

Is Online Personalisation Important to Millennials?

A UK Study in the Context of Personalised Search Engines

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Abstract

Online personalisation has recently become a trend across the Internet. By using consumer data and advances in technology, brands are able to provide individual users with different content across the same platform through personalisation. Despite benefits for both marketers and consumers being evident, there are growing concerns regarding the provision of personal data for this purpose. This chapter aims to explore how Millennials perceive the cost and benefits of online personalisation in the context of search engines, as well as how they interact with personalised platforms. The results of an online survey of UK consumers suggest that privacy concerns and perceived benefits especially influence Millennials' willingness to interact with search engine personalisation in the disclosure of personal data. Privacy concerns affect willingness to disclose contact data in particular, which appears to be a cost that Millennials overall appear unwilling to forgo for greater personalisation online. However, Millennials are found to desire high levels of personalisation either side of this concern. Interestingly, a positive relationship is found between Internet expertise and the perceived value of search engine personalisation. No evidence is found to suggest control or consumer-brand relationship as significantly influential in Millennials' perceptions of search engine personalisation.

*Keywords:* Millennials, search engine personalisation, online personalisation, privacy, personal data, privacy concerns, online behaviour

## Is Online Personalisation Important to Millennials?

### A UK Study in the Context Of Personalised Search Engines

The World Wide Web is expanding as the Internet grows larger (Veloutsou & McAlonan, 2012) and with it, brand communications and consumer experiences online are becoming more sophisticated (IBM, 2014). A new generation of consumers emerged with new knowledge and new expectations of brands (Sweeney, 2006; Yadin, 2012). This change in demand triggered significant innovations in the online space and, in the case of online personalisation consumer data is a central feature (Acton, 2014).

Although literature shows considerable variations in the definition (Donnison, 2007), this new generation, known as Millennials, are those individuals born between 1980 and 2000 (Young & Hinesly, 2012). Millennials are technologically savvy, service orientated, and expectant of immediate access to information (Young & Hinesly, 2012). They are extensive Internet users (Kumar & Lim, 2008), whose strong online presence and peer influence (Lantos, 2014) makes them an attractive segment for brands to understand and connect with due to their substantial buying power (Smith, 2011). They have already been acknowledged as economically powerful in changing the landscape of the Internet (Nusair, Parsa, & Cobanoglu, 2010).

Millennials hold expectations for products and services to meet their changing demands through features that maximise personalisation and customisation (Yeap Ai Leen, Thurasamy, & Omar, 2012). As a result, brands are changing their way of communicating with these customers. As mass-marketing strategies become increasingly ineffective, one-to-one experience is now becoming the strategic focus. In particular, there is a rise in the implementation of online personalisation as brands attempt to provide more relevant, customised experiences to meet consumer expectation (IBM, 2014). In order to take advantage of rising opportunities, companies

need to fully understand the implications of personalisation and specifically its effect on such Millennials as a crucial segment of the target audience.

Online personalisation involves the delivery of a service that is tailored to an individual to better suit their needs (Montgomery & Smith, 2009). It is generated using personal information provided by the consumer directly or through tracking technologies (Montgomery & Smith, 2009; Tucker, 2011). When implemented effectively, it is said to improve efficiency and functionality of online platforms (Thorbjørnsen, Supphellen, Nysveen, & Pedersen, 2002), whilst producing more relevant content (Nysveen & Pedersen, 2004). Due to increasing the value for the consumer as well as the producer (Montgomery & Smith, 2009), brands are presented with great opportunities in the use of online personalisation, and the creation of a strong, personalised consumer experience (Acton, 2014).

When cross-comparing the benefits of online personalisation and the desires for online experience, the literature suggests that consumers generally find personalised platforms beneficial and thus important to their online consumption (Geraci & Nagy, 2004; Lantos, 2014; Nusair et al., 2013; Smith, 2012; Sweeney, 2006; Thorbjørnsen et al., 2002; Yeap Ai Leen et al., 2012; ZenithOptimedia, 2015). At the same time, however, there are a number of perceived costs felt by many consumers interacting with personalised systems, mainly in relation to the exchange of personal data (Goldfarb & Tucker, 2012; Montgomery & Smith, 2009; Tucker, 2011; 2014; Turow & Hennessy, 2007; Walrave & Heirman, 2013; Yadin, 2012). It is unclear the extent to which these issues are found amongst the Millennial generation, with conclusions being limited due to literature spanning across mixed generations and varied marketing tools; for example, advertising (Smith, 2011; 2012), e-retail (Yeap Ai Leen et al., 2012) and social media (Labrecque, Esche, Mathwick, Novak, & Hofacker, 2013). It is therefore difficult to draw

collective conclusions, due to contextual discrepancies existing across the data sets. Moreover, the exchange of personal data plays a major role in the delivery of personalised experiences (Montgomery & Smith, 2009). It is therefore crucial for brands to clarify the degree to which Millennials are affected by concerns about this exchange. Findings from the existing literature highlight control, privacy and trust as areas of concern found to have an impact on consumer's opinions of online personalisation. In some cases, this can cause consumers to show unwillingness to disclose personal information (Turow & Hennessy, 2007) which can in turn lead to considerable challenges for brands offering an online personalised service. Without the precision that individual consumer data delivers, providing personalisation becomes more complex (Acton, 2014) and its effectiveness is compromised, reducing the value for both brands and consumers.

This chapter explores how Millennials value online personalisation and to what extent the issues amongst general consumers, highlighted within the reviewed literature, apply to Millennials as well. In using established literature and theory, including a combination of academic sources as well as practitioner ones, this descriptive research hopes to better link the perceptions around the costs and benefits of personalisation to the Millennial cohort. Given that Millennials most frequent use for the Internet is to carry out information search (Geraci & Nagy, 2004), a web-search platform is a suitable focus for research. Search engine platforms are information rich and already well invested in personalisation and the online movement towards individual experience (Hannak, Sapieżyński, Kakhki, Krishnamurthy, Lazer, Mislove, & Wilson, 2013; Montgomery & Smith, 2009). Millennials make up a large majority of the searches made on search engine platforms (Veloutsou & McAlonan, 2012). Search engines are also an example

of full immersion personalisation, which will help to generate stronger assumptions about Millennials and personalised experiences.

### **Literature Review**

To fully comprehend the extent to which online personalisation is important to Millennials, it is essential to review the extant body of knowledge into this area. By examining online personalisation, its importance to consumers (in particular the Millennial generation) as well as the issues that impact consumers' interaction with the tool, inferences can be made about how personalisation is perceived by Millennials. The goal of the literature review is to shed light into whether personalisation is perceived as beneficial or costly to consumers, and therefore how important it is to their overall online experience.

### **Online Trends and Personalisation**

Personalisation on the Internet is on the rise (Hannak et al., 2013). Part of a growing online trend towards greater individualised experiences (Dan, 2014), personalisation enables the delivery of customised content through the use of data capture technologies and web platforms. This change from a mass-marketing approach to marketing and service has emerged from a resistance to homogenization (Dan, 2014) as well as from the creation of enabling technologies that aid the collection of personal data and automated customisation (Goldfarb & Tucker, 2012; ZenithOptimedia, 2015). The Internet has cultivated the highest interest in personalisation, due to advancing its practice more than any other technology (Montgomery & Smith, 2009). The Internet provides an information rich and suitably interactive environment, perfect for personalised platforms. Online personalisation is one of the best examples of how brands can successfully implement individualised experiences in a highly profitable way. Montgomery and Smith (2009, pp.130) define personalisation as “the adaptation of products and services by the

producer for the consumer using information that has been inferred from the consumer's behaviour or transactions". Through the use of technology, either in the communication to, or the collection of consumer information, personalisation promises the delivery of more relevant products or services to consumers.

The overall objective of personalisation is to create increased value for the consumer, as well as profit for the producer (Montgomery & Smith, 2009). The notion of value as consumer's expectations for personalisation is fundamental in order to understand how different consumers perceive it (Miceli, Ricotta & Costabile, 2007). Thorbjørnsen et al. (2002) identify 'value' as greater efficiency and functionality. Montgomery and Smith (2009) support this by suggesting that online personalisation reduces the time and effort required from consumers to reach the information they desire. Nysveen and Pedersen (2004) also highlight improved relevancy as an area of increased value to the consumer. Therefore, online personalisation is often seen as beneficial to the parties involved and it is defined in this chapter in terms of improved efficiency, functionality and greater relevancy. Relevance is referred to as information or content that is better suited to the individual's needs, as opposed to the broader definition of contextual relevance. This 'value' – being improved efficiency, functionality and greater relevancy – is increasingly sought after in the ever expanding, information cluttered web environment (Smith, 2012). However, although viewed as clear benefits of online personalisation, these value drivers are said to vary in importance from person to person, which may affect how valuable online personalisation is to different consumers.

When implemented effectively, online personalisation has been proven to build consumer loyalty (Srinivasan, Anderson, & Ponnayolu, 2002), longer consumer-brand relationships (Nusair et al., 2013), increase content appeal to consumers (Anand & Shachar, 2009), as well as

drive customer retention and brand profits (IBM, 2014). As a result, to fully understand personalisation, it is important to include relationship quality, that is, the connection between the consumer and the brand as indicated by Miceli et al. (2007).

Another important dimension affecting consumer perception of personalisation is knowledge, defined as consumer's experience (Miceli et al., 2007). Thorbjørnsen et al. (2002) recognise consumers' usage experience as an indicator of variations in the effectiveness of personalisation. Personalised websites were found to be more effective in building brand relationships with Internet users of high experience compared to lower experience. This leads to two critical conclusions. Firstly, frequent Internet users are more likely to emphasise efficiency and ease of use as valuable compared to less frequent users. Secondly, personalised websites may demand a certain level of Internet proficiency and user experience in order for the value created to be appreciated, given that the features of personalisation are in many cases advanced.

These elements surrounding personalisation and its benefits become particularly important when looking at contemporary consumers, who unlike previous generations, no longer respond to mass marketing and instead favour a more personal, one-on-one experience (IBM, 2014). These differences are anticipated to affect the way consumers from separate age cohorts view the importance of relevancy online. The consumer cohort therefore most likely to experience maximum value from personalised services is the Millennial generation, due to their expectations for efficiency and convenience, and demands for more personal, relevant, experiences (Lantos, 2014; Sweeney, 2006). Lantos (2014) also states that engaging Millennials as they enter their prime earning and spending years should be of interest to all brands. With Millennials having now transitioned into young adulthood, it could be argued that they have already entered their prime consumer years, reinforcing the importance of examining the cohort.



The next section focuses on how relevant online personalisation is to Millennials and how to engage them through this medium.

### **Millennials and Online Personalisation**

Also described as the “Net Generation” (Nusair et al., 2013, pp. 13) and “Digital Natives” (Millham & Atkin, 2016), Millennials are known to be early adopters of new technologies and extensive users of the Internet (Kumar & Lim, 2008). Due to growing up in an Internet-driven world (Tapscott, 1988), Millennials adapt faster to computer and Internet services due to always having had them (Sweeney, 2006). Their impatience (Sweeney, 2006) is reflected in their consumption behaviour, since Millennials have expectations of immediate access to information (Young & Hinesly, 2012). With these consumers being incredibly time-sensitive, it is common for them to multi-task as a method of improving the efficiency of the time they dedicate to tasks (Sweeney, 2006). It can therefore be argued that Millennials appreciate technologies that aid time-efficiency. Geraci and Nagy (2004) support this by suggesting that Millennials seek efficient online search and improved ways to validate the credibility of what they find. The authors also state that due to the complexities of the web, Millennials find it important for web platforms to make it possible for them to find what they seek. This is particularly important in the quest for information, which is the predominant reason for Millennials being online (Geraci & Nagy, 2004). Millennials perform a high volume of the searches made on search engine platforms, choosing in many cases to research their issues through the Internet as opposed to family and friends (Veloutsou & McAlonan, 2012). Not surprisingly, this disclosure of information through web-search provides huge opportunities for search engines to capture highly detailed data.

Looking at the profile of Millennials, research suggests that their online consumption demands match that of the value created through personalisation, this being greater efficiency, functionality and relevancy (Lantos, 2014; Sweeney, 2006; Thorbjørnsen et al., 2002; ZenithOptimedia, 2015). Smith (2011) states that Millennials respond to personalised messaging, while Yeap Ai Leen et al. (2012) suggest that they are in fact expectant of personal experiences online. Yadin (2012) also indicates that Millennials are ideal candidates for the capturing of personal data, a crucial requirement of personalisation. Without obtaining personal data, web experiences cannot be personalised. Millennials are said to freely share many aspects of their lives, disclosing a great deal of information without paying attention to the potential implications. This is likely linked to the fact that Millennials are heavy users of online social networks, which according to Millham and Atkin (2016) often encourage the disclosure of an individual's personal private information. Coelho and Duarte (2016) highlight that it is typical of social network members to disclose their full names and include personal pictures on their profile. This indicates a strong suitability between online personalisation and the cohort. However, with control being an important factor to Millennials (Geraci & Nagy, 2004), there is potential for Millennials to show a reduced willingness to share information if they feel a lack of control over the process. With online personalisation being automated by the marketer on behalf of the consumer (Montgomery & Smith, 2009), often using advanced data gathering technologies such as click-streams and tracking methods (Tucker, 2011), Millennials may experience low control due to lack of input in the process. This may impact their willingness to interact with personalised services online. This has been seen in the case of online advertising, where it was found that individuals are less likely to interact with personalised advertisements if the data

collected for that purpose was done so covertly, not overtly (Aguirre, Mahr, Grewak, De Ruyter, & Wetzels, 2015).

In spite of these potential deterrent factors, emerging trends suggest that Millennials do desire personalisation (ZenithOptimedia, 2015). It can therefore be indicated that personalised experiences are likely to be valuable and important to Millennials, although to what extent is yet to be defined. To define the extent to which this value is important and obtainable, it is crucial to understand the issues that may arise in the consumer as part of its interaction with personalised services online. Further research into online personalisation highlights that there are a number of costs that can be incurred when interacting with a personalised platform. Montgomery and Smith (2009) recognise that, in some cases, high degrees of personalisation are not always beneficial, particularly when the explicit costs of the tool exceed the overall value it creates. Manfred, Arden & Verhoef (2017) support this idea, reinforcing the importance of perceived value in consumers' willingness to engage with personalised services. This balance between the perceived benefits and perceived costs of personalisation will be the critical determinant in establishing the importance of personalised experience amongst Millennials. These aspects will be detailed in the following sections.

### **Perceived Costs of Online Personalisation**

Throughout the literature, it is found that the main criticisms against online personalisation most frequently relate to the provision of personal data. Since capturing consumer data is crucial to the effectiveness of personalisation, it is important to examine the issues that surround this transaction. Although there are multiple issues subsequent to this, privacy concerns are recognised as one of the most significant and will therefore be the focus of

this chapter (Goldfarb & Tucker, 2012; Montgomery & Smith, 2009; Tucker, 2014; Turow & Hennessy, 2007; Walrave & Heirman, 2013).

### **Privacy Concerns**

Alhouti et al. (2016) states that although privacy is a dynamic construct that changes with time, it is still a key factor in consumers' decision making today. Online personalisation has particularly been criticised for invading the privacy of consumers. This has led to a trade-off between the information required to successfully implement personalisation and the potential violation of privacy that comes with gathering that same information (Montgomery & Smith, 2009). In instances where consumers feel their privacy is being compromised, they are less likely to provide data about themselves (Manfred et. al 2017; Walrave & Heirman, 2013), thus preventing the successful application of personalised systems.

Smith highlights that Millennials often express concerns of privacy intrusion (2011) and interference (2012) in the case of personalisation, causing negative perceptions. Research by Salonen and Karjaluoto (2016) reached similar conclusions, suggesting that breaches in privacy for the purposes of personalisation can in fact be harmful to business. Van Doorn and Hoekstra (2013) found that high personalisation in online advertisements led to increased feelings of intrusiveness, as well as harm to business performance. Factors such as trust, risk and awareness are each said to have an impact on how online privacy is considered, often associated with consumer-brand relationship and expertise. If consumers view a website as untrustworthy, perhaps due to low credibility or lack of relationship with the brand, they are more likely to perceive higher levels of uncertainty and thus experience greater concerns for privacy (Turow & Hennessy, 2007). Lack of trust has been repeatedly identified as one of the most challenging barriers for engaging consumers in transactions involving the submission of personal information

via the Internet (Montgomery & Smith, 2009; Turow & Hennessy, 2007; Wang & Emurian, 2004; Wang, Min & Han, 2016). Interestingly, despite assumptions that greater transparency in data collection may help to improve trust perceptions amongst consumers (Morey, Forbath, & Schoop, 2015), research from Marreiros et al. (2017) identified the resulting negatives of making privacy practices more visible to users; the findings indicating that users could become more reluctant to share personal data.

**The Influence of Consumer Internet Expertise.** According to some studies in the area, consumers' willingness to provide data and therefore interact with personalised systems is determined by Internet expertise. Most commonly, Internet expertise is determined by the overall proficiency of the consumer online, indicated by usage and overall web knowledge (Miceli et al., 2007; Thorbjørnsen et al., 2002; Turow & Hennessy, 2007). Turow and Hennessy (2007) suggest that consumers with higher Internet expertise may be more willing to disclose information online due to believing their knowledge will help them to avoid the misuse of personal data. On the other hand, they suggest that consumers with high Internet expertise but low trust may demonstrate greater scepticism towards data collection systems. This may cause reduced willingness to provide personal data. Goldfarb and Tucker (2012) support this idea by suggesting that as individuals become increasingly aware of the numerous uses of online data, they may become increasingly more private. Similarly, research from Ying Lee, Tan & Chua Siah (2017) identified that individuals who are more confident in their Internet skills demonstrate greater concern about online privacy. It is therefore very difficult to predict Millennials' willingness to provide personal data online, knowing that in many cases their Internet expertise is considerably higher.

**Willingness to Provide Personal Data.** To better understand Millennials' willingness to disclose personal information, Walrave and Heirman (2013) assessed teenagers (aged 12 to 18) on their willingness to disclose personal data for online marketing purposes. Their study considered type of data, privacy concerns, perceived benefits of data disclosure, and Internet usage as determinants in disclosure willingness. Their results showed that 69.2% of teenagers expressed concerns about online data collection, but nevertheless many respondents showed willingness to disclose personal data for marketing purposes. Participants were more willing to provide profile data—being age, gender, hobbies, favourite products, favourite shops—compared to contact data—being home address, home telephone number, mobile telephone number, E-mail address. Teenagers with higher privacy concerns were less willing to disclose both data types and vice versa. Consistent with Youn (2005), perceived benefits were found to be influential, showing that those consumers who perceived greater benefits of information disclosure were more willing to disclose both data types. Similar research by Alhouti et al. (2016) into the effects of privacy concerns on online purchase behaviour found that consumers' interest in materialistic purchases often override their privacy concerns. It is inferred that this is due to the material benefits of a purchase being perceived as more valuable than the individual's private data. When comparing research findings with reviewed literature, Walrave and Heirman (2013) found that teenagers disclose more data than adults. It was suggested that this was due to a lack of knowledge found in adolescents. This explanation contradicts other research that suggests that Millennials have greater Internet expertise than older generations (Yeap Ai Leen et al., 2012).

A more recent study (Murnane, 2016) could help to explain this contradiction by highlighting a key factor that may influence Millennials perceptions of privacy and data disclosure as they transition through their life stages. The study found that although Internet

expertise is particularly high amongst Millennials, their experience of the online environment, and subsequently online privacy, increases as they grow older. This is simply due to having spent more years as an Internet user. As a result, older Millennials were more likely to report having experienced security problems online (70%) when compared to younger Millennials (59%). It could therefore be suggested that teenagers and younger Millennials are particularly more likely to share personal data and have less concerns about privacy online than their elders, due to having less experience with the negative implications of doing so.

Further research from Li, Sarathy and Xu (2011) highlights another factor that could be used to explain the varied findings surrounding consumers' willingness to disclose personal data; mind-set. Li et al. (2011) found that in many cases a person's emotions are highly influential on their readiness to disclose personal information. Appearing in the conceptual framework developed Miceli et al. (2007) under the label of "orientation", consumer's mindset—that is, being goal-oriented or experiential—affects the perception of personalisation.

### **Gaps in the Literature**

The literature reviewed in the previous sections provides an overview of online personalisation, its importance to consumers across multiple generations, as well as the issues that prevent online personalisation from being effective. Some inferences can now be made about the extent to which personalisation is important to Millennials. For instance, that online personalisation provides considerable value to Millennials when implemented effectively, although factors such as lack of control, privacy concern and knowledge may affect their willingness to provide personal data in order for personalisation to be effective. However, due to research being gathered across multiple contexts (e.g. advertising, social networks, websites and e-retail) it is difficult to draw cohesive conclusions without considering contextual variation. For

instance, research into personalised advertising and targeted messaging highlights issues of privacy intrusion (Aguirre et al., 2015; Smith, 2011) and interference (Smith, 2012). These issues are much more likely to be experienced in the context of advertising due to pop-up and banner ads, as well as tracking techniques being far more visible and invasive. These factors may be less evident in less invasive contexts such as web platforms with less frequent messaging delivered direct to consumers (Chatterjee, 2008). Mixed assumptions regarding Millennials, in particular about their view towards privacy concerns, leave scope for a more focused investigation. In order to develop up-to-date research into online personalisation and Millennials, it is very appropriate to focus on search engines, as these platforms are becoming increasingly personalised (Hannak et al., 2013; Veloutsou & McAlonan, 2012) and Millennials primarily use the Internet to pursue information search, while making up a large majority of searches carried out via search engines (Geraci & Nagy, 2004; Veloutsou & McAlonan, 2012).

From the literature reviewed in the previous sections, it clearly emerges that the way in which the value of personalisation is perceived affects the way in which consumers behave with personalised platforms (Miceli et al., 2007; Thorbjørnsen et al., 2002). It is therefore essential to not only determine the perceived cost and benefits of personalisation amongst Millennials, but also understand how other key factors identified in the literature, such as consumer-brand relationships, may influence their overall perception of these costs and benefits. In other words, considering the gaps in current literature, the following research questions are put forward and explored in this chapter:

1. How beneficial do Millennials view search engine personalisation to be?
2. At what cost are Millennials willing to and/or unwilling to interact with search engine personalisation?



3. What role does the relationship of Millennials with a search engine brand play in the trade-off between the disclosure of personal data and the value of personalisation?

With regards to the first research question, some consumers across mixed generations feel they obtain value through using personalised platforms. Indicated in the reviewed literature, this value to younger consumers is said to be higher than other cohorts. Research from Walrave and Heirman (2013) found teenagers to be highly influenced by perceived benefits, showing that consumers who perceived greater benefits of information disclosure were more willing to disclose data. Therefore, it can be expected that this will be consistent amongst Millennials, who view personalisation as valuable and are more likely to provide personal data for personalisation purposes.

With regards to the second research question, Internet expertise of the user is found to affect online behaviour. There are, however, mixed findings about the type of impact (Goldfarb & Tucker, 2012; Nyveen & Pedersen, 2004; Turow & Hennessy, 2007). Thorbjørnsen et al. (2002) suggested that frequent users of the Internet are more likely to emphasise efficiency and ease of use as valuable compared to less frequent users. It was also indicated that those with high Internet proficiency were more likely to understand the process of personalisation, and were therefore more likely to appreciate the value. Turow and Hennessy (2007) support this conclusion. Consequently, it can be expected that these factors apply to Millennials in the context of search engine personalisation, resulting in Millennials with a greater expertise online viewing search engine personalisation as more valuable.

With regards to the third and final research question, it is important to consider the impact of consumer-brand relationships on Millennials and their perception of personalisation, as these have been found influence users perceptions of privacy. Turow and Hennessy (2007) suggest that

lack of relationship and thus lack of trust in the brand will be likely to cause higher levels of uncertainty and consequently, greater concerns for privacy. Montgomery and Smith (2009) and Wang and Emurian (2004) agree that a lack of trust (most likely to be found in circumstances where the consumer-brand relationship is weak) is a challenging barrier for engaging consumers in the disclosure of personal information via the Internet. Therefore, if the relationship with the brand is a determinant of perceived trust and privacy, Millennials who have stronger, more positive relationships with a search engine brand are expected to be less likely to be concerned about privacy.

By gathering data to explore these three research questions, it is hoped to gain a better understanding of how Millennials value search engine personalisation. By looking at the effects of factors such as expertise and consumer-brand relationships against privacy concerns and the willingness to provide data, the aim of this descriptive investigation is to recognise the key factors that directly impact interaction with search engine personalisation, as well as the effects on its perceived value for the Millennials.

### **Methodology**

The primary research conducted was primarily quantitative and undertaken using a positivist research philosophy, due to data being collected about an observable reality in order to derive objective and factual conclusions regarding phenomena (Saunders, Lewis, & Thornhill, 2012). As the research questions explored in this chapter deal with the issues of “What” and “How”, a descriptive research design (Saunders et al., 2012) was implemented to obtain an accurate representation of Millennials’ views of personalisation in the context of search engines.

An online anonymous self-completion questionnaire was designed for a target audience of Millennial consumers. The questionnaire was carried out online due to the Internet offering

greater opportunities to reach a larger sample and also being a suitable medium to the subject in question. 24 questions were developed based on previous studies and were adjusted to suit the subject context. Table 1 provides an overview of the structure of the questionnaire and of its sources (see Appendix 1 for the full text questionnaire). The conceptual framework developed by Miceli et al. (2007), alongside research from Walrave and Heirman (2013), served as a foundation to design the data collection instrument. Additional sources were used to construct the questionnaire (Labreque et al., 2013; Tucker, 2011; Turow & Hennessy, 2007; Veloutsou & McAlonan, 2012). The questionnaire consisted of three sections. The first section measured the perceived costs and benefits of search engine personalisation; the second, the willingness to disclose personal data for these purposes, and the final section, based on the dimensions outlined in the framework of Miceli et al. (2007), looked at the factors that may influence value perception and data disclosure willingness. The questionnaire also included socio-demographic information about participants.

To begin, an initial question was developed to establish whether the respondent views search engine personalisation as useful or not. The responses from this question will be compared against a number of questions regarding the disclosure of personal data. Additional questions regarding the value of search engine personalisation were constructed to support this analysis. These questions will also be compared against responses showing how consumers viewed their level of Internet expertise, in order to explore the second research question.

As the literature highlights consumer-brand relationship and trust as key issues affecting privacy perceptions, questions to determine the respondents' relationship with search engines were constructed. The comparison of how these factors impact responses to questions about privacy and information disclosure will shed light into the third research question.

INSERT TABLE 1 HERE

The questionnaire was designed using Qualtrics as online software. A pilot questionnaire was carried out to highlight any potential issues that could arise once the questionnaire was launched. Before launching and distributing the online questionnaire, ethical approval was obtained. The questionnaire was then distributed via the researchers own social network in July 2015. Respondents were required to provide consent and confirm that they were born between 1980 and 1997. Despite the definition of Millennials spanning consumers from aged 15 to 35 (born 2000-1980), consumers aged 15-17 were discounted in order to protect a more vulnerable target for which parental consent would have been required. No respondents aged 34 and 35 were obtained. The limitations of this are disputable, with Sweeney (2006) suggesting that in many cases demographers use 1982 as the start year of the Millennial generation.

A total of 142 respondents took part in the study. Out of these, 109 respondents fully completed the questionnaire and were therefore useable. 55 respondents were male and 54 respondents were female. The highest volume of respondents were from the age group 18-23, making up 57% of the overall sample (Table 2).

INSERT TABLE 2 HERE

## **Results**

### **Online Behaviour of Respondents**

100% of respondents were found to use the Internet on a daily basis, with 73% describing their ability to navigate the Internet as 'advanced', and 23% as 'expert'. No respondents described their Internet expertise as 'beginner', with the final 4% stating an 'intermediate' ability. This suggests a high level of Internet expertise within the sample. Daily usage of search engine platforms was found amongst 100% of respondents. All respondents were also present on social media.

## **Perceptions of Search Engine Personalisation**

As shown in Figure 1, the majority of respondents agreed that search engine personalisation is useful (80%), with minimal differences in response found regarding age and gender.

INSERT FIGURE 1 HERE

Looking at the effect of Internet expertise on agreement with search engine personalisation usefulness, it was found that agreement increased with the respondent's level of expertise. Only 50% of Intermediate users agreed that search engine personalisation was useful, compared to 80% amongst expert users. Intermediate users showed no strong opinions, unlike advanced and expert users. Overall, the highest percentage of total respondents was found to have advanced levels of expertise and agree that search engine personalisation is useful (55%). As shown in Figure 2, agreement, alongside strength of agreement, increases with expertise.

INSERT FIGURE 2 HERE

Overall, respondents were found to perceive more benefits than costs of search engine personalisation (50%) in a comparison of question 4 and 7 (see Appendix 1). However, with other respondents viewing the balance between perceived costs and benefits as equal (11%) or for there to be greater costs (39%), it can be suggested that Millennials still experience concerns about search engine personalisation. The most significant concern was lack of privacy, supporting the findings of the reviewed literature.

Conversely, when asked directly in question 24 (see Appendix 1) about whether search engine personalisation was more beneficial than costly, 73% of respondents showed agreement. Amongst these, 67% were advanced users and 30% were expert users, thus providing further evidence to the impact of expertise. In addition, out of the respondents who found

personalisation to be more beneficial, 65% also agreed that search engine personalisation was useful. Only 17% of respondents who viewed search engine personalisation to be more costly agreed that it was useful. As shown in Figure 3, strong agreement was only present amongst respondents who viewed greater benefits. Therefore, it can be suggested that Millennials who perceive more benefits than costs in search engine personalisation are more likely to find it useful.

There was no strong evidence suggesting concerns for control over search results. 41% stated greater control as a major benefit of search engine personalisation, and 57% stating lack of control as a major concern. Many respondents stated both, suggesting inconsistency of opinion.

INSERT FIGURE 3 HERE

### **Data Disclosure**

Out of the 80% of respondents who view search engine personalisation as useful, only 12% disagreed that disclosing personal data to search engines leads to more relevant, personalised results. For those respondents showing higher levels of agreement with the concept that search engine personalisation is useful, a greater willingness to provide different forms of personal data was seen overall. Therefore, it is suggested that those respondents who view personalisation as useful, also saw benefits in disclosing personal data for those purposes. Moreover, 72% of the 88 respondents who view search engine personalisation as useful also agreed that there were greater benefits than costs in search engine personalisation, and that disclosing personal data for these purposes leads to more relevant results. This suggests a greater willingness to provide personal data for these purposes. Despite an overall willingness to disclose personal data in order to benefit from the perceived value of search engine

personalisation, the data collected suggests that Millennials will show reduced willingness if the cost is to disclose contact data (Figure 4).

INSERT FIGURE 4 HERE

To further explore this trade-off, the exchange between consumer data and search engine personalisation value is examined. A subgroup of respondents was created due to only 58% (63 respondents) of the total sample providing valid responses. Within the subgroup, a proportionate mix of age, gender and expertise still exists. The question provides an indication of the level of personalisation respondents desire at the cost of what types of information. Respondents were asked to select the type of results they wish for when using a search engine, whilst considering the level of data they would need to, and be willing to disclose. Figure 5 indicates that the majority of respondents desired 'greatly improved results', implying that they were comfortable sharing six out of the nine information types.

INSERT FIGURE 5 HERE

Out of those who chose 'greatly improved results', the willingness to disclose data was highest amongst profile data, as opposed to contact data. Figure 6 shows that all respondents were not willing to disclose their home telephone number, with few willing to disclose their mobile telephone number and home address. Furthermore, only those who desired 'perfect results' showed a willingness to provide their home telephone number.

INSERT FIGURE 6 HERE

It is therefore highlighted that, in most cases, Millennials do wish for personalisation to be present on search engine platforms, but their concerns about data disclosure may affect this desire, particularly in the exchange of location based contact data. In fact, 65% of respondents stated that they have chosen not to use personalised features on a search engine because it

requested personal information in order to use the feature. Based on the overall findings, it can be inferred that this is due to the request of contact data.

### **Additional Influencers**

Other factors were found to influence personal data disclosure among respondents. 61% of respondents agreed that they would be more likely to provide personal data for search engine personalisation purposes if their peers had already done so. 67% agreed that their mood affects their willingness to co-operate with search engines that request the disclosure of personal information, whilst 13% strongly agreed.

The presence of a privacy policy seemed relatively unimportant to respondents. Only 3% of respondents regularly check to see if a search engine has a privacy policy before inputting personal data, or enabling personal data to be collected. 40% never check, and the majority of respondents (46%) only check on an occasional basis. This was surprising, considering 65% of respondents expressed a major concern for privacy when providing personal information for search engine personalisation purposes.

Results also show findings for the effect of consumer-brand relationship on privacy concerns. 98% of respondents stated their preferred search engine brand was Google. Of these respondents, 60% stated that they trust Google not to share information with other companies or advertisers when they say they won't (19% showing strong agreement), suggesting a perceived low risk of personal data disclosure on this platform. 72% of these respondents were also using 80-100% of the search engines services; Internet browsing, maps, email/contact, file creation/file sharing and multimedia (music & video), implying a strong relationship with the brand. This initially suggests that Millennials with stronger consumer-brand relationships are less likely to be concerned about privacy. On the other hand, in cases where the respondents stated that they



distrust Google not to share information with other companies or advertisers when they say they won't, consumer-brand relationships were seen as equally strong. 67% of those that showed disagreement also used 80-100% of Google's services. Moreover, overall satisfaction with Google as a search engine was very high.

### **Discussion**

Increasingly, brands are implementing personalisation into their online service offering in order to match the demands of modern consumers for individualised and more personal experiences on the Internet. To implement online personalisation effectively, brands require the submission of personal data from consumers. Effective online personalisation yields considerable benefits to both the consumer and the producer. However, concerns have been highlighted regarding the disclosure of personal data online, affecting consumers' interaction and perceptions of online personalisation. Despite these concerns being well established amongst consumers broadly, there is inconclusive evidence on their direct relevance to Millennials. Few studies have focused on personalisation within the context of search engines, a medium that is frequently used by Millennials (Veloutsou & McAlonan, 2012) and that has increasingly high levels of personalisation. This chapter attempted to address this gap by examining how Millennials perceive the benefits and costs of search engine personalisation, paying specific attention to the value proposition and the disclosure of personal information. Overall, this descriptive research shows support for what was inferred by the reviewed literature; Millennials perceive search engine personalisation to be beneficial but, like other consumers, are affected by concerns in the disclosure of personal information. The implications of these findings offer insight into how this trade-off between personal data disclosure and the value of search engine personalisation impacts how important Millennials perceive search engine personalisation to be.

These findings also provide some indications to marketing managers and researchers, to be discussed in the remainder of the chapter.

In terms of the relevance of search engine personalisation to the profile of Millennials, this study extends the assumptions of the literature review, showing that Millennials do find search engine personalisation to be beneficial. Millennials seem to view online personalisation as important to their daily online experience. In fact, results show that Millennials perceive greater benefits in search engine personalisation compared to costs. It is assumed that this is due to the characteristics of the cohort (outlined in section 2.2) matching that of the value of search engine personalisation. However, as highlighted by Salonen and Karjaluoto (2016), this is not always the case when it comes to personalisation in other mediums. Research into online advertising, in particular, suggests that consumers may perceive personalisation in the context of advertising to have less potential benefit to them than, for example, websites (Awad & Krishnan, 2006). Nevertheless, the findings show that firstly, Millennials perception of search engine personalisation usefulness is high. Correspondingly, they also view disclosing personal data for these purposes as leading to value. Supporting the findings of Walrave and Heirman (2013), Millennials that view greater benefits in search engine personalisation are found to show greater willingness to provide personal data. In addition, the perceived usefulness of search engine personalisation increases with Internet expertise. It can therefore be argued that Millennials with greater Internet expertise view search engine personalisation as more beneficial, leading to a greater willingness to disclose personal data for these purposes. These findings can be attributed to two factors: (1) Millennials with high expertise seek greater levels of efficiency and functionality online, meaning they are more appreciative of the benefits offered by search engine personalisation and/or (2) Millennials with high expertise believe that their knowledge helps

them to avoid the misuse of personal data, as identified by Turow and Hennessy (2007). For marketing managers, this means that by enhancing the perceived value of search engine personalisation, higher levels of interaction are more likely. In cases where interaction is low, taking steps to better educate consumers about the platform may also be advantageous.

Despite the positive influence of Internet expertise, findings indicate that Millennials show a much lower willingness to provide personal data in the form of contact data. This suggests that in some cases Millennials' desire for the benefits of personalisation may be surpassed by the cost of providing more private forms of data. Supportive findings show that although Millennials desire high levels of search engine personalisation, they are willing to sustain lower levels of personalisation in order to protect contact data. This could have two potential underlying reasons: (1) Millennials will choose to reduce the level of personalisation to protect contact data in the instance that they will still receive some form of personalised experience or (2) Millennials will choose to participate in personalisation only up until contact data is required. This could mean that they choose not to participate at all if contact data is requested in the first instance. The protection of contact data is presumed to be due to issues of privacy. This was not unexpected, with findings highlighting lack of privacy as the most significant concern in the interaction with search engine personalisation. It can be inferred that if the provision of contact data is disrupted by concerns of privacy, the reduction of these concerns will increase willingness to disclose the data type. This is reflected in the research conducted by Aguirre et al. (2015), who identified that the click through rate for personalised advertising was lower in cases where highly personal data was either too apparent in the advertising (i.e. age, gender, location), or collected in a way that was seen as covert. This was due to consumers

feeling a sense of vulnerability when they believed that their personal information had been collected without consent.

For marketing managers, the focus should not only be on enhancing the perceived value of search engine personalisation, but also on the perceived privacy of disclosing personal data. With Millennials said to freely share many aspects of their lives online, there is an opportunity for brands to capture less traditional forms of consumer data, to obtain the same types of information.

Contrary to the expectations, Millennials with strong consumer-brand relationships were neither more or less concerned about privacy. This would suggest that in the context of search engine personalisation, relationship quality has low significance. Findings also indicate a very low concern for policy. Overall, Millennials seem less influenced by legal factors, but more by social factors such as mood and peers. Therefore, the data collected does not provide a conclusive answer to the impact of relationship quality and trust.

This chapter suggests that, despite acknowledging that search engine personalisation involves a number of costs, the value of the benefits to the consumer appear to be more significant to Millennials. Privacy concerns affect this positive perception in the disclosure of contact data, which has been shown to be perceived as the most private form of data. In other words, the main conclusion of the primary research summarised in this chapter is that online personalisation is therefore important to Millennials to the extent of providing “non-contact” based information—such as home address, home telephone number and mobile number, but excluding e-mail information which overall was willingly provided—whereas information at any point thereafter privacy does become a concern.

### **Limitations and Future Research**

There are some limitations evident in this study that offer opportunities for future research. Firstly, with the findings being generated from a self-completion online questionnaire, responses are based on the respondents' perceptions of their own behaviour, which may or may not match their behaviour in reality. Despite answering questions regarding search engine personalisation, 18% of respondents were unaware that their preferred search engine could be personalised to better suit their needs. A potential area for future research could, therefore, be a more detailed examination of the online behaviours of Millennials when using personalised search engines in real-time, using an experimental design. Based on the definition of Millennials described by Young and Hinesly (2012), the research sample recruited through the researchers' social networks lacked both younger and older Millennials. Moreover, due to the distribution between age groups being uneven, comparing the data across groups may be difficult. It would also be unreasonable to generalise the findings from those respondents aged 30-35 to the all UK Millennials from this age range. Nonetheless, the moderate sample size provided a reasonably strong foundation for generalisations across the cohort. As seen in the findings of the research, homogeneity amongst all respondents is found to be relatively high, with no significant age and gender variance evident throughout the majority of findings. As a result, a replication of the study covering a much broader sample of Millennials in the UK may be beneficial in identifying behavioural comparisons within the whole generational cohort. At the same time, it could be helpful to compare the perception of Millennials across different countries to determine whether cross-cultural differences play a role.

Nevertheless, despite its limitations, this chapter is believed to provide an interesting description of the extent to which Millennials' perceptions of online personalisation are affected

by perceived concerns. A number of key findings were highlighted as important to the perceptions and thus behaviours of Millennials. As online personalisation continues to develop across Internet platforms, alongside associated technologies, it is hoped that the findings from the study will stimulate further research into this progressively important subject area.

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## Tables and Figures

## Tables

Table 1

*Outline of questionnaire structure*


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<u>Section</u>	<u>Construct</u>	<u>Sources</u>
1	<p><b>Perceived costs and benefits</b></p> <p>An exploration of the types of perceived costs and benefits (previously outlined in literature) which are found amongst Millennial consumers.</p>	<p>Influenced by Labreque et al. (2013), Tucker (2011), and Walrave &amp; Heirman (2013).</p> <p>Adapted from: Turow &amp; Hennessy (2007) Walrave &amp; Heirman (2013)</p>
2	<p><b>Willingness to disclose personal data</b></p> <p>To understand participants' willingness to disclose personal data, questions were developed to test the types of data participants were willing to provide for personalisation purposes.</p>	<p>Adapted from: Walrave &amp; Heirman (2013)</p>
3	<p><b>Value</b></p>	

*The consumer's expectations for both content and site-specific features (Gilmore & Pine, 1997)*

Influenced by the framework of Miceli, Ricotta, & Costabile (2007).

To a large extent, value is likely to be determined through questions that regard perceived costs and benefits. However, to strengthen assumptions on value, questions were also asked regarding the quality of various search engines. If a participant perceives a search engine to be higher quality, this will imply a greater likelihood of perceived value being greater.

Adapted from:

Walrave & Heirman (2013)

### **Knowledge**

*The consumer's expertise and familiarity with the Internet and web-based interaction tools (Alba & Hutchinson, 1987; Page & Uncles, 2004)*

Influenced by the framework of Miceli, Ricotta, & Costabile (2007).

To understand the level or knowledge each participant has, questions were developed to establish frequency of Internet usage and usage of Internet

Adapted from:

Turow & Hennessy (2007)

based platforms, as well as general online behaviour.

### **Orientation**

*The consumer's mind-set during the navigation experience (Dholakia & Bagozzi, 1999; Wolfinbarger & Gilly, 2001)*

Influenced by the framework of Miceli, Ricotta, & Costabile (2007).

The orientation of participants when using search engines is complex due to the likelihood of the orientation varying across multiple sessions. However, to get an indication of whether Millennials are impacted by orientation, a question about mind-set has been included. This will help to clarify whether willingness to disclose information or interact with personalised services is affected by this.

Adapted from:

Han, Sarathy, & Xu (2011)

### **Relationship**

*The strength of the consumer's relationship with the search engine (Sirdeshmukh, Singh, & Sabol, 2002)*

Influenced by the framework of Miceli, Ricotta, & Costabile (2007).

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In order to establish the effect of relationship, questions were developed to determine the loyalty and trust a person has with a platform. If a participant uses one search engine regularly, it would be inferred that there is a stronger relationship.

Adapted from:

Turow & Hennessy (2007),

Veloutsou & McAlonan (2012)

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Table 2

*The percentage of age groups within research sample*

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<u>Age</u>	<u>Percentage of sample</u>
18-23	57%
24-29	36%
30-35	7%

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Appendix 1- Questionnaire

Q0 Before completing this questionnaire, please confirm that you were born between 1980 and 1997.

- I confirm that I was born between 1980 and 1997.

Search engine personalisation involves the collection of personal data, or tracking of online behaviour in order to better tailor your search results.

*Click next to begin the questionnaire.*

Q1 Please state your agreement with the following statement.

"Search engine personalisation is useful to me"

- Strongly agree
- Agree
- Disagree
- Strongly Disagree

Q2 Please state your agreement with the following statement.

"Disclosing personal data to search engines leads to more relevant, personalised results"

- Strongly agree
- Agree
- Disagree
- Strongly Disagree

Q3 Please state the forms of information you would be willing to disclose to a search engine online in exchange for improved results.

	Definitely would disclose	Likely to disclose	Unlikely to disclose	Definitely would not disclose
Home address	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Home telephone number	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mobile telephone number	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E-mail address	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gender	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hobbies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Favourite products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Favourite shops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 Please read carefully.

You are in a position whereby the more information you provide, the better your search results are when using search engines.

Using the items of information and the boxes below, please select the items of information you would be willing to disclose and place them into your desired search results type. Choose only one type of results to place information into (one box).

For example, if you care less about the quality of your results, or you are only willing to disclose two types of information you would drag two items into the 'Generic results' box.

If however you would be willing to disclose more information for 'Perfect, specific results' you would chose 9 items and drag them in that box.

Generic results (2 out of 9 items required)	Moderately improved results (4 out of 9 items required)	Greatly improved, more specific results (6 out of 9 items required)	Perfect, specific results (8 out of 9 items required)
<p>_____ Home address</p> <p>_____ Home telephone number</p> <p>_____ Mobile telephone number</p> <p>_____ E-mail address</p> <p>_____ Age</p> <p>_____ Gender</p> <p>_____ Hobbies</p> <p>_____ Favourite products</p> <p>_____ Favourite shops</p>	<p>_____ Home address</p> <p>_____ Home telephone number</p> <p>_____ Mobile telephone number</p> <p>_____ E-mail address</p> <p>_____ Age</p> <p>_____ Gender</p> <p>_____ Hobbies</p> <p>_____ Favourite products</p> <p>_____ Favourite shops</p>	<p>_____ Home address</p> <p>_____ Home telephone number</p> <p>_____ Mobile telephone number</p> <p>_____ E-mail address</p> <p>_____ Age</p> <p>_____ Gender</p> <p>_____ Hobbies</p> <p>_____ Favourite products</p> <p>_____ Favourite shops</p>	<p>_____ Home address</p> <p>_____ Home telephone number</p> <p>_____ Mobile telephone number</p> <p>_____ E-mail address</p> <p>_____ Age</p> <p>_____ Gender</p> <p>_____ Hobbies</p> <p>_____ Favourite products</p> <p>_____ Favourite shops</p>

Q5 Please tick the boxes to indicate what you feel are benefits to using search engine personalisation.

	Major benefit	Slight benefit	Not a benefit
Results are more relevant to my search	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Greater control over search results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speeds up the process of finding the results you desire	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improved relationship with the search engine brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ranks search results effectively	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q6 If you feel there are other benefits to using search engine personalisation, please type them in the text box below.

Q7 Please tick the boxes to indicate what you feel are a concern to you when providing personal information for search engine personalisation purposes.

	No concern	Slight concern	Major concern
Lack of privacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of control over information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of knowledge about how search engine personalisation works	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A feeling of being watched	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Missing information from search results due to personalised filters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8 If you have any other concerns with search engine personalisation, please type them into the text box below.

Q9 Have you ever chosen not to register with a search engine because it asked you for personal information to get into the site?

- Yes
- No

Q10 Have you ever chosen not to use personalised features on a search engine because it asked for your personal information to use the feature?

- Yes
- No

Q11 Do you look to see if a search engine has a privacy policy before inputting personal data and or enabling personal data to be collected?

- Yes, regularly
- Yes
- Occasionally
- No

Q12 Please state your agreement with the following statement.

"I am more likely to provide personal data for search engine personalisation purposes if my peers have already done so"

- Strongly agree
- Agree
- Disagree
- Strongly Disagree

Q13 Please state your agreement with the following statement.

"My mood affects my willingness to co-operate with search engines that request the disclosure of personal information"

- Strongly agree
- Agree
- Disagree
- Strongly Disagree

Q14 How often do you use the Internet?

- Daily
- 2 or more times a week
- Once a Week
- Less than once a week to fortnightly
- Less than fortnightly to once a Month
- Less than once a Month

Q15 How would you describe your ability to navigate the Internet?

- Beginner
- Intermediate user
- Advanced user
- Expert user

Q16 How often do you use a search engine?

- Daily
- More than once per day
- More than once a week
- More than once a month
- Less than once a month
- Never

Q17 This question relates to social media usage.

Please tick the boxes that best describe your frequency of activity on the following social media platforms.

	More than once per day	Daily	More than once a week	More than once a month	Less than once a month	Never
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instagram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Linkedin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Google+	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tumblr	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pinterest	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q18 The following is a list of reasons why you might use search engines.

Please rank each statement (using the drag feature) to reflect your own reasons for using search engines. The most preferred reason should be given a rank of "1" and the least preferred reason should be given a rank of "6".

- \_\_\_\_\_ To access the information I'm looking for quickly
- \_\_\_\_\_ To discover new information and/or media
- \_\_\_\_\_ It's easier than typing in the web address
- \_\_\_\_\_ It helps me to structure my browsing
- \_\_\_\_\_ It provides me with a greater range of sources to look at
- \_\_\_\_\_ Other (please state)



Q19 The following outlines the performance of a variety of search engines.

Please tick the boxes that best reflect how you perceive the performance of the below search engines. If you do not use a search engine, please tick 'I do not use this search engine'.

	Google	Yahoo	Bing	Ask.com	Other (Please state in the next question)
This search engine provides accurate results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The results are up to date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Results are always returned promptly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The site set up can be personalised to my needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The search engine is dependable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The search engine is trustworthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The search engine entirely fulfils my needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The search engine brand has a good reputation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I do not use this search engine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Q24 Please state your agreement to the following statement.

"I feel there are more benefits to search engine personalisation than costs"

- Strongly agree
- Agree
- Disagree
- Strongly Disagree

Q25 Please state your age.

- 18-35

Q26 Please state you gender.

- Male
- Female

Q27 After reflecting on your experiences and opinions of search engine personalisation, is there anything else you would like to add? Please feel free to provide more detail about your thoughts of search engine personalisation.

Many thanks for taking part in the survey. Your contribution is greatly appreciated!