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Self-monitoring and corporate interests

Nick Montfort

Nick Montfort develops computational poetry and art, is a frequent collaborator at the intersection of digital media and literature and associate professor of digital media at MIT, where he has served as faculty adviser for the Electronic Literature Organization. He is the coeditor of *The New Media Reader* (2003) and *The Electronic Literature Collection 1* (2006) as well as the author of *Twisty Little Passages: An Approach to Interactive Fiction* (2003) and *Exploratory Programming for the Arts and Humanities* (2016).

Nick Montfort ponders about the fate of buzzwords in the history of digital media, praises the Internet for supporting intellectual advancement, and does not expect a for-profit organization such as Google to serve the intellectual community or nonprofit organization. He addresses self-monitoring systems as corporate monitoring systems, he assumes authorship over a text resulting from a program he wrote including legal responsibility in case this text incited a riot, and he doesn't fear the quantitative turn of Digital Humanities but hopes for a "digital media DH".

Prelude

Roberto Simanowski: What is your favored neologism of digital media culture and why?

Nick Montfort: “Blog” is a pretty good one that works well as a noun and verb and describes a non-proprietary, user-controlled, system for a new sort of writing. Remember blogs? But I think one of the most telling neologisms is “ghay” (or “ghey”), which is an intentional misspelling of the word “gay” originally developed to circumvent lexical filters and allow people (boys and young men) to insult one another in a homophobic manner. This term’s existence shows how negativity, including that based on identity, persists in online cultures, even if ‘on the Internet, no one knows you’re a dog,’ even though new groups of people are connected by computing, and even though we built systems to try to block disparaging forms of speech. It appears not only because people want to use a particular slur, but also because a silly, ineffective way of preventing that slur from being used was put in place. And usage has evolved: Some people now use the term in the sense of “I wish to insult you, but don’t worry, even though I am using a slur of this sort I don’t mean to say that homosexuality is bad.” What progress.

RS: Interesting to see how the arrival of effective search and filter engines have impeded free speech and how people found their way to work around it. Which leads to the next question: If you could go back in history of new media and digital culture in order to prevent something from happening or somebody from doing something, what or who would it be?

NM: I don’t think free speech online has been impeded very directly, at least from my perspective in the United States. One might have a different idea in considering China, of course, and there are chilling effects and other indirect means of suppressing expression. But I find that many of the speech-related problems that I see are from trolls, spammers, haters, and other people who speak freely and in anti-social ways. We don’t need to make all such speech illegal. We would, however, like to

have a world in which those who want to communicate with one another can do so.

With regard to your question about what to prevent, the easy choices here would be ones that keep bad things from happening (for instance, the release of *Spore* or *Duke Nukem Forever*, games that were much better when we were imagining them) or ones that keep good things from ending (for instance, classic games are revived in new editions). To look on the positive side, I'd be interested in keeping the Digital Arts and Culture conference series going past its final 2009 conference. I wish there were some conference series of this sort today, spanning the arts, including theory and practice, and allowing for humanistic work that is technically serious.

RS: We will come back to the issue of humanistic work and digital technology. First this question: If you were a minister of education, what would you do about media literacy?

NM: When it comes to media literacy in general as well as programming, students should be invited to be creative and to learn by doing. I'd work, and would continue to work as I do in my role as a teacher (rather than government official), to allow more media practice and media making. This is a major aspect of my next book, *Exploratory Programming for the Arts and Humanities*, but is also part of all the classes I teach at MIT. I'm not saying that practice and media-making is the *only* way to learn, but I do find it to be an *essential* way to learn.

Politics and Government

RS: Some of the buzzwords of critical as well as euphoric discussions of the current and future state of digital media are "big data", "Internet of things", "algorithmic regulation". How would you discuss those words in a class on the cultural implications of digital media?

NM: Terms like these do represent underlying ideas and concepts, and they are worth discussing. But the ascendancy of the term "big data" doesn't mean it is truly a more effective and

powerful idea than is “distant reading” or “cultural analytics.” I think it’s useful to discuss today’s popular terms in the context of other famous terms from the past such as “push media” and “cyberspace.” Obviously these are terms that sound very outmoded now, but I don’t mean to be dismissive when I refer to them; some of those underlying ideas have been important and remain so, and yet, obviously, everything promised by such terms did not persist (or never came to be in the first place). How do terms such as these represent hopes, imaginations, fascination, and also misconceptions?

RS: If we ask Google Ngram, we learn that the term “big data”, of which “distant reading” can be seen as an offspring, occupies discussions much more than “push media”. We will come back to big data and distant reading later. For now it may be good to remind of this other term famous in the past and somehow forgotten in present time. Why do you think “push media” and its antipode “pull media” did not persist?

NM: Without looking at the relevant big data, I am sure that “push media” is a term strongly associated with the Web boom of around 1996 and 1997. PointCast was a company, founded in 1996, that garnered a huge amount of buzz for “pushing” information to client computers, reversing the way the Web works. Practically everybody had the Pointcast screensaver, which displayed news headlines and such. In March 1997 the cover of *Wired* featured a hand and the word “PUSH!” and instructed readers to “kiss your browser goodbye.” Why did PointCast go out of business and why did talk of “push media” subside? Because the concept, as exciting as it was, was almost totally wrong. People did not want to turn their computers into print newspapers or TV sets, at least on these terms, even though they would later gladly use services like YouTube to access video. They wanted to post their own content, search and surf in different ways, and write comments (even if the comments on YouTube do not seem highly meaningful). Sure, there are types of information that people want “pushed” to their computers and devices – weather information, software updates, posts and tweets from

feeds/accounts that they've subscribed to. But putting those in place didn't fundamentally reverse the Web. We didn't kiss our browsers goodbye.

The reason I bring up this term is simple. In late 1996, "push media" was the next big thing, generating tremendous excitement. Except, like "Infobahn," it wasn't the right concept or a truly relevant term. In 2014, "big data" is obviously a hot topic, the next big thing. Except maybe it isn't. Maybe by 2020 it will sound about as relevant as the Infobahn does today. In the case of big data, I think the reasons for the obsolescence of the term (and I am sure it will become obsolete) will be quite different. We really are facing what seems to us today like massive amounts of data related to communication, writing, media - and we have data from a huge number of sensors as well. We don't yet have the methods to analyze this data as we would like, and we *certainly* lack the means to contextualize it within our cultures, societies, and economies. But this data isn't inherently "big." It only seems big because we have been focused on much smaller data sets. Our discussion of "big data" does not pertain to how much data there is, but rather what our traditional means of data collection and analysis have led us to expect. When those expectations change, what seems like "big data" now will no longer seem big. It will just be data.

RS: Web 2.0 culture seems to have tamed and commodified the wild, anarchistic Internet of the 1990s when people played with identity in IRCs and MUDs and built their own websites in idiosyncratic ways. Remember John Perry Barlow's declaration of the independence of Cyberspace from the governments of the old world? Today, it seems people hope for governments to intervene in the taking-over and commercialization of the Internet by huge corporations such as Google and Facebook.

NM: Government has always played a huge role in online communications. Even before there was much popular access to the Internet, when people used BBSs run on individual's home computers and phone lines, the technical development of both the computer and the phone system was strongly supported by

the government. Obviously the US government had a lot to do with the development of the Internet, too. The problem now is that corporations have found a way to profitably insinuate themselves into personal publishing, communication, and information exchange, to make themselves essential to the communications we used to manage ourselves. As individuals we used to run BBSs, websites, blogs, forums, archives of material for people to download, and so on. Now, partly for certain technical reasons and partly because we've just capitulated, most people rely on Facebook, Twitter, Instagram, Google, and so on.

RS: Capitulation is a strong word; stronger than technical or cultural reason. It associates the claims of activists to stand up against the danger of surveillance and commercialization for a "free, open and truly global Internet" as, for example, expressed in Tim Berners-Lee's campaign *The Web We Want*. Such claim certainly deserves consent. However, the notion the Internet has gone the wrong way reminds us of philosophers such as Adorno who considered, against the perspective of the majority of the people, the social system we live in as wrong. Isn't the claim of a better Internet similar to the utopian notion of a better society? To rephrase my earlier question: What would have been the alternative to the actual development of the Internet? And how do you see the interdependence of technological agenda and cultural demand in this regard?

NM: This is an extremely interesting and important issue. Often, we act as if we want the Internet to live up to the positive nature of our society. Consistent with the various media panics we have undergone, we assume that new technologies will be threats to the social order. Because of this, we want our familiar society to win out over these new threats. But in fact, while new technologies certainly have their relationships to communication and creativity, being influenced by the past and influencing what will come, they are part of society. As you've said, our current social norms are not always correct or ideal. We shouldn't just be hoping to uphold them, but to improve our societies, whether one wants to call that impulse progressive, utopian, or whatever else.

Of course our current social system is wrong, or, to be a bit more gentle, not optimal. Should we try to “fix” the Internet or digital media more generally so that it better replicates the dominant social treatment of immigrants, trans people, youth, and other disadvantaged and oppressed groups? Of course not! We should be working to improve social justice, and we should certainly use and shape our technologies to help us accomplish that.

You’ve asked for an alternative to the Internet, so let me provide an alternative that would be worse than what we have: An oligopoly of hegemonic corporate services that replicate the mainstream values seen in classic network television and the policies of retail stores. You can only hang around if you might buy something. You need a credit card (so you can’t be a young person) and/or documentation that is effectively proof of citizenship. Don’t expect alternative gender identities or other means of self-representation to even be discussed, much less implemented. Even cumbersome and seldom-adopted means of enhancing privacy (PGP, Tor) are absent, as of course are practical tools for ad blocking and spam filtering.

Access to digital information and conversation via the Internet isn’t perfect, but it is better than this nightmare. Today, there are people who work on alternative DNS servers and other infrastructural improvements to the core technologies of the Internet. But from your and my standpoint, and the standpoint of most of our readers, I think that trying out practical ways of collaborating, sharing information, and fostering access and conversation can offer tremendous benefits. You could have started a conventional, closed-access journal 1999, but instead you created *Dichtung Digital*, a bilingual publication, which you made available online for free and later developed into a peer-reviewed journal. I have been blogging for many years and have used Web systems to collaborate on and publish freely-available work, working with people of different sorts internationally. These are the things we need to do to provide an alternative to monolithic discourse, whether corporate, retail, or institutional in some other ways. We need to build the structures that will support positive conversations, intellectual advancement, and

empowerment. And we need to continually be part of these conversations.

RS: In his book *The Googlization of Everything (And Why We Should Worry)*, Siva Vaidhyanathan speaks of Google's "infra-structural imperialism" and notes that Google has been crowding out imagination of alternatives, not the least of which by its reputation for building systems that are open and customizable -- so far. Should we mistrust the positive record and worry? Should --and could-- the US government or the European Union carry out something like Google's book project and run a search engine free of advertisement?

NM: Siva is absolutely right. Just hoping that Google will provide flexible, general-purpose search, search that does exactly what everyone in the world wants and needs, as a public service, is not a sound idea. While the government can lead the way in information access (for instance, the Library of Congress is a pretty good institution that does this, as is the British Library) I also don't expect new Web systems such as search engines to be government initiatives. Let me be more explicit about those institutions I mentioned, though: The Library of Congress, in addition to being a major library in the US, developed a non-proprietary classification system that is used throughout the US and in some other countries. The British Library has also made many general contributions and has more items in its holdings than any other library in the world. So some of our large governmental institutions that deal with information are very influential, and in very positive ways.

Building a large search engine is a hard task that few undertake. Currently, in English, I understand that there are only two sizable indexes of the Web; Google's and the one used by both Bing and Yahoo. It's Coke and Pepsi, but for our access to the universe of inscribed knowledge. The search capability we have is pretty good for commerce and for just "surfing" for entertainment; for doing scholarly research or getting medical information it is atrocious - sometimes it seems that you might as well simply go to Wal-Mart and try to find what you need there. But

it is considered a hilarious idea to try to build a new index of the Web. We think that only Google can do it for us.

There probably are suitable uses of government regulation and suitable new government projects in this area, but the main response here should be to expand our imagination and undertake new efforts to build alternative systems. For instance, why are we waiting for Google to give us an excellent search facility for scholarly works? Google is not involved in the intellectual community of scholars, academic conferences, teaching, advising students, and so on. The research they are conducting is, by the very nature of their organization as a corporation, for the purpose of enriching their shareholders. That by itself doesn't make Google "evil," but the company is simply not going to solve the scholarly community's problems, or anyone else's problems, unless it results in profit for them. A regulation won't fix this; we, as scholars, should take responsibility and address the issue. To see a case where a nonprofit organization has done a better service than any company has, by the way, consider the Internet Archive. Obviously there is Wikipedia, too. Neither is perfect; they're just the best systems of their sort in the world.

Algorithm and Censorship

RS: As I learnt in the interview with Erick Felinto, Brazilian's most progressive former minister of culture, Gilberto Gil, once said: "I'm a hacker, a minister-hacker". Felinto continues, in a time when big corporations are increasingly colonizing cyberspace, we need to imbue people with the hacker ethics of freedom, creativity and experimentation. David Golumbia, on the other hand, holds that "hackers" are bizarrely celebrated as both libertarian and leftist political agitators. To Golumbia, "political activism" by "hacker" groups such as Anonymous is more easily parsed as right-wing than as left-wing activism, for their issues are usually ones on the agenda of the far right: the dissolution of the state, the celebration of individual freedoms over social equality, and a diminished focus on the dangers of concentrated

capital. How do you see the role of hackers and hacktivism in the cultural and political environment of digital media?

NM: “Hacker” is a very loaded term, to leave aside “hacktivism,” which is loaded in other ways. To some it means breaking into other people’s systems, to some it means working to protect those systems, and to some it means building those systems. I think the political valence of destruction is different than that of construction, and that working for organized crime to infiltrate other people’s computers and build botnets is also significantly different than opposing Scientology or (to get old school) the Communications Decency Act. It’s certainly different than creating and maintaining Python, a Linux distribution, the Linux kernel, or other systems. To consider hacking in the sense of programming and in the constructive system-building sense, particularly in free software, I see that there is a liberal aspect to the activity, even if undertaken by political conservatives. (Perhaps like George W. Bush’s artistic practice as a painter, which allows him to sensitively and strikingly portray Putin?) “Hacking” in this way involves adding code, and the concepts that code embodies, to the world, allowing others to use these additions they like, fork them if they like, or forget them if they like. I’m not saying hackers (specifically, free software hackers) are always virtuous in every way or that they are exactly what we expect them to be politically. For that matter, I don’t mean to suggest that doing destructive things isn’t appropriate and useful at times. Still, the basic activity of hackers (as I think of them) is constructive and the outcomes are offered to the world to improve the way computational systems work and the way we think about information.

RS: Since Internet companies use data and algorithms to customize the website they show us, the ads they send us, and the information they give us, one metaphor to describe the digital media age may be narcissism. In digital media studies the term translates to “daily me” (in Cass Sunstein’s book *Republic.com*) or “you-loop” (in Eli Pariser’s book *Filter Bubble*). To Sunstein, Pariser and others alike, the personal and cultural cost of personalization in digital media is the loss of chance encounters, the

preclusion of the unfamiliar, the removal of diversity and of what we are not (yet). A valid concern or a hyperbolic alarmism?

NM: There are a lot of dimensions to personalization and self-monitoring beyond the narcissistic ones. You could use information about yourself to better contextualize what you read, to relate news in other parts of the world to your own city or experiences, or to get recommendations that broaden your perspective. I don't think that I would call a person with diabetes, monitoring his or her blood sugar levels, a narcissist simply because more information about the self is being observed in this case and this person is concerned with that information. When unseen algorithms isolate people by their purported world-views, of course, that is problematic. But let's not flatten every use of personal data to that.

RS: I agree. So let's take self-monitoring: What is your perspective here?

NM: I do admit that there are dangers in taking a Fordist/Taylorist perspective on oneself (and one's productivity). But I think individuals in culture today can work through the problems associated with self-monitoring. I'm more concerned that what we call self-monitoring is almost always mediated by corporations. The types of monitoring we can do are dictated by corporate, for-profit interests, just as the interfaces we use are developed by corporations. And of course the data we accumulate about ourselves, even if we look at it only on our phone or only on our local computer where it is captured, is almost always transmitted to corporations that are obliged to use it in any way that can increase their profits. It doesn't have to be this way, but we need to change things if it is to be otherwise.

Fitness monitoring is an interesting case. Fitbit's monitoring devices are popular ones, providing information about how the wearer's body vibrates throughout the day, an extraordinarily detailed sequence of sensor data that pertains not just to general activity level but to all physical activities being undertaken. Fitbit's system is not a self-monitoring system. It is a corporate monitoring system: the data is sent to Fitbit. The corporation

then shares the data it obtains from a particular user with that user, via its website. Other users get some information, too. Years ago, it was noted that the sexual activity of some users was visible in their posted data. Fitbit responded by making certain data private by default. “Private” of course just means that the data is not posted on the Web for all users to see. The company Fitbit, based in San Francisco and founded by James Park and Eric Friedman, can still tell when its users are engaging in sexual activity. Fitbit has been taking on other companies as clients and is monitoring the activities of those companies’ employees. I don’t know whether your HR department gets to track how much sex you’re having, but there is no technical barrier to this.

My point is that if you want to know how many steps you’re taking each day, you can just get a pedometer. There’s no need to get a corporation (or several) involved. If you want to plot the data and have it look pretty, there’s no technical barrier to doing that on a computer or mobile phone without sending the data to anyone else. Why wait until people start getting fired for their tracked activities outside of work: walking too little, for instance, or having too much sex on their own time?

RS: I absolutely agree, if I want to track myself why do the data have to be on a corporate website. Your explanation suggests that it is actually laziness and incompetence (to go the extra mile and find ways to collect, analyze and visualize data without falling for the convenient app of a corporation) that eventually will allow employers to control their employees. However, we should not forget that the new cultural technique of self-tracking is intertwined with the meanwhile quite established cultural technique of sharing. It is not inevitable but very much suggested that my running becomes a ‘social running’ by sharing the data of my activities online. Plus, in this case the sharing has even more reason than the infamous sharing of what I am doing right now or what kind of food I ordered. According to the Hawthorne effect people work harder – and run faster – if monitored by others. Transparency boosts motivation and will push a lazy person into action. Jawbone’s VP of product development once phrased

it this way: ‘The number one correlate with your weight is what your friends are doing.’ Hence, it is very unlikely that self-tracking works the way it does without a social-networking feature.

NM: Actually, the 2007 Journal of the American Medical Association article “Using Pedometers to Increase Physical Activity and Improve Health,” which considered pedometer use without data sharing, reported ‘The results suggest that the use of a pedometer is associated with significant increases in physical activity and significant decreases in body mass index and blood pressure. Whether these changes are durable over the long term is undetermined.’ So there is peer-reviewed medical research that people having their own (not shared) pedometer data is beneficial. Of course, for medical advice and information, I would go to the top American medical journal before an offhand statement from an executive of an interested company. Beyond that, I’ll note that if you want to get into a sharing situation where social pressure helps you enhance your fitness, there are other ways to do it – join a gym, for instance.

Although I don’t see it as critical to fitness success, I do understand why people wish to share exercise data with others. It may be, for instance, to try to connect to other people via data instead of via conversation. Is it really very socially significant that I walked 16,396 steps on Saturday? It’s more than usual, and I suppose it could possibly prompt a conversation or make some of my friends more socially aware of me in some ways. But if the goal is social sharing, wouldn’t it be much more significant to write something on my blog, or even briefly tweet, about where I walked, why, with whom, and what the weather was like? For some people, sharing raw data may indeed serve this social purpose, so I don’t mean to suggest that data sharing is wrong. But it seems that it could just as easily substitute for deeper social interaction, rather than enhancing it.

RS: This brings us closer to the actual issue here: The increasing public sharing of personal data may in fact represent the decrease of social interactions. Could it be that people have become too lazy to write about their life and prefer outsourcing

the task to technology which automatically both turns the report from words to numbers (or images if we include Snapchat and other social media of self presentation) and distributes it to as many people as wanted at once. This of course raises the inevitable question why people follow Facebook's imperative to share as much personal information as possible and why younger generations don't seem to care about privacy.

NM: I don't buy either the stereotypical privacy concerns that people have about, for instance, teens (refuted in danah boyd's book *It's Complicated*) or the "digital native" concept (with odd colonial valences among many other problems). Essentially, I would say that young people, as with any group of people, are neither fully aware of technology and complete masters of it in every way, nor are they rubes who fail to think about their own interests and who don't understand the social implications of technology. Young people do not need to learn the social norms of the use of technology from their elders. But they are also not total experts who are ready to chart the future of the Internet for everyone in the world. We should be respectful of the perspective and values that youth have; we should also respect the fact that their expertise and vision is not the only expertise and vision, nor is it the best in every way.

I have to point out that Facebook is not in favor of 'the sharing of as much personal information as possible.' Facebook is in favor of having as much personal information as possible fed into their own corporate systems, for others to see, certainly, but ultimately for their own use. In fact if all the information on Facebook were available in some other system that was at least equally convenient to use, the company would have a severe problem. So trustworthy branding, a trendy company, buying other prominent and successful startups, and so on is also critical from Facebook's standpoint. What Facebook really wants is for your social life to be impossible without them.

Finally, I don't think people are just being too lazy generally. They're inventing new forms and genres online, communicating and creating in radical new ways. It's just that there are a lot of

complexities to the social, cultural, and political dimensions of digital media and the specific systems (often corporate ones) that are arising. In fact the problem is probably not laziness at all, but that people are moving too fast and are overlooking things that, with a better understanding of history and more time to contemplate them, they would be able to deal with in much better ways.

RS: This is exactly what should alarm us. More so since Facebook is so successful in accomplishing its goal. If boyd's message is that the kids are all right, we may add that - and some would say, for this reason - the society is not. Younger generations have basically adapted to the regime of sharing and look forward with excitement rather than discomfort to the Internet of smart things that will know everything about us and may pass it on to others who also like to know. I wonder how much they understand the social implications of technology if even people with more education and experience don't really know where this road of sharing will lead us. Not only Facebook but almost every app today wants to have as much personal information as possible. As we know, personal information sum up to societal information which is wanted by the intelligence apparatus and governments as well as by scientists and companies. Isn't the actual problem of big data mining rather than the more or less conscious compromise of privacy the looming of algorithmic analytics and regulation?

NM: I don't think these can be easily separated. There are some types of big data work that are hard to see as a threat to privacy: astronomical data and data from monitoring air quality, for instance. But much of the excitement about big data has been regarding data about people - cultural, economic, medical, and so on. Or of course reading people's email (or whatever Google wants to call its algorithmic analysis), initially to serve up ads but perhaps for many other interesting reasons. I say these are difficult to separate because there is no reason to amass huge amounts of data, which classically would be private, unless this data can eventually be analyzed, either by the collector or by a company to which it is sold, or can be used to regulate human or machine behavior in profitable ways. So I wouldn't locate the

problem in the analytic stage. The collection stage very strongly prompts analysis and use.

Two analogies: In a criminal trial in the US, the judge works to avoid inadmissible evidence being shown to the jury in the first place. That evidence isn't shown at first and then retracted later. Also, in a hiring process, if you're not legally allowed to discriminate based on age, it works well if you don't ask applicants to provide their age. So instead of trying to block analysis, I'd suggest that we only give data to companies if, at the very least, there is actually some benefit to us. But really, the benefit should be worth the cost of giving up that data - it should pay us appropriately for how much the data is worth. And of course we don't know how much the data is worth.

RS: Indeed, we don't know and even if we knew that it is worth a lot it shouldn't be up to us to sell it because not only do personal information sum up to societal information, the personal approach to information can also produce societal pressure. Imagine fifty percent of the applicants in a hiring process volunteering their age, their ethnicity, and their Facebook password assuming that it is beneficial to them. What chances do you think the other fifty percent will have of getting hired if there is only one job for ten applicants? We have to be stricter: It should not only not be up to companies alone what kind of data they can collect and analyze but also not to the individuals alone what data they can share and provide. The decision should be in the hands of the society as a whole after it has discussed the possible implications of certain data sharing and reviewed the acceptability of such implications. In this context it is remarkable that in December 2015 the European Parliament agreed on a proposed Data Protection Reform that foresees the appointment of 'data protection officers' in order to 'help the competent authorities to ensure compliance with the data protection rules' as well as the adoption of 'impact assessment' carried out by the competent authorities with respect to certain uncertain data processing. Hence, maybe we have to think much bigger about the privacy issue, as an issue that, similar to that of social welfare

and medical benefits, requires public debate and governmental regulation.

Art and Aesthetics

RS: In the 1990s there was a lot of talk about the “death of authors” and the empowerment of the reader in hypertext. Although in the discussion of hypertext today the role of the author is understood in a way that is much more complex, the death of the author remains an issue with respect to text automatically created by a computer program. Ironically, in contrast to the author’s hasty discharge in the early hypertext debate, the trope of the death or disempowerment of the author is now not at all played out in the way one would have expected. Rather than considering the author as being replaced by software, a number of theorists and practitioners regard the author as present in the software. You have experimented a lot with computer-generated text and “poetic computing” as one of your lectures is entitled and discuss this issue in your book *Exploratory Programming for the Arts and Humanities* that will be published in 2016 with MIT Press. How much authorship do you claim in a text resulting from a program?

NM: When I write a text-generating program - and let me restrict myself right now to the “self-contained” kind that doesn’t accept seed or source texts - I consider myself to be the author of the program and therefore implicated in the output the program produces. I wouldn’t say, and I don’t say, that I wrote the output. It was produced by the program, which I wrote. I make my programs available under free software licenses as free/libre/open source software, so anyone can run them and generate texts with them. I don’t claim ownership of the texts that result when other people run the program. It is perfectly legal for someone to go and publish such outputs, and the system itself, without my permission, although it’s nice for people to let me know when that happens. Now, I think it very likely that if one of my programs generated some text that, for instance, advocated the overthrow of the government and incited a riot, I could be found to be

legally responsible for this. And, in the sense of moral authorship, I certainly get some credit (or blame) for the poems others generate with my programs.

RS: Given that you don't claim ownership of the text resulting from somebody using your program, would then, if the text turns out to be lawless, the other guy be jailed? To hold you responsible in court or build you a memorial for the overthrow, wouldn't the idea then have to be communicated within the code itself, i.e. before the outcome of any text? As I understand it, you program a system with certain rules of communication while the concrete application of the rules, the communicated, is not in your control. Like langue and parol in linguistics, or the camera and the photograph in media studies.

NM: Analogies to better-known domains may be helpful. IBM's chess computer Deep Blue defeated Gary Kasparov in a watershed moment for human-computer relations. One can imagine the team of programmers saying "We beat Kasparov!" after this happened. This is an instance of metonymy, however; it isn't literally true. Kasparov could easily defeat any or all members of this team, playing in any configuration, if the game were between people. The programmers didn't beat him; they wrote a computer program that beat him. Sergey Brin and Larry Page don't find people's search results for them; the search engine they developed (and that many others contributed to) does. When you typed "I hate Jews" into the Google search engine several years ago, the system would helpfully suggest: "Did you mean: *I hate Jews?*" Brin and Page didn't create this result, of course, but they and their company developed the system that produced this result. Just as the Deep Blue programmers can take credit for Kasparov's defeat, although they didn't personally defeat him, Brin, Page, and Google would have to be the ones blamed for that suggestion that the search engine made - and also the ones who get credit when the system works well.

RS: I agree with your conclusion but wonder about the premise. Deep Blue won because of the computing power, and only after it was upgraded to Deeper Blue so it could base its moves on the

analysis of thousands of master games and the evaluating of 200 million positions per second. Google acts on the base of probability. These are qualities of the computer humans deliberately make use of. Their good making use of it certainly deserves them authorship. But of course, Brin and Page are not the authors of the line *I hate Jews*; only of the mechanism of autocompletion.

NM: That's a good point, and I think it does inflect mine in an important way. In both of these cases the system (Deep Blue, Google search) works not only because of smart programmers but because of well-curated data that is used to train the system. Even when there's not a mass of data to train on, those who develop such systems draw on experience "manually" to devise rules. In any case we have to look beyond the developers/programmers to, in many cases, data, and, in all cases, the culture and contexts in which these systems are developed.

RS: You also wrote a book about interactive fiction (*Twisty Little Passages* of 2003) describing the development of an online interactive fiction community in the 1990s and examining the concept of the "active reader" in contrast to the passive reader in traditional text from gaming and literary perspectives. What are your main points in the book? What would you rewrite more than a dozen years later?

NM: A significant change is the increasing amount of work that isn't "parser-based." When I looked at IF critically, and when I thought about it myself as an IF author, I considered that natural-language input (in the form of short commands: *get lamp, ask the librarian about the freeway, take inventory*) was very important. It was giving the player a chance to be a maker of language and to respond, even if in a limited way, in the same medium that the game was using to present the simulated, fictional world. Recently, there has been a great deal of interesting work in hypertext (mainly using the system Twine) and in "choice-based" games where one selects from a short menu of options. Meanwhile the visual novel, a form much beloved in Japan, is also gaining some ground in the US. These interfaces still don't appeal to me as much as that of parser-based IF does,

but there is some very intriguing writing, including radical and experimental writing that goes in some very compelling new directions, that is happening in these forms. I've also written my own interactive fiction system, used these days for research purposes rather than widespread creation of IF, since writing *Twisty Little Passages*. I wouldn't try to document this system in an updated edition, but I would try to enrich the discussion of IF platforms and their influence on and relationship to creative work. That's of course also a topic that grows out of my work as a series editor of the MIT Press *Platform Studies* series.

Media Literacy

RS: In 2003 you edited, together with Noah Wardrip-Fruin, *The New Media Reader* collecting important texts about and projects of the than still emerging field of new media. If you look back at this book and forward to the probable future of new media (i.e. smart objects, big data, self tracking), what subjects have proved essential, what subjects need revision, what subjects would you add to the New Media Reader 2?

NM: Actually there is essentially nothing I would change about the texts we selected in *The New Media Reader*. We tried to determine the readings that would explain the history of the field, from World War II to the World Wide Web, and with the input of our many advisors I think we did that well. We could certainly substitute a reading here or there, but I think it would be a detail and not indicative of a need for a major revision. We could update the introductions, too, if that seemed valuable to readers. If there were any change I would strongly advocate for a new edition of *The New Media Reader*, it would be to eliminate the CD-ROM. Certainly not because I dislike the contents of the CD, which I think are rather important and which I worked to assemble very earnestly, but because in practical terms there are few people who even have CD drives in their computers and who make use of the CD. For practical use in classes, we should get as much as possible online (some of it already is) and allow people to access these resources over the network. I guess it's

typical that the major changes needed are not in the book's content but are due to changes in platforms and storage media (or network access to resources).

RS: Digital Humanities seem to be the new buzzword in the Humanities. Some fear with Digital Humanities the quantitative turn taking place in contemporary society finally infects even the disciplines supposed to reflect and interpret society's development and turns it into a branch of the science department. Others hold that "algorithmic criticism" doesn't aim at verifying and stabilizing meaning through replacing interpretation by counting. On the contrary, "algorithmic criticism" and "distant reading" offer new insights in the way knowledge or data respectively is organized and opens up new opportunities for close reading and interpretation. What do you fear or hope from Digital Humanities and how do you see their relationship to Digital Media Studies?

NM: Fear of quantitative study by a computer is about as silly as fearing writing as a humanistic method - because writing turns the humanities into a branch of rhetoric, or because writing is about stabilizing meaning, or whatever. Valuable insights from computational humanistic study have already been reached, and these should be displayed in response to such talk. I'm actually worried about a different type of intellectual limitation when it comes to the Digital Humanities. Many people think that DH can only be done on our venerable cultural heritage. We can study literary history from centuries past, the development of cities, older examples of art, music, and so on, but we can't study digital media using DH, because, I suppose, that's too many digitals at once. It's bizarre, because that part of our culture which is digital is particularly amenable to analysis using DH techniques: you don't have to digitize it, because it's already digital. And, those working with DH clearly don't find computers entirely disdainful; they can be used for analytical and critical purposes. Why not consider the cultural production that is being done with them, too?

I see a connection between the study of 17th, 18th, and 19th century art, literature, and culture and the study of what is happening today with digital art, electronic literature, and online culture and communication. So I'm certainly in favor of having "digital media DH" along with other kinds of DH. Such work, just like any other DH endeavor, could provide new insights into its objects of study while also offering general benefits to the digital humanities. In case this sounds like a minor concern in light of some of the more overtly political and urgent issues that we discussed earlier, let me state: Understanding that we, today, are part of history, and understanding *how* we are part of history, is not an irrelevant detail!