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Open data: "There's an app for that."

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ABSTRACT

This commentary examines how the open data movement is revolutionizing the diverse practices of journalism, government communication and public relations. The author defines open data as the future of communicating knowledge, and explains how it is challenging communication professionals in ways that previous incarnations of the World Wide Web have not before. The author describes the evolution of web services tracing the differences between Web 1.0, 2.0 and 3.0. The author proposes transparency as the fundamental concept underlying success for professional communicators in an open data world.

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s the information age progresses and more data is placed on the internet, it seems that no task is without an available software application. From ordering coffee in the morning, to checking the traffic in the afternoon, to learning the weather forecast at night, there is no shortage of available information or applications to offer it up to us. As the amount of available human knowledge continues its exponential rate of increase, we appear to be on the verge of an information overload.

As this information deluge becomes part of our everyday reality, humankind is innovating to break through to a new innovation barrier as we've always done when it appears that we've reached the limits of a technology. The solution for helping people handle oceans of information is to decrease the complexity of each piece and to further increase the amount of understandable knowledge available to each individual.

"Open data" is simple yet complex at the same time. There are no agreed upon definitions for either the technical or philosophical components of open data. It is best described as structured primary information from an or-

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ganization — meaning unfiltered and complete information — provided in an accessible, machine-processable, non-proprietary, license-free format.

Open data is the future of communicating knowledge, and it is challenging communication professionals in ways that previous incarnations of the internet have not.

This newest incarnation of the web has a name: the Semantic Web or, Web 3.0, for those who prefer continuity with previous naming conventions.

Web 1.0 was simple information in HTML format that was not very interactive. A news article or news release was posted to the web and that was the end. The content didn't change much, and you couldn't customize it or interact with it much.

Web 2.0 brought interactivity to the web and connected people to one other. Newspaper websites and PR news releases added features such as interactive comment sections, buttons for sharing the item, Facebook "like" and Google "+1" buttons.

Web 3.0 will connect information to information, allowing people to use data in unexpected ways to better inform and power innovative mobile apps. Developers can take various datasets and "mesh-up" to produce apps. A "mesh-up" is the combination of two data sets to enhance our understanding of trends. Mesh-ups have been common for decades. For example, researchers and investigators have long taken public health data and census information to determine the relationships between income and health. Open data allows for both complex and simple "mesh-ups."

In Vancouver, a software developer took public parking lot data from the city government and data from Impark, a private parking corporation, to create a mesh-up mobile app that uses GPS to find the nearest lots at a price range acceptable to the user. In this case, Impark benefits from the free development of a parking application and citizens have a more rational means of accessing parking.

Open data is one of the movements pushing Web 3.0 forward and it will remove one of the last bastions of traditional media control - government data. It's a bastion for both the mainstream media and government. The media can decide what government information it wishes to access and the government can decide how willing it is to release that data. If the government does not wish to release the data, it can delay and frustrate the media by using freedom of information request (FOI) appeal mechanisms.

Open data removes the traditional filters from the information process and thus represents the most disruptive development for my trade — journalism — of any creation of the internet age.

Government data has remained elusive to the general citizen. Performing an FOI request is both time-consuming and expensive. The result has been that only people backed by the resources of traditional media organizations or professional advocacy organizations have been able to fruitfully use FOI request processes. There are cases of private persons using an FOI request, but these are rare and often motivated by a personal agenda.

Open data movements across North America are changing this state-ofaffairs by lobbying governments to release ever-greater amounts of information such as expense accounts, crime, health, and legislative information. These movements are also at the forefront of lobbying for live streaming of public meetings.

Think of open data as "proactive FOI requests." The government releases information in its most basic form providing citizens the opportunity to interpret it for themselves without any filter.

With access to raw information, citizens can analyze data for themselves to reach their own conclusions. With live streams, citizens are able to act as their own eyes watching over government.

FOI request barriers allowed journalists to continue to sell "exclusives" resulting from requests. Open data will end these exclusives and remove one of the last gate-keeping assets of traditional media.

The old symbiotic relationship between politicians and journalists served both parties well until Web 2.0. Both benefited from closed data: politicians were able to exercise some control over what information journalists received, while journalists were given a product of value due to its rarity, although not necessarily due to its quality.

Politicians needed journalists since they were the only conduit to the constituent. Journalists needed politicians since they were the conduits to information that sold subscriptions.

Web 2.0 allowed politicians to bypass journalists completely. The recent election campaign demonstrated this well. Journalists joined the Conservative campaign bus on tour, at great cost to their respective news organizations, but could only ask five questions each day. Photo opportunities were only available at carefully scripted events. The political party was in control.

All political parties took advantage of the social web to bypass the "media filter" and aimed their messages at targeted constituencies. Journalists could do little but protest — politicians may simply no longer need them.

Open data will aid in fixing this imbalance. Journalists will be able to bypass politicians to get information, but citizens will be able to do this as well.

Open Data can be thought of as "Craigslist for government". Much as Craigslist provided a more effective lower-cost platform for the exchange of goods and services, open data provides a more effective platform for civic information than the traditional newscast or newspaper.

Traditional media outlets and their journalists have fought the internet for over fifteen years. Each battle starts the same and ends in defeat with journalists forced to adopt the very innovations they fought against.

Initially, blogs were dismissed as having no credibility, but today, the *Huffington Post* - a non-traditional media organization - is a very popular news site because they embraced blogs as a credible means of delivering information. Today, it is hard to find a respected media organization that does not publish blogs or at least link to them.

The same battle raged about Web 2.0 services such as Twitter, with similar results: Twitter has become a trusted source of information for citizens and a ready venue for professionals to have brief real-time conversations amongst themselves — conversations that their followers could easily read and keep track of.

Will it be the same with open data? Can journalism survive another lost opportunity? *The Huffington Post* did not have the brand or resources available to traditional media organizations when it launched. Now, it's worth more than most traditional newspapers.

One of the primary criticisms of open data is that it will lead to "information overload" as millions of data sets flood the internet, making it very difficult for people to make sense of all the raw data.

This criticism assumes that no search engine is capable of indexing it and that people will be unable to understand the data. With open data, experts in specific fields are able to leverage their knowledge and skills to create usable, understandable applications that make the data understandable and accessible for the general public.

Much as journalists and professional communicators help others to better understand the world, developers and engaged citizens will use open data to expand this understanding. The rate of growth in human knowledge continues to increase exponentially and each time it appears that society might face information overload, we invent better methods of organizing and understanding it.

The coming "information overload" will demand a solution creating the opportunity for a new Google, Craigslist, or *Huffington Post* to develop and flourish. Open data movements are already assisting governments to better communicate information. I'm involved as a founding member of Open Hamilton (www.openhamilton.ca) which partnered with nearby open data movements to create WardRep (www.wardrep.ca), a web application that uses open data to create an interface through which, after entering their email address, citizens are informed of their local ward and political representation.

At the time of this writing, we're working with the City of Hamilton to build an instance of WardRep that can be embedded on the city website to replace the PDFs currently provided for citizens attempting to find their corresponding wards. The city is receiving tangible benefits from the open data community. The community is gaining wider distribution and exposure for

our efforts.

Participating with the open data movement offers these opportunities to government, corporations, non-profits, non-governmental organizations and the traditional media.

Traditional media organizations will need to quickly build their models around Web 3.0 or watch as the web replaces them entirely.

There's another more disruptive threat. Data is now used to check journalism in ways unimaginable five years ago. A site called churnalism.com in the United Kingdom allows people to see how much of an article is merely copied from press releases or other sources. Already, programmers are working to use this site's application programing interface (API) to automate the comparisons with articles indexed in Google News.

Open data is changing how journalists, professional communicators, and the public interact with each other. No longer will there be the power imbalance that exists today, where one group has superior access to information through sources or subscriptions. Rather, open data will mean that each party will be able to operate without the other and point to raw data to correct any inaccuracies put forward by one another.

The relationship between all parties will require trust as a foundation. In the era of Wikileaks, trust is lacking between "public relations," "mainstream media," and "activists." In isolation, each party will only have a limited understanding of the true knowledge contained in the data.

Working together, journalists, professional communicators, and citizens can parse the data to be able to contextualize it and present it in understandable ways, to allow the general public to grasp the information. An image may be worth a thousand words, but I would argue that a successful data visualization is worth ten thousand words.

Open data allows for a joint collaboration between journalists, professional communicators and the citizenry to improve society. It will move forward, with or without those who choose to stay behind. The question for my trade is to decide whether we're getting on board or being left behind.

One thing is certain: the only effective response for traditional media, professional communicators and government policy makers in the Web 3.0 era is transparency.