Profiling the Australian Google Consumer: Implications of Search Engine Practices for Consumer Law and Policy

A. Daly¹ · A. Scardamaglia²

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Abstract Against the legal backdrop of proceedings against Google in various jurisdictions regarding the layout of its search result page, this article presents the results of a survey of a representative sample of 1014 Australian consumers, investigating their use of the Internet and specifically Google’s search engine, and the implications of these findings for consumer law and policy concerning the operation of search engines. The study is the first of its kind in Australia, despite litigation against Google in this jurisdiction for alleged misleading and deceptive conduct. The survey findings indicate that consumers have a lack of understanding about the operation and origin of the different elements of the Google search engine. In particular, the findings show particular confusion in relation to the operation and origin of Google’s related vertical services. Such confusion seems to be more pronounced among older respondents and those without higher education qualifications, although the survey revealed some more surprising and unexpected results in terms of the demographics of confusion. These findings are important for several reasons. Firstly, they identify and point to a gap in consumer knowledge about Google search that should be addressed, presenting an opportunity for consumer education in this area. Secondly, this research challenges the widely held assumption that the average (Australian) Internet user has a basic understanding about the operation and function of the Google search engine. Thirdly, the results leave open the possibility for further proceedings against Google in Australia on the basis of consumer law, the decision in Google v ACCC notwithstanding. This points to the potential for a more active role for consumer law in the digital ecosystem to address problems emanating from large and powerful platform providers such as Google than it previously has occupied.

A. Daly
angela.daly@qut.edu.au

A. Scardamaglia
ascardamaglia@swin.edu.au

¹ Queensland University of Technology Faculty of Law, George Street, Brisbane, QLD 4001, Australia
² Swinburne University of Technology Law School, Wakefield Street, Hawthorn, VIC 3122, Australia
This article examines consumer understanding of Google’s search result page from legal and empirical perspectives, with a focus on Australia. The legal part of the article examines both the (under)use of consumer law in the online ecosystem and specific instances under different areas of law in various jurisdictions in which the legality of the search result layout have been tested and which have involved empirical evidence of consumer understanding. However, in the main Australian proceeding on this issue, Google v ACCC, such empirical evidence was not presented. The second part of this article remedies this lacuna by comprising a study of Australian consumers’ understanding of Google search, the first of its kind. In doing so, we provide a snapshot profile of Internet users in Australia with a view to better guiding and informing Internet and consumer law policy in this jurisdiction, as well as providing comparative material to guide law and policy elsewhere.

This research is significant given the growing use and reliance on Google search by consumers—and citizens—seeking information online, and by businesses advertising their products and services around the world. It is also timely given international legal and policy developments and discussions in this space relating to the ever increasing power of online intermediaries including Google over the digital ecosystem, and what possible responses to this power imbalance between Google and its users may be, as will be explained in more detail below.

**Background and Context**

The operation of Google’s search and advertising business has courted controversy in various countries, including for the extent to which its business respects the laws of the jurisdictions in which it operates. In particular, Google’s liability as an Internet intermediary or platform connecting different groups of Internet users (advertisers, intellectual property rights-holders and consumers) has been in the spotlight. Recent prominent cases have involved the “Right to be Forgotten” in the European Union (Lindsay 2014; Lynskey 2015), the ongoing EU antitrust investigation into Google’s search and advertising practices (Daly 2014) and the US decision that affirmed Google’s digitisation of published works for its Google Books service that constitutes “fair use” for the purposes of American copyright law (Fisher 2015).

In some of these legal proceedings, survey evidence has been presented regarding consumers’ understanding of Google’s search result page and its different “elements,” namely:

- the organic or generic results which are generated based on their “relevance” to the search term entered;
- the “Sponsored Links” or advertisements whose appearance and positioning in the results page have been bought by advertisers from Google via its AdWords tool; and
- results from Google’s “vertical services” which focus on a specific segment of online content such as travel or shopping.
Such instances of survey evidence being used include the aforementioned antitrust investigations and the cases where it has been alleged that Google engaged in trade mark infringement (Scardamaglia 2014). However, this survey evidence, as will be seen below, has been conducted in some but not all jurisdictions in which Google operates and in some cases is contradictory as to the extent to which users understand the Google search result page. The research findings in this paper provide a more contemporary addition to this pre-existing base (which in itself is significant given the many changes there have been to Google’s search result page over the years), documenting evidence emanating from independent academic researchers who are not financed by Google or its competitors. This paper also represents the first empirical study on Australian consumers’ understanding of Google search, despite domestic litigation on that very point.

In this article, firstly, some background on consumer law and policy in Internet markets, and in particular search engines and online advertising, will be outlined. Then, more specifically, the context to the instances where consumer surveys about Google have been conducted, and the Australian legal proceedings which provide the backdrop for the survey discussed below will be explained. Then, the survey which is the subject of this article will be discussed, including key findings and analysis of the results, providing a picture of Australian Internet search user traits, habits and levels of understanding. Our research shows that Australian consumers lack understanding about the operation of Google search and the origin of different kinds of search results, in particular as regards the vertical search services, and this is pronounced among older users and less educated users. This is significant because it identifies a gap in consumer knowledge about Google search that should be addressed, suggests that judicial opinion on this point is inaccurate, and may give rise to future regulatory or policy action on the basis of consumer protection against Google.

The Internet, Search and Advertising

As 50% of the world’s population uses the Internet (with much higher percentages in developed economies) (Internet World Stats 2017), and e-commerce continues to grow (Ramcharran 2013), online transactions and digital products and services play an increasingly important role in world economies. Prominent among digital products and services are Internet search engines, performing a crucial role in locating and filtering information for Internet users (Elkin-Koren and Salzberger 2004, p. 71), and usually producing results which include adverts as well as “generic” results.

Overall, online advertising generates large amounts of investment from advertisers and high revenues. In the third quarter of 2016 alone, US advertisers invested US$17.6 billion in digital advertising (Interactive Advertising Bureau, 2016) and in the first half of 2016, digital advertising revenues in the USA were $32.7 billion of which search ad revenue represented 50% (Sterling 2016). In 2008 in the USA, online advertising accounted for 9% of all advertising (Evans 2009), and this figure was growing. The rise of online, especially search advertising, has come at the expense of traditional newspapers losing readers and revenue to such competitors (Evans 2009), which may be attributed to online advertising being more effective than traditional advertising methods (Dinner et al. 2014). Online advertising spending is predicted to surpass TV advertising for the first time in 2017 (eMarketer 2016).

Google has emerged as the market leader among search engines globally, and for the last 10 years has occupied a dominant position in various markets, including the European Union and Australia. Search engines including Google operate in two-sided markets, with consumers
searching for information online on one side, and on the other side are advertisers which pay for their adverts to be displayed in search results. Google provides the platform for these two sides to meet. Google also collects large amounts of data about its users, ostensibly in order to improve the generation of search results to be increasingly more “relevant” to consumers (including more precisely targeted advertising), but this data gathering has engendered significant privacy concerns (Zuboff 2015).

Google provides search results in response to user queries which comprise different categories: organic or natural results which are the most relevant results for the search query (and website owners do not pay Google to appear there), paid advertisements for which Google is paid and results from Google’s own subsidiary or “vertical” search services such as Google Shopping. While there are obvious economic and commercial elements to the information which Google provides in its search result pages, there is also a non-commercial element in the form of the organic or natural results, giving Google a dual role as a provider of “paid” and “unpaid” information. Given Google’s overwhelming market share, and the role of search engines in providing Internet users with both commercial and non-commercial information, it is of great importance for Internet users to be able to have an understanding of search engine use and advertising. This is particularly the case given accusations of bias against Google and other search engines in the way they select search results (Vaughan and Thelwall 2004; Introna and Nissenbaum 2000), and the recent controversies around the role of Internet intermediaries vis-à-vis “fake news” stories (Floridi 2016), both of which have given rise to calls for Google and others to be regulated more intrusively than currently (Pasquale 2006; Andrews 2016).

**Consumers in Online Markets**

From a consumer law and policy perspective, limited attention has been given to the issues faced by consumers in Internet markets, and particularly search, despite the large power imbalance which exists between service providers and consumers (Mik 2016). Some specific issues within the scope of consumer policy have come under consideration, such as: transparency obligations in the context of net neutrality debates (Marsden 2013); consumer privacy concerns especially in the USA, where the Federal Trade Commission has protected consumer privacy via its authority to police unfair and deceptive trade practices (Solove and Hartzog 2014); and cybercrime concerns around e-commerce contracts, particularly those conducted across jurisdictions (Alboukrek 2003). Some consumer interests may be taken into account by other areas of law, directly or indirectly, such as the competition investigations and trade mark proceedings discussed in more detail in the next subsection. Increasingly, consumer protection issues are coming to the fore with the rise of the (somewhat misnamed) “sharing economy” of Airbnb, Uber and so on, where “traditional” forms of regulation are “disrupted” by these services, with questions remaining about how to ensure certain desirable goals of such regulation are maintained while “red tape” is dispensed with (Ranchordas 2015).

However, the proactive protection of consumer interests in Internet markets, even where it is acknowledged that problems exist, has proved less forthcoming. In the EU, for instance, consumer law has been tardy in its consideration of digital markets when compared to other areas of law (Helberger et al. 2013), and there is very little CJEU case-law on unfairness in digital consumer contracts, despite common contractual terms being likely to fail the current “unfairness” test in the Unfair Terms in Consumer Contracts Directive (93/13/EC) (Loos and Luzak 2016). Some of this lack of activity may be attributed to more generalised rhetoric
advancing regulatory forbearance in Internet markets as a means of not stifling innovation and the consumer benefits which purportedly flow from such innovation (Rothchild 1999)—an argument rehashed currently with regards to sharing economy services. Combined jurisdictional and efficiency issues may also contribute to under-enforcement (Swire 2009).

Specifically concerning Internet search engines, and Google in particular, enforcement activities regarding consumer issues have either taken the form of upholding consumer privacy rights (as in the USA) regarding the data that these services collect (Federal Trade Commission 2012), or targeting search engine advertisers for misleading conduct in how they present their advertisements. The question of whether intermediaries themselves, such as search engine providers, are engaging in misleading conduct in breach of consumer law has been paid scant attention, with the Australian litigation discussed in more detail in the next section being a notable and rare example. The US FTC did issue guidelines to search engines in 2002, which were then updated in 2013, about how these services should distinguish paid search results and other forms of advertising from organic or natural search results, and stated that failure to distinguish between these different kinds of results adequately may constitute a deceptive practice in violation of section 5 of the FTC Act (Federal Trade Commission 2013a). However, to date, the FTC appears not to have undertaken any public enforcement action against search engines on this point.

Instead, in some jurisdictions, antitrust and trade mark law have been used, not very successfully, to provoke changes to how search engines operate their services and display their results (Daly 2016). The most prominent of these instances which are most relevant for this article’s subject matter are considered below. Empirical evidence of consumer understanding of search results was adduced in some of these proceedings.

Background to Legal Proceedings Regarding Google’s Search Results

There has been some prior research on consumers’ understanding of search result pages, research which has mainly been carried out in the context of legal proceedings concerning Google in various jurisdictions. These proceedings comprise the following: competition concerns involving Google’s dominant position in the search result market; concerns about Google’s use of trade–marked terms in search advertising; and concerns that Google is not acting consistently with consumer law. A brief description of these legal issues is given here, in order to understand the background against which claims about Google’s detrimental conduct vis-à-vis consumers have been made, and, accordingly, also against which most previous surveys around Google search and consumers have taken place.

**Competition Law**

Google has been the subject of claims of anticompetitive conduct in both Europe and the USA in relation to the layout of its search result page. At issue has been Google’s alleged preferencing of results from its subsidiary “vertical search” services above those of its competitors, which Google’s competitors argue constitutes an illegal abuse of dominance.

The US investigation concluded with the Federal Trade Commission (2013b) finding that Google had adopted design changes for its search result page primarily to improve the quality of its search product and the overall user experience—even though these changes meant that
Google displayed its own vertical search results more prominently which had the effect of pushing the organic search links further down the page—and so had not acted illegally.

In Europe, the European Commission opened its investigation into Google in November 2010 for an alleged abuse of its dominant position contrary to Article 102 of the Treaty on the Functioning of the European Union (TFEU). This case is the largest and most significant competition investigation into Google’s conduct to date—and is still ongoing more than 5 years after it was opened. While in 2014, it seemed that the Commission and Google had reached a settlement, progress seems to have been stymied by political pressures. In 2015, the Commission (2015) sent Google a formal Statement of Objections and at the time of writing the proceedings are still ongoing (Daly 2016).

Relevant to the survey discussed below is the fact that Google had proposed, in 2013, to alter the appearance of its search result page. More specifically, Google offered to label its own services when one or the other of them was displayed in the result page when a user did a generic search for particular terms, and results from Google’s own services should be displayed in a separate area to Google’s generic search results and Google also offered to display links to three rival services in “… a manner to make users clearly aware of these alternatives.” However, these proposals were ultimately rejected by the Commission.

Since the case against Google in the EU is ongoing, it remains to be seen whether it will result in Google having to change its search result page, and if so in what ways, and to what extent the appearance of different kinds of search results may be “clarified.” Yet, it is unclear that Google’s alleged conduct, even if proven, is actually in breach of EU competition law since it does not clearly fall within one of the already-recognised categories of abuse of dominance (Ibanez Colomo 2014). There are also questions about whether any measures taken against Google will actually benefit consumers and their “welfare” (the purported objective of contemporary competition law) as opposed to Google’s competitors (Daly 2016).

**Trade Mark Law**

In addition, Google has been subject to trade mark infringement proceedings across the globe with respect to its sale of trade marks as AdWords keywords to third parties (usually competitors of the trade mark owner). A series of lawsuits have been initiated against Google, but most of these have either been resolved in Google’s favour or settled out of court, some on account of a lack of sufficient evidence of consumer confusion, which is a bedrock principle of trade mark infringement.

Other cases have failed on the basis that Google’s role in the sale of trade marks as keywords is “neutral” and their use of trade marks in this way is merely technical and therefore not sufficient to establish “trade mark use” consistent with trade mark jurisprudence (which largely requires use of a trade mark so as to indicate origin). Again, the most prominent of these cases was in the EU in Google France SARL v Louis Vuitton Malletier SA, where the Court of Justice of the European Union (CJEU) decided the matter in Google’s favour (Jyrkkiö 2011).

As a result of these cases being settled or decided in Google’s favour, trade mark owners have increasingly turned their attention towards pursuing advertisers which have purchased others’ trade marks as Google AdWords keywords in the courts. This strategy has proved more successful so far, in cases such as Interflora Inc v Marks and Spencer Plc (2013).
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Furthermore, Google’s conduct in relation to its search result pages and its AdWords facility has been tested under laws regulating misleading and deceptive conduct and false advertising (Van Allen 2014). This area of law is often invoked in common law proceedings as an alternative to trade mark infringement. In Australia, in the absence of antitrust proceedings against Google or cases directly on the issue of trade mark infringement in the use of AdWords, consumer protection law was the legal regime used to pursue Google in domestic courts. Australian courts had dealt previously with some misleading and deceptive conduct cases involving the Internet (Coorey 2016), but Google v ACCC remains the most prominent.

Google v ACCC was initiated by the Australian Competition and Consumer Commission (ACCC) (Richardson 2012; Scardamaglia 2013), and the case related to several Sponsored Links on Google’s search results page, i.e., that each of the disputed Sponsored Links were misleading or deceptive, or likely to mislead or deceive, because they included a headline that linked to the advertisers’ webpage rather than to a webpage of the advertisers’ competitor whose trading or product name featured in the headline.

The matter was heard at first instance before Justice Nicholas in the Federal Court of Australia. He found that although four out of the 11 Sponsored Links subject to dispute were misleading and deceptive such that the advertisers were liable, Google itself had not made those representations. As to the claim that Google had failed to sufficiently distinguish between its organic search results and Sponsored Links, Justice Nicholas found that ordinary and reasonable members of the public who have access to a computer connected to the Internet would have understood Sponsored Links were advertisements that were different from Google’s organic search results. The consequence was that Google was not liable for any misleading and deceptive conduct constituted by those advertisements.

This decision was appealed and reversed by the Full Federal Court of Australia in the ACCC’s favour; however, the finding that Google had not differentiated between its organic search results and Sponsored Links was not subject to appeal. Google then appealed this decision to the High Court of Australia, the court of last instance, which allowed the appeal. The High Court held that the evidence against Google “[...] never rose so high as to prove that Google personnel, as distinct from the advertisers, had chosen the relevant keywords, or otherwise created, endorsed, or adopted the Sponsored Links.” Accordingly, Google was not liable as the maker of misleading and deceptive advertising content.

During these proceedings, statements were made about Australian Internet users’ understanding of the Google search engine, particularly by Justice Nicholas at first instance. As mentioned above, Justice Nicholas considered that Australian consumers would have understood the difference between Sponsored Links and organic search results. Another inference made by the judge was that it was not possible for consumers to use a search engine without knowing how it operates.

However, these statements were made without reference to any actual evidence of Australian Internet users, their habits and their understanding of how Google operates and how it generates different kinds of search results. This may seem at least surprising to those unfamiliar with trade mark and passing off law in jurisdictions such as Australia, but in practice the question of what constitutes misleading and deceptive conduct or consumer confusion is a finding of fact for the judge to make, and it is not customary for the judge to refer to survey evidence in these types of cases (Huang et al. 2012).
While survey evidence can still be presented of actual or potential consumers in common law jurisdictions including Australia, this evidence is usually presented by one party or other to the case, and usually only presented in practice if it aids that party’s case. The adversarial nature of these jurisdictions’ proceedings tends to reduce its value to the judge, as it is not considered to be objective (McWilliam’s Wines 399, 1980). The judge may also not want to see her decision-making capacity reduced by reliance on survey evidence. These factors can explain what may otherwise seem a baffling lack of real-world evidence being presented in cases such as Google v ACCC. Yet, this is not unique to Australia or the common law, with the “average consumer” concept in EU law also not being dependent on statistical evidence of actual consumer behaviour (Incardona and Poncibo 2007).

However, this lack of empirical evidence on whether Internet users in Australia understand the difference between the different parts of the Google search result page is something the survey detailed below aims to address. The survey results, and what they reveal about Australians’ use of the Internet and the Google search engine, are presented with a view to provide the evidence base required to guide future Australian Internet and consumer law and policy in a way which better reflects actual consumer behaviour and understanding. These results also increase the comparative evidence base for legislators, policymakers and consumer advocates internationally to draw upon in Internet and consumer policy debates concerning Google and other large Internet corporations in their own jurisdictions.

In addition, independently conducted research such as that presented in this article—where the authors are not retained by one of the parties to a case nor are otherwise funded or affiliated with Google, its competitors or its regulators—may be perceived as more credible or objective. Accordingly, this research may serve to encourage law and policymakers, including judges, to seek such evidence when making similar determinations on Internet users’ use and understanding of online services in the future. In any event, this evidence also contributes to more general discussions flowing from the Google v ACCC case and questions of Google’s dominance and relationship with consumers in Australia and other countries.

Existing Studies

There are no prior existing studies of Australian Internet users’ use and understanding of Google’s search engine and the different kinds of results it produces. However, there are some analogous surveys conducted in other parts of the world, and there is also some existing evidence on Australian Internet users’ habits more generally.

Internationally, as regards to consumer understanding of Google’s search engine, the existing survey evidence is conflicting as to whether consumers are actually confused or do actually understand the nature and operation of Sponsored Links and results generated from Google’s subsidiary vertical search services.

In the USA, this kind of survey has been carried out in the context of the aforementioned trade mark litigation. In Rosetta Stone Ltd. v Google Inc., the US Court of Appeals for the Fourth Circuit cited an internal Google study, which found that even sophisticated consumers were sometimes unaware that Sponsored Links were advertisements. This finding can be compared to a survey on the use of trade marks in search engine keyword advertising by Franklyn and Hyman (2013a) which found that there was little evidence of consumer confusion regarding the source of goods which could form the basis of trade mark litigation. However, at the same time, that study also found that only a minority of consumers correctly and consistently distinguished paid ads from unpaid search results.
In Europe, similar surveys have been carried out in the context of the antitrust investigation into Google mentioned above, where a lobby group made up of Google’s search competitors commissioned a survey from Franklyn and Hyman (2013b). The aim was to assess the likely impact of Google’s proposals from 2013 on a sample of UK-based Internet users. In particular, the survey tested the extent to which users were likely to click on any of the three rival links, and whether they understood and recognised the different parts of Google’s proposed search results page, i.e., the labelling and descriptions (Franklyn and Hyman 2013b). The survey found that “only a modest number” of users would click on one of the rival links and that users were confused about the difference between Google’s vertical search results and the other results (Franklyn and Hyman 2013b, p. 2). The conclusion was that if Google presented links to its rivals in a relatively neutral fashion, that is, in a comparable way in terms of appearance and placement on the page, then this would result in higher click through rates for the competitors’ links. However, the Second Commitments offered by Google to the European Commission did not achieve this and so were not “… likely to command materially increased consumer attention or restore competition for [Google’s] rivals” (Franklyn and Hyman 2013b, p. 13).

In the trade mark context, a further survey was carried out by Bechtold and Tucker (2014) in the wake of the CJEU’s Louis Vuitton decision and the policy changes Google made to AdWords in Europe subsequently. The survey analysed click-stream data from European Internet users in France and Germany to investigate consumer browsing behaviour when using Google’s search engine, and in particular whether there were any changes following Google’s AdWords policy reform subsequent to the CJEU’s Louis Vuitton decision. This reform entailed that third parties could register keywords without the trade mark owner’s permission. Bechtold and Tucker used micro-level click-stream data from 5.38 million records of website visits following search engine queries that contained a trade mark, from both before and after the AdWords policy change. This research found that, in general, after the policy change, consumers engaging in “navigational searches” (where the consumer is searching for the keyword because they are looking for a specific website, e.g., trade mark owner’s website) were less likely to visit the trade mark owner’s website after the policy change, while after the policy change, “non-navigational searches” (where the consumer is using the keyword in some other way, e.g., because they are interested in information about the product) were more likely to lead consumers to visit the trade mark owner’s website. Bechtold and Tucker advance that these results suggest “search engine users are using trademarks in more subtle and varied ways than is often assumed.”

Ofcom, the UK communication regulator, released research it conducted on British children’s media literacy levels (Ofcom 2015). Although not undertaken in the context of litigation or other legal proceedings, this research augments the knowledge base about consumer understanding of search engine results. Among the questions posed were some which sought to understand how older children (aged 8 to 15 years old) understood their media environment, specifically focusing on “children’s understanding of how search engines operate, and on their awareness and understanding of how paid-for content appears in search results” (p. 84). The research found that only a minority of 8–11-year olds (16%) and 12–15-year olds (31%) who use search engines correctly identified Sponsored Links on Google as advertising, despite the results being distinguished by an orange box with the word “Ad” in it.

This research was followed by a further Ofcom report in 2016 which examined, among other issues, British adults’ understanding of search engine results. Ofcom (2016) found that
51% of search engine users were unable to identify adverts or sponsored links correctly, and that this was more common among older (65+) users and users from low socio-economic backgrounds. Ofcom also found a “continued lack of understanding” among “a sizeable minority” of British adult users on how search engines operate, such as 18% of users believing that if a website appears on the search results page, it must be “accurate and unbiased” (p. 8). Among “newer users,” i.e., those who first started using the Internet in the last 5 years, Ofcom found that they were no less likely than other users to understand how search engines operate vis-à-vis accurate and unbiased results, but were less likely to be able to identify paid-for results/advertising in search results correctly (p. 172). In addition, a group of users Ofcom termed “narrow users” (those who carry out one to six of 18 types of online activity identified by Ofcom, and were more likely to be older adults, from a low socio-economic background and newer users (p. 188)) were “less likely to use and understand search engines, and less likely to be able to correctly identify paid-for content/advertising that may appear in search engine results” (p. 173).

As regards to Australia, as mentioned above, there is no existing evidence of a similar kind on Australian Internet users’ use and understanding of Google’s search engine. There are, however, some existing studies of Australians’ Internet usage, the most recent and prominent of which is the 2014 World Internet Project Australian country report (Ewing et al. 2014). This report encompassed a survey of a random sample of 1000 Australians. While there were no questions about search engines or specifically Google, some major findings of the survey were that Australia has a very high level of Internet use (91% using the Internet during the 3 months preceding the point they were surveyed) but the “digital divide” still existed and was largely generational (100% of under 35-year olds used the Internet and 97% of 35–49-year olds; but more than a third of those aged 65 or older did not use the Internet) (Ewing et al. 2014 p. v). Furthermore, the survey revealed that “Australians are avid online shoppers” (Ewing et al. 2014, p. vi), with the vast majority of users using the Internet to research purchases, with 85% buying products online and 80% making travel reservations or bookings online (Ewing et al. 2014 pp. 38–39). This provides some important context for the survey discussed below, given two of Google’s prominent vertical search services are Google Shopping and Google Travel.

Survey and Methodology

The data presented in this article was collected from an online survey of a demographically representative sample of 1014 Australian adults during November 2014. The questionnaire was drafted by the authors. An external market research company, Research Now, was engaged to enlist the representative panel of respondents, to programme and coordinate the delivery of the survey and produce the survey data in raw form. The panel was recruited by Research Now and selected using the most recent Australian Bureau of Statistics data to ensure that it was representative of the Australian adult population on account of gender, age, location, education, occupation, income, country of birth and language spoken. The only qualifying question for participation was “Do you use Google Search?”

The survey was drafted with a view to examine whether users understand the operation of the Google search engine in terms of its search results, including the purpose and provenance of those search results. Within these parameters, the survey included questions that were directed towards profiling Australian Internet users and specifically, those who use the Google search engine, as the country’s most popular search engine (Digital Summit 2015).
The survey instrument was pre-tested with a convenience sample of 30 people in a soft-launch. The results from the soft-launch were used to revise the survey instrument into its final form. The final questionnaire comprised nine demographic questions (to ensure that a representative panel was selected) and 26 substantive questions. As already noted, the substantive questions were framed around the purpose of obtaining data about consumers’ understanding of Google search results and the provenance and purpose of different kinds of results. The survey instrument further included questions which went to the profile of Australian Internet users and their browsing habits. The questionnaire closed with an opportunity for respondents to provide their comments about Google and the Google search engine by way of an open-ended question.

In the survey, respondents were firstly asked some background questions about which devices and browsers they used and what they did when they were online (work, study, shopping etc.). The remainder of the questionnaire was premised around two screenshots taken of Google search result pages from the Chrome browser on a desktop PC. The Chrome browser was downloaded specifically for the purpose of conducting this research and so there was no browsing history, save for the two searches conducted for this survey. Chrome was selected as it is the most popular browser used in Australia, which was also confirmed by the data collected in this survey with 37% of respondents using Chrome. The screenshots related to the search terms “apple” and “rolex.” Each key element of the search results page was framed in a black box and labelled (Section A-G and Section A-K) before it was presented to respondents.

A copy of the screenshots is provided in Figures 1 and 2. The breakdown of each section for each screenshot is shown in Table 1 and Table 2.

The questions posed in the survey centred on the following key themes:

- Consumers’ ability to identify paid-for advertising and their knowledge and understanding of the nature and provenance of paid-for advertising (Sponsored Links).
- Consumers’ ability to identify natural or organic search results and their understanding of the operation of the Google search algorithm in producing natural search results.
- Consumers’ ability to identify Google’s affiliated services (Google Maps, News and Shopping) and their knowledge and understanding of the nature and provenance of these affiliated services, i.e., that they are also owned and operated by Google.

All questions were posed as multiple choice questions, except two questions which were open text. The first sequenced open text question asked how Google could improve the layout and labelling of results. The second sequenced open ended question was the final question posed in the survey which asked respondents for their closing remarks. Thematic analysis was used to code these responses according to prominently displayed themes. The results of the multiple choice questions are presented statistically.

Chi-square analyses were run to determine demographic differences in responses to each substantive question. Demographic categories included gender, age group, state/territory, region (metro/rural), country of birth (Australia or other), level of educational attainment, occupational category and annual income bracket. Post hoc Chi-square with Holm’s Bonferroni alpha correction was completed where differences were found in categories with more than two subcategories (e.g., state/territory: ACT, NSW, NT, QLD, SA, TAS, VIC, WA).

The search result pages shown in Figures 1 and 2 and which formed the basis of the survey questions were generated using a PC (that is, a personal desktop computer). It is acknowledged
that different results may be yielded from different devices, and thus, this is a limitation of this study. The findings are still pertinent, however, as PCs are widely used, and the survey showed that respondents’ primary device was a laptop (32.1%) followed closely by a PC (30%). Mobiles phones (8%) and tablet devices (8%) were equally popular.

Another limitation of this study relates to the way in which the Google search result pages were presented to respondents. As previously stated, the search result pages as generated in response to a search for the terms “apple” and “rolex” were modified to the extent that each section or component of the search results page was framed, boxed and labelled ex post facto as part of the survey design. This may have had the effect of delineating the different elements of the Google search result page in a way that respondents would have otherwise not been able to delineate themselves. As a consequence, the data may be somewhat distorted, such that the incidence of confusion in the survey results was actually under-reported.

The data was also limited to the extent that the survey questions related to only two search queries—“apple” and “rolex.” While Apple is a popular and well-known producer of consumer goods as well as having a generic meaning as a kind of fruit, Rolex is a high-end luxury brand. This in itself is another limitation as different results may have been yielded from a search term that was less affordable as opposed to a brand that is more frequently purchased.

The final limitation of this survey relates to the formulation and sequencing of questions, which may have unintentionally primed some of the responses later in the survey. That is, and
to quote Franklyn and Hyman (2013a, p. 528) who acknowledged a similar limitation in their own survey regarding Internet search: “… particular questions may be affected by survey respondents’ interpretation of the goals of the survey. So, survey respondents might conclude that there is something problematic about [the search results pages] from the simple fact that we constructed a survey devoted to the issue.
Results

Profile of Respondents

In terms of the profile of respondents, there were an equal percentage of male and female respondents, all largely from metropolitan Australia (68%). The majority of respondents were university educated (40%), while 30% had a trade/vocational qualification or diploma. Almost 30% of respondents reported that high school was their highest level of education.

Respondents primarily used a laptop or PC to access the Internet (32% and 30%, respectively). Notwithstanding the rise of the smartphone, only 8% of people nominated their mobile phone as their primary device. The same percentage of people (8%) nominated their tablet as their primary device.

Chrome was the most popular browser (37%), followed by Internet Explorer (31%). Firefox was the third most popular browser (21%) while 12% of respondents said Safari was their browser of choice.

Australian Internet users reported that they primarily use the Internet for general browsing (93%) and email (88%). Shopping (72%), social media (64%) and accessing the news (64%) were also highly reported. In terms of how respondents divide their time spent on the Internet, work purposes were the most popular response (19%). Social media and email ranked next (17%, respectively).

| Section | Description |
|---------|-------------|
| Section A | Sponsored Links |
| Section B | Organic or natural search results |
| Section C | Google maps |
| Section D | Google news results |
| Section E | Google maps |
| Section F | Knowledge graph box |
| Section G | Results about box |

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Table 1 Breakdown of Google Search Screenshot: “apple”

| Section | Description |
|---------|-------------|
| Section A | Organic or natural search results |
| Section B | Google maps |
| Section C | Organic or natural search results |
| Section D | Organic or natural search results |
| Section E | Google images |
| Section F | Organic or natural search results |
| Section G | Google shopping results |
| Section H | Google maps |
| Section I | People also search for |
| Section J | Results about box |
| Section K | Paid advertisements/Sponsored Links for ads |
Paid-for Advertising

In the first substantive part of the survey, respondents were asked a series of questions about the various elements of the Google search result page, generated after entering the search query “apple” into the Google search engine. The purpose of this part of the survey was to test whether respondents were able to identify paid-for advertising, as distinct from organic or natural search results, the placement of which is not paid for by advertisers.

Initially, respondents were shown Section A of the Apple screenshot and asked whether they were aware that this was a paid-for ad. See Figure 3. Overall, 62% of respondents said that they were aware that this was a paid-for ad, paid for by Apple Inc.

Male and female responses to this question were not significantly different, with 63% of men and 61% of women able to identify Section A as a sponsored ad. The responses were, however, significantly different across age groups. Specifically, it was shown that most of the youngest respondents (18–24) were able to correctly identify Section A as a sponsored advertisement (74%), with these results the highest across the cohort of survey respondents. 68% of young adults in the 25–34 age bracket were also able to recognise that Section A was a paid-for ad purchased by Apple Inc. Conversely, respondents in the 65+ bracket had less of an understanding, with only 56% people in that demographic aware of the fact that Section A was a sponsored ad. Perhaps more surprising is the fact that only 55% of respondents in the 35–44 age bracket correctly identified Section A as a paid-for search result.

In sum, the results showed that older Internet users were less able to identify sponsored ads than their younger counterparts. The exception to this was those in the 34–45 age bracket, with only 55% of respondents in this demographic able to identify Section A as a sponsored link. For some perspective, 56% of those in the 65+ age bracket correctly identified Section A as a sponsored ad.

There were also significant differences between those respondents who correctly identified Section A as a paid-for ad and the respondents’ level of education. Of note, the survey results showed that respondents with a bachelor or postgraduate qualification (72%) had a better understanding of the origin and provenance of Section A than those respondents without a tertiary education (51%). In terms of occupation, self-employed business owners (76%), students (72%) and professional employees (70%) had the best understanding of the nature of Section A. Those who identified themselves as government service holders (40%) (i.e., worked in the public sector) or those who did home duties showed the least understanding (43%). Interestingly, the responses from Australian and foreign born respondents were not significantly different. The locality of respondents was also not a factor, with the responses of metropolitan and rural respondents not significantly different.

Organic or Natural Search Results and the Google Algorithm

Respondents were asked whether they knew that organic or natural search results and their ranking and placement on the Google search results page could not be purchased from Google.
An overwhelming number of respondents (68%) did not know this was the case. Only around one third of respondents understood the nature of organic search results. As with the results in relation to paid-for advertising, male and female responses to this question were not significantly different, with 52% of male respondents and 44% of female respondents agreeing with the statement posed in the question. There were, however, significant differences among the different age brackets.

Those in the younger age brackets had a better understanding of the operation of the Google algorithm and responded that they were aware that natural search results differ from sponsored ads in that they cannot be purchased. The greatest difference emerged between those in the youngest age brackets and the 65+ age bracket. Eighty-four of those in the 65+ age bracket did not know that organic search results could not be purchased from Google, while only 53% of 18–24-year olds did not know. Fifty-one of respondents in the 25–34 age bracket were unaware that natural search results could not be purchased.

Education levels played a discriminating role in the responses where a greater percentage of those with a higher education (i.e., bachelor and post-graduate qualification, 59%) responded yes to this question relative to those without higher education (i.e., high school and trade qualification/diploma, 40%).

**Google Affiliated Services (Maps, News)**

Respondents were shown several elements of the search result page which were generated from Google’s affiliated services, including results from Google Maps (Section C and E) and Google News results (Section D). These affiliated services are operated by Google’s subsidiaries and associated legal entities. Respondents were then asked if they were aware that Google sometimes displays links to their affiliated services in search result page (Figure 5).

Overall, 33% and 26% of respondents believed Sections C and E, respectively, were displayed because Apple Inc. had paid Google to appear there. Only 14% and 22% of respondents were able to correctly identify the fact that these results were from an affiliated Google service. As for the Google News results in Section D, 22% of respondents incorrectly
believed that Apple paid to appear in these results, with only 20% of respondents able to correctly identify the fact that Google News is an affiliated Google service.

Responses to these questions also differed significantly according to age demographic categories. More than 70% of respondents in each of the 18–24 and 25–34 age bracket knew that Google sometimes displayed links to their affiliated services. This is compared to just 45% of those in the 65+ age bracket and 48% of those in the 45–54 age bracket.

Significantly different responses to this question were also found across some of the education demographic categories. At the bottom end of the scale, only 42% of respondents who nominated primary school as their highest level of education agreed with the statement posed in question, while 75% of respondents with a post-graduate qualification answered this question in the affirmative.

**Google Shopping**

The “rolex” search query produced a result for Google Shopping, as shown in Section G. This element of the search result page was then used as the basis to test respondents’ understanding of Google Shopping, how these results are generated, and the source from which they emanate. Respondents were shown Section G and asked if they were aware of the fact that this was an affiliated Google service (Figure 6).

Overall, nearly 70% of respondents were unaware that this was a result from one of Google’s affiliated services. Male and female respondents were not significantly different in answering this question: 33% of male respondents and 43% of female respondents answered yes to this question. There were, however, statistical differences in the responses across some of the age demographics. Again, those in the youngest demographic (18–24) showed the highest level of awareness, with 53% of respondents in that category answering yes. This can be compared to the 20% of those in the 65+ bracket and 21% of those in the 45–54 bracket who answered yes. Awareness about the fact that Google Shopping was a Google affiliated service also varied according to education. Again, more respondents with a post-graduate qualification (41%) acknowledged that they understood that Google Shopping was an affiliated Google service, while only 27% of high school leavers knew this fact. Country of birth did not affect the respondents’ answer to this question.
Analysis

Overall, the survey respondents did seem to understand and be able to identify paid advertisements included in Google’s search result page. Their understanding and identification of paid advertisements are better than their understanding of organic search results and ability to identify results from Google’s affiliated services. However, of concern is the fact that almost 70% of the total number of respondents were unaware of the provenance of the Google Shopping result (Section G).

These findings echo Franklyn and Hyman’s findings in their two surveys mentioned above (2013a, 2013b), that consumers were unclear about the difference between paid and unpaid results, and results from Google’s vertical search services. This is also consistent with research in consumer psychology which finds that access to information on the Internet does not necessarily empower consumers with enhanced decision-making capability, confirming just how little information it takes to confuse consumers (Henry 2005).

Specifically, as regards the survey responses relating to Google Shopping’s Rolex results, these may be explained by the fact that users may be less familiar with these results as Google Shopping is a more recent addition to the Google search result page. A beta version of Google Shopping was introduced in Australia in 2011 (Momtaz 2011) followed by the full version’s debut in 2013 (Samat 2013). The relatively recent introduction of Google Shopping may therefore account for the high incidence of confusion shown by respondents in relation to its operation.

When looking more closely at the survey responses, certain differences in response emerge along demographic lines. Demographic factors which do not appear to be relevant to respondents’ understanding and ability to identify particular kinds of search results are respondents’ sex. Yet, age and education levels influence a respondents’ understanding: with the younger age cohorts typically exhibiting a greater understanding of Google’s search results than older cohorts and respondents with higher levels of education (especially tertiary qualifications) typically exhibiting a greater understanding of the search results than those with lower levels of education.

The different responses by age point to a deeper age-based digital divide in Australia than that identified by Ewing et al. (2014), as discussed above. Not only are older Australians less likely to use the Internet than their younger counterparts, but this survey shows that those older Australians that do use the Internet exhibit a diminished understanding of how Google’s search engine operates and the different kinds of results it produces.
This age-related trend can also be seen in Ofcom’s surveying of British adults, which also identified older people (specifically those in the 65+ age bracket) as exhibiting less ability to correctly identify paid-for links. Only Australians above 18 years old were surveyed here, so it is not possible to make a comparison with the Ofcom research on British children, which found that only a minority of British children aged between 8 and 15 correctly identified Sponsored Links. Replicating the Ofcom research in Australia may give an even more nuanced view of the relationship between age and correct understanding of the search result page, and so is an area for future inquiry.

Furthermore, the survey results do not bear out Justice Nicholas’s statements in the Google v ACCC case about Australian Internet users. These results show that Australian consumers who do use Google’s search engine do not understand some of its basic features, including the existence of Google’s vertical services and do not understand the difference between organic results and paid-for advertisements.

It is unclear what legal consequences these survey results may engender. The survey itself is likely to be insufficient to establish Google’s liability for misleading and deceptive conduct in Australia despite the measure of consumer confusion that it reveals. However, it does bring up the question of whether similar survey evidence was presented in the Google v ACCC case, the outcome of that case would have been different. The results also signal that this is an area of which regulatory attention should be turned—again, in Australia’s case—in order to determine whether indeed Google is engaging in misleading and deceptive conduct in contravention of consumer law.

Moreover, aside from legal proceedings, there may be other policy decisions that Google could take in order to improve the clarity of its search results in the wake of this survey, to improve user experience and to stave off any future legal challenges on the basis of misleading and deceptive conduct in Australia or other jurisdictions. Clearer and better labelling of the different kinds of results on the search result page may be one option for Google.

The findings also suggest a need for better consumer education around how search engines work and the different kinds of results they produce, whether as regards Google or as regards search engines more generally. Given the lesser understanding exhibited by older and less educated cohorts, there may be a need for the specific targeting of such education initiatives at these particular groups. Gaining a better understanding of Google search, as well as how other online service present information becomes all the more topical—and goes beyond the purely commercial—given current concerns over online “fake news” and the role of intermediaries including Google in disseminating it—and what possible legal responses may be (Drexl 2017). Due to the dual socio-political and economic roles that online services such as Google perform (Daly 2016), increasing the media literacy of consumers may have spill-over benefits in increasing their media literacy as citizens.

**Conclusion**

This article presents the findings of the first and—so far—only survey of Australian consumers and their interactions with and understanding of the operation of the Google search engine. It shows that consumers have a lack of understanding about the operation and origin of the different elements of the Google search engine. In particular, the findings show particular
confusion in relation to the operation and origin of Google’s related vertical services. Such confusion seems to be more pronounced among older users and those without higher education qualifications.

These findings are important for several reasons. Firstly, the findings identify and point to a gap in consumer knowledge about Google search that should be addressed, presenting a long overdue opportunity for consumer education in this area. Secondly, this research is significant as it suggests that the views expressed in the recent Australian High Court decision in *Google Inc. v ACCC* by the judge at first instance, Justice Nicholas, were not accurate and that the average Australian Internet user does not have a basic understanding about the operation and function of the Google search engine.

This opens the opportunity for further legal scrutiny of Google’s conduct in Australia, notwithstanding the *Google v ACCC* decision. Indeed, as discussed in the first part of the article, there is scope for consumer law to take a more active role than has been the case as regards the online ecosystem, and specifically as regards search engines including Google. Compared to the problematic uses of antitrust/competition and trade mark law so far, if indeed consumer confusion is found vis-à-vis the Google search result page, then prohibitions against misleading and deceptive conduct in Australia, and its equivalents in other jurisdictions, may be the most appropriate and doctrinally sound legal regime to address adverse effects on consumers caused by how search results are laid out. This will not address ongoing concerns about the user data that Google collects when its services are used, but consumer law may also have a greater role to play here than it has done, working along with privacy and data protection law (EDPS 2014; EDPS 2016).

In any event, this article and the survey results highlight the need for further investigation and further public policy discussions around Google and the operation of its search engine. Further thought must also be given to the protection of consumer interests in using Google search, including possible regulatory, legal and policy measures, based on additional and more thorough consumer research.

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References

Alboukrek, K. (2003). Adapting to a new world of E-commerce: The need for uniform consumer protection in the international electronic marketplace. *George Washington International Law Review, 35*, 425–460.

Andrews, L. (2016). We need European regulation of Facebook and Google. *openDemocracy*. Retrieved from https://www.opendemocracy.net/uk/leighton-andrews/we-need-european-regulation-of-facebook-and-google

Bechtold, S., & Tucker, C. (2014). Trademarks, triggers, and online search. *Journal of Empirical Legal Studies, 11*, 718–750.

Coorey, A. (2016). The ACCC, the internet and extraterritorial injunctions. *Australian Journal of Competition and Consumer Law, 24*, 214–221.

Daly, A. (2014). Dominating search: Google before the law. In R. König & M. Rasch (Eds.), *Society of the Query Reader: Reflections on web search* (pp. 86–104). Amsterdam: Institute of Network Cultures.

Daly, A. (2016). *Private power, online information flows and EU law: Mind the gap*. Oxford: Hart.

Digital Summit. (2015) *Google Maintain their Stranglehold over the Australian Search Engine Market in 2014*. January 9. Retrieved from http://www.digitalsummit2013.com.au/google-maintain-their-stranglehold-over-the-australian-search-engine-market-in-2014/.
Dinner, I. M., Van Heerde, H. J., & Neslin, S. A. (2014). Driving online and offline sales: The Cross-Channel effects of traditional, online display, and paid search advertising. *Journal of Marketing Research, 51*(5), 527–545.

Drexl, J. (2017). Economic efficiency versus democracy: On the potential role of competition policy in regulating digital Markets in Times of post-truth politics. In D. Gerard & I. Lianos (Eds.), *Competition Policy: Between Equity and Efficiency (forthcoming).* Cambridge: Cambridge University Press.

Elkin-Koren, N., & Salzberger, E. (2004). *Law and economics of cyberspace: The effects of cyberspace on the economic analysis of law.* Cheltenham: Edward Elgar.

eMarketer. (2016). Digital ad spending to surpass TV next year.

European Data Protection Supervisor (EDPS). (2014). Privacy and competitiveness in the age of big data: The interplay between data protection, competition law and consumer protection in the Digital Economy. Preliminary Opinion of the European Data Protection Supervisor. March 2014. Brussels. Retrieved from https://secure.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions2014/14-03-26_competition_law_big_data_EN.pdf

European Data Protection Supervisor (EDPS). (2016). EDPS Opinion on coherent enforcement of fundamental rights in the age of big data. Opinion 8/2016. Brussels. Retrieved from https://secure.edps.europa.eu/EDPSWEB/webdav/site/mySite/shared/Documents/Consultation/Opinions2016/16-09-23_BigData_opinion_EN.pdf

Evans, D. (2009). The online advertising Industry: Economics, evolution, and privacy. *Journal of Economic Perspectives, 23*(3), 37–60.

Ewing, S., van der Nagel, E., & Thomas, J. (2014). *CCi digital futures 2014 The Internet in Australia.* Policy Report. Melbourne: ARC Centre of Excellence for Creative Industries and Innovation Swinburne University of Technology. Retrieved from http://researchbank.swinburne.edu.au/vital/access/services/Download/swin:418447/SOURCE1

Federal Trade Commission. (2012). *Google will pay $22.5 million to settle FTC charges it misrepresented privacy assurances to users of Apple's Safari Internet Browser.* Washington DC. Retrieved from https://www.ftc.gov/news-events/press-releases/2012/08/google-will-pay-225-million-settle-ftc-charges-it misrepresented

Federal Trade Commission. (2013a). FTC consumer protection staff updates agency's guidance to search engine industry on the need to distinguish between advertisements and search results. Washington DC. Retrieved from https://www.ftc.gov/news-events/press-releases/2013/06/ftc-consumer-protection-staff-updates-agencies-guidance-search

Federal Trade Commission. (2013b). *Statement of the Federal Trade Commission regarding Google's search practices In the matter of Google inc.* FTC File Number 111–0163. Washington, DC. Retrieved from https://www.ftc.gov/system/files/documents/public_statements/295971/130103googlesearchstintofcomm.pdf

Fisher, D. (2015). Google Books survives copyright challenge as fair use. *Forbes.* Retrieved from http://www.forbes.com/sites/danielfisher/2015/10/16/google-books-survives-copyright-challenge-as-fair-use/

Floridi, L. (2016). Fake news and a 400-year-old problem: We need to resolve the ‘post-truth’ crisis. The *Guardian.* Retrieved from https://www.theguardian.com/technology/2016/nov/29/fake-news-echo-chamber-ethics-infosphere-internet-digital

Franklyn, D. J., & Hyman, D. A. (2013a). Trademarks as search engine keywords: Much ado about something? *Harvard Journal of Law & Technology, 26*(2), 481–543.

Franklyn, D. J., & Hyman, D. A. (2013b). Review of the likely effects of Google’s proposed commitments dated October 21, 2013 (“Second Commitments”). Report. Brussels: Fair Search. http://www.fairsearch.org/wp-content/uploads/2013/12/FairSearch-Hyman_Franklyn-Study.pdf

Helberger, N., Loos, M. B. M., Mak, C., & Pressers, L. (2013). Digital content contracts for consumers. *Journal of Consumer Policy, 36*(1), 37–57.

Henry, P. (2005). Empowering consumers to make better decisions, or strengthening marketers’ potential to persuade. In P. C. Haugtvedt, K. A. Machleit, & R. Yalch (Eds.), *Online consumer psychology: Understanding and influencing consumer behavior in the virtual world* (pp. 323–336). Hove: Psychology Press.

Huang, V., Weatherall, K., & Webster, E. (2012). The use of survey evidence in Australian trade mark and passing off cases. In A. T. Kenyon, M. Richardson, & W. L. Ng-Loy (Eds.), *The law of reputation and Brands in the Asia Pacific* (pp. 181–202). Cambridge: Cambridge University Press.

Ibanez Colomo, P. (2014). Exclusionary discrimination under article 102 TFEU. *Common Market Law Review, 51*(1), 141–163.

Incardona, R., & Poncibo, C. (2007). The average consumer, the unfair commercial practices directive and the cognitive revolution. *Journal of Consumer Policy, 30*, 21–38.

Interactive Advertising Bureau. (2016). *IAB Internet Advertising Revenue Report.* Retrieved from https://www.iab.com/news/q3-2016-internet-ad-revenues-hit-17-6-billion-climbing-20-year-year-according-iab/

Interflora Inc v Marks and Spencer Plc. (2013). *EWHC,* 1291.

Internet World Stats. (2017). Internet Usage Statistics.
Introna, L. D., & Nissenbaum, H. (2000). Shaping the web: Why the politics of search engines matter. *Information Society, 16*(3), 169–185.

Joined Cases C-236/08 – C-238/08 Google France SARL, Google Inc v Louis Vuitton Malletier SA, Google France SARL v Vaticum SA, Luteiciel SARL, Google France SARL v Centre national de recherche en relations humaines (CNRRH) SARL, Pierre-Alexis Thonet, Bruno Raboin, Tiger SARL [2010] ECR I-02417. Jyrkkö, L. (2011). But I still haven’t found what I’m looking for – The ECJ and the use of competitor’s trademark in search engine keyword advertising. *Helsinki Law Review, 1*.

Lindsay, D. (2014). The ‘right to be forgotten’ by search engines under data privacy law: A legal analysis of the Costeja ruling. *Journal of Media Law, 6*, 159–179.

Loos, M., & Luzak, J. (2016). Wanted, a bigger stick: On unfair terms in consumer contracts with online service providers. *Journal of Consumer Policy, 39*(1), 63–90.

Lynskey, O. (2015). Control over personal data in a digital age: *Google Spain v AEPD and Mario Costeja Gonzalez*. *Modern Law Review, 78*(3), 522–534.

Marsden, C. (2013). Network neutrality: A research guide. In I. Brown (Ed.), *Research handbook on governance of the internet* (pp. 419–444). Cheltenham: Edward Elgar.

McWilliam’s Wines Pty Ltd v McDonald’s System of Australia Pty Ltd (1980) 33 ALR 394.

Mik, E. (2016). The erosion of autonomy in online consumer transactions. *Law: Innovation and Technology, 8*(1), 1–38.

Monttaz, M. (2011). Google shopping released in Australia. Margin Media. Retrieved from [http://blog.marginmedia.com.au/Our-Blog/bid/55791/Google-Shopping-released-in-Australia](http://blog.marginmedia.com.au/Our-Blog/bid/55791/Google-Shopping-released-in-Australia).

Ofcom. (2015). *Children and parents: Media use and attitudes report*. London: Ofcom. Retrieved from [http://stakeholders.ofcom.org.uk/market-data-research/other/research-publications/childrens/children-parents-nov-15/](http://stakeholders.ofcom.org.uk/market-data-research/other/research-publications/childrens/children-parents-nov-15/).

Ofcom. (2016). *Adults’ media use and attitudes*. London: Ofcom. Retrieved from [http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/adults-literacy/2016/2016-Adults-media-use-and-attitudes.pdf](http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/adults-literacy/2016/2016-Adults-media-use-and-attitudes.pdf).

Pasquale, F. (2006). *Rankings, Reductionism, and Responsibility*. Seton hall public law research paper no. 883827. South Orange.

Ramcharran, H. (2013). E-commerce growth and the changing structure of the retail sales Industry. *International Journal of E-Business Research, 9*(2), 46–60.

Ranchordas, S. (2015). Does sharing mean caring? Regulating innovation in the sharing economy. *Minnesota Journal of Law, Science & Technology, 16*(1), 413–475.

Richardson, M. (2012). Before the high court: Why policy matters: *Google Inc v Australian Competition and Consumer Commission*. *Sydney Law Review, 34*, 587–598.

Rosetta Stone Ltd v Google Inc, 676 F 3d 144 (4th Cir, 2012).

Rothchild, J. (1999). Protecting the digital consumer: The limits of cyberspace utopianism. *Indiana Law Journal, 74*, 3, 895–998.

Samat, S. (2013). “Introducing shopping campaigns: A better way to promote your products on Google.” *Google Commerce Blog*. Retrieved from [http://googlecommerce.blogspot.com.au/2013/10/introducing-shopping-campaigns-better.html](http://googlecommerce.blogspot.com.au/2013/10/introducing-shopping-campaigns-better.html).

Scardamaglia, A. (2013). Misleading and deceptive conduct and the internet: Lessons and loopholes in *Google Inc v Australian Competition and Consumer Commission*. *European Intellectual Property Review, 35*, 707–713.

Scardamaglia, A. (2014). Keywords, Trademarks and search engine liability. In R. König and M. Rasch (Eds.), *Society of the query reader: Reflections on web search*. Amsterdam: Institute of Network Cultures.

Solove, D., & Hartzog, W. (2014). The FTC and the new common law of privacy. *Columbia Law Review, 114*, 583–676.

Sterling, G. (2016). Search engine ads generated 50 percent of digital revenue in first half of 2016. *Search Engine Land*. Retrieved from [http://searchengineland.com/search-ads-1h-generated-16-3-billion-50-percent-total-digital-revenue-262217](http://searchengineland.com/search-ads-1h-generated-16-3-billion-50-percent-total-digital-revenue-262217).

Swire, P. (2009). No cop on the beat: Underenforcement in E-commerce and cybercrime. *Journal on Telecommunications and High-Technology Law, 7*, 107–126.

Van Allen, F. (2014). Google, others ignoring FTC warnings on deceptive search ads. *Techlicious*. Retrieved from [http://www.techlicious.com/blog/ben-edelman-google-deceptive-search-ads/](http://www.techlicious.com/blog/ben-edelman-google-deceptive-search-ads/).

Vaughan, L., & Thelwall, M. (2004). Search engine coverage bias: Evidence and possible causes. *Information Processing and Management, 40*(4), 693–707.

Zuboff, S. (2015). Big other: Surveillance capitalism and the prospects of an information civilization. *Journal of Information Technology, 30*, 75–89.