

**To:** jeffrey epstein[jeevacation@gmail.com]  
**From:** roger schank  
**Sent:** Sat 12/12/2009 6:14:42 PM  
**Subject:** Fwd: Edge Question 2010

john loves me again; maybe he is over gelernter

roger schank  
<http://www.rogerschank.com/>

Begin forwarded message:

**From:** John Brockman <[brockman@edge.org](mailto:brockman@edge.org)>  
**Date:** December 12, 2009 12:01:46 PM EST (CA)  
**To:** roger schank <[REDACTED]>  
**Subject: Re: Edge Question 2010**

Schank is back!

This is great. One minor tweak which I'll send later.

Thanks.

JB

Sent from my iPhone  
+1-917-744-8920

On Dec 12, 2009, at 11:08 AM, roger schank [REDACTED] wrote:

<internet.doc>

roger schank

<http://www.rogerschank.com/>

On Dec 10, 2009, at 8:15 PM, John Brockman wrote:

## THE EDGE ANNUAL QUESTION - 2010

This year's Edge Q is the one big question that everybody is asking today:

### HOW IS THE INTERNET CHANGING THE WAY YOU THINK?

Responses to date: Daniel Everett, Marc D. Hauser, Nicholas Carr, David Gelernter, Rodney Brooks, Paul Bloom, Howard Gardner, Daniel C. Dennett, Mihaly Csikszentmihalyi

Click here to track the responses (or see excerpts below):

[http://www.edge.org/q2010/q10\\_index.html](http://www.edge.org/q2010/q10_index.html)

user id: edge

password: q2010

(password protected until publication)

Contributions are due on or before Sunday, January 3rd.  
The publication date (tentative) is Monday, January 11th  
Please do not circulate.

Hope to hear from you.

Best,

JB

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John Brockman

President

Edge Foundation, Inc.

Visit the EDGE Website at: <http://www.edge.org>

#### EXCERPTS FROM RESPONSES...

DANIEL L. EVERETT

Chair of Languages, Literatures, & Cultures, Professor of Linguistics and Anthropology, Illinois State University; Author, *Don't Sleep, There Are Snakes*

#### THINKING AND LIVING WITH THE INTERNET'S HELP

I cannot use the Internet without thinking about the primitive research conditions I labored under during the late 1970s and early 1980s in the Brazilian Amazon, when I spent months at a time in complete isolation with the Piraha people. My only connection with the wider world was a large and clunky Philips short-wave radio I bought in Sao Paulo. In the darkness of many Amazonian nights, I turned the volume low and listened, when all the Pirahas and my family were asleep, to music shows like 'Rock Salad', to individual artists such as Joan Baez and Bob Dylan, and to news events like the Soviet invasion of Afghanistan and the election of Ronald Reagan. As much as I enjoyed my radio, though, I wanted to do more than

just listen passively. I wanted to talk! I would lie awake after discovering some difficult grammatical or cultural fact and feel lost at times. I could barely wait to ask people questions about the data I was collecting in the village and my ideas about them. I couldn't, though. Too isolated. So I put thoughts of collaboration and consultation out of my head. Now this wasn't a completely horrible outcome. Isolation taught me to think independently. But there were times when I would have liked to have had a helping hand. ...

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### MARC D. HAUSER

Psychologist and Biologist, Harvard University: Author, *Moral Minds*

### CONNECTING THROUGH CONTACT, NOT ELECTRICITY

Let me answer this question by recounting a personal story that took place 25 years ago in Kenya.

I was in Amboseli, National Park, Kenya to complete my PhD thesis on the development of vervet monkey behavior. I had never travelled to Africa. Kenya was my first exposure to the continent. I gradually learned Kiswahili, the local language. I learned it while playing on the local soccer team. I also learned another custom, one that started out as a shock to my male-ness, but soon became a lovely manner of interaction: holding hands while talking to good male friends. When I returned to the United States, and reached out to hold the hand a good buddy, I received a dirty look, followed by some lovely explicatives. I tried to explain that it was a way of connecting, and was not what he thought. Physical contact is good for us. I tucked this story away for years. It was resuscitated in Australia. ...

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NICHOLAS CARR

Author, Does IT Matter?; The Big Switch

#### DEPTHES AND SHALLOWS

As the school year began last September, Cushing Academy, an elite Massachusetts prep school that's been around since Civil War days, announced that it was emptying its library of books. In place of the thousands of volumes that had once crowded the building's shelves, the school was installing, it said, "state-of-the-art computers with high-definition screens for research and reading" as well as "monitors that provide students with real-time interactive data and news feeds from around the world." Cushing's bookless library would become, boasted headmaster James Tracy, "a model for the 21st-century school." ...

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DAVID GELERNTER

Computer Scientist, Yale University; Chief Scientist, Mirror Worlds Technologies; Author, Mirror Worlds

#### THE VIRTUALIZATION OF THE UNIVERSE

The Internet is virtualizing the universe, which changes the way I act and think. "Virtualization" (a basic historical transition, like "industrialization") means that I spend more & more of my time acting-within and thinking about the mirror-reflection of some external system or institution in the (smooth, pond-like) surface of the Internet. But the continuum of the Cybersphere will emerge from today's bumpy cob-Web when Virtualization reaches the point at which the Internet develops its own

emergent properties and systems: when we stop looking at the pixels (the many separate sites and services that make up the Web) and look at the picture. (It's the picture, not the pixels! Eventually top-down thinking will replace bottom-up engineering in the software world-- which will entail roughly a 99.9% turnover in the current population of technologists.) ....

Rodney Brooks

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#### RODNEY BROOKS

Panasonic Professor of Robotics, MIT Computer Science and Artificial Intelligence Lab; Author, *Flesh and Machines*

#### IN SEARCH OF THE DIET-INTERNET

When a companion heads to the bathroom during dinner I surreptitiously pull out my iPhone to check my email and for incoming SMS. When I am writing computer code I have my email inbox visible at the corner so that I can see if new messages arrive -- even though I know that most that do arrive will be junk that has escaped my spam filters. When I am writing a paper, or letter, or anything else serious I flip back and forth scanning my favorite news sites for new gems, or during weekdays I check on stock prices -- they might be different than they were five minutes ago.

I recently realized why I enjoy doing a mindless but timed Sudoku puzzle so much -- the clock stops me from breaking off to go graze on the endless variety of intellectual stimulations that the Web can bring to me. Tragically Sodoku is my one refuge from information provoked attention deficit disorder. ....

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## PAUL BLOOM

Psychologist, Yale University; Author, *Descartes' Baby*

### I AM REALIZING HOW NICE PEOPLE CAN BE

When I was a boy, I loved the science-fiction idea of a machine that could answer any factual question. It might be a friendly robot, or a metal box you keep in your house, or one of the components of a starship. You just ask "Computer: How far away is Mars?" or "Computer: List the American presidents in order of height," and a toneless voice would immediately respond.

I own several such machines right now, including an iPhone that fits in my pocket, all of which access information on the Internet. (Disappointingly, I can't actually talk to any of them -- the science-fiction writers were optimistic in this regard.) But the big surprise is that much of this information is not compiled by corporations, governments, or universities. It comes from volunteers. Wikipedia is the best-known example, with millions of articles created by millions of volunteer editors, but there are also popular sites such as amazon.com and tripadvisor.com which contain countless unpaid and anonymous reviews. ....

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## HOWARD GARDNER

Psychologist, Harvard University; Author, *Changing Minds*

### "GO NATIVE"

The Internet has changed my life greatly, but not in a way that I could have anticipated, nor in the way that the

question implies. Put succinctly, just as if a newly discovered preliterate tribe had challenged my beliefs about human language and human culture, the Internet has altered my views of human development and human potential.

Several years ago, I had a chance conversation with Jonathan Fanton, then President of the MacArthur Foundation. He mentioned that the Foundation was sponsoring a major study, to the tune of 50 million dollars, of how young people are being changed by the new digital media, such as the Internet. At the time, as part of our GoodWork research Project, I was involved in studies of ethics and focusing particularly on the ethical orientation of young people. And so I asked Pres. Fanton "Are you look at the ways in which the ethics of youth may be affected?" He told me that the Foundation had not thought about this issue. After several conversations and a grant application, our GoodPlay project, a social science study of ethics in the digital media, was launched.

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DANIEL C. DENNETT

Philosopher; University Professor, Co-Director, Center for Cognitive Studies, Tufts University; Breaking the Spell

POWER CORRUPTS

We philosophers don't agree about much, but one simple slogan that just about everybody accepts is 'ought' implies 'can'. You aren't obliged to do something impossible (for you). In the past this handily excused researchers from scouring the world's libraries for obscure works that might have anticipated their apparently novel and original discoveries, since life is short, and the time and effort that would have to be expended to do a thorough job of canvassing would be beyond anybody's means. Not any more. Everybody has all-but-free and all-but-

instantaneous access to the world's archives on just about every topic. A few seconds with Google Scholar can give you a few hundred more peer-reviewed articles to check out. But this is really more scholarly can-do than I want. I don't want to spend my precious research time scrolling through miles of published work, even with a well-tuned search engine! So (like everyone else, I figure), I compromise. I regret the loss of innocence imposed on me by the Internet. "I could have done otherwise, but didn't" is the constant background refrain of all the skimpings I permit myself, all the shortcuts I take, and thus a faint tinge of guilt hangs over them all. ...

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#### MIHALY CSEKSZENTMIHALYI

Psychologist; Director, Quality of Life Research Center, Claremont Graduate University; Author, Flow

#### I MUST CONFESS TO BEING PERPLEXED

Answering this question should be a slam-dunk, right? After all, thinking about thinking is my racket. Yet I must confess to being perplexed. I am not even sure we have good evidence that the way humans think has been changed by the advent of the printing press . . . Of course the speed of accessing information and the extent of information at one's fingertips has been extended enormously, but has that actually affected the way thinking unfolds?

If I am to rely on my personal experience, I would probably suggest the following hypotheses:

1. I am less likely to pursue new lines of thought before turning to the Internet to check either existing data-bases, or asking a colleague directly (result: less sustained thought?)

2. Information from the Internet is often decontextualized, but being quick it satisfies immediate needs at the expense of deeper understanding (result: more superficial thought?) ....

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