can violate the privacy of individuals.

Another technology that can help a great deal is intelligent firewalls. I believe that this has to be a must. Any image that passes the firewall that is deemed unacceptable should be removed from the traffic. The question then is what about the pornographic material watched by adults? I

believe that this has to be discarded also by the firewalls unless there is a way to separate the adults from children. I believe that parents have to make sacrifices for the sake of their children.

The group at the EWI summit also spent quite some time discussing cyber bullying. While some felt strongly that profiling can be dangerous as innocent people may be profiled, they agreed we need ways to profile bullies by interviewing law enforcement, teachers and even the children. I believe that we need to gather as much information about them as possible and install agents that could detect bullying and immediately disconnect the perceived bully's account. Now this could violate civil liberties, but I would rather this happen temporarily than a child committing suicide.

Finally, I cannot stress enough the importance of education. We need adults to be educated on child psychology. This could be through universities, community colleges, nonprofit organizations and yes, even online. Adults need to have a good understanding of what it means to raise and educate children. If the adults are educated in child psychology, sociology and health issues, then perhaps we might have less violence and abuse against children which might lessen the dangers in cyberspace. Religion could also play a role here.

Remember our children are precious, they are our future. As citizens of our respective countries and as citizens of the world, we owe it to ourselves, our children and the world communities to not only raise well-balanced children but also it is our duty to protect them as much as we can. Let us work with organizations such as the East West Institute, the United Nations, Save the Children and many others to make this happen. Recently, the US First Ladies have taken child causes as their platforms and this is great. Hillary Clinton (current Secretary of State) wrote a wonderful book "It Takes a Village" to raise children. Laura Bush took on early childhood education as her platform. Michelle Obama has taken on obesity against children as her platform. All are very worthy causes. Hopefully our current or the next First Lady will take on the protection of children in cyberspace as her platform. We need celebrities like Oprah Winfrey and Angelina Jolie to do more in this area. They have devoted a lot of their time and money to children's causes. We also need people like them to take on "Children in Cyberspace". It now takes a World to raise children. Every citizen of the world must do his or her part to save our children in cyberspace.