

Big Data and Intrusiveness: Marketing Issues

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Abstract

Nowadays, more and more companies have huge masses of data from multiple sources (online transactions, traces from website navigation, social networks, sensors, etc.). These data are moreover heterogeneous and volatile. This large amount of data offers tremendous opportunities in terms of knowledge and customer relationships. However, their transformation into actionable knowledge poses important challenges both technically and ethically. Through a state of the art, this paper aims to highlight the issues and challenges of Big Data for marketing. We are particularly interested in those related to customizing and boosting the real time experience of the internet customer. To what extent these practices (real-time interactions, website and customized offer based on the user profile and the navigation behavior are impacted by the Big Data?

Keywords:

1. Introduction

The influx of data has never been so massive. “Almost 90% of the data collected throughout humanity’s history has been over the last two years” (IBM, 2014)ⁱ. These data offer tremendous opportunities for companies in terms of relationships and customer knowledge. However, their transformation into actionable knowledge raises big challenges both technically and ethically. Indeed, if this “Data Deluge” dangled for businesses the eternal dream to better understand their customers, to better calibrate, target, plan, anticipate and measure their actions, it raises another problem: one of the intrusions. Jumping on the back of a prospect when he initiates a request on the Internet can quickly turn counter-productive if he feels threatened or assaulted. The subject also concerns professionals. If the exploitation of personal data, as precious as they are, may eventually turns consumers against their brands, this would go against their original objectives. How to deal with this paradox? Will actions or messages which are too (well) customized be inevitably perceived as intrusive and rejected by the consumer?

In what follows, we will focus, alternately, on issues arising from intrusion with consumers but also with professionals. Then we will look at the academic literature to explore these issues.

2. Intrusiveness and Stakeholders

Is Big data: a distant dream for companies and a nightmare for customers?

2.1 Intrusiveness as Seen by Consumers: Big Data or Big Brother?

If some consumers are not yet fully aware of all the traces they leave on the web, many are dismayed about cookies and other techniques recording our actions. As Henri Verdier, former head of Cap Digital stated “What makes us uncomfortable is that it is probably possible to know things about ourselves that we do not know yet.” (Stratégies, 2013). Rumors, carefully denied, even claim that Visa can predict divorce two years in advance by data analysisⁱⁱ. Like it or not Big Data refers to Big Brother. No doubt the recent revelations of e-monitoring practices conducted by

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Washington via full access to Google's and Facebook's servers might have inspired George Orwell (Stratégies, 2013). In this context, consumers are becoming more wary than ever. Renewal terms and conditions of use of Facebook and Instagram in 2012, for example, caused uproar and led to a massive loss of active clientsⁱⁱⁱ. Consumers are so distrustful that over 40% of Internet users say they no longer dare leave information on forms. Aware that their personal information is used without their knowledge, some even lie deliberately to sites on which they occur^{iv}. According to a recent study from Axance and Netbooster (2013)^v, 41% of consumers say they do not accept that their personal data are used as part of a marketing campaign. This study demonstrates, moreover, that the intrusiveness of marketing actions, both at style and content levels, leads to a strong rejection by consumers. Indeed, the consumer rejects an advertisement when its appearance is not desirable and is considered intrusive. So pop-ups, slide-ins, or even commercials, etc., that precede a streaming video on Youtube for example fail to capture the attention of internet users. According to the same study: "The most hated format is one that opens itself. All strategies that involve hiding or reducing the visibility of the action to close the advertising are counter-productive." The consumer also rejected an advertisement when its contents are deemed intrusive. Thus, retargeting which is to display users with personalized banners according to their interests and their Web browsing is very not well received by consumers^{vi}. According to the same study, 68% of users feel spied on. Surprisingly, current practices seem to have resulted, unexpectedly, in a comeback of classic ad banners. Indeed, web users of this study said that they appreciated being exposed to ad banners but only when "they remain in their places." Consumer rejection concerns the advertising message perceived as intrusive.

2.2 Intrusiveness as Seen by Professionals: Do Not Exceed the Red Lines

The use of personal data, for good deeds and bad, is an equally important concern for professionals. Eric Carreel, founder of Withings, says that there is a "real culture of fear" about personal data^{vii} (2014). This culture is so powerful that simply asking questions about ethics and intrusion appears to scare professionals. Indeed, they "fear that merely asking them conveys a negative message about the sector and is hampering its development." ^{viii}

Like Google, Facebook and other web giants, many professionals trying to be proactive and to take a responsible attitude concerning customer data and their use. Respect for the consumer, protection and create an environment of trust are now major issues for companies. As Martin Winterkorn, the Head of Volkswagen recently stated, "yes to big data, no to Big Brother." (2014)^{ix} The compliance of regulatory and prerogatives of dedicated organizations (eg. "Commission Nationale Informatique Liberté" in France) to the protection of personal data is essential. It is not sufficient so far. Indeed, there is a difference between what the regulations prohibit and authorize and what users perceive as intrusive and are willing to bear. Beyond compliance, companies are increasingly aware of the need for "an ethic of data use" (Henri Verdier, 2013) and the existence of invisible red lines in the eyes of the law but which are clearly present for customers. According to Jean-Christophe Lalanne, Air France KLM CIO, one of their major projects is "The development of an attentive service but one which is not intrusive." "Intrusion" provides a solid barrier between businesses and operation Big Data. Aware of the rejection it seems to engender among their consumers, businesses have an increasing interest in understanding its determinants. This fundamental problem, however, has raised a side issue both important and subtle: an act, initially perceived as intrusive is it necessarily rejected? Can the intrusion be accepted?

2.3 Big Data: Big Brother or Big Service?

Today, the citizen-consumer is aware of data trade and its economic, political and social issues (strategy). He knows hence forth the price to pay for free use of services and applications inviting them to have fun, to locate, to share. The consumer is in a delicate and paradoxical situation. In fact, if many are afraid of being spied on, they seem unwilling to choose between more comfort and more privacy. 80% of the French are aware of the risk concerning data protection, but 70% do not plan to change their uses of digital tools (Source BVA, Sept. 2013). Loyal since the first programs born in the 80's, breast fed by Google since 1998 and rocked by Facebook for ten years, consumers have long incorporated the market value that their personal information represents. A study conducted by IFOP Institute for consultancy Elyon^x reveals that 76% of consumers do not appreciate the help of a sales person. The main reason lies in the perceived incompetence of the sales people.

Indeed, 86% of respondents believe that the seller does not have enough information about products. They say they often feel they know more than the seller himself. In other words, it seems that this is not the seller or recommendation itself which is rejected, but the perceived as unnecessary of this last. Similarly, the study by Axance and Net booster^{xi} showed that beyond the intrusiveness, the consumer rejects especially sales message she does not understand and he doubted as the merit (whose merit he doubts?). In another study, 27% of users want the complete lack of advertising on a site where they would be subscribers. For others, targeted banners, close to their area of interest, look legitimate. Would useful information, which is relevant though intrusive, be better accepted by consumers? In other words, the question is it to know if the client is psychologically ready to accept intrusive recommendations or to know the level of ROI he expects to accept. According to Eric Carrel (2014) "it is through the improved service that one can best manage concerns. And it is the responsibility of all stakeholders to move forward on this issue." Would a system where valorization and operation of data would also benefit the consumer, be a solution to the paradox?

3. A Digital Intrusion Desired by Consumers?

The issue of privacy is an old one in marketing. This discipline bases its actions on consumer knowledge; and even privacy when Customer Relationship Management (CRM) appeared. The rise of digital marketing has gradually developed customized customer relationships. It can even be done dynamically, for example Amazon with the recommendation systems technique. The first part of the paper showed a concern of managers about the risk of a sense of intrusion by consumers, because of the potential performance of customization marketing campaigns. This risk may be exacerbated by big data. More and more companies have huge masses of data from multiple sources (online transactions, traces on the web, social networks, sensors, etc.). For marketing campaigns, work on algorithms for processing such data, and their visualization, is particularly interesting to companies now.

3.1 Introduction to the Concept of Intrusiveness in Digital Marketing

The concept of intrusiveness is a subject in its own right in digital marketing. Belvaux and Herault¹⁰ look at the privacy paradox and the adoption of intrusive technologies, using the Technology Acceptance Model (TAM). They define the privacy intrusion ... "as a harvest and an unwanted use of personal information". In their model, perceived intrusiveness is a predictor of the adoption of the mobile location-based services. Several studies have investigated the concept by applying digital marketing techniques, namely online advertising^{5,7,16,25,27} or e-mailing^{18,20,21}. So, a different definition of intrusiveness, focused on cognitive processes can be found. Li and al.¹³ define intrusiveness of Advertisements as ... "a perception or Psychological consequence that occurs when the audience's cognitive processes are interrupted."; ... "the ads must be perceived as interrupting the goals of the viewers to be regarded as intrusive". Li and al.¹³ provide a seven item scale for measuring the intrusiveness: distracting, disturbing, forced, interfering, intrusive, invasive, and obtrusive. Other works include intrusiveness in a broader theoretical framework. As a first work on our part, we highlight two references. Yildiz²⁶ reported on the process of permission by mobilizing the psychosocial theory of commitment and considering the mediating role of trust. The author talks about the work of Milne and Gordon¹⁷. "Through the traditional business mail, permission has been seen as a means to create rights preserving the privacy of consumers".

An assumption of the model is: "The more the author of a permission has a sense that the prospector will respect his privacy, the more trust to him is strong".

N'Goala and Cases²² include respect for privacy to explain at is faction that customers can withdraw from their navigation on a website, beside other variables: design, product range, offer customization, interactivity-navigability, compliance, ability to create a community and create contact. And privacy respect is assumed to have a positive influence on benevolence dimension of trust.

3.2 The Privacy Paradox

A paradox is apparent regarding the digital lives of individuals. The dialectic between the respect of privacy and, uptake of data and data use generates anxiety. On the other hand, personal data are massively present on the Internet, including on social networks. How to explain it? A study by Havas Media Group France⁹ states that: "If the majority is concerned about their data being captured and used that could be done, almost one in two French people say they can find an interest...

especially if they receive personalized offers”; -“A majority of Internet users say they are even willing to accept transparency monitoring of their digital data in exchange for financial counterparts (45.2%) and non-financial (41.6%)” (LOYALTY EXPERT's insight).

To explain the privacy paradox, it may be worth while to retain the concept of global value. “It results from a confrontation between benefits and sacrifices associated with consumption”³. Thus, summing up the results of the Havas study, the sacrifice made by intrusiveness could be relativized by financial and non-financial counterparts. In a similar approach, academically, Herault and Belvaux¹⁰ ask, “Why do some people use technologies they perceive as intrusive?”. Authors show that although perceived intrusiveness is quite high throughout the sample, two blocks of variables are opposed: benefits (usefulness and ease of use) and disincentives (privacy intrusion). Both groups, adopters vs. non adopters are distinguished by the following variables: ease of use, perceived fun associated with use, perceived usefulness and influence of peers. This approach is reflected in the work on permission. “The idea of Krishnamurthy is that permission requires costly actions, such as time to provide personal information, which weighed against the expected benefits of the program, determine customer interest for the permission and beyond, his involvement in the exchange with the partner”²⁶.

4. Conclusion

The main contribution of this exploratory work is to parallel concerns of digital marketing professionals in the use of personal data, in the era of Big Data, and the privacy paradox, which could be an area for research. This paradox is the hub from which we plan to propose a model to explain intrusiveness, in the context of personalized digital marketing campaigns. In particular, we are interested in the recommendation system technique, which allows consumer behavior to be influenced dynamically. The questions that this model should try to answer are: what are the costs and benefits of digital customer relationship customization? To what extent is perceived intrusiveness an obstacle to the use of custom digital services? Is customization while browsing (with recommendation systems, retargeting, etc.) viewed as more intrusive by Internet mobile users? To what extent do benefits outweigh perceived intrusiveness?

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