

**“Low-Rise Renters and Multi-Ethnic Enclaves”:**

**How Data Brokers Categorize Canadians**

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**Directed Reading Project (POLI 556)**

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Data brokerage firms might not seek the same level of public recognition as big tech companies such as Facebook or Google, but tucked away behind the scenes of mundane purchases and targeted advertisements, data brokers deal in billions of pieces of consumer information every day (OPC, 2014). Their role is to serve as intermediaries between dataset owners and those who wish to gain access to consumer data for purposes related to marketing, employment, law enforcement, and more. As an understudied topic, this paper explores the nature of the industry through Canada's largest data broker: InfoCanada. More specifically, this research investigates the geo-demographic, behavioural, and psychographic analytic services offered by InfoCanada's partners at Environics Analytics (EA), to determine the types of variables and categorical groupings used to sort consumers into market lists. Following the wake of Cambridge Analytica, this type of market segmentation, or social sorting (Lyon, 2003), is of public interest regarding its democratic implications. Beyond electoral politics, however, social sorting is also capable of influencing life chances and life choices through advantaging certain groups while marginalizing others (Lyon, 2003). This research confronts the following questions:

- 1) How are Canadian consumers categorically sorted by InfoCanada and their partners?
- 2) What are some of the risks associated with categorical discrimination and social sorting?
- 3) Do Canadian privacy regulations meaningfully protect consumers in this regard?

This study relies on the most recent Canadian data broker reports from the Office of the Privacy Commissioner of Canada (OPC, 2014), and the Canadian Internet Policy and Public Interest Clinic (CIPPIC, 2006). Supplemental information is presented from InfoCanada's website,<sup>1</sup> as well as marketing materials from partners such as Environics Analytics (EA)<sup>2</sup> and Asking Canadians<sup>3</sup>.

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<sup>1</sup> <https://infogroup.infocanada.ca>

<sup>2</sup> <http://www.environicsanalytics.ca>

<sup>3</sup> <https://www.askingcanadians.com>

These materials were accessed between February 1 and April 1, 2018. After a quick overview of the data brokerage industry in Canada, I present a sample of the categorical lifestyle segments that InfoCanada and Environics Analytics sell to clients. Following an analysis of the discriminatory risks of social sorting practices through the lens of surveillance capitalism (Zuboff, 2015), this paper ends with the question of whether Canadian privacy law adequately protects consumer privacy through the notion of meaningful consent.

### **Big Data Surveillance**

In 2016, Canadian advertisers spent upwards of 9.14 billion (USD), making Canada as the tenth strongest country in the world in terms of advertising expenditures. In the same year, the U.S. spent over 190.84 billion on advertising (Statista, 2016). As the intermediaries of the advertising industry, data brokers are highly involved through buying, selling, trading, and renting access to consumer data with the promise of more efficient market research and targeted advertising (CIPPIC, 2006:11). Standard datasets usually contain demographic information such as names, addresses, and phone numbers, grouping people into categories based on geographic proximity or perceived interests. Others are more extensive, profiling people by hobbies, credit status, age, gender, ethnicity, shopping habits, psychographic and behavioural categories (Environics Analytics, 2018). This information typically comes from purchasing data linked to loyalty cards, credit cards, mail order subscriptions, publicly available census data, survey data, social networks and many other sources (CIPPIC, 2006:33-36). These categorized groups are then sectioned off into lists, which are then promoted to marketers. List brokers then sell or rent access to them (CIPPIC, 2006:12). Largely, these data collection and sharing practices happen outside of consumer awareness (Kuempel, 2016:209-210). While the practices of advertising and data brokerage firms predate recent trends in internet technologies, today, the continually expanding

nature of Big Data has promised to bring new value to marketing companies (Pridmore & Hämäläinen 2017:112).

The advent of Big Data has allowed for new ways of collecting, analyzing and predicting information. According to boyd & Crawford, Big Data is a product of mixing new forms of technology, analysis and mythology (2012: 663). It is a phenomenon that allows for digital innovations to collect, compute and cross-reference enormous datasets in ways that were previously impossible, expensive, or inconvenient. The magic of Big Data combines technology and analysis with modern mythology, or, the industry belief that Big Data innovation leads to marketing solutions, stronger insights, and ultimately, larger profit margins (boyd & Crawford, 2012: 663).

The language used to promote any data analytics website can demonstrate the marketing industry's heavy reliance on myth. Wary of "the hype", some critics are weary of the overall accuracy of Big Data's promises (Pridmore & Hämäläinen 2017: 117), while others maintain that these practices are pushing us toward a society governed by consumer prediction and behavioural control through surveillance capitalism (Zuboff, 2015: 86). At the same time, Big Data is celebrated by some policy-makers, for example, technologies that accurately predict traffic flows or the spread of disease have aided in public planning (Pasquale, 2015:56). And, as we have seen, Big Data collection and analysis has reached the realm of electoral politics (Delacourt, 2016). However, whether these practices are able to reach intended marketing or political goals remains unclear. The truth of it is, the full implications and possibilities of so-called Big Data analytics are still unfolding. Whether or not we should believe "the hype", Big Data collection starts with surveillance.

For our purposes, surveillance can be defined as the systematic tracking and monitoring of information or activity for the purposes of predicting or influencing future behaviour (Lyon, 2003:14). Data brokerage firms fit into the larger context of surveillance culture, one that often involves active participation and voluntarily sharing of private information (Lyon, 2017:824). For example, loyalty cards demand the voluntary sharing of purchasing data for access to discounts. Social media sites are free to use but require sharing access to profile information which is then made accessible to third parties. David Lyon explains that surveillance culture then is a condition of “digital modernity”, and has been exemplified by the infiltration of new communications technologies into everyday life. However, while surveillance can be beneficial for society in some ways, it can also be harmful without the strict regulation enforcement or accountability measures. As a result, surveillance is seen as “ambiguous” (Lyon, 2003:14) or “Janus-faced” (Lyon, 1994 in Marx, 2016:11). The question is, even as consumer surveillance may provide some individual benefits, such as access to services or discounted products, are risks of discriminatory harm also present and adequately accounted for?

### **InfoCanada: Canada’s Largest Data Broker**

InfoCanada is celebrating its 45th anniversary this year. As a subsidiary of InfoUSA, both are part of Infogroup, which is owned by CCMP capital, a private equity firm which was formed by J.P. Morgan. As Canada’s largest data broker, InfoCanada boasts information on 12 million Canadians, reportedly drawing from over 100 sources. Although an extensive list of those 100 sources is not publicly available, they use information from Statistics Canada, census data, self-reported surveys, social media data, purchasing data, real estate records, tax assessments, voter registries, income, age, and ethnicity to compile consumer lists for others to rent (InfoCanada, 2018). When lists are made available for rent, these include names, addresses and phone numbers. Lists are based on

inferred commonalities, for example, consumers who may have purchased books on a particular topic or are the owners of a gold credit card (CIPPIC, 2006:8).

Potential clients looking to purchase consumer data are asked to select preferred cities, municipalities, postal codes, provinces, telephone area codes, age range, gender, estimated household income, number of children in home, home ownership, type of home, value of home, marital status, ethnicity, religion, and last name. Throughout this selection process, a note at the bottom states all demographic information is collected from “Census Dissemination Area” information at the neighborhood level. Finally, for an added fee, more extensive datasets are available from Environics Analytics’ ‘PRIZM’ program, where 68 lifestyle segments based on psychographic data are available for purchase.<sup>4</sup>

### **Environics Analytics (EA)**

InfoCanada is partnered with Environics Group, a cluster of Canadian companies which includes Environics Analytics (EA), Proof Inc. (previously named Environics Communications), Proof Experiences (formerly known as Free For All Marketing),<sup>5</sup> and Environics Research Group. Together, they provide far-reaching analytics and insights services to InfoCanada and others. EA offers a variety of services, primarily through PRIZM5, a program which is used to compile and analyze psychographic data on consumers based on their large Social Values Survey dataset alongside neighborhood crime statistics, health statistics, new businesses per area, and many other variables (Environics Analytics, 2018). PRIZM stands for Potential Rating Index for Zip Markets, and was developed in the U.S. in the 1980’s (Pridmore & Hämäläinen 2017:108). CIPPIC’s report explains this process further:

PRIZM CE links geo-demographic information with psychographics, incorporating social value data with demographics and product preferences to explain consumer behaviour. Data

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<sup>4</sup> 68 lifestyle models from Environics Analytics: <https://ibb.co/wNDx8mt>

<sup>5</sup> <https://www.getproof.com/news/environics-communications-adopts-new-proof-brand/>

sources include Statistics Canada census data, survey data from the Print Measurement Bureau (PMB) and Bureau of Broadcast Measurement (BBM), and social values data obtained from Environics' sister company, Environics Research (2006:15).

Since 1983, EA's partners from Environics Research have conducted a yearly survey with over 7000 respondents to determine the "human motivation, social relations...and mindsets of Canadians" through measuring 95 values and 174 attitudes on a variety of topics.<sup>6</sup> This information is used to help businesses gain in-depth insights into potential customer bases, and to profile using correlations between attitudes, beliefs, and behaviours (Environics Analytics, 2018). Environics Research conducts surveys through by phone, mail, and online, as well as focus groups and home based interviews.<sup>7</sup> Some of the variables on attitudes collected by Environics Research and their partners at Asking Canadians are deeply intrusive, prying deeply into moral values, mental health status, attitudes on sexism, racism, and more. Often, questions span far beyond whether respondents prefer Pepsi or Coke or how often they go to the gym. Some variables from the SocialValues2017 dataset<sup>8</sup> include the following:

- "Violence is a part of life. It's no big deal"
- "Racism in Canada is by and large a thing of the past"
- "It's acceptable to use physical force to get something you really want. The important thing is to get what you want"
- "Getting married and having children is the only real way of having a family"
- "My life is meaningless"
- "Generally speaking, I feel that I don't really have any goals in life"
- "I feel that I have little value as an individual in society"
- "It is not at all important to me that I leave money to others when I die"
- "Whatever people say, men have a certain natural superiority over women, and nothing can change this"
- "An extramarital affair from time to time is not that serious"
- "Non-whites should not be allowed to immigrate to our country"

Other datasets measure health data variables, some examples include:

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<sup>6</sup> <http://www.environicsanalytics.ca/data/psychographic>

<sup>7</sup> <https://www.bloomberg.com/research/stocks/private/snapshot.asp?privcapId=60978819>

<sup>8</sup> See full list of variables here: <https://ibb.co/GvsHVdL>

- Self-reported mental health scores on a scale of “poor” to “excellent”
- Whether the respondent has had bowel disorders, mood disorders, urinary incontinence, anxiety disorders, or cancer, among others
- Whether the individual considers themselves to be obese or overweight

Further, EA compiles supplemental data from third-party websites such as AskingCanadians.com, another survey company which boasts access to over one million Canadians’ opinions.<sup>9</sup> Asking Canadians offers loyalty card points such as Aeroplan miles for each survey completed.

In addition to 11 groups of ethnic categories for clients to choose from, EA’s PRIZM boasts a 68-lifestyle category list that groups the psychographic profiles of Canadians such as “Lunch at Tim’s”—a name used to categorize “urban downscale singles and families”<sup>10</sup> who dine at low-cost establishments like Tim Hortons—which is added to geo-demographic information for more complete consumer profiles. Other sample segment lifestyles include “Boomerang City Millennials”: young people who have moved out and since moved back in with their parents; “Asian New Wave”: young well-educated Asian Canadians; “Survivre en Ville”: “younger, low-income Quebec urban renters”, and Les Seniors: “urban low income Quebec seniors” (Environics, 2016). Previously, “Money with Brains” referred to highly educated affluent families, while “Urban Spice” was the name once used to categorize young ethnic city-dwellers (Wright, 2014). While the updated category labels may be slightly more politically correct, the sentiment behind them remains unchanged.

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<sup>9</sup> <http://corporate.askingcanadians.com/about-us/>

<sup>10</sup> For full list and descriptions of 68 lifestyles: [http://downloads.esri.com/esri\\_content\\_doc/dbl/int/Environics-PRIZM5-Segment-Side.pdf](http://downloads.esri.com/esri_content_doc/dbl/int/Environics-PRIZM5-Segment-Side.pdf)





Sample of Environics PRIZM5 Segments of Canadians

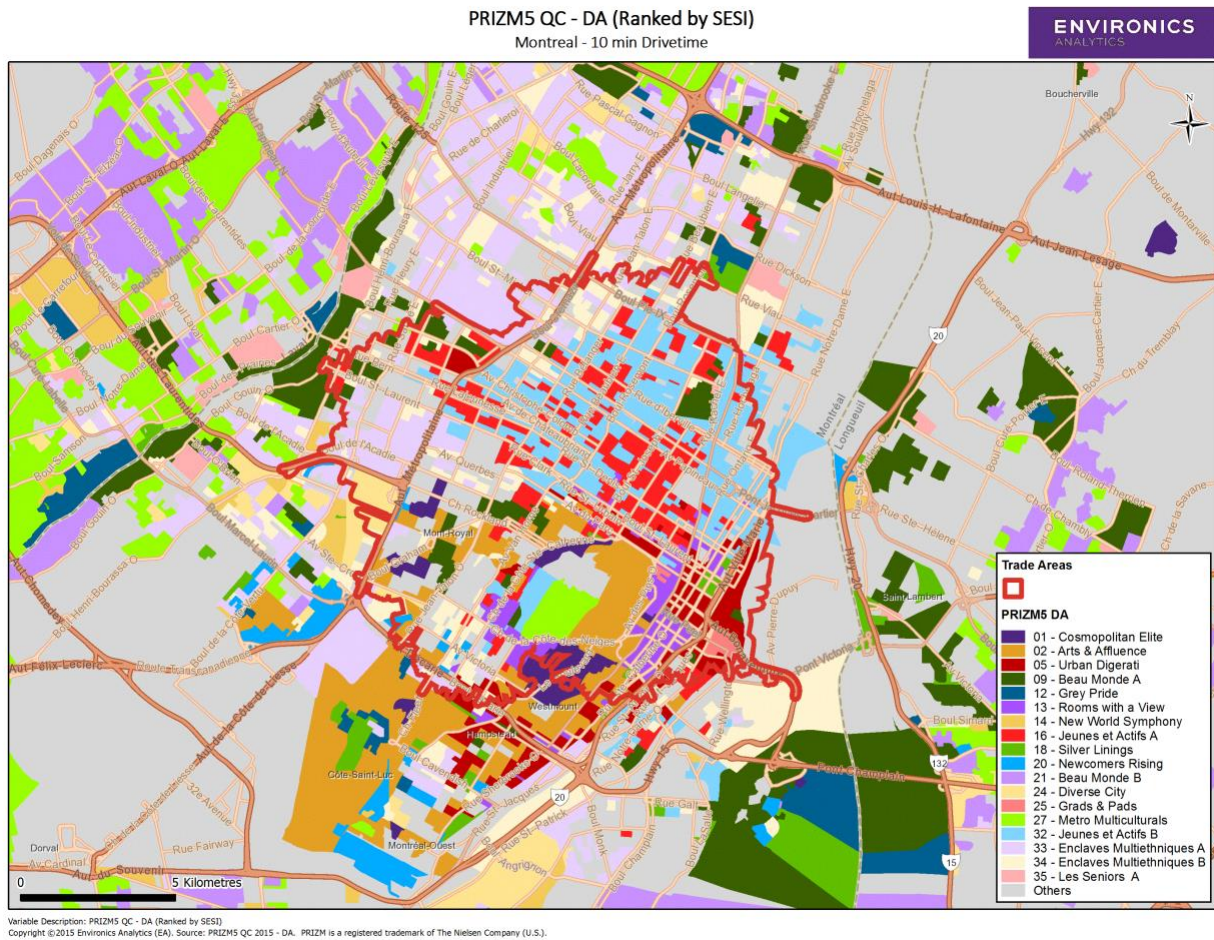


Environics Analytics Millennials

Based on the results from an online quiz cornering personal attitudes on everything from respect for authority to work-life-balance, EA also offers lists on 12 groups of segmented Millennials, including the “Engaged Idealists”, the “Critical Counterculturalists” and the “New Traditionalists”.<sup>11</sup> Geo-demographic neighborhood maps are available as well, whereby neighborhoods are labeled by demographic and lifestyle data. The following map of Montreal uses PRIZM5 QC to feature some of the lifestyle segments mentioned, as well as others which are unique to Quebec. Here, ethnically diverse and low-income “downscale” urban areas are marked

<sup>11</sup> <http://environicsresearch.com/insights/meet-millennials/>

as “Multiethnic enclaves” or “Metro Multiculturals”, and the highest income areas marked as “Cosmopolitan Elite”, referring to middle aged couples who own million dollar homes.



### *Lifestyle Segments in Montreal, Quebec*

According to EA, beyond income levels, neighborhoods are also segmented by community trust in authority, insurance rates, crime rates, and more:

- Past/current/future crime scores <sup>12</sup>
- Detailed household spending <sup>13</sup>
- Disposable income levels<sup>14</sup>

<sup>12</sup> <http://www.environicsanalytics.ca/docs/default-source/variables/crimestats-2015---variables-list.pdf?sfvrsn=8>

<sup>13</sup> <http://www.environicsanalytics.ca/docs/default-source/variables/householdspend-2017---variables-list.pdf?sfvrsn=8>

<sup>14</sup> <http://www.environicsanalytics.ca/docs/default-source/variables/wealthscapes-lite-2017---variables-list.pdf?sfvrsn=8>

- Social media engagement and brand recognition<sup>15</sup>
- Community engagement, including demographic details of friend groups; attitudes about national pride; respect for the law; confidence in police; religiosity and spirituality<sup>16</sup>
- Financial records and account balances, including detailed credit information and insurance rates<sup>17</sup>

Previously, Environics sold maps of “gayborhoods” which located neighborhood segmentation of LGBT clusters (Brown, 2010). It is unclear whether this function has since been eradicated because of its potential for abuse, or if it has simply been removed from their marketing materials. Keeping the data collection and analysis practices of InfoCanada and EA in mind, the next section discusses the inherent risks of categorical discrimination associated with of market segmenting of this type.

### **Social Sorting and Categorical Discrimination**

The steady application of targeted marketing through consumer segmentation has been in operation for over half a decade (see Delacourt, 2016). This practice started after WWII, where advertisers sought to understand the “socio-psychological inclinations of consumers” (Pridmore & Hämmäläinen 2017: 107). In as early as 1956, Wendell Smith argued that identifying product preferences within subpopulations was the key to strong marketing strategies (Ibid.) The popularization of computers further amplified psychographic marketing trends, where companies worked to understand lifestyles and attitudes of their customers in the 1970s. Next, further technological innovations of the 1980s brought about new geodemographic possibilities (Pridmore & Hämmäläinen 2017: 108). More recently, research has shown that marketers have had limited success with adding social media to older forms of segmentation, and many companies are still

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<sup>15</sup> <http://www.environicsanalytics.ca/docs/default-source/variables/opticks-social-powered-by-askingcanadians-2017---variables-list.pdf?sfvrsn=4>

<sup>16</sup> <http://www.environicsanalytics.ca/docs/default-source/variables/communitylife-2017---variables-list.pdf?sfvrsn=6>

<sup>17</sup> <http://www.environicsanalytics.ca/docs/default-source/variables/moneymatters-powered-by-cfm-2017---variables-list.pdf?sfvrsn=6>

struggling with trial and error to accurately predict qualifiers such as class or political attitudes using social media analytics (Pridmore & Hämäläinen 2017:116). This is to say that the accuracy of segmentation programs should not be overstated by academia or the media. However, the reality that decisions are made about people based on profiling is potentially a cause for concern.

Drawing from Gandy's (1993) critique of marketing databases in their ability to categorize groups of people for social rewards or punishments, David Lyon coined the phrase "social sorting" to describe the ways surveillance is used to impact life chances based on the rankings of "worth or risk" (2003:1). Social sorting is used to make inferences about individuals and then make decisions about what spaces they can access, what information they receive, or whether they are worthy of a discount or a hiked interest rate (Lyon, 2003). As the use of digital technology and computer databases continue to permeate everyday life, we are experiencing the effects of social sorting all the time. Whether we are aware or not, our experiences with airport security and customs procedures, credit card applications, job applications, personalized advertisements online, the flyers we receive in the mail, may all be the results of social sorting. As many have argued, the impacts of surveillance systems often result in heightened risks and marginalization for vulnerable populations (Lyon, 2003:16).

Oscar Gandy (2009) argues that as these practices become increasingly common, stronger regulatory constraints on the collection and analysis of data are necessary. Historically, using demographic variables such as gender, socioeconomic status, and race to make decisions concerning access to opportunities have resulted in discriminatory outcomes. For this reason, U.S. law has already made decision-making based on categories such as gender, ethnicity, sex, national origin and religion, illegal in certain sectors—such in applying for credit or housing (Gandy, 2009:35). The continued use of "immutable" categories for algorithmic decision making in

marketing is problematic because it helps to reinforce existing hierarchies of oppression and domination (Ibid). In one American example, “Urban Scramble”, a segment label used to cluster low-income African American and Latino consumers, led to advertisements from predatory loan companies “looking to target populations likely to ‘need quick cash’” (Kuempel, 2016:220-221). At the same time, EA is classifying Canadian consumers in similar ways with segments labeled “Suburban Scramble” or “Rural Downscale”.<sup>18</sup> It follows that the sentiment of classifying groups based on variables such as income levels or ethnicity could lead to similar outcomes where certain groups receive an ad for a predatory loan or a call from a telemarketing company, where “Arts and Affluence” groups are more likely to receive information about upscale products or experiences.

Consider some of the segment categories on older adults that were exposed by the Senate Commerce Committee in a report on the American data broker industry: “X-tra Needy”, “Zero Mobility” “Extremely Elderly”, “Reliant on Aid” or “Retired Singles”. The 2013 report concluded that these categories, among others, were used to target financially vulnerable populations with predatory loans (Taube, 2013). Over the years, Claritas—the developers of PRIZM—and others have slightly improved their categorical labels to draw less attention to the fact that they are discriminating against groups of people based on racist and classist markers (Gandy, 2009:35). While some companies may now have less offensive label names, and “gayborhood” maps are perhaps no longer available on the Environics website, classifying people based on such variables still has real world implications for the individuals being sorted.

Risks of social sorting practices can also further exacerbate social inequalities by contributing to the detriment of neighborhoods and urban development. For example, EA offers detailed lists of “future crime scores”<sup>19</sup> organized by type of assault or theft, by neighborhood. As a result, new

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<sup>18</sup> See EA’s 68 lifestyle segments: <https://ibb.co/wNDx8mt>

<sup>19</sup> <http://www.environicsanalytics.ca/docs/default-source/variables/crimestats-2015---variables-list.pdf?sfvrsn=8>

restaurants and high quality daycare centers may decide against setting up shop in those areas, while payday loan establishments or pawn shops might gladly use that information in congruence with neighborhood credit status to determine where to set their next location. Whatever data brokers choose to label less-advantaged neighborhoods in a city, selling geo-demographic maps to marketers on the basis of income, ethnicity and lifestyle segment are bound to result in some negative consequences, whether intended or not (Gandy, 2010:30).

A 2014 report by the World Privacy Forum (WPF) demonstrates how American data brokers engage in “consumer scoring”, that is, ranking consumers based on past behaviors in order to predict the future (Dixon & Gellman, 2014). Consumer profitability, health risks scores and combined credit rankings of neighborhoods are measured through this practice. For Dixon and Gellman (2014:7), secretive consumer scoring becomes problematic when it contributes to the erosion of due process, privacy rights and justice, while contributing to structural discrimination based on qualifiers such as race and ethnicity. According to the WPF, almost all Americans have at least one consumer score, while the majority have multiple consumer scores (Dixon & Gellman, 2014). Canadian data brokers may face tighter legal limits than their U.S. counterparts, but consumer scores can still be considered problematic for the abovementioned reasons.

Moreover, consumer access to how risk scores are determined are often unavailable to those affected (Bennett & Bayley, 2016). Banks, credit bureaus, search engines and others all determine scores like these to predict outcomes, but since algorithms are considered trade secrets, they are largely kept hidden from consumers (Dixon & Gellman, 2014; Pasquale, 2015). For this reason, some have pushed for tighter regulatory frameworks that support continual, rather than retrospective, technology impact assessments (Gandy, 2010:30). Others have argued for stronger

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algorithmic transparency, while also noting that they may be too complex for most to understand (Pasquale, 2015:4-16).

Undoubtedly, some groups will be disproportionately affected by the demographic and lifestyle categories determined by data brokers and analytics firms. The redlining of neighborhoods can contribute to community-inequality that spans across generations (Gandy 2009: 37). Aside from consumer marketing and urban planning implications, there are further political implications. Political parties purchase information from data brokers. Depending on their platform, some politicians might very well choose to engage with more affluent areas based on neighborhood data, perpetuating the cycle of political inequality based on demographic factors. In other words, social status is often linked to formal political engagement, maintaining a cycle where marginalized groups are perpetually ignored (Gandy 2010:37). While the usage of data brokers by political parties and law enforcement is beyond the scope of this paper, the practice of segmentation becomes more serious when access to political involvement is considered. Finally, when considering the deeply personal questions from the EA Social Values survey surrounding self-assessed or inferred mental health status, there are good reason to limit access to such sensitive information.

### **Privacy and Obtaining Meaningful Consent**

Privacy can be defined in many ways. Here, it is access to control over information that pertains to oneself, or, in Westin's words: "the claim of an individual to determine what information about himself or herself should be known to others" (Westin 2003:431). The question is, how can individuals reasonably exercise control over information that pertains to them in the Big Data era? Data collection companies are mandated to be transparent about their usage intentions, and are not to use or repurpose data without consent, but Big Data surveillance complicates this (Bennett &

Bayley, 2016). The alluring power of Big Data analytics lies in its apparent ability to repurpose “data exhaust” for new value (Mayer-Schönberger & Cuckier, 2014:113). In the case where consumer data is collected and then sold to others, how can informed consent be obtained? In many cases, the secondary usage may not have been explicit or even imagined at the time consent was given. How many Canadians would expect that a trip to the grocery store or filling out an online survey would land them on a list of “low-rise renters” or members of an “multiethnic enclave” by a third-party company?

Consent is the legal standard for allowing companies the right to access personal information, such as is the case with Canada’s *Personal Information Protection and Electronic Documents Act* (PIPEDA). However, the current arrangement does little to ensure *meaningful* consumer consent is obtained, particularly because most people often do not read, understand, or care about such legal documents or contracts (Mayer-Schönberger, 2014:153-154). Among others, Dixon and Gellman (2014: 15) critique the lack of informed consent following registrations for loyalty cards, health websites, or any other instance in which a reward, purchase, or access to information that comes along with a contract regarding privacy rights: “a buried statement in an unread privacy policy that ‘we may share your information for marketing purposes with third parties’ is not informed consent to allow unfettered use information for predictive scoring”. Further, although there have been recent efforts to rectify the issue of notice and consent through “short notices”, by and large, the notice and consent model has not proven to be an effective tool in helping internet users control information that pertains to them. Through the “transparency paradox”, Nissenbaum (2011:36) has shown that short and easy-to-read privacy policies would likely leave out important details, and the onus of responsibility would still be on individuals to “carry the full weight of expectation” in assessing what the collected data might be used for down the line.



What emerges from this equation is a false choice dilemma, where ‘opting in’ is often the only way to receive a service, a discount or an opportunity (Bennett & Bayley, 2016). In some cases, opting out of data collection is not a viable option under cultural and societal norms: “either we can consent to having our information bought and sold, or we can forego the benefits associated with such conveniences as having a credit card, a mortgage, or access to a physiotherapist” (Bennett & Bayley 2016:57). Where pricing is involved, this could also further the dynamics of inequity, where some may have the relative wealth to avoid consumer surveillance practices where others have no choice but to accept a discount in exchange for their data. Where opting out or rejecting terms denies access to a service or reward all together, consent is unlikely to be meaningful. As aptly explained by Andrejevic, “given an unconstrained choice”, many would likely choose not to share their personal information for marketing purposes (Andrejevic, 2012:86).

### **Moving Forward**

As has been discussed, issues related that start with privacy and consent can also lead to categorical discrimination and neighborhood redlining for vulnerable or marginalized groups. In short, power relations that benefit data firms at the expense of consumers can exacerbate social and political inequality. In essence, whether surveillance capitalism continues on the path as the “default model of information capitalism”, or whether it will become an “evolutionary dead end” (Zuboff 2016: 4) is dependent on future action from “indignant” scholars, journalists, and policy makers, elected officials and citizens (Zuboff 2016: 9). The future also relies on the strength and application of regulations, the spread of information by privacy advocates and related organizations, and an informed and “active citizenry” who advocate against the expansion of surveillance (Bennett et al., 2014:10). If public backlash surrounding the Cambridge Analytica

scandal has taught us anything, it's that many people were highly unaware of the everyday data collection practices that support Big Data business models and methods. In the case of data brokers, the murky waters of non-transparent market segmentation tools and hidden terms and conditions make meaningful consent difficult, if not impossible, to obtain. While data brokers, analytics firms, and big tech companies continue to deal in consumer profiles for profit and behavioural control, governments maintain that we need to strike a balance between privacy protection and avoiding stifling innovation and competition. However, the right balance that adequately protects Canadian consumers is yet to be seen.

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