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In This Issue…

Trust Through Technology?

Who hasn't heard the lament that we're overwhelmed with information, but short of wisdom? As technology has proliferated, information has as well – but now, users are faced with the overwhelming task of verifying information and deciding whom or what to trust. There are no quick or easy answers.

Caroline Jack's new report, "Lexicon of Lies: Terms for Problematic Information," does an excellent job of delineating various types of problems in today's media world: misinformation and disinformation, publicity and propaganda. All are symptomatic of a media ecosystem where there are no gatekeepers and where thankfully, free speech typically rules. But the report is understandably short on solutions, especially solutions that support free speech rights. "Well-intended efforts at debunking inaccurate information may not necessarily help," Jack said. "Media literacy is necessary, but not sufficient for understanding today's problematic information flows. Sites that fact-check news stories or aim to debunk rumors are proliferating, but as media theorist Jayson Harsin has observed, these interventions make little headway in restoring the authority or legitimacy of the press or other social institutions." (https://datasociety.net/output/lexicon-of-lies/).

What to do? What to do? Perhaps the answer lies in looking to technology to solve some problems that technology helped to create…and though such technology doesn't lie readily at hand, there are some promising developments that we in the media literacy community need to be aware of and stay tuned on – developments that help to solve the riddle of where information originates, and how it morphs and proliferates. One such promising technology is the BlockChain – or distributed ledger technologies.

These distributed ledger technologies are foundational – they provide a catalyst for the creation of decentralized applications that have the potential for truly disruptive effects in education, media, health and finance. According to William Mougayar, in his 2015 article "Understanding the Blockchain," there are five major concepts that characterize the innovation behind Blockchain technology: https://www.oreilly.com/ideas/understanding-the-blockchain

- The Blockchain itself
- Decentralized Consensus
- Trusted Computing
- Smart Contracts
- Proof of work/stake

These attributes can all contribute to confidence in media and information. The end result of employing BlockChain technology is that the provenance of any information can be documented and traced over time, and then checked and verified anywhere, anytime, by anyone with access to the public records offered through the BlockChain. This verification of

the provenance of information is a skill that is often called for through media literacy education, but given the overwhelming amount of information and difficulty in assessing its origins, a technology “assist” is a valuable contribution, indeed. Hence, the impetus to explore BlockChain technology is a worthy media literacy undertaking.

Although BlockChain technology is popularly associated with the techno-currency Bitcoin, its applications have far more implications for use than finance alone. There are those who say that this technology calls for the re-writing of the Internet, since it offers a more secure and accountable environment for exchange of all types of information. But of course, it is very early in the development of such distributed databases, and it will undoubtedly take many years for the story of BlockChain to unfold.

In the meanwhile, we invited Dr. Ian O’Byrne to explore the BlockChain with us, to provide a picture of work he has done to discover how BlockChain may be applied in worlds outside of finance – namely, in education, media and healthcare. This glimpse offers another important ingredient to looking to the future: hope. We all need that!

Research Highlights

BlockChain: A Trust Builder

Why Distributed Ledger Technology Offers Hope

Dr. Ian O'Byrne (@wiobyrne) is an internationally recognized educator, researcher, and presenter. His research investigates the literacy practices of individuals in online and hybrid spaces. Ian's work can be found on his website. His weekly newsletter focuses on the intersections between technology, education, and literacy.

This video by O'Byrne provides a short introduction to BlockChain technology: Understand Basics Behind BlockChain: https://www.youtube.com/watch?v=ljVWx4LBKuI

Tessa Jolls: Ian, can you give us some background information on BlockChain and explain the power brokers currently at play?

Ian O'Byrne: BlockChain is a hard subject to talk through -- we're looking at something that's very much on the bleeding edge. If we look at the hype curve or the hype cycle, we're heading up that hype curve before we head into that trough of disillusionment that happens with technology.

We're talking about encryption. We're talking about new paradigms for information and these technologies, and then, within that context, we also have to recognize that globally, we have this disenfranchisement with the establishment and this global pushback against systems, and questions about trust. With all of that, there is an even greater lens on these technologies and what they can or cannot do. BlockChain also applies to many different fields -- these distributive ledger technologies apply in education or in finance, or in health information and electronic health records.

I had a discussion the other day with a startup that's looking at BlockChain and iterations of the BlockChain for ownership of digital content. So, if I were to create an image and put it online, I could mark off on the BlockChain or on some sort of ledger the fact that I created that content and I "own it," and then if I wanted to, I could share part of that. Or let's say I have music albums in my iTunes library. With BlockChain technology, you could see a place that says, "Okay, I paid for these music albums, and now I can sell them to someone else or I can gift them to my children," as a ledger or a record of these transactions happening with digital goods.

We are challenging and problematizing the current system and power brokers. To the people that are in power now, the groups that are making money and the groups that have established these systems, you're saying, "Okay, well, we want to develop a new system." So, I go to health information, electronic health records and I say, "Okay, well, what if we took these electronic health records that exist within specific silos of information and, instead, we put these records out there online, openly and transparently?"

That's a challenge -- there's a lot of people making a lot of money from those silos and from those roadblocks and from that current infrastructure. There's a lot people that are protecting and benefiting from the present system. And also, there's a lot of legislation and protection and encryption built into the system, and so there's a lot of people that say, "Well, wait a minute. What we have currently works, and it works somewhat well."

Yet the promise of BlockChain is that we can be much more granular as we go into this new era of data having value, of data being currency. In order for that new era to happen, we have to look to technology and the systems and the legal framework in place to be able to deal with the emerging needs surrounding data. So, when we look at data as ownership, as something desirable, and the idea of personal property rights being attached to data, BlockChain makes that possible. Whereas what we currently have is very crude and it isn't really capable of tracking data in a highly granular way, which works to some people's advantage and some people's disadvantage.

TJ: What we're seeing is the emergence of a technology that enables us to truly have an operable Magna Carta for the internet.

IOB: Yes. At this point, we don't have a Magna Carta for the internet even though Tim Berners-Lee has called for one. But it's not technically possible, and it's not legally structured at this point in time. For us to go toward that ideal and truly be able to track property rights, assign property rights, be able to have interchangeable property rights that are capable of being monetized and sold at a granular level, BlockChain could possibly permit that. But we have many, many systemic obstacles at this point in time.

Tim Berners-Lee was saying a couple of months ago that we need to reconstruct or recreate the internet. Pirate Bay founder Peter Sunde recently suggested that we've lost the internet and that it is all about damage control. We're hearing this sort of narrative come from a variety of technologists across many fields.

The BlockChain, and these distributive ledger technologies may provide us with opportunities to rebuild, or reinvent the system. When I work with individuals or groups to make sense of the possibilities, first, I try to understand it and teach the basic elements as I see them. We have to recognize that the BlockChain, and these technologies are terribly complicated and intricate. We also need to recognize that it's not just about Bitcoin. When Bitcoin comes into the discussion, the discussion tends to get distorted, because all of a sudden, we start thinking about banking. We think about trust. As we think about the possibilities to learn and create from what we're learning from the BlockChain and Bitcoin, and I try to nudge people to say, "Let's think more about the philosophy behind it. Let's think about the structure behind it, and let's problematize the ways in which we view the internet and our use of the web and ways that we might re-examine that."

TJ: So you're saying, there are many, many applications for BlockChain, and part of it is really

understanding the technology so that it can be best applied to problem-solving.

IOB: To me, the BlockChain or these philosophies really boils down to two things: One is a peer-to-peer network, and two is a distributed database. A peer-to-peer network is basically all of the stuff that we know from back in the day when we did not download music from LimeWire, Kazaa, or Napster. The peer-to-peer technology is basically the systems that made all of tech run.

Peer-to-peer networking is the technology that fuels BitTorrent, Napster, Kazaa, and others. Peer-to-peer networking is basically that decentralized system where my computer is talking to your computer, and it's talking to the computer at my neighbor's house across the street. It's creating those pipelines and those connections. With that peer-to-peer network, if I have a file on my computer and we are synchronized, I can pretty much send that file immediately to your computer and my neighbor's computer instantaneously.

Then if you change something, if you say, "Oh, this is great. I'm going to add or edit, or revise, or do something to this file," then it'll automatically get distributed or propagated throughout the network, so we all have the same thing. Within that structure, what BlockChain offers is a decentralized database. BlockChain tracks records of all transactions that are linked up in a series of transactions, and the transactions are basically organized in blocks.

The block is just a way to structure or identify the individual transactions…they basically run the transactions in a time sequence. So you have these blocks that exist in that database, and then, between the blocks, you have encryption. (See Ian O'Byrne's blog). Between each block, there is an encryption, or a seal, and the seal is basically saying, "This block is current as of this date, this time. Here's who signed it. Here's where it got signed from." It basically, transparently, openly, publicly says, "This is 'real' as of this date, this time."

Then that block is the chain between the blocks in the transaction ledger. If you can imagine, we've got that database and, within that peer-to-peer network, you have copies of the database everywhere. You could have copies at my house, your house, my neighbor's house, but then also, if someone in Australia or Argentina said, "Hey, we also want to run a node of this network," they can go ahead. It's open. It's transparent. You don't have to buy in. If you have the computing power, if you have access to the internet, you can go ahead. You can run a node on the network.

The network is not just dependent upon one centralized system, and the transactions are still recorded through a secure database. Let's say, five years from now, somebody said, "Okay, where did this original file come from?" You could go back and say, "Okay, Ian shared on this date, this time, to the network. He shared it from this computer. Here's the IP address. Here's his key so that we know it's him," and then you can track it back through time. We could say, "Okay, how do we know what Tessa added to this? How do we know that she did it?" "This is the specific date and time and place and everything that she did," so we can sort of track all of

that over time.

The BlockChain started with Bitcoin and the Bitcoin BlockChain. The BlockChain was the technology that made Bitcoin run, but now, technologists and other people are looking at Bitcoin and saying, “Okay, we’re interested in Bitcoin, but what we’re far more interested in is the technology that makes Bitcoin run.” And that’s the BlockChain.

TJ: Have you ever heard of Hernando de Soto? He’s a Peruvian economist who has studied what makes countries successful in being able to provide a quality standard of living for people, with economic opportunity. To oversimplify, he says such success comes down to being able to define and exchange property rights.

When the 2008 financial meltdown happened, DeSoto wrote in *The Wall Street Journal* that the basic problem was that these “baskets” or tranches of mortgages weren’t properly tracked and identified and verifiable, and therefore the system froze because trust was impossible. In a more sophisticated world, this would be a perfect application of BlockChain, because you could easily verify what’s in a tranche. You could, then, value the tranche and monetize it in an appropriate way in terms of how to confidently price a particular security – and you could do it instantaneously with computer power.

IOB: Here’s another example. Let’s say I’m in South Carolina. I have a local bank. It’s a national bank, and I want to transfer you money. It’s relatively easy. The current structure is that I would either go to PayPal or write a check and mail it to you. Easy. We both live in the US. We both have access to “good, modern systems.” But what happens when you get other countries involved? Now you say to someone in Peru or Argentina, “Hey, I want to send you $150.” It’s not so easy – and in fact, it may not even be worth the time and trouble.

That’s why Bitcoin and Ethereum make sense because then, I could go on my computer and say, “Okay, send Tessa $100.” And I send it. It comes out of my credit. It goes to you. We can go back 100 years from now and say, “Ian had 500 credits, and now he has 400 credits. Where did these credits go? They went to Tessa on this date and time.” I don’t have to deal with PayPal, I don’t have to deal with the bank.

Then you say, “How do we extrapolate that convenience and confidence to products? How do we extrapolate it to houses, for example?” That’s when you start to say, "Who are the real power holders? What are the systems that create inefficiencies and waste?" And then, also, what happens if you are in that global marketplace? How do you really get engaged and not subscribe to the power holders that are out there?

TJ: The finance industry has a sophisticated automation system because it pays off and there’s money involved. But this is a great example of how BlockChain can solve problems and, also, what happens when a sophisticated technology like BlockChain isn’t in place. The strength of BlockChain is that it offers credibility and security – and therefore, trust.

Having data and information that we can trust is a feature that we have a need for in many settings.

IOB: For sure. The way I got started was, years ago, I started to hear about Bitcoin. I started to hear about Bitcoin and the BlockChain, and I'd read things online on Reddit and other spaces that would talk about these people that were 'mining' in their basement on old computers. I'm like, "What is this all about?"

I was doing work with Mozilla on web literacy work. I was also involved in digital badges and digital or alternative credentialing. This is a little over two years ago. During this time period, a group of six to ten of us from these varied projects were all reading, thinking, and writing a lot about technology, education, and literacy. Within this collective, a podcast with Vinay Gupta was shared and inspired a lot of discussion. It was the Future Thinkers Podcast number 18 with Vinay Gupta.

Vinay Gupta was talking about Ethereum, and he was talking about a new internet system, about e-gold. Within our collective of technologists, we were all just fascinated by the new opportunities this may present. That podcast launched our interest in the BlockChain. From that we started a group called BadgeChain, and we wanted to look at, "Okay, what is the potential for BlockChain in education, and specifically in digital badges?"

There's not really a lot happening regarding BlockChain in education. We decided to take an example, "What would it look like if we were to explore BlockChain with badges or certificates or credentials? What would that look like on the BlockChain?"

We had a group of us that were regularly thinking and chatting, and in this private slack channel, we would keep just sharing ideas and riffing off each other. And we learned a lot. I mean, one of the things we learned, because we're educators, we're teachers, is we tried to make sense of, "What is the BlockChain?" and then, "How do we have informed discussions with others about this?"

We would have community calls, and you'd have people that were into education show up. You'd have people that were into BlockChain. You'd have people that were into financial tech because they hear about BlockChain, so they would show up, people into badges. You had this really interesting mix of people from all different wavelengths trying to figure out what this all means. Some of the things that I learned from it, one, is that, because the BlockChain is hard to understand, there was a tremendous amount of lack of understanding that people would bring into the discussion. People would come in, and you would talk about the BlockChain and possibilities in education, and then someone would quickly say, "Well, yes, but there's no trust in the system," or "BlockChain came from Bitcoin, and we can't trust Bitcoin," or "We can't trust the banks, so how can we trust this?" And I'm like, "We need to look at the philosophies behind it."

The other thing that I learned from all this is that there is a need to go back and redefine a lot of the terminology that we use in this, so one of the key things that we have to redefine is *trust*. *Trust* from a cryptography standpoint means something totally different than the trust that we talk about in media literacy or in education or in journalism. It's something completely different.

So we started looking at, "Okay, what might these digital credentials look like if they were in the BlockChain?" And the more that we learned, we started to say that we had a lot of things that we would like to develop. There's still things that I'm trying to develop actively as we speak. But we were looking at it and saying, "Okay. What might we be able to develop?"

We were finding that with digital badges, some aspects of BlockChain work and others definitely don't work. One of the things that doesn't work is interoperability. For example: If I go to Harvard, I take a MOOC, I get a digital badge after completing the MOOC at Harvard University, and then I take an MBA class at MIT. How does that badge, how does that credential come from Harvard to get over to MIT? Right now, it's pretty near impossible, and we see the same thing with transcripts now. The fact that I need to email or call a school to get PDF or a hard copy of a transcript to demonstrate that I have completed work there is ridiculous, but that's the nature of the beast right now.

One factor of introducing BlockChain is that, if we do such credentialing transactions online, we need to rebuild the system from the bottom up. We have to look at the philosophies behind the BlockChain and figure out how to rebuild that using what the BlockChain excels at -- and we started calling it distributive ledger technologies. That's really what BlockChain is, and to me, it helps make more sense if we call it a distributive ledger. It's a system that offers a database that we're splitting up across multiple nodes.

In education, one of the things that really gets me excited is the idea of creating a personal learning ledger. This would a way for us all to have a real, living résumé or a living CV.
So, for example, when we are in high school, we would write a résumé, and we would write down on the top of the résumé, "I'm writing this so that I can be this. I'm positioning myself for this career as a bilingual ski instructor." We put that line on the very top of the résumé, and then for some reason, during the rest of our career, we never do that. Once we get into our jobs, we never put up at the top of our resume aspirational goals, things you would like to do. And hopefully, we're all learning. Hopefully, we're all still continuing our track record or we're trying to identify ways in which we'd like to grow. But for some reason, we don't.

Wouldn't it be interesting and useful to have a real résumé, where you could actively link learning experiences that you've had over time? You'd be able to actively show where you would like to grow. You'd show other things that you would like to do. You would be interoperable, so I could easily pull in that MOOC credential from Harvard that I did. I could easily pull in the three or four Lynda courses that I've taken.

The thing is, with that personal learning ledger, there's an opportunity to create that database that you maintain and you control. The individual has the power over that. You can say, "Here's the parts of my identity that I want to showcase, and here's the part that I don't really want out there." There's an opportunity to say, "Yes, I did complete these MOOCs and I had this experience, and I also want to showcase my high school degree, my college or undergrad degree. I want to showcase my masters," for example. There's an opportunity to foreground and showcase and shift or sculpt out that digital identity. With all of that, it's just a database about you, about creating your own version of your digital identity. You create that database and you're just pulling and pushing information as you see fit, based upon information that's out there. If you think about the BlockChain technology as part of that, that distributive ledger database, the distributive ledger system, that's all it would be on a personal level. Each and every one of us would have our own individual database that we construct and control, and that we can push and pull as we see fit. And the information is verifiable.

Part of what I'm doing right now is working with a group that does verifiability for health information and health informatics, and they basically verify the hospital, the insurer, they verify the patient. Or when you go to your bank, you log into your banking website, they get a certain level of encryption based upon what the government says we have to have, and a lot of this happens in the browser that we don't see. They do that, and they're starting to do it more and more for health information, electronic health records. You go to your hospital. Your hospital does a test or your urgent care does a test. They send the materials back to your doctor.

So with this group, I've been doing some work recently, and we've been talking to universities and colleges and registrar's offices and saying, "Why can't we do the same thing?" When you graduate from x university... the fact that I left one institution and went to another -- again, it's ridiculous that I had to have my institution call on the phone and talk to a human being or get a hard copy or an PDF, an encrypted PDF, that says that I went to UConn and I finished this degree. It's ridiculous. I should be able to just instantaneously verify that. I should be able to verify these claims made. If you have that sort of system set up, you could easily just create your own database.

TJ: Absolutely. Yes, those are great examples of an education application, a health application. I'd also like to explore with you a media application because I think there is a huge opportunity in the media arena.

IOB: Looking at our information landscape, taking a look at our media landscape globally, especially right now, we live in a climate where the internet is the dominant text of our generation. As a civilization, we all use the internet for reading, writing, communicating, participating. To be a savvy citizen of the current and future centuries, you have to be able to use the internet as a tool, as a text, and it becomes problematic when we start to see changes that are made to this global text. We start to see modifications or propaganda or certain things that others want to be whitewashed.

One of the things that I've been paying a lot of attention to recently is the discussion about climate change. Now we see that as the new U.S. administration came in, they were whitewashing and removing parts of U.S. websites, like the whitehouse.gov websites. Well, I look at the global community that we live in, and for the most part, I would assume that websites, especially U.S. government websites, rank pretty high in terms of all of the information that's shared globally, just from the status that the U.S. has had throughout time. If, all of a sudden, this information or what we consider "truth" automatically changes from one day to the next, that's problematic. The challenge with that is, you look it and say, "Okay, I understand there is a willingness to change course and change direction, but at the same time, if the internet is the dominant text, then this is a literacy tool and this is the way that we educate and we empower. There's something fundamentally wrong with being able to just simply change that."

If we look at the potential for this distributive ledger of technologies in redefining or how we use the internet or how the internet is structured, you could see a structure where information can be tracked and verified. Let's say, for example, the BlockChain happens in education the way that I would like it to happen. I have a number of students…I studied with an adviser. My adviser has a lot of credibility in the field. We did a lot of great work together. We look at the lineage of students that come out from my adviser to his students, and then we look at the lineage of students that come out from me to my students.

Then, let's say five, ten years down the road, some new information comes out, and you realize that someone faked some credentials. Let's say you look through, and you say,"Johnny faked some of his credentials. Johnny didn't really finish up this work." Let's say Johnny was proven to be a liar, but then, if you had that database, if you had that ledger set up, you could see a system where the ledger would self-correct, or course correct. Then somebody could pull up students that Johnny had and say, "Oh, wait a minute here. The guy that this guy says he studied with, he never really studied with him."

Through the BlockChain, you could track and validate and verify the level of credibility and the relevance each one of those people had based on their lineage: it's like an apprenticeship model.

Going back to media literacy and climate change, one of the things that I'd be interested in seeing is, is there a way to have a global version of text or a global version of truth? We could go back and we could say, "Okay, this is everything you need to know." I guess to some extent, Wikipedia is like that now. We could say, "Okay, this is everything you need to know about climate change." Then, as you look through that history, it could also say, "Oh, by the way, you might want to know that this is what the U.S. government said about climate change up until this date, but then there was this period of time where they changed the text of the discussion."

TJ: Yes, there could be a history of knowledge creation, as well as how the knowledge is

shared, and how it comes about and what's being shared, whether through social media or newspapers or websites or videos. What we're talking about is accountability and the genesis of information, so that we can trace it and we can find out where it came from and, then, make judgments about its reliability, about its accuracy. It is a way of looking at information provenance -- and whether it's a forward look or a backward look, how did it all come out? How did it come about? How can we sure? How do we know? And, of course, that's the great media literacy question: "How do we know?"

IOB: And the other thing is when we see social media stories blow up online. Imagine. Right now, Facebook and Twitter and other tools, social networks are trying to figure out, "Okay, how do we deal with this?" Google's trying to figure out, "How do we mark this? How do we stop it?" That's a very real question we have to make sense of. This happened recently with a story featuring a lost photo of Amelia Earhart — even the Today Show covered it nationally. Two weeks later, apparently, the story was debunked by a couple of bloggers. (a-bogus-photo-decades-of-obsession-and-the-endless-debate-over-amelia-earhart).

How much did the media do to go back and say, "Hey, remember all those hours of broadcasting that we spent spreading the story? Well, it wasn't true." How much time did they spend? With BlockChain, there is a way to check... you could check to see whether a news story has been debunked or whether there is more relevant information from other sources. Just as we talk about your credentials being transportable or interoperable or sending out an mp3 or a file, there's got to be a way to have some sort of metadata in that message that you're sending that says, "Hey, you're reading this now, but you're not getting the full story."

Right now, it's hard to do, because how many people search and see what else is being said about an issue or story? Not many. So, if there was something right in the message that could give you a very quick visual identifier to say, "There's more to the story," that's an important tool that we need.

TJ: Yes, and it's not about censorship as much as it is about the tracking and accountability and giving a fuller picture so that a better judgment can be made about whatever information it is. We need a whole new technology structure to be able to do that. At least that's a possible route to go. It's more than we have now.

IOB: Yes. When we get back to the philosophies of the distributed ledger technology. You still must say, "Where do the power structures currently lie?" The power structure currently lies in corporations such as Twitter, and they're not going to be honest with us because they do not want to let us know the number of bots and trolls that they have. The power structure lies with Facebook. They're not going to be honest with us in terms of their algorithms and the way they set things up. Google and YouTube -- a lot of these companies are fast and loose with the ways that they hold and use our data, and so-- we have to look at it and say, "We need a new structure." One of the things we talked about with BadgeChain is, "Hey, let's build a new

Twitter clone on the BlockChain." But that's easier said than done. And maybe the answer is not to use the BlockChain. Maybe it's, "Let's build a new system." It's like a "Silicon Valley" episode.

TJ: This is illustrative of the idea that there are many potential applications for this technology. We're right at the beginning, but given some of the really enormous challenges that we have now in terms of the amount of information, the credibility of the information, the power of the database and so on, at least we've got some avenues that we can pursue in thinking differently about this so that, going forward, we have an opportunity to build the trust.

IOB: This is not a popular opinion, but who's to say that trust needs to emanate from the United States? Why can't trust begin with a small town in Africa? Or why can't trust begin with an individual as opposed to an organization? If you are an expert in a given area or if you run a business, why can't you be the primary element of trust in that equation as opposed to this long-standing tradition?

TJ: Exactly, and I think we're looking at that in terms with what's happening with the news media right now because traditionally, media companies have been the editors. They've been the gatekeepers of the information and the news that reaches us, and social media has definitely up-ended that traditional role of mass media. But where do you, then, place your trust? How do you know? So, we're having a real crisis of confidence because these news organizations no longer control the message, and they have been our filter. Now, what's the filter today?

So we are at that point where the problems are right in our face, but what we're struggling with now is, "Okay, what do we replace the old filtering system with, and how can we trust that? How can we do it without eroding our freedoms -- our freedom of speech or freedom of assembly or freedom of thought or freedom of expression?"

IOB: Yes. The thing is, also, especially with media, with publishers, there's always the question about what's happening behind the scenes? What are the motivations, what are the perspectives, what's the money behind it? And we see disruption happening in publishing as a result of technology. I think we see it happening in education, as well, especially higher ed.

A lot of the pushback I get from colleagues about all this is, well, then, there is a role for the gatekeepers. If anyone can create and share information now, then how do we know what's credible and relevant and reliable? How do we know what's "good" in that information?
I like to think that the internet is a giant self-cleaning oven. I like to believe that, for the most part, the good stuff comes out and the less credible stuff is highlighted so other people can really evaluate it.

TJ: Yes. That's a belief in the power of the people, and in the importance of maintaining our freedoms and trusting in the power of the people. And I think part of what you were also

touching on is the power of branding and how branding is strongly associated with trust and credibility. It's rather old-school and crude, but branding is a powerful and effective way to manage perceptions about credibility and trust. BlockChain technology gives us another, sophisticated tool through which to evaluate the validity and the credibility of a brand and to associate the information with a brand that's now diffuse and at the present time, difficult to track accurately in a granular way.

IOB: Now, for example, if these BlockChain technologies were prevalent, we could look at companies and we could say, "Why is this company trustworthy? Why should I trust this brand?" The trust will be written in code. And if the code is made available and transparent– and this is why open source is huge -- then other people can look at the code and say, "Yes, I trust this. Yes, I'm looking at the code. There's nothing funky happening." Which shows the need for students in our schools to learn how to "read" coding and programming and data. Behind the programs, behind the apps, somebody sat down or a group of somebodies and they wrote the code, and that's what's making the program do what it does. If I can "read" the code, I can "trust that" because I can see what the authors are doing. The big question in education is, how do we get to that point?

CML News

NAMLE Meeting 2017

The NAMLE conference in Chicago (June 26-28) brought together media literacy professionals, educators, and enthusiasts from around the world for meaningful discussion and the sharing of ideas on the state of media literacy education. CML's Tessa Jolls and Beth Thornton teamed with CSUN professor Bobbie Eisenstock to present ideas for schools and organizations to actively participate in Media Literacy Week.

The Third Conference of Media Education and Digital Competence

(*III Congreso de Educación Mediática y Competencia Digital)* built on the work of international scholars and practitioners from the fields of education and communication. A virtual conference was held from May 1-30, and a face-to-face conference in Segovia, Spain was held June 15-17. Michael Hoechsmann and Tessa Jolls, co-chairs for the North American Sub-Chapter of GAPMIL, presented an update on the formation of the Sub-Chapter.

American Association for School Librarians

CML's Tessa Jolls presented at a plenary session of the American Association for School Librarians international conference in Long Beach, CA, August 7. Jolls' topic was "Powershift: Why Information and Media Literacy are Essential in Today's Global Culture."

New Video from Radio Free Europe/Radio Liberty

"Digital Intelligence in Need" from Radio Free Europe/Radio Liberty was created by Salome Apkhazishvili, Vaclav Havel Journalism Fellow. This short video documentary on media literacy includes quotes from CML's Tessa Jolls.
https://www.youtube.com/watch?v=gx1qRe5Unt8.

About Us…

The Consortium for Media Literacy addresses the role of global media through the advocacy, research and design of media literacy education for youth, educators and parents.

The Consortium focuses on K-12 grade youth and their parents and communities. The research efforts include nutrition and health education, body image/sexuality, safety and responsibility in media by consumers and creators of products. The Consortium is building a body of research, interventions and communication that demonstrate scientifically that media literacy is an effective intervention strategy in addressing critical issues for youth.
http://www.consortiumformedialiteracy.org

Resources for Media Literacy

BlockChain Technology Resources

A posting on BlockChain by Ian O'Byrne: http://wiobyrne.com/what-is-blockchain/

"Vertical Teams and the Open Organizational Structure of BadgeChain," by Ian O'Byrne: http://wiobyrne.com/organizational-structure/

"What is BlockChain Technology?" https://blockgeeks.com/guides/what-is-blockchain technology/

"The Truth about BlockChain," by Marco Iansiti and Karim R. Lakhami, Harvard Business Review Jan-Feb. 2017: https://hbr.org/2017/01/the-truth-about-blockchain

"The Impact of the BlockChain Goes Beyond Financial Services," by Don Tapscott and Alex Tapscott, Harvard Business Review, May 10, 2016. https://hbr.org/2016/05/the-impact-of-the-blockchain-goes-beyond-financial-services

"IBM Collaboration with Walmart for Global Safety Review," by Roger Aitken, Forbes, August 2017: https://www.forbes.com/sites/rogeraitken/2017/08/22/ibm-forges-blockchain-collaboration-with-nestle-walmart-for-global-food-safety/

Med!aLit Moments

Your Search or Mine?

Not so long ago, when we wanted to find the definition of a word, we went to a printed dictionary and looked up the word. Regardless of where we were in the world, if we used the same edition of the same dictionary, the word would be defined in the same way, on the same page, in the same typeface.

What happens when we do a search today, using the same key words? Ask students to find out and see for themselves.

AHA! I can enter the exact same key words to search Google or Bing (or any other browser), but my results may be very different from others.

Grade Level: 7-9

Key Question #3: How might others experience this message differently?
Core Concept #3: Different people experience the same message differently.
Key Question #5: Why is this message being sent?
Core Concept #5: Most media messages are organized to gain profit and/or power.

Materials: Use Smart Phones or Computers with a browser

Activity: Ask students to pair with a partner. Each pair should have a different device to do a search using the following terms (and write down examples of responses from each device as the searches are completed):

Pizza near me
Medical clinic
Tips for Healthy Living
What is Obamacare?
What is the Affordable Care Act?

What are some examples of your findings? Did you get the same findings from each device? What were some differences? Was there some overlap? Were the findings presented in different orders? What do you think may account for some differences? Why – or why not? -- do you think these differences may be important?