

The Future's So Bright...

The former chief scientist at Xerox goes up against a California high-school senior on whether all this cool technology is bringing people together or keeping them apart.

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John Seely Brown

Former chief scientist at Xerox Corporation, now consultant and "chief of confusion"

Shannon O'Brien

Senior at Marin Catholic High School in Greenbrae, California, and gymnastics instructor



John Seely Brown (left), Shannon O'Brien (right)

Resolved: The future's so bright, I gotta wear shades.

Brown: Sure, the future looks great. Folks of my generation won't have to pay off the gigantic debt our government is currently endowing today's kids with and we can continue to live and enjoy a virtual economy - spend today; pay tomorrow.

But let me be a bit more optimistic. From where I sit, I have never seen so much cool innovation as is beginning to happen in the world. We are experiencing a "Cambrian Explosion" of innovations that will impact every aspect of how we live, work and play. Computers are now getting powerful enough to do both cool and deep stuff. We can model incredibly complex physical and biological phenomena that in turn enable us to build nano structures, bio-inspired machines and medicines heretofore unthinkable.

These innovations, unlike many during the dotcom bubble, will directly impact our quality of life through more efficient uses of energy, new forms of clean energy, medical devices for non-invasive surgery and designer drugs that minimize adverse side effects, to name just a few. These advances might just provide us tools and

methods to reverse or at least abate the damage we have been doing to our environment and global warming, more generally. Most specifically for me, though, is the belief that we will see a new form of education emerge--not one based on being taught but one more oriented to passion-based learning within niche communities of interest.

Let's face it, most of what we learn we learn with and from each other doing things, things that matter to us. For example, the capability of today's more participatory web starts to enable us to form communities of interest and to build and share things together. The remix movements are an obvious example, but also consider extreme sports such as extreme surfing. The speed of innovations happening there, not done by corporations but rather done by surfers engaged in passionate and continuous tinkering, leads to awesome advances shared nearly instantaneously over the web and around the world. Yes, what I see unfolding is an organic culture of learning for us all... from sports fanatics to geeks to authors, artists and amateur astronomers. Let's just call it the rise of the pro-amateur class--serious explorations and creations we do for the love of doing it. Remember the term amateur comes from the Latin 'amatour' meaning for love. This more learner-centric, socially based learning, will enable us to keep up with the pace of change and enable us to feel comfortable with having multiple careers as both we and the world unfold at a challenging pace.

O'Brien: I am a teenager, so of course the future looks bright. The future is exciting, different, a step in a new direction. I know I have a lot to experience and even more to learn. The future holds freedom, the future holds responsibility. From a teenager's perspective, the future is a giant leap into the hopeful unknown.

I worry about the future a great deal though. You mentioned that great technological advances have been invented throughout the years.

Amazing technological advances can help bring some fun to your day (X-box, Tivo) but they also tear away from people communicating and bonding like they used to. Many teenagers sit on their computer surfing MySpace or on AIM instead of having actual relationships with their friends. Everyone rushes through the streets jabbing on their cellphone, iPods stuck in their ears. No one has time to be close to...well, anyone. The world is too fast paced. I believe everyone needs to slow down and take a good hard look at the world in front of them; you won't be there forever.

Maybe inventors ought to spend less time on developing a cellular phone with a video camera, laptop and stereo connected to it and start concentrating on more beneficial inventions such as a replacement for gasoline (a fossil fuel on its way to extinction), ways to repair the ozone layer, prevent pollution etc.

Who are the role models for the future of America? Britney Spears? 50 Cent? Are these the kind of people we want our children aspiring to be? I hope not. The media has pumped my generation with images of superficiality ("Desperate Housewives," "The Swan"), violence (video games, movies), drugs and alcohol, and casual sex (any teen movie). An America with morals such as these is not a place I choose to be.

Brown: Perhaps in a way we are both teenagers, since from my perspective the future is also a giant leap into the unknown where we both hope freedom and responsibility--responsibility for a sustainable world--will reign supreme. Indeed, last

year I was part of a workshop called "Information, Silence and Sanctuary" that brought technologists, humanists and theologians together to ponder the consequences of the information overload we are all experiencing. We should have also invited you!

There are a couple of points I might choose to differ with you. First, the Net is enabling us to build and maintain dense networks of friends and colleagues that stretch the globe. When I stepped down from running Xerox PARC I left behind one of the world's best infrastructures I could ever imagine. Yet now three years later and self-employed I have access to library resources richer than ever, have colleagues now scattered all over the world and have an immensely rewarding life-- partially because of the new kinds of connections the Net has provided me. Yet still, speaking personally, I was hesitant to even enter this discussion until we had met f2f. So I certainly agree with you in the profound need for not letting the virtual replace the physical--but let's also recognize that there are many creative ways that it can augment it.

The other point refers to your comment on mass media. Yes, much of mass media has sunk to playing to the lowest common denominator of our society. But digital tools and the Net have enabled many more of us to make and distribute our own independent movies and documentaries that address core issues of society. We also have an emerging blogosphere that is certainly acting as a new kind of watchdog over mass media and opening the door to new forms of participatory democracy. Thus, we now have much more powerful ways for you and your generation to give voice to your vision of the future and to organize social movements to push for the kinds of values you care about.

O'Brien: I'll be honest: when I first read your response I was at a loss at how to reply. This was until New Year's. New Year's Eve I spent the night at a friend's house. The next morning we all woke up and were obviously just tired lumps, with the intention of just sitting around and being lazy all day. We spent the entire day playing board games, sitting and chatting, playing cards, charades, you name it. I looked at the clock and next thing I knew it was 9:00 pm. Where did the day go? To a fun-filled time bonding with my friends.

I was thoroughly impressed that my friends and I spent the entire day without turning on the television once or even resorting to video games. And to be honest with you, it was one of the best times I've had with my friends in a while.

The next day I went to another friend's house, just to hang out. I found myself sitting scrunched on the couch with my four friends glued to the T.V. No one was talking, no one was bonding, creating good memories.

Two of my friends were locked on MySpace, sending comments to their friends, and another friend was sitting in a chair texting. I couldn't help but be a little upset, that a group of my friends couldn't just hang out and talk, and just be together.

Once again, while technology is an amazing development, the people of the world must learn to find balance between the real world of people and relationships and the cyber world, time consuming and overpowering.

P.S. Mr. Scientist....is "blogosphere" really a word?

Brown: It is very true that the digital world must involve new social practices before its true social and civic power can be realized. Sounds like you had a wonderful New Year's and you and your friends were totally living in the moment. On the other evening, though, your friends, though physically present, were not really there. They were probably staging tomorrow or whatever and not fully being present for themselves or for you. As you said, one of the challenges we all face today is maintaining a balance between the physical and the digital (pardon the expression) but actually the balance is between "the now" and tomorrow and "the here" and elsewhere.

You are way too young to realize this, but this is nothing new. Wait 'til you are married and see what it is like to talk to someone who is only half there - no digital devices involved! We all zone out from time to time. In the past people complained about the emptiness of small talk at cocktail parties. It is the same as your friends using MySpace and texting while talking to you--only they are little bit more obvious about it. Next time, tell them to put the damn thing away and to turn off the tube. 20 years ago my girlfriend and now wife made me throw out the TV and it has never returned.

On "blogosphere" I have no idea if it is in any dictionary but I do know it is a movement that has found a new way to hold accountable many of our public and private institutions. Yes, it can be a set of echo chambers but it can also lead to new forms of social capital and maybe even a new generation of leaders.

O'Brien: What do I imagine for myself in the future? Who knows? I remember being in third grade, daydreaming about the year 2000, and oo-la-la the future looked bright. I was convinced I would be riding in flying cars and living on Mars. Well, that obviously didn't work out.

I'm young and the future is a mystery. Nobody knows what's in store! Many times I feel like society puts too much pressure on teens and young adults to have a plan, and to know exactly what they want from life. I mean, hell, my parents and teachers began drilling me on my college options before I was even a freshman in high school! I am turning 18 in less than a week. The world is telling me I'm now an "adult," but I feel so young, and so unprepared for the "adult life" ahead. Being a kid is a blast, finding Neverland doesn't sound like such a bad idea. I know I am going to college, I know I want to travel throughout my life and I know I want to someday find a job that I am passionate about. That's all I know...I'll follow the path as I go, I suppose.

In addition, may I just add, I am young, agreed, but "way too young to realize this"? Well, that's a bunch of B.S. I guess I'm allowed to "legally" be an adult but still not be treated like one. While I am obviously not in tune and updated on all the mysteries of the world around me, I'm not naive or ignorant, and I definitely know what it is like to talk to someone who is only "half there." I suppose when it comes down to it, people are selfish in a way, and will only listen and pay attention to matters they believe "worth their time."
