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# The Ethics of Outsourcing Online Survey Research

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## ABSTRACT

*The increasing level of Internet penetration over the last decade has made web surveying a viable option for data collection in academic research. Software tools and services have been developed to facilitate the development and deployment of web surveys. Many academics and research students are outsourcing the design and/or hosting of their web surveys to external service providers, yet ethical issues associated with this use have received limited attention in academic literature. In this article, the authors focus on specific ethical concerns associated with the outsourcing of web surveys with particular reference to external commercial web survey service providers. These include threats to confidentiality and anonymity, the potential for loss of control over decisions about research data, and the reduced credibility of research. Suggested guidelines for academic institutions and researchers in relation to outsourcing aspects of web-based survey research are provided.*

*Keywords:* Anonymity, Confidentiality, Cyberethics, Data Protection, Outsourcing Surveys, SurveyMonkey, Web Survey

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## INTRODUCTION

Recent Pew Internet and American Life survey data indicate almost three quarters of American adults regularly access the Internet from home (Horrigan, 2009). The vast majority of these connections are at broadband speeds. Data from the Australian Bureau of Statistics (2008), the UK Office for National Statistics (2009) and the OECD's Directorate for Science, Technology and Industry (2009) reveal that Internet penetration levels are similarly high in Australia, the UK, and many other industrialised nations.

As Internet penetration has risen, researchers have increasingly moved their data

collection efforts 'online' (Lee, Fielding, & Blank, 2008; Reips, 2007; Skitka & Sargis, 2006). These efforts have variously involved online interviewing (Hewson, 2007; O'Connor, Madge, Shaw, & Wellens, 2008), observation and other non-reactive methods (Janetzko, 2008; Robinson, 2001), experimentation (Birnbaum, 2007; Reips, 2007) and web surveying (Best & Krueger, 2008; Reips, 2008). Of these online data collection methods, web surveying is currently dominant (Reips, 2008), is continuing to grow in popularity (Lee et al., 2008)<sup>1</sup>, is the online method most frequently reviewed by Human Research Ethics Committees (HRECs; Buchanan & Hvizdak, 2009) and thus is the primary focus of this paper.

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The growing use of web surveying merits attention to the possible impacts of the technology on research participants. Such ethical considerations are situated within the emerging scholarship on technoethics. Technoethics provides a focus on the ethical considerations associated with technological change (Luppini, 2009). Within the broad field of technoethics, Internet ethics and cyber ethics have been identified as key areas (Luppini, 2009) with major questions including “What are the ethical responsibilities of Internet researchers to research participants?” (p. 10) and “What are the ethical responsibilities of Internet researchers to protect the identity and confidentiality of data derived from the Internet?” (p. 10). We begin this article by providing an overview of web surveying, including the tools and services that have emerged to facilitate the development and deployment of web surveys. We provide evidence to suggest that commercial web survey hosts are widely used by academic researchers, yet the ethical issues associated with this use have received only limited attention in the academic literature. The main body of this article provides a focus on specific ethical concerns associated with outsourcing aspects of the web surveying process, with particular reference to external commercial web survey hosts. These include threats to confidentiality and anonymity associated with breaches of data protection and the potential loss of control over decisions about the data. Further, the possible impact of externally hosting academic surveys on response rates and responding is examined in terms of online privacy concern and the perceived credibility of research. This article concludes with some suggested guidelines for institutions and researchers in relation to the outsourcing of aspects of academic research utilising web surveys.

## Web Surveying

Web surveying typically involves administering a series of questionnaire items of varying types (e.g., rating scales, fixed-choice, open-ended etc.) over the world-wide-web, and can offer a

number of advantages over paper and telephone based surveying methods. Such advantages include, but are not limited to, timely access to large samples (Skitka & Sargis, 2006) that are often more diverse and ‘representative’ than traditional samples (Gosling, Vazire, Srivastava, & John, 2004); access to samples that would otherwise be prohibitively costly or difficult to achieve (e.g., Hildebrandt, Langenbucher, Carr, Sanjuan, & Park’s, 2006) large sample of anabolic steroid users); reduced social desirability and experimenter expectancy effects (Hewson & Laurent, 2008); and the ability to easily randomize and impose conditional logic on the presentation of survey items and stimuli (Best & Krueger, 2004).

The topics that have been investigated using web surveying are diverse, and a full review is beyond the scope of this paper. However, a small sample might include studies typical of Skitka and Sargis’s (2006) three broad categories of web-based research: translational, phenomenological and novel.

Translational studies are those that investigate traditional topics using methods and measures developed offline, and adapted for use on the web. Such adaptation is primarily to capitalize on the efficiencies and global reach afforded by the web. For example, Oliver John, Sam Gosling and colleagues have used online variants of the Big Five Inventory (BFI; see John, Naumann, & Soto, 2008) to collect large volumes of self-report questionnaire data used in a series of investigations into the psychometric properties of the measure, as well as the characteristics and correlates of the ‘big five’ personality factors more broadly (e.g., Rentfrow, Gosling, & Potter, 2008; Robins, Tracy, Trzesniewski, Gosling, & Potter, 2002; Robins, Tracy, Trzesniewski, Potter, & Gosling, 2001; Soto, John, Gosling, & Potter, 2008; Srivastava, John, Gosling, & Potter, 2003). Sample sizes in these studies have ranged from 100,000 to over 600,000 participants (in the case of Rentfrow et al., 2008). Many additional examples of ongoing translational survey research are indexed on websites like Hanover College’s *Psychological Research on the Net*<sup>2</sup> and the *Web Survey List*<sup>3</sup>, hosted at the University of Zurich.

Skitka and Sargis's (2006) second category of web-based research, phenomenological, is also well represented on *Psychological Research on the Net* and the *Web Survey List*. Phenomenological web-based research is focused on the nature of Internet behavior itself, and includes examples such as McFarlane, Bull, and Rietmeijer's (2002) study of young adults' online sex seeking behavior, as well as various investigations into 'Internet addiction' (e.g., Greenfield, 1999; Whang, Lee, & Chang, 2003).

Finally, Skitka and Sargis (2006) identified a third category of web-based research, which they referred to as novel. Novel web-based research capitalizes on unique features of the Internet to ask questions that would be methodologically difficult, if not impossible, to address offline. As an example of novel web-based research employing survey methods, Skitka and Sargis cite Vazire and Gosling (2004), who examined the nature and accuracy of personality impressions derived from viewing personal websites.

## Web Surveying Tools and Hosting

As the popularity of web surveying has increased, many software tools have been built to facilitate their development and deployment (Kaczmirek, 2008). These tools typically reduce (and often completely eliminate) the specialised programming knowledge that researchers would otherwise require to create and maintain a custom-built online surveying instrument, and can vary greatly in terms of their feature sets, flexibility, usability and cost to the end-user. These tools also vary in the extent to which they require the researcher to outsource aspects of the research (e.g., survey hosting, data collection, storage etc.) to an external service provider.

*SurveyMonkey.com Corporation*<sup>4</sup> (hereafter *SurveyMonkey*) is one such service provider. It is a commercial venture that provides subscribers with access to a proprietary, browser-based survey editor, which can be used to build and deploy surveys containing a common range of question types (e.g., fixed-choice, open-ended etc.). Surveys constructed

with the *SurveyMonkey* editor, as well as the data they are used to collect, are hosted on the company's secure web-servers. In other words, researchers using *SurveyMonkey* are essentially outsourcing survey formatting, data collection and storage (at least in the short term) to the company.

Although it is a current market leader, *SurveyMonkey* is but one of literally dozens (and probably hundreds) of companies to which survey hosting and data storage can be outsourced. For more exhaustive reviews and evaluations of some of the available alternatives, the reader is directed to Crawford (2002), Beiderniki and Kerschbaumer (2007), Gordon (2002), Wright (2005), Sue and Ritter (2007) and Gaiser and Schreiner (2009). Gaiser and Schreiner, in particular, provide useful guidelines for evaluating commercial web survey hosts based on costs, ease of use, output viewing options and technical support. Many of the more popular outsourcing options are also indexed in the University of Ljubljana's *WebSM*<sup>5</sup> resource, where they are referred to as "hosted solutions".

Rather than outsourcing, many researchers prefer to, are required to, and/or have the facilities to, host web surveys internally, or 'in-house'. In other words, to host them on web-servers owned and/or managed by the researcher's home institution. In some instances, these surveys will be hand-coded by or for the researcher; in others, they will be developed using standard web authoring software (e.g., *Adobe Dreamweaver*<sup>6</sup>, *Microsoft Expression Web*<sup>7</sup> etc.), or more specialised survey development applications like *Opinio*<sup>8</sup> and *Lime Survey*<sup>9</sup>.

*Lime Survey* is an example of a widely used open-source web application that can be installed on any web-server running MySQL and PHP. *Lime Survey* surveys and databases are typically hosted on the installation web-server. Like *SurveyMonkey*, *Lime Survey* can be used to build and deploy surveys containing a common range of question types. Unlike users of *SurveyMonkey* (and users of closed-source applications such as *Opinio*) users of *Lime Survey* are free to modify and add to its current feature set, a practice that is encouraged amongst open-source

software developers. For a more comprehensive review of open-source surveying options, the reader is referred to Baker (2007). On *WebSM*, both closed- and open-source web surveying applications suitable for building and hosting surveys in-house can be located by browsing for software that runs “on user’s server”.

Universities vary in both the types of software used to develop web surveys, whether surveys are hosted internally or externally, and the policies and procedures surrounding their use. For example, at our institution, Curtin University, both *SurveyMonkey* and *Lime Survey* are currently being used, along with a range of other tools that are hosted both on- and off-site. To determine whether or not this was common practice, we examined each of the studies employing online survey methods listed on Hanover College’s *Psychological Research on the Net* website on 19 September 2009 that had been added in the three months from 20 June to 19 September 2009. *Psychological Research on the Net* was selected because of its size, popularity, and exclusive focus on ethical academic research (the requirements for listing a study on the site include providing information about the researchers, affiliations, and ethics review processes).

Of the 66 studies meeting our criteria, 35 had chief investigators (CIs) with affiliations at United States universities or colleges, and 23 had CIs with United Kingdom affiliations. The remaining studies were Australian (4), Canadian (1), Irish (1), Singaporean (1) and Swiss (1).

Consistent with Buchanan and Hvizdak (2009), who found that just 24% of the United States Human Research Ethics Committee (HREC) representatives they surveyed worked at institutions with “specific tool[s] to use for online surveys” (p. 40), only 17 (i.e., 26%) of the 66 surveys we examined were hosted on web-servers owned and operated by the CI’s institution, or another academic institution with which the CI was affiliated. Of the remaining 49 surveys, 47 were hosted off-site (see Table 1), and we were unable to draw any conclusions about the final two. Excluding the five surveys hosted on personally owned web servers, the

off-site surveys we looked at were exclusively hosted by commercial service providers, primarily *SurveyMonkey*.

These findings suggest considerable variation across institutions and researchers, with the majority outsourcing major aspects of the web surveying process to commercial service providers. Such outsourcing can offer a number of advantages to academic researchers. First, it is typically quicker and easier to use existing products for survey design and deployment, than to develop systems internally. Ease of use may be of particular concern to academics supervising student research projects with short time-lines, or utilising online surveys in their teaching (Gaiser & Schreiner, 2009). Second, outsourcing usually eliminates the need for sophisticated technical knowledge, including the need to maintain a web-server and databases (Kaczmirek, 2008). Furthermore, large commercial providers can usually offer researchers guaranteed ‘up-time’, a regular backup schedule, and high levels of data security (Kaczmirek, 2008), often at a considerably lower cost than deploying and maintaining a comparable service in-house (Gaiser & Schreiner, 2009; Kaczmirek, 2008). On the surface, these advantages make the outsourcing of web surveys an attractive option for many researchers. However, outsourcing also raises a number of significant ethical concerns.

## ETHICAL ISSUES ASSOCIATED WITH OUTSOURCING

In the previous section, we noted the popularity of outsourcing significant aspects of the web surveying process to external (and typically commercial) service providers. Such outsourcing can offer many advantages, but also raises a number of ethical concerns, particularly when service providers are selected and used by researchers on a seemingly case-by-case, ad-hoc basis<sup>10</sup>. In this section we examine ethical issues associated with outsourcing, focusing on two key areas. First, we outline potential threats to anonymity and confidentiality associated with

*Table 1. Hosting locations of 47 online surveys listed at 'Psychological Research on the Net' in the three months to 19 September 2009 and not hosted on the CI's Institution's web-servers*

Host	Website address	N
SurveyMonkey	http://surveymonkey.com	27
Psych Data	https://psychdata.com	5
Qualtrics	http://qualtrics.com	2
Survey Gizmo	http://surveygizmo.com	2
Bristol Online Surveys	http://survey.bris.ac.uk	2
Globalpark/Unipark	http://unipark.info	2
Formsite	http://formsite.com	1
QuestionPro	http://questionpro.com	1
Researcher's Personal Web Server	n/a	5
<b>Total</b>		<b>47</b>

both data protection methods and the collection of IP addresses. Then we examine the potential impact of the perceived credibility of a data collection website on response rates and the accuracy of reporting. While recognising that each discipline has their own set of ethical guidelines, in our discussion of these issues we refer to the American Psychological Association's Ethical Guidelines (APA, 2002). These guidelines, in common with most other sets of ethical guidelines, are based on the principles of beneficence and nonmaleficence, fidelity and responsibility, integrity, justice and respect for the rights and dignity of individuals.

### **Data Protection: Threats to Anonymity and Confidentiality**

The protection of data at all stages of the research process, from initial data collection through to storage, is vital to ensuring the confidentiality and anonymity of research participants. With online research, data protection moves beyond the traditional methods for protection of paper documents to cover the protection of digital data. The potential for intentional malicious damage to online surveys is not simply a theo-

retical risk. Online surveys have been hacked (see Andrews, Nonnecke, & Preece, 2003, for details of how their online survey was hacked twice and infected with a virus) highlighting the need to ensure a high level of data protection. As noted by the American Psychological Association Policy and Planning Board (2009) "issues of protecting participant privacy in Internet transmission and computer storage are paramount but challenging" (p. 458).

The data protection measures employed need to increase with the increasing sensitivity of the data collected. Barchard and Williams (2008) recommended researchers of highly sensitive topics go beyond basic security measures and refer to the security standards in the computing industry, such as those provided by the Payment Card Industry Standards Council<sup>11</sup>, for the most up-to-date advice on data protection. The American Psychological Association's Board of Scientific Affairs' Advisory Group go further, recommending that where acceptable protections cannot be put in place, alternatives to Internet research should be used (Kraut, Olson, Banaji, Bruckman, Cohen, & Couper, 2004).

The outsourced hosting of surveys is associated with additional layers of threats to

data protection over those shared by all web surveys. While many commercial web survey hosting services may employ high level data protection measures that are consistent with industry standards<sup>12</sup>, a major concern is that the researcher does not have complete control over who can, and cannot, access the research data. A second area of concern with the external hosting of web surveys is the additional risks associated with the transmission of data from the host to the researcher.

External hosting services also vary in their data protection policies and practices. Further highlighting the potential for breaches of data security, Buchanan and Hvizdak (2009) reported that more than a third of their Human Research Ethics Committee representative survey respondents did not, as part of the ethics review process, consider the security and privacy policies of external service providers. As Buchanan and Hvizdak noted (2009), “until each tool is vetted and its privacy policies and data security policies understood, we cannot be 100% certain how security, content and privacy are instantiated within the individual tools” (p. 46).

### **Collection of IP Addresses: A Threat to Anonymity**

A further threat to participant anonymity is the collection of IP addresses. A unique Internet Protocol (IP) address is assigned to a computer each time it connects to the Internet. Banks of IP addresses are allocated to organisations and Internet Service Providers (ISPs) through five regional Internet registries: AfriNIC servicing the Africa region, APNIC (Asia Pacific), LACNIC (Latin America and the Caribbean), American Registry for Internet Numbers (ARIN) and RIPE NCC covering Europe, the Middle East and parts of Central Asia. In some circumstances it is possible to trace the location of a specific computer from an IP address. This may be done through one of the regional registries, along with the records of the ISP originally allocated the address of interest (Barchard & Williams, 2008).

While it is possible to use IP addresses and cookies to identify/track use on individual computers (Charlesworth, 2008), it is difficult to make a definitive link from an IP address to a specific individual. An IP address only identifies a computer, not a user (Nosek, Banaji, & Greenwald, 2002). Furthermore, many ISPs use dynamic IP allocation, whereby an IP address is assigned to a computer for the duration of the session only (Nosek et al., 2002), meaning that over a course of a day several computers may have been assigned the same IP address. Furthermore, a computer may be used by multiple users (e.g., a computer located in a public library) and/or a single account may be used by multiple family members (Hewson, Yule, Laurent, & Vogel, 2003).

However, the uniqueness of IP addresses, when used in combination with time and date information, means they should be treated in survey research as potential identifiers. Preferably, IP addresses should not be recorded as part of a survey (Nosek et al., 2002). When using an external survey provider, the option of not recording IP addresses may not be possible. Where a commercial survey provider automatically captures IP addresses, it is recommended that they be deleted as soon as possible, preferably before saving the data file to the researcher’s computer (Barchard & Williams, 2008; Benfield & Szlemko, 2006). However, the external survey provider is likely to retain IP information, regardless of whether or not the researcher deletes it, posing an ongoing threat to confidentiality and anonymity. For example, the *SurveyMonkey* Privacy Policy<sup>13</sup> states:

*As is true of most Web sites, we gather certain information automatically and store it in log files. This information includes internet protocol (IP) addresses, browser type, internet service provider (ISP), referring/exit pages, operating system, date/time stamp, and clickstream data.*

*We use this information, which does not identify individual users, to analyze trends, to administer the site, to track users’ movements around the*

*site and to gather demographic information about our user base as a whole.*

*We do not link this automatically-collected data to personally identifiable information.*

However, that such data is not generally linked does not mean it will never be linked. Later in the *SurveyMonkey* Privacy Policy under 'Legal Disclosure' it is stated that:

*We reserve the right to disclose your personally identifiable information as required by law and when we believe that disclosure is necessary to protect our rights and/or to comply with a judicial proceeding, court order, or legal process served on our Web site.*

This effectively means that control over the decision of whether or not to disclose research data to legal authorities may be taken out of the hands of the researcher and his/her institution. This may be a particular issue for researchers conducting surveys on criminal behaviour, where there have been cases of off-line research data being subpoenaed or research suspended over concerns about being able to maintain confidentiality (Roberts & Indermaur, 2003). In line with the APA's recommendations on informed consent (APA, 2002), research participants must be informed of the limits of confidentiality.

### **The Impact of Credibility of Site on Response Rates and Accuracy of Reporting**

Ethical issues also arise in relation to public perceptions of the credibility of surveys hosted at non-academic domains. The external hosting of an academic web survey risks diluting public perceptions' of the academic nature of the research. In addition to academic researchers, commercial, non-profit and media organisations, and members of the lay-public also use web surveys to collect data. For example, Couper (2000) refers to 'web surveys as entertainment', which includes collections

of non-scientific surveys or polls and media 'question of the day' polls. Some potential research participants may be unable to differentiate between academic research surveys and other commercial surveys, potentially affecting the credibility of academic surveys housed by commercial survey providers (Binik, Mah, & Kiesler, 1999; Fricker & Schonlau, 2002). Some external hosting services routinely use banner advertisements on survey pages, further blurring the distinction between academic and commercial data collection. This highlights the need for researchers to clearly delineate their work as 'academic research' that has ethical approval from the relevant HRECs/IRBs.

Suggested ways of strengthening the perceived links between research and academic institutions include posting researchers' photographs and links to researchers' home pages on the survey site (Binik et al., 1999). Peden and Flashinski (2004) examined psychology research websites for evidence of institutional affiliation. Only 22% of 22 websites housing psychology surveys and experiments reviewed in early 2002 contained an active link to a university website, although 88% identified institutional affiliations. Further, only a minority of sites (31%) stated that the research had been granted ethical approval by a HREC/IRB, with even fewer (27%) actually providing contact details for the approving body.

The perceived credibility of a survey domain may affect both willingness to participate in research and the candidacy of responding. While Internet users vary in their levels of concern about online privacy, the majority do express some concern about disclosing personal information online. For example, of 1,482 US residents surveyed as part of an online survey about Internet use, 53.7% reported being 'very concerned' and 27.1% 'somewhat concerned' about security on the Internet, where security was defined to include privacy, confidentiality and identity issues (O'Neil, 2001). Further, online privacy concern may vary by domain. Home Internet users vary in the degree to which they find website privacy statements from corporations and government institutions credible



(Turow & Hennessy, 2007). While the proportion of Internet users who trust commercial online survey providers or universities has not been established, the percentage of 1,200 adult home Internet users surveyed who trusted an institution to protect their information online and not disclose it without their consent varied by institutional type, from 4% for major advertisers to 25% for makers of privacy protection software (Turow & Hennessy, 2007).

The presence of online privacy policies on websites has limited impact on perceptions of privacy risk (Myerscough, Lowe, & Alpert, 2006). Further, the majority of Internet users do not systematically read online privacy notices. Based on survey responses from a stratified random sample of 2,468 U.S. adults from the Harris Poll Online panel, Milne and Culnan (2004) reported that 17.3% of respondents stated they never read privacy notices on websites. Of those who did report reading privacy notices, less than five percent reported always reading them. As Binik et al. (1999) suggest, "researchers should not assume that a promise of anonymity or non-anonymity is always viewed as such by participants" (pp. 85-86).

Where individuals have online privacy concerns, the majority take actions to protect their privacy (Paine, Reips, Steiger, Joinson, & Buchanan, 2007). While protective measures are largely based around hardware and software (e.g., firewalls, use of antivirus software etc.), almost 10% of Paine and colleagues' survey respondents volunteered that they were careful about the information they revealed online. Experimental research suggests that online survey responding is sensitive to, and responses may be affected by, privacy concerns. Joinson, Paine, Buchanan, and Reips (2008) manipulated level of privacy concern in online surveys, demonstrating that the use of an 'I prefer not to say' option is sensitive to both priming and manipulation of privacy concern.

Online privacy concern may also affect the candidness of survey responses. While early research into the computer administration of measures suggested that this mode of administration reduced socially desirable responding

and increased the candidness of responses (Feigelson & Dwight, 2000), more recent research has failed to find differences between various modes of administration (e.g., Bates & Cox, 2008; Uriell & Dudley, 2009). Respondent concerns over web survey data security have the potential to reverse any positive effects on social desirability responding (Couper, 2000).

Perceptions of confidentiality and anonymity of survey responses can affect responding to survey questions deemed sensitive by the respondent. A meta-analysis of research conducted into the effect of confidentiality assurances in offline research indicated that confidentiality assurances can improve responding to sensitive questions (Singer, 2004; Singer, Von Thurn, & Miller, 1995). More recent research has suggested that perceptions of anonymity have a greater effect than assurances of confidentiality on preparedness to reveal sensitive information (Ong & Weiss, 2000).

In addition to the impact of the immediate environment, Binik et al. (1999) suggest that online cues and the survey interface may impact on perceptions of anonymity. Perceptions of anonymity and security of survey responses influence intention to respond to online surveys (Rogelberg, Spitzmueller, Little, & Reeve, 2006) and accuracy of reporting. Uriell and Dudley's (2009) survey of enlisted US navy personnel found that web survey respondents were significantly more likely than pen-and-paper survey respondents to think that others could access their survey responses and that their survey responses would be linked with identifying and personal information. Accuracy of responses was positively correlated with perceived anonymity and confidentiality of survey responses. Participants' concern over the potential identifiability of data from web surveys suggests that researchers need to make explicit how anonymity will be maintained (Chizawsky, Estabrooks, & Sales, 2009).

The history of privacy violations online creates an atmosphere un conducive to building a relationship of trust between respondents and researchers (Cho & LaRose, 1999). This distrust may be magnified where commercial

survey providers are utilised for data collection. Research in offline settings has demonstrated that the perceived legitimacy and authority of researchers is influential in the decision to participate in research (Groves, Cialdini, & Couper, 1992) with higher responses rates for university sponsored research (Fox, Crask, & Kim, 1998). The internal hosting of web surveys on education domains may increase the credibility of research and hence response rates (Cho & LaRose, 1999), as well as the candidness of responding.

## HOSTING ON-SITE

Researchers may seek to avoid or address some of the ethical concerns associated with outsourcing by simply moving their web surveying on-site. This can seem particularly tempting to those researchers with a reasonable degree of IT savvy and administrator level access to a web server. We do not wish to imply that the outsourcing of academic web survey development and hosting is necessarily inferior to developing and hosting surveys internally. Indeed, while internal development and hosting increases the transparency of research (Buchanan & Hvizdak, 2009) and strengthens the identification of the research with the university, it can also raise a raft of new concerns. For example, are procedures in place to ensure that the both the surveying application *and* the software and services on which it relies (e.g., the web server, database server, web application framework etc.) are appropriately maintained (i.e., regularly updated/patched, backed-up etc.)? How are 'default' security and privacy policies set, and reviewed? Who has administrator level access to the web server, and are these people appropriately qualified? How are access rights and user accounts managed? Can users edit and/or view each other's surveys or data? If so, how is confidentiality managed? These issues are largely beyond the scope of this paper, but illustrate that the decision about whether to outsource or not is a challenging one, and should not be made lightly. With this

in mind, in the final section of this paper, we offer a series of suggestions to those readers needing to make such a decision.

## GUIDELINES

First and foremost, we recommend that each university develop a coordinated, institution-wide approach to online surveying, rather than relying on ad-hoc decisions by individual researchers, and the duplication of systems and services that such decisions often result in. We recommend the development of this approach involve representatives from the university HREC/IRB, legal department and IT department, in addition to academics from a range of disciplines who are experienced in conducting online research. A set of clearly stated policies and procedures for conducting web surveying should also be developed. As part of a coordinated, institution-wide approach, a university may choose to provide and support internal survey development and hosting and/or to provide a short-list of 'approved' external services for survey development and hosting. Each of these options will be briefly explored below.

In our view, the greatest protection to research participants is offered where the university provides and supports the development and hosting of online surveys, and the online surveying facilities are managed and maintained by staff skilled in IT security and familiar with the ethical and legal requirements that researchers are bound by in their geographic regions and professional disciplines. Such facilities can be based on an open source software package like *Lime Survey*, or a proprietary solution such as *Opinio*. Larger institutions may also consider the option of developing a customised surveying package in-house, rather than depending on code developed or maintained by outsiders.

However, we recognise that it is not always possible to harness the resources necessary to provide surveying facilities in-house. This may be particularly the case for smaller or specialised institutions, or institutions where there is little demand for web surveying. Where this is the

case, we would recommend that representatives from the university HREC, legal department, IT department and active research academics examine the terms of use and security provisions of a range of widely used commercial survey providers with the aim of providing a short list of acceptable providers. In recognition of the rapidly changing field, it is recommended that this list of preferred providers be reviewed on an annual basis. Where necessary for the specifics of their research project, individual students/researchers can present a case for utilising another survey organisation, and this can be assessed on a case-by-case basis.

Where the decision is made to outsource the hosting of a survey, we recommend that the survey content, hosted on the commercial site, is 'sandwiched' between an information sheet and debriefing page, both hosted on a university server. This will strengthen perceptions of the association between the research and the university. It also allows for the collection of identifying information for purposes such as informed consent or entry into a prize draw to occur on the university server. This separation of collecting survey information on the commercial survey provider's server and identifying information on a university server provides an additional layer of protection for participants (Barchard & Williams, 2008).

Where a university has not developed a coordinated, institution-wide approach to online surveying, individual researchers may need to make their own decisions about outsourcing aspects of their web survey research. In our own research and supervision of research students we have successfully used both internally hosted surveys developed using an open source software package and surveys externally hosted on commercial web surveying sites. These choices were largely influenced by the technical skills and experience of the researchers/students and duration of the projects, with those with limited IT skills and a limited data collection period being directed towards external survey companies where the researcher requires few technical skills to be able to 'create' their

on-line survey. In choosing between external providers, particular consideration should be given to data protection and privacy policies, privacy certification, and hardware and software configurations.

## CONCLUSION

The use of web surveying in academic research is a relatively new phenomenon, and occurs within a rapidly changing environment characterized by technological innovation. New modes of data collection are likely to evolve, enabled by technological change (Tourangeau, 2004). While the principles underlying ethical research remain the same, the application of these principles to new methodologies such as web surveying lags behind their introduction. In this article we have outlined some of the ethical issues associated with outsourcing aspects of web surveying at the current point in time. While we have provided suggested guidelines in relation to the outsourcing (or otherwise) of web surveys, researchers will need to keep abreast of both social and technological changes in the field, including both standards for data protection and evolving interpretations of ethical codes.

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## ENDNOTES

- 1 A recent *Google Scholar* search by Lee et al. (2008) indicated that the number of social science articles with 'web survey', 'Internet survey' or 'online survey' in their titles increased from 4 in 1994 to 1146 in 2006.
- 2 <http://psych.hanover.edu/Research/exponnet.html>
- 3 <http://genpsylab-wexlist.unizh.ch/browse.cfm?action=browse&modus=survey>
- 4 <http://surveymonkey.com/>

- 5 WebSM (<http://websm.org/>) allows users to search through 350+ web surveying applications and services on characteristics like cost to the user, availability of source code (i.e., closed vs. open source), and whether or not the user's surveys and data are hosted on the vendor's, or user's own web-server.
- 6 <http://www.adobe.com/products/dreamweaver/>
- 7 <http://www.microsoft.com/expression/>
- 8 <http://www.objectplanet.com/opinio/>; a proprietary application developed and distributed by Object Planet Inc.
- 9 <http://www.limesurvey.org/>
- 10 This paper focuses solely on ethical issues associated with outsourcing web surveys. That is, the use of commercial survey hosting services for academic surveys. For a more general discussion of online research ethics please see Ess (2007) and Ess and the AIOR Ethics Working Committee (2002). Our focus on the ethical issues associated with a specific online methodology and context is consistent with Ess's (2007) claim that "research ethics is intimately interwoven with the specific methodology/ies used in a given project" (p. 495).
- 11 See [https://www.pcisecuritystandards.org/security\\_standards/pci\\_dss.shtml](https://www.pcisecuritystandards.org/security_standards/pci_dss.shtml)
- 12 For example, *SurveyMonkey* is a licensee of the TRUSTe Privacy Program, complies with the EU Safe Harbor framework and employs Secure Socket Layer (SSL) technology to encrypt sensitive information.
- 13 [http://www.surveymonkey.com/Monkey\\_Privacy.aspx](http://www.surveymonkey.com/Monkey_Privacy.aspx) (last accessed on 21 September 2009).

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