Exploring New Frontiers: Technology and Autism

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On the internet, there isn’t any body language to read. There are no facial expressions. There is no tone of voice. There is no background noise to mess up your hearing. The most you can expect is an emoticon with a smile or a frown to tell you whether or not a person is joking. This makes communication much, much simpler. If someone sends me a message on Facebook, I don’t have to spend time wondering exactly what they are trying to say. There are no non-verbal cues to sort out. There is less pressure to respond instantaneously, so there is more time to figure out what I want to say.
SOCIAL MEDIA EXPLAINED

TWITTER  I'M EATING A #DONUT

FACEBOOK  I LIKE DONUTS

FOURSQUARE  THIS IS WHERE I EAT DONUTS

INSTAGRAM  HERE'S A VINTAGE PHOTO OF MY DONUT

YOUTUBE  HERE I AM EATING A DONUT

LINKEDIN  MY SKILLS INCLUDE DONUT EATING

PINTEREST  HERE'S A DONUT RECIPE

LAST FM  NOW LISTENING TO "DONUTS"

G+  I'M A GOOGLE EMPLOYEE WHO EATS DONUTS.
• Challenges in basic social interactions
  ◦ Failing to take another person’s perspective
  ◦ Not knowing the unspoken social rules we use each day
  ◦ Trouble with nonverbal cues/body language
  ◦ Rules of conversation
  ◦ Understanding sarcasm

• Site determines the rules
  ◦ 140 characters
  ◦ Comment boxes
  ◦ “Like”
  ◦ Poke
“The best thing about social media is that it cuts across the barriers of traditional communication and geography.” Joseph Wilson, former US Ambassador

Social media is by its nature – Social
  ◦ With 1 like, Tweet, comment, an individual can receive many responses, affirmation, encouragement
“This is where the beauty of social media lies. When there is no one in your life to turn to in the middle of the day (or the middle of the night), Twitter is there. When you have a question about a treatment and you want to know others’ experiences, blogs are there. When you just need some adult contact to take your mind off of all that is so difficult, Facebook steps up.

“For people on the spectrum themselves, online communication eliminates the pressure to respond immediately in conversation and lets an individual choose what conversations they want to take part in. Web conversation is also more black and white, reducing the need to understand all the non-verbal parts of communication that can be so difficult for those with autism.”

Jean Winegardner
Key elements of social media

- Participation
- Openness
- Conversation
- Community
- Connectedness
• Q-Sensor 2.0 - http://www.affectiva.com/q-sensor/

• Use the wireless, wearable Q Sensor to track increases and decreases in engagement, stress or excitement, in real world settings, where individuals are not tethered to a computer
New Technologies

- Auditory Desensitization Game
  - MIT: Games for Autism Spectrum Disorders

- MIT Media Lab: Affective Computing
**SPARX**

- Self-help computer program for young people with symptoms of depression
- Uses a 3D fantasy game environment and a custom-made soundtrack.
- Teaches skills to manage symptoms of depression, in a self-directed learning format.
- Learn cognitive behavioral therapy techniques for dealing with symptoms of depression (e.g. dealing with negative thoughts, problem-solving, activity scheduling, and relaxation)

• Virtual Peers – ArticuLab
• Apps for Autism & Children with Special Needs

  ◦ [http://a4cwsn.com](http://a4cwsn.com)