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Ethical Considerations and Guidelines in Web Analytics and Digital Marketing: A Retail Case Study

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ABSTRACT: Within the information economy customers utilise the media that interests them, view the news that affects them and read about the people that inspire them. Web analytics enables an organisation to collect customers' data as they interact with an organisation. Then with analysis of the captured data, organisations can offer a unique online experience, tailored to the customer's individual preferences and create direct marketing campaigns that target individual consumers. This paper discusses the ethical considerations of collecting customer data and highlights how ethical guidelines can better inform organisational behaviour.

Keywords: web analytics, digital marketing, retail, business ethics

INTRODUCTION

The Australian retail industry contributes AUD $292 billion or approximately 24% of GDP (ARA, 2011; ABS, 2011). During the global financial crisis (GFC) of 2007-2009, Australian retailers were relatively insulated by the Labor Government Stimulus Package, but a stronger Australian dollar caused by continuing global economic concerns in 2011 has intensified Australian retail competition as the industry becomes more globalised by the advent of online retailing (Pierce, 2011). Increased global competition could indicate that some retailers will not be bound by the level of ethics Australian consumers have come to expect.

Since its commercialisation in 1994, the Internet has been an invaluable and multi-faceted tool for retailers, especially in terms of reaching customers and satisfying business needs (Runyan et al., 2009). Not only can businesses broadcast to potential customers across the globe, but they have the ability to analyse user interactions with their website, affording an unprecedented understanding of the needs and wants of their audience (Omidvar et al., 2011). Web analytics is the term given to the automated practice that allows organisations to study website performance relative to customer experience to determine whether business objectives are being met (Young, 2008).

As technology advances, businesses conceive of new ways to exploit it (cf. ‘the virtuous circle of the ‘real’ new world economy’, McNurlin & Sprague, 2006 p.80). Business products and services are designed to exact competitive advantage either through more efficient operations, or establishing a superior and sustainable strategic position and as the rhetoric goes, information is both the best offence and the best defence (Pearlson & Saunders, 2011). The technology tools that support both the business and the consumer often operate by collecting and processing data provided by the consumer, although not always with their direct knowledge or consent (Pollach, 2005).

Web analytics can be used to measure the success of online marketing campaigns and tailor marketing material to suit a specific audience (Fulgoni, 2011). The underlying objective of using web analytics tools is to make improvements to the customer engagement initiatives and the overall website design (Sostre & LeClaire, 2007). By engaging web analytics tools, businesses are more prepared to design better-targeted advertisements and strengthen marketing initiatives (Google, 2011) with the underlying goal of enhancing profitability.

The focus of this research is the ethical implications behind the deployment of web analytics applications and the collection of data through online media resources. The authors discuss current ethical guidelines and frameworks and whether they adequately cover the full range of ethical issues that surround online data collection. The authors also argue that although capability exists to monitor and collect intimate customer data that it is not necessarily the right of commercial enterprise to do so.
It is necessary to determine the ethical viewpoint to identify how businesses intend to use this data. For example, is the data being analysed to improve customer relationship management (CRM)? Is it the sole purpose? Or is it collected without any real goal or direction, or with secondary or tertiary purposes? Although these technology tools can benefit both the business and the consumer, the modern enterprise must consider the ethics of collecting and using consumer details for analytical purposes (Dwight, 2010).

There are two themes to this paper, the ethical issues in web analytics and direct marketing, which are linked in terms of what they offer in business opportunities. The paper is organised as follows: to describe the emerging business practice of web analytics and its capabilities before presenting a retail case study. The case study enables consideration of the ethical issues that surround the collection of customer data in an online and retail context, which leads into an ethical discussion with regard to direct marketing; highlighting the currently available ethical guidelines before concluding with future research directions.

**CAPABILITIES OF WEB ANALYTICS**

Web analytics offer a multitude of possibilities. However, the irony is that organisations do not always know what they don’t know (Hassanzadeh et al., 2011). So as the desire to learn more about customers builds, organisations are looking to web analytic providers to assist them to understand their customers, resulting in a growth in the web analytics sector (Sen et al., 2006). Providers offer varying capabilities to help businesses discover more about their website users and enhance their online presence.

Google Analytics and Yahoo Analytics, for example, both enable businesses to track user interactions with their websites. Organisations can view user click-paths, drop off points and even e-commerce reporting such as product views, purchases etc. (Google, 2011; Yahoo, 2011). Both of these analytics tools provide visual representations of the data, such as click-path conversion funnels that show the pages of the website users are leaving. These visual representations enable easy interpretation of the data and can assist the business in making decisions regarding the layout of the website. Another web analytics tool, eLogic, provides the ability to monitor visits to the website in real time. Some of the data collected by eLogic includes where visitors are coming from, the page they land at, how many visitors are returning and which hours of the day the site draws more traffic (eLogic Web Solutions, 2010).

The types of features offered by analytics providers include: tracking email campaigns, search engine optimisation (SEO), banner advertisements and offline adverts. Businesses can see what actions engage audience interest and what behaviours result in revenue and purchases (Yahoo, 2011). It is also a useful method to identify which marketing campaigns are most effective, which advertising material produces the most traffic or generates the most sales (eLogic Web Solutions, 2010). This then enables the business to identify the strengths and weaknesses in their online marketing campaigns and subsequently enable them to fine-tune future campaigns.

Another useful feature is benchmarking. Google Analytics has the ability to compare website metrics with those within the same industry (Google, 2011). This gives a comparative indication of how successful the website is in terms of industry averages. The tool also allows the setting of targets and to identify whether the website is meeting business expectations. Google appears to have first mover advantage in benchmarking web analytics, although the literature contains many proofs of concept (e.g. Krishnamurthy et al., 2005; Pang et al., 2009; Panian, 2010; Lee et al., 2005; Spangler et al., 2009).

Internal site search can also be monitored using web analytics. Google Analytics provides the ability to view the top site search terms which is useful to find out what users are actually looking for on the website (Google, 2011). This information can help businesses to identify gaps in their website strategy; what information is not readily available and what parts of the website should be more dominant on the homepage.

Yahoo Web Analytics also provides the functionality to identify user demographics. Demographic reports can be used to identify user age groups and gender, or standard reports can be filtered by age or gender (Yahoo, 2011). There is also the capability to report user behaviours such as the types of websites they visit, in order to identify the categories of interest of the websites users (Yahoo, 2011).
Through using these reporting features, businesses will develop a better understanding of their users' behaviours, beliefs, preferences, and interests in order to better target their marketing campaigns to their main audience.

With the proliferation of social media use, some web analytic providers, such as Omniture Analytics (2009), are offering businesses the option to track social networking, video and mobile devices. The ability to view user-generated content on Facebook and Twitter is invaluable in gaining insights with regard to brand sentiment. Omniture Site Catalyst can measure Facebook applications, identify the devices used to access the site, identify the number of times the business is mentioned on Twitter and provide metrics on blogs, consumer reviews and social networking (Omniture, 2009).

HOW CUSTOMER DATA IS COLLECTED

Using web analytics customer data are essentially collected automatically as a function of viewing the web media. Marshall (cited in Murdock, 2006) identifies two ways in which data can be collected by web analytics packages: the log file method and the Javascript method, which are explained as follows, in greater detail.

The Log File Method

This method involves using locally stored tracking files—cookies—that automatically record user activities as they interact with the site. This method collects data as requested by the server and are potentially difficult to maintain (Whyte, 2010). Some of the benefits of using the log file method, as indicated by Whyte, include no firewall issues (see the JavaScript method), that completed downloads can be tracked, mobile visitors are tracked by default and filters can be applied at any time. Some disadvantages, however, include no event tracking, all updates and modifications must be managed by a team, robots can skew the data by multiplying the visitor count, excessive disk space is required for storage, one IP address implies one person (proxy servers are ignored) and cached pages are not counted (ibid).

The JavaScript Method

Using this method, the business embeds some JavaScript code in the web page and then sends the user activity to a third party web analytics service provider. The JavaScript method, also known as the 'Page Tagging' method has more accurate session tracking allows data collecting and storage for later analysis by a host vendor, tracks client-side events, captures client-side e-commerce data and the host vendor manages all of the stored data (Whyte, 2010). Similar to the log file method, the JavaScript method also has a number of disadvantages, such as: inaccurate set up and tagging of site pages will create inaccurate data, fire walls can skew the data, latency can result in untracked visitors and deleted or rejected cookies can cause inaccurate tracking.

It is clear the JavaScript method is a technical improvement over the log file method and it can be seen that user data (URL origin, device, browser, plug-ins, IP address, operating system etc.) and behaviours (mouse-click latencies, preferences etc.) can be collected seamlessly with ease. With the obvious potential in web analytics, there are a number of questions regarding the ethics of this data gathering approach, the information gleaned from it and the subsequent targeted marketing employed, such as:

- What are the ethical implications of this approach?
- What are the implications for customers?
- What do customers expect in terms of using the information gathered?
- Do customers know what is happening to their information?
- Are customer privacy issues or expectations beginning compromised?

The following case study describes the actions taken by a retailer with a view to aggressively marketing their eCommerce website to increase their online sales by gathering consumer activity information using a web analytics approach.

A RETAIL CASE STUDY

AIM is a large national department store chain retailer that has established numerous retail outlets in metropolitan, regional and rural locations throughout Australia. AIM has predominately focused on
delivering their customer needs as a traditional ‘bricks and mortar’ retailer and aggressively holds a significant market share over its main local retail competitors. However, times are changing and AIM is aware that with the pervasion of ‘online shopping’ into the retail marketplace, this is empowering their traditional customer base to choose alternative shopping options and to browse or make purchases online from both national and internationally based competitor retailers. Although initially cautious to adopt a retail presence on the Internet, AIM acknowledges that the Internet and eCommerce is now a viable reality and with their competitors adopting this online technological approach to shopping. Therefore, AIM took the decision to make a significant investment that has resulted in a comprehensive and popular eCommerce website that has delivered steady but slow online sales growth.

AIM is aware that the new online sales paradigm represents a means of continuing to provide strong customer service to local customers and is an opportunity to competitively retail within the wider global marketplace. In seeking to customise their eCommerce website to provide a more personalised eCommerce experience to their customers, AIM considers that the use of a Web Analytics approach would enable them to gather valuable data about the online activities of their customers. This would enable AIM’s marketing department to analyse and surmise ways of enhancing and personalising their online customer’s shopping experience. AIM already operates a Facebook page through which it interacts with people who are AIM’s ‘friends.’ It also operates a community of practice tool to interact with customers who are incentivised with AIM vouchers in exchange for providing open and honest feedback.

Using web analytics will enable AIM to run reports regarding the number of site visits; track user origin; ‘click paths’; locate where on customers leave the website; number of product views; internal product searches, and the number of purchases and orders placed. Using this information AIM can begin to build a profile of their individual repeat customers including, their demographic; click paths; orders; product browsing habits; product searches; the time spent at the website and how often they visit. This information is invaluable to AIM’s Marketing department in terms of developing broad advertising strategies and aggressive individual marketing campaigns, particularly for enacting personalised direct marketing promotions to individual customers.

Potential Ethical Issues: The Good, the Bad, and the Ugly

The capabilities of web analytics are impressive, and the commercial advantages to be had are clearly evident in the building and customising of user experience in the online environment. Enterprises that build innovative and superior customer experience focusing on newness will enjoy repeat visits (Grewal et al., 2004). Despite the advantages, however, the use of web analytics in this context raises a number of ethical questions, those most notable regarding:

- security and privacy issues – to both the business and the consumer;
- the issue of informed consent – the extent to which consumers understand how their personal data is being used;
- tracking individual and social networking activity – as an invasion of privacy;
- the perceived quality of open source versus packaged solutions;
- access to industry figures, and;
- the accuracy and permanency of collected data.

The authors use the term ‘ethics’ to refer to what the business ought to do. It is asserted that the organisations that collect customer data have a duty of care with respect to the following points as a minimum:

- the customer is the owner of information about them;
- the customer should be informed on the information the organisation is collecting and for what purpose the information is being collected;
- the customer should have the option not to participate;
- the customer’s information should be protected from third-party access;
- appropriate governance on management and destruction of customer data is established.

Mindful of these assertions, and assuming an organisation is diligent in their application of these ethical principles, we now discuss use of customer data in the form of direct marketing. It follows that armed with personal customer details organisations can offer personalised marketing campaigns directed at the very preferences the customer may have unknowingly divulged to the organisation.
DIRECT MARKETING

Atraight Technologies (2009) define direct marketing as 'all marketing communication techniques which allow to address [sic.] directly and individually the addressee with the objective of a more or less immediate answer.' In other words, direct marketing is any marketing communication that is tailored to individually satisfy the needs of a specific audience. Online direct marketing uses the data collected using web analytics tools to segment the audience into more specific groups. This gives businesses the opportunity to provide marketing communications that are relevant to each individual group.

While direct marketing is increasing in popularity, it is important to consider that it may not be suitable for every marketing campaign. Table 1 lists the advantages and disadvantages of direct marketing as they apply to both the business and the consumer.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td>For the business</td>
<td></td>
</tr>
<tr>
<td>- Cost reduction (Rath, 2009).</td>
<td>- Potential to target the wrong audience.</td>
</tr>
<tr>
<td>- Avoids fallout from consumers.</td>
<td>- Restricting the distribution of marketing material lowers the chance of attracting a new audience.</td>
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<tr>
<td>- Easy to integrate with a database which also allows data analysis.</td>
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<tr>
<td>- Online direct marketing reaches the audience faster than other mediums such as post or television.</td>
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<td>- Easy to modify marketing campaigns.</td>
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<tr>
<td>For the consumer</td>
<td></td>
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<tr>
<td>- Reduces unwanted marketing material.</td>
<td>- May miss out on wanted marketing material if the defined targeted audience is too narrow.</td>
</tr>
<tr>
<td>- Only informed about promotions that are of interest to the consumer.</td>
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Table 1: Advantages and Disadvantages of Direct Marketing

In following on from the ethical concerns raised by web analytics, the discussion now moves to marry the two themes together to discuss the ethical guidelines that exist for marketing.

CURRENT ETHICAL GUIDELINES

As web analytics and direct marketing both involve the collection and use of personal and sometimes sensitive information, business has a duty of care to the consumer. Currently, there are a number of guidelines that have been developed help businesses to decide the most appropriate course of action, especially in the current environment where competitive and ethical issues sometimes collide or overlap. The following are examples of current industry standards for ethics.

Best Practice for Digital Marketing

The Australian Direct Marketing Association (ADMA) is an organization developed to inform businesses about responsible and effective direct marketing. ADMA have established a set of “Best Practice for Digital Marketing” guidelines, which covers a number of important areas in relation to online marketing and the collection of data. These guidelines cover (ADMA, 2010):

- Online privacy policies;
- A means for customers to opt-out from having their information passed on to a third party;
- Email marketing;
- Guidelines for responsibility marketing to children.

Marketing Code of Ethics

The Marketing Association of Australia and New Zealand (MAANZ) have a focus on “marketing education and training, marketing information and practical marketing tools for marketing and business development”. As a result, MAANZ have designed a Marketing Code of Ethics which covers the following areas (MAANZ, 2010):

- The responsibilities of the marketer;
- Honesty and fairness;
- Rights and duties of parties;
- Product development management;
• Promotions;
• Distribution;
• Pricing;
• Market research;
• Organisational relationships.

In terms of online direct marketing and web analytics, the main areas of focus for the Marketing Code of Ethics is the responsibility of the marketer, honesty and fairness, the rights and duties of parties and market research. However, it is still important for businesses to consider the other areas when venturing into online marketing.

National Privacy Principles
The National Privacy Principles are a part of the Privacy Act 1988 (Cth) and are the “base line privacy standards which some private sector organisations need to comply with in relation to personal information they hold” (Australian Government, 2010). A more detailed information guide has also been established to provide the “Office’s interpretation” (ibid) of the principles. The areas covered in the National Privacy Principles include:

• Collection;
• Use and disclosure;
• Data quality;
• Data security;
• Openness;
• Access and correction;
• Identifiers;
• Anonymity;
• Trans-border data flows;
• Sensitive information.

For online and direct marketing, all of these principles must be adhered to, but there are a few that require special attention; collection, use and disclosure, data security, openness, identifiers and sensitive information.

Synthesis
Overall it appears these guidelines place an onus on the marketer to place the interests of the customer above their own commercial interests. For example the provision of opt-out clauses in the marketing terms allows the customer to participate in the face value of the marketing application without participating in secondary or ternary applications. Where the National Privacy Principles seem to be the more overarching guidelines there is scope to provide specific guidelines for the ethical practice of web analytics. The authors recommend said guidelines to be developed and proposed in future research.

CONCLUSION
In the years 2009-2011, in response to increased competition in Australia many traditional retailers have joined their online competitors by selling goods via the online medium. The so-called multi-channel retailing efforts are becoming more competitive. Examples include the case study, JB Hi-Fi, Myer, David Jones, Harvey Norman and numerous specialty stores. As these traditional stores continue to vie for a share of the customer’s wallet it is likely that web analytics will continue to be a differentiating factor in well-designed web experiences and retailers that engender customer loyalty and entice repeat purchases. The continuing high clause of the Australian dollar makes the situation unique to Australia, especially as local retailers claim to be combatting a non-level playing field in that imported purchases under AUD $1000 currently do not attract GST (Pierce, 2011).

In the current online environment where content is key and consumers constantly want newness and the ability to interact socially, the pressure is very much on organisations to offer a truly unique experience. The potential offered by web analytics providers for organisations to fully understand and customise web experiences to their consumers is considerable and often provides the means to offer a customisable experience.

In this paper we have argued that although the potential exists to use customer data to create their unique and personally customised experience, business is duty bound not to overstep the boundaries of
ethical collection and use of consumer data. As Kant’s (1997 cited in Quinn, 2006) second formulation of the categorical imperative implies treat others as ends in themselves and never as means to an end. Taking the Kantian view, it therefore holds that organisation’s first obligation is to the customer, even at the expense of creating a customisable experience for them.

Future research will continue to examine the ethical issues of online technology use, especially where collection and use of customer data is concerned. Furthermore, the framing of ideas regarding ethical guidelines for web analytics use and direct marketing in terms of formal ethical frameworks is required to test their validity and offer a set of best practice guidelines to industry.

REFERENCES