



Keynote Address to Society for Scholarly Publishing Top Management Roundtable September 5, 2008

KARP: Well, thank you very much for having me here. I enjoyed listening in the last couple of days. So I figure why not go for the gusto and talk about the future of scholarly publishing, because that's sort of what everybody wants to know, right?

I'll just give just a brief introduction. I like to think of myself as sort of an accidental trade publisher. I was working back in 2005 for Atlantic Media, which publishes the *Atlantic Monthly* and *National Journal* and a bunch of other political publications. And we were at that time, it was like, oh, actually the Web didn't die. It's coming back now. It's real. It's going to take over everything now.

And I was forwarding around things inside and someone said, you should do this in a little bit more – forwarding around articles about all the different things that were happening out there in the media world driven by digital technology. And someone said we should do this in a more orderly fashion. And I said, oh, maybe I'll throw up a blog and people will read it internally in Atlantic Media and it'll be more efficient.

And so I started doing this. This was the time when the whole idea of Web 2.0 was really starting to crank up its hype factor, especially in technology circles in Silicon Valley. And I started to linking to a lot of tech bloggers and they were checking me out and that was – saying a lot of things that I guess were challenging some of the hype at the time. And all of a sudden I just started getting an audience without even intending to and I started linking things and people started linking me back and the whole thing just kind of snowballed.

And before I knew it, I actually had what amounted to a trade publication sort of from nothing, with no help from an actual traditional publishing entity or publishing infrastructure.

Where it's arrived is – and I think of it as a trade publication, but you could also wonder – I'm also an accidental book publisher. Someone said, are you going to

write a book? And I could say, well, I kind of already have. And it never goes out of print. It lasts forever. It's constantly updated. This is the kind of thing I might have ultimately put into a book, but I don't know if I'll ever write a book. I don't know if I ever need to.

I said that at the book publishers conference last year, and that –

(laughter)

So what we're finding on the Web is that there's actually a new basis for authority. Here's one reflection of what's happened to this blog is you do a search for publishing on Google. And this varies depending on the time of day, but I'm usually in the top 10 results, and here on this day when I did it, I was in the top five results, on the top five most authoritative things on publishing in the whole world, according to Google, which is just sort of baffling when you think about it.

Why should that be? I'm not that much of an expert. But it comes back to this thing that's we're debating the last couple days about what is a blog, so I thought I'd throw out what I like to assert as sort of the authoritative answer to this question of what a blog is. I think somebody said it yesterday, something along these lines, which is it's just a Web-native content management system.

It is just a piece of technology, but the important thing about it is that it's Web-native publishing. That's actually the significant thing about a blog. It's not about the fact that people are able to publish their diaries or do political rants. It's the fact that this is the first content management system, the first publishing system, that would actually leverage everything that was possible on the Web rather than taking a mindset from print and just drop-shipping it onto the Web.

There's a number of basic features of a blog which explain why it makes so much sense on the Web and why it's such an effective publishing tool.

Reverse chronological order. If you think about it, when you go to a Web – you get a new magazine in the mail, right? And you know that the entire contents of the issue is brand new. It's like, oh, it's all new stuff and I'll just read it.

You go to a website, especially back in the '90s, there was no way to figure out what was new since the last time you were there. You'd go the homepage and you had no way of knowing what had changed, what new content had been put up. Sometimes there'd be a what's new section, but – And the whole idea of reverse chronological order is less about it being a diary, but more about you go there and the new stuff's at the top. It just makes sense for a website.

RSS is also about easily figuring out what's new, so you have your RSS reader and the new content just comes to you as it's published.

Comments. When I'm talking to a magazine publisher, a lot of times, I talk about this. It's unlimited space for letters to the editor. I know it was debated at much length yesterday, the issues with that.

Tags. It used to be in a print publication, you could only put an article in one section. But in blogging software, you can put something in five different sections at once by putting five different tags on it.

Permalinks. This is a huge thing. Big problem with a lot of content management systems on the Web is the URLs would change. Where the content lived would change, which made it impossible to link to things. And a lot of blogs' content started to become very prominent on the Web because it always stayed in the same place and you could always find it in the same place with the fundamental thing that makes the Web work, which is links.

That's what it comes down to.

The other basic thing about blogging software is that the form that you could put something into actually took html. You could actually put a link into it. So many publishers were using content management systems which were designed for print publishing, so you couldn't actually put a link into the content that you were posting.

And the Web, at the end of the day, is all about links, so the reason I show up on Google like that is because of the links.

You can see here, this is something. If you go to search.yahoo.com, type in link: and put in a domain, you'll be able to see how many links that domain has. So as of the last couple days, I have 177,000 links to Publishing 2.0.

This is significant because of search. How many of you know – raise your hand if you know – how Google decides what to show, how to rank? How does that actually work? How does it figure it out in these gazillion Web pages? How does it know?

F: They don't tell you.

KARP: They don't tell you, right? That's the secret sauce. This is what Google figured out. It's really brilliant what they figured out. They said, if you think about it, when one website links to something on another website, it's kind of like a recommendation. It's kind of like saying, check this out. Go here. It's almost like a vote for that content.

So they said, if we could count the number of links going to a website or going to a piece of content on the website, and we counted them all as votes, we could

actually see what was the most important website or the most important content. And they then figured, well, I guess you could game that system because you could just get a bunch of domains and link them all to one domain. So gaming the system was a big problem for Google.

They said, well, what if we didn't just count the number of links into a website, but we counted all of those other websites that were doing linking. How many links did they have? And then how many links did those sites have? And you can see why this required PhDs from Stanford to figure this out.

But they were basically able to create a system of authority on the Web where sites were considered authoritative based on the number of links in by the sites that were linking to them and how authoritative they were, and ad infinitum.

And that's why links are so important and that any content on the Web that exists outside of this linked ecosystem, given the prominence that search now has in people finding content, are outside the entire new content economy.

I'm going to come back to this idea in a moment, but I thought first we would just get to the punchline, sort of what everybody wants to hear. So wrap it all together. What's the future of publishing? Publishing generally, forgetting scholarly publishing. What's the future of publishing? So everybody take out your pens and get ready to take really copious notes now, because here's the answer. Ready?

That's the answer.

But, it's changing faster every day. Not only is it uncertain, but the whole thing is evolving such that these discussions of technology change like every month, every day, every week. And everybody's basically making it up. And that's the sort of mindset you have to be in. Where it used to be a discipline like publishing operated according to a set of known rules and known responses, it's very scientific. You figure out how to manage it.

But I like to think that the more uncertainty there is in how this is all going to evolve, the more opportunity there is, because when you've got a pretty rigid, fixed system, there's only so much you can do within that system to grow your brand, to improve your economics, to do all the things that you want to do.

So I was thinking about specifically scholarly publishing and what I could talk about, because I know you guys have heard from a lot of people doing a lot of innovative things. You've heard about all the technologies. You've heard social networking and blogging and podcasting and electronic books and all this stuff.

That went bad. This is what happens when you switch from a MAC to a PC. Well, I'll just tell you the story.

It happens to be my wife is a pediatrician, and she said to me one night that she was really sort of at her wit's end with all of these parents who were refusing to get their kids vaccinated or didn't want to get their kids vaccinated. She said, it's really becoming a problem because I'm worried that at some point, some kid's going to get sick or worse and I'm going to get sued because even though I told them to get the vaccination, they were under my care and they didn't get the vaccination.

She said, I read this thing in *AAP News* from this practice – unfortunately, I'm not going to be able to read it to you now. Although, actually I can, off of my computer. And there was this practice who posted a letter to the editor in *AAP News* and I'll read it to you.

They said, my colleagues and I are finding ourselves spending an inordinate amount of time defending the use of vaccines in each well-child check as well as during the increasing number of telephone inquiries. Furthermore, we found ourselves on the defensive side more often than not. In response to this heightened demand on our time and energy, we developed a vaccine policy statement that we post in the exam room and give to our meet-and-greet talks as well as the one-month well-check. The response has been tremendous. New parents clearly know where we stand in the vaccine controversy, and our established patients.

And it goes into – it actually quotes Benjamin Franklin who delayed the smallpox vaccine for his 4-year-old child, and his 4-year-old child tragically died as a result and he regretted it for the rest of this life. And it actually goes so far – so over the past several years, that vaccine – so it makes very strong case statements, things like not vaccinating your child, you are taking selfish advantage of thousands of others who do vaccinate their children, trying to explain the whole idea of herd immunity.

So I was thinking about this. Wow, this really has become an acute problem that all of these parents have somehow gotten it into their heads that there is a controversy, and despite the commitment to evidence-based medicine, somehow other evidence has gotten into their head.

Then I was down in her office and I saw this on her bulletin board, which was a response in *Pediatric News* to a recent decision by the government to compensate somebody for their – but it was a very complex case where the child actually had a specific precondition that made them susceptible to this vaccine and it was basically they were saying, look, this is not actually any concession by the government that vaccines cause autism or any other neurological disorder.

I was like, wait a second. So this is posted on her bulletin board so her patients can see this because clearly, they've heard about it elsewhere and have been coming to her complaining about it.

So I was thinking about this. This often happens to me. There's a big global problem here that this particular case represents. So I thought, let's explore this a little bit and see what's going on here.

The first question is, you're looking at this and say, where are the parents getting all this information, that despite their pediatricians telling them no, no, no, get vaccinations, they're still actually refusing. Not even just debating it but flat out refusing. Can anyone guess where the parents are getting all this information from?

F: (inaudible)

KARP: This is where they get most of the information from. Vaccines, autism, right?

So what comes up? We've got the CDC, which is good. We've got worldnetdaily.com. We've got about.com, cnn.com, novaccines.org, *Palm Beach Post*. And look at some of these. Vaccines May Fuel Autism Epidemic. Do Vaccines Cause Autism? Vaccine Case Draws New Attention to Autism Debate. The Autism-Vaccine Controversy.

Is it any surprise that if people have heard this and they go looking for information, that this just throws just huge logs on the fire? This is why my wife had to post this thing from *Pediatric News* on her bulletin board, because people had heard this on the news, on CNN.

Look at the headlines. Vaccine Case Draws New Attention to Autism Debate. When you talk to pediatricians, the reason they tear their hair out is there's no debate. If you talk to most pediatricians they will say there's no evidence for a link. It's been just disproven in peer reviewed study after peer reviewed study, and yet it's always framed as a controversy.

So if the parents are not listening to their doctors, who are they listening to? Of course they're listening to Jenny McCarthy who says – actress Jenny McCarthy believes that vaccines could have contributed to her son's autism. That's the kind of thing that they're finding in these searches.

Which gets now back to the question of who's got authority. Because Google, given its position as the gateway to all information on the Web, actually now has the power to give people the impression of what sources are authoritative.

One thing that frequently comes up, I've found, when you do these – so this is vaccines cause autism search. It varies based on what key words you put in. You

see we've got quackwatch.org, authoritative site. About.com came up frequently. About.com is actually an old Web thing from the '90s that was bought by the *New York Times*, so it's actually owned by the newspaper of record, so not somebody who's into sort of slipshod information.

The interesting thing is, you look at some of these articles. This is in the special needs children section. Author Terri Mauro. It says, Do Vaccines Cause Autism? This is a dangerous question to answer these days. To say yes or maybe is to be accused of inviting a public health disaster as millions of parents refuse to vaccinate their children against a dread disease. OK. But, to say no is to deny the experience of parents who need no more proof than the fact that their children were fine before shots and not fine after.

And of course, you ask any scientist and they'll tell you if two things happen simultaneously, well, of course one caused the other, right? That's only logical. That's what's being asserted here, right?

You say, well, who is Terri Mauro? Well, she's got two teenagers with special needs, has written a book about it and has a BA in literature. So your authoritative source on whether vaccines cause autism.

OK. Well, there's another result there that came up and this one's under autism, not under children with special needs. And it's actually been reviewed by a physician. If you look down here, to begin with, it's important to note that there are not one but two vaccine controversies. And that's that magic word, controversy. As soon as you say the word controversy, that's when you have patients running into their doctors' offices saying, what should I do? What do you mean, what should you do? There's no controversy. But this is where they're getting it from.

Here's the question that then came to mind. Where's the AAP in all this? People searching, right? Where's the AAP?

In this particular search, the AAP is in a dreaded place, the second page of results. And the second page of results in 95 percent of cases don't exist because people are more than happy with what they find in the first page of results and then they do a different search.

And look at where they are. We've got Case Study, Autism and Vaccines. Debate Rages Anew. Vaccine Autism Link. Fighting the Autism Vaccine War. Autism Payout Reignites the Vaccine Controversy. And here we are, Facts for Parents About Vaccine Safety. It begins with a sort of a ponderous URL, on vaccine. Another ponderous URL. You don't even know what this article's about.

Look here. From *US News*, we actually have this excerpt. One of the most vitriolic debates in medical history. From the AAP, we've got a bunch of weird stuff that got scraped off their site. This is a problem. Which result would you click? You do this search.

So here's the CDC, another version of the same problem. Is this an inviting headline for a parent to click on? Do you think anybody clicks on this? Nobody clicks on this. CDC is actually showing up in these search results in a place where they could actually do some good, but nobody's clicking on them. They're not getting the actual, medical, scientific facts to anybody.

Here's another. There's not another one.

Now, here's another interesting thing. You go to the homepages of the AAP and the CDC and if you have a toolbar available by Google, the Google toolbar, you can actually see an interesting thing, which is that these two sites are very authoritative, according to Google. CDC has a page rank of nine out of 10. This is a very, very high-level rough look into the very complex algorithms that Google used to figure this out. AAP, I believe, is an eight out of 10.

Which means that anything that is linked to from this homepage would get a lot of Google juice, meaning it would be much more likely to rank higher. But in fact, you go to these homepages and they don't actually link to any information outside of their own sites. They're just linking internally.

It would seem to me that in this sort of chaotic world where people are getting their hands on tons of misinformation or misleading information, that there's an opportunity for these organizations to actually use this power.

I don't know if this occurred to you when I was describing how Google page rank works, but if you think about it, page rank is actually a peer review algorithm. It's actually saying, OK, what peers have linked into this and how does that make that content authoritative? And they do it in a very complex way, but it's still the same basic principle behind peer review.

Which means that organizations and publishers that represent these organizations could actually apply that peer review power to content that's floating out there outside of the scholarly publishing world.

So you think if parents are going to read something and they're not going to the CDC website and they're maybe not even going to the AAP website, and they're going to read something in mainstream media, what would we like them to read? They're going to read it anyway. We can't just stand there and say, no, they shouldn't read any of their stuff. They should just listen to their physicians. Well, they're not, so what should they read?

Maybe something like this, which actually tries to explain the whole herd immunity problem, which doesn't occur to people. So this is actually taking a mainstream approach to try to educate people on the actual underlying medical science behind herd immunity and what their decisions actually impact the whole society.

So instead, we want them to read that, if they're going to read anything, and not something like this. This is that World Net Daily which came up the number two search result. It's some random website. Vaccines May Fuel Autism Epidemic. From 2003. This is what people are getting their hands on. So not only is this a completely questionable source, it's an old source.

This comes down to the basic fact that anybody can publish anything now and get it found. This is another site, No Vaccines, that was coming up. This is their about page, to promote public awareness of the fundamental issues concerning vaccination controversy, and they're based like in north Florida.

There's a whole ecosystem out there where basically Google's making the decisions without impact from people who actually know the science and know the facts.

Now, you go to Google Scholar, of course you get very different results. You search for vaccines autism, and you get a thing that says, No Epidemiological Evidence for a Causal Association. You actually get the science. You actually get the facts. But consumers aren't going to Google Scholar, unfortunately.

And so, what this all boils down to – and I don't know what the answer is here, but I'm posing this to you all as a question. I know I'm using medical journals as an example, and that's one where the intersection with the consumer world is actually probably the most prominent.

But it strikes me here that there's a big information problem. Something's wrong on the Internet. And if there's a big information problem and it involves medical scientific information, well, that would seem like the perfect opportunity for a bunch of scholarly publishers to come in and try to solve that problem.

I don't know what the solution looks like, but it could include things like doing something to ensure that either mainstream content that people might actually pay attention to, or in the more ideal case, AAP does have a fact sheet. Why is there no first-page results? Where's their search engine optimization strategy? Why haven't they done it in such a way so their result appears more appealing to click on? Why hasn't the CDC done this? Where is *AAP News*? Where's *Pediatric News* in all this?

When you think about what's happened to the information world, the role of the scholarly publisher in some ways has exploded beyond potentially the more

controlled channels that are focused on the professionals that we used to deal in, because now there's all this bleed of information across all different types of information consumers.

Here's an interesting example. This is on *Physics Today*, and this is an interesting answer to the question of what does a monthly publisher do on the Web where the expectations for information are daily. One of the things they've done, using blogging software as a simple, inexpensive tool for doing this, is – and this is for their audience of physicists. They link to stories of note from mainstream media about news relating to physics. And this fits with this particular publication and the news role that it happens to play versus a publication that's more purely into publishing peer-reviewed.

But I said, why couldn't a scholarly brand do this for consumers? If you're going to read anything, well, read the *AAP* in this case, but if you're going to read anything else, read these things. They're actually trying to get into this ecosystem where people are trying to figure out, how do I get information.

Maybe this is a service for physicians. Physicians are trying to give people fact sheets and statements, and they're not reading them. It's like, all right, well, you don't believe that, well, read this that appeared in the *Washington Post*. We know that that's not a more authoritative source, but maybe from the perspective of the patient, it matters, and it's better than the alternative. And say, well, we never recommend something other than information prepared in a controlled professional vetting, but they are out there reading it.

So there could be an interesting service for physicians out there where they try to help – where *AAP News* could try to help physicians solve this information problem. They had this – they actually – this is one of the things you couldn't see because it's blacked out, but they actually posted this particular practice's policy statements in *AAP News*, and the practice who posted it said, go ahead and reproduce this. It was in letters to the editor and it was just because the practice happened to want to do this.

So why couldn't *AAP News* actually decide we're going to help put information in the hands of physicians that they can help their patients, understanding that the sort of horse is out of the barn, beyond the controlled situation where the physician was the pretty much sole conduit of information.

The last thing I wanted to talk was the economics, because I know at some point at the end of one of the sessions yesterday, somebody said, OK, but are you making any money? So what about the money, because we've all got to keep paying the bills and being in the publishing business.

I guess you could see the shapes enough to tell the story here. This is IDG, which is sort of at the vanguard of the disruption of the Internet. They publish *PC*

World, *MAC World*, I think *Information Week*, those big technology trade publications, which became completely disrupted by the Web by – in the '90s, companies like CNET came along and started doing a pure Web-only publishing operation covering technology. And then in the last several years, you've had emergence of the tech blogs, who are now turned into serious journalistic operations actually covering technology. And all of the advertisers in the tech field were among the first to say, let's start moving all of our advertising dollars to the Web.

And IDG said, we've got to face up to this. And so this light blue part here was their percentage of revenue from print in 2002, and this is now their percentage of revenue from print in 2008. They've become more the Web publisher from an economic perspective than they are a print publisher because they realized that they had to do this to survive.

This is one of the sort of big questions when publishers look at their economics of things on paper are still – pay the majority of the bills. That's what all the money is still coming from, the stuff on paper. And a lot of publishers are struggling with the fact that they're not getting as much money out of the stuff in the digital world.

But I always like to show this example to show that it actually is possible. People actually at the vanguard are trying to figure this out.

The other place to look to for some lessons is – this is in thousands, so this is \$5.7 billion. This is the advertising revenue of a Web publisher, arguably the most successful Web publisher. This \$10 billion is from advertising on this publisher's own sites, and this is from advertising that they run on other peoples' websites. This was from the first quarter of this year. It's already up to \$5 billion just in the first quarter. Can anybody guess what company this is?

So anybody – every now and then, someone will trot out an article. Is Google a media company? Oh, no, no! They're not a media company, and they'll give you sort of all sorts of definitions of a media company. But you sort of look at Publishing 101. When you're making \$16 billion in advertising revenue, if you're not a media company, well then, what are you? Certainly a whole new industry unto yourself. But I would call them a publisher.

Here's another thing that is often unknown, even though we see it every day. How many of you know how these – where does that \$16 billion come from? Like, how does that work?

It comes from these ads here on the side. What happens is, when somebody clicks on one of these ads, the advertiser pays Google. If nobody clicks on the ad, no money changes hands.

People look at that and say, well, I never click on those ads. Who would click on those ads? Somebody's clicking on the ads, \$16 billion worth of clicking on ads.

Google actually didn't invent pay-per-click advertising. It was actually a company called Overture, which was ultimately bought by Yahoo that invented this. But Google is the one that actually perfected it, because the way it was invented was as an option. You would bid how much you were willing to pay per click for an ad that showed up based on particular words that were typed into the search box to yield the search results.

When this was first rolled out by Overture and when Google first tried this, what they found is – there's a basic rule of the Web, which is, any system that can be gamed will be gamed, automatically. And what they found was that people were bidding obscene amounts of money per click, like \$15 per click for like digital camera or plane tickets, things that were very much about commerce, and they were getting all these really irrelevant ads coming up.

The problem was, the ads were so irrelevant to what the person was searching for that nobody was clicking on the ads. They said, well, this is a problem. We've got people ready to pay us a lot of money, but if nobody's clicking on the ad, then we're not making any money. So this is a problem.

They said, well, wait a second. What business are we in with search? We're in the relevancy business, right? We try to bring people the most relevant information for the thing that they were searching for. They said, well, what if we made relevancy a factor in figuring out which ads show up, and not just the amount of money that people were offering to pay us?

So they actually made a combined algorithm that looked at the history of whether anyone clicked on the ad as a measure of whether people were finding it relevant to a particular search. And the ads that got clicked on more were deemed to be more relevant and therefore more likely to appear in combination with how much they were bidding.

So the miraculous thing that happened is by putting ads that were more likely to be clicked on at the top, even if they didn't necessarily bid the most, people were clicking more and Google was making more money, and they actually created a true liquid marketplace for these ads, and that's where the \$16 billion comes from.

What's interesting is, Google didn't introduce this out of the box. When they first introduced these ads, they actually were charging a flat cost-per-thousand, a flat CPM rate, for the ads. Then they played around with Overture's model and ran into the same problem. And they actually did this for a couple of years, sort of groping around in the dark with this, before –

I always try to imagine what this looked like at Google headquarters one day, whether it was a group or somebody woke up one morning to say, wait a second, wait a second. This doesn't make any sense what we're doing. What if we try it this way?

And it's that ah-ha moment that led to all this money, but it took them awhile to figure it out. And I always take that as sort of an inspirational thing that when you sort of bang your head against the new thing saying, how are we going to make money on this and how is it going to work and we have no idea how it's going to work, so should we even try – that even the most successful Web story.

One other thing that's very interesting about Google – and this is the last thought I will leave you with – is – this is a letter that every publisher has been dreaming about writing to their advertisers, right? This is in fact what Google does.

If your ad isn't relevant, it doesn't rank as high, so if your ad sucks, it doesn't actually show up on Google. Google actually has this quality score, which is actually based on where people get sent. So they're actually factoring not only the relevancy of the ad but the relevancy of the website. So if you say, we've got discount plane tickets, and no, no, here's digital cameras, that gets slammed.

Quality scores work as an incentive to advertisers to improve their ads, which benefits users and in turn benefits Google. That seems to me like a holy grail for what this tech – what technology can enable, because when you were just running an ad in a magazine and you had this sort of, here's the insert order and just boom, stick it in. As long as it's not offensive, what else can you do?

This is a quote from a guy named Dave Winer, who's one of the longest-standing bloggers. He actually invented the RSS standard and one of the first blogging softwares. He said, advertising will get more and more targeted until it disappears, because perfectly targeted advertising is just information.

And that's where the \$16 billion comes from. But if you look at that within your world and the commercial messages that try to go through the publication, there's more value to be created and people might be willing to pay more if the whole thing could be more effective, and that's one of the opportunities from the technology.

Last question I'll leave you with, and this occurred to me when I was thinking about the basic business of publishing peer-reviewed science and why that's one of the areas on the Web where you can still actually get away with charging for access to the content when so many other fields of publishing find themselves unable to charge anymore.

I was thinking, well, why is it that you guys can charge and other people can't? What's happened with so many other areas of publishing is that the information is

becoming increasingly commoditized. Other people have business news, technology news, entertainment news. There's so many sources out there, why would anyone pay? One source can't be that good. And of course, the *Wall Street Journal* is the 10-year-old exception rule that everybody always trots out and there hasn't been another one since.

People aren't paying access to the content, right? People are paying access to the science. That's what they want to find out about. It's not that I've got some more clever write-up of this thing. People want to connect with the science. So are you actually in the science business and what does that look like?

But when you think about where you stand in the world of publishing and how the world of publishing has been disrupted and where do you look for lessons, there is still – there is something very unique about scholarly publishing in that it's actually connecting people with an ongoing process rather than some static piece of information.

So again, I don't know quite what that significance of that, but I just wanted to try send you home with some things to ruminate on.

I think we're almost exactly time-worthy, right?

(applause)

MODERATOR: Thank you very much. It's very interesting to contemplate whether – we're talking about these actions that people that are now more fluid and sustainable (inaudible) they are (inaudible) suggest that there is (inaudible). David, do you have a –

DAVID: Yeah. I'm actually looking at the autism case study and about this issue of blogs as a source of information. I'm afraid this is (inaudible) but there's a whole issue there about what level of communication people are getting directly from their physician (inaudible).

My 8-year-old had her annual checkup. It was a serendipitous situation. We were one hour waiting in the office and then we got to meet with the pediatrician for five minutes. And as opposed to the time I could spend finding this information on the Web, and so – and all the magazines in the office were of course like either children's magazines or *Glamour* or *Better Living* (inaudible).

And there was this one little row of pamphlets there on rubella, which I don't think anybody's ever read. In fact, I've been thinking of marking them and when I come back next year, if they're still all there.

So there's a whole issue there about where people are getting information and the people who are giving disinformation, I think as you pointed out, are much more

customer-friendly, much more user-friendly, and they're also – that information is being reinforced by people that parents meet in their daily life, people who have kids with autism and they believe the connection and hypothesis.

So there's a lot there beyond just something to get (inaudible). I know you were (inaudible).

KARP: No, no. I think that's actually very relevant because it is a problem that exists in the physician's office. But again, when you frame it as, OK, we've got a bunch of professionals who have a problem with communicating information, and then we've got publications, people who are in the information business, who serve those professionals.

So I guess one positive thing at the end is, isn't there an opportunity to help solve that problem in some form. Since you're right, it does exist in the physician's office if it exists outside the physician's office. So physicians don't see themselves in the information business, but now they've sort of been dragged into this through that and how can publishers help solve that information problem?

DAVID: One of the things that I think we talked about at dinner the other night is that – when I see (inaudible) I don't know what people think of this, but I think that physicians and other additional viewpoints depend on intermediation. So I'm a physician, I can intermediate (inaudible). What's happening is (inaudible) mediation (inaudible) brief encounter is not sufficient intermediation to overcome the power of the (inaudible) mediation that goes on on Google and blogs and everything in this public sphere. And so that actually is (inaudible) search (inaudible) much more powerful and then AAP's inability to participate effectively with its authority in the (inaudible) mediation. (inaudible) and that (inaudible) really solved that issue (inaudible).

MODERATOR: We're going to have to wrap up because the clock does not lie. (inaudible) final comment. Thank you again, Scott.

KARP: Thank you.

(applause)

END OF PRESENTATION