Understanding the provision and processing of information for information-intensive products as a basis for market segmentation

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Abstract

This thesis helps to address the gap in literature relating to the study of the provision of information to consumers, consumer information search behaviour and consumer information processing and choice behaviour relating to information-intensive products. Throughout the thesis, wine is taken as an example of an information-intensive product. Through a series of four published papers in peer reviewed journals, the thesis examines how firms can control and manipulate the provision of information to consumers and that by restricting the availability of information, the firm can make its target consumers want the product even more. Although secrecy has existed for centuries, as a marketing tool it is relatively new and little is understood about its power or purpose in marketing strategy. The thesis also analyses how consumers process information relating to information-intensive products using mental shortcuts, or heuristics, to substitute price for product quality at increasing rates of product consumption. Finally, the thesis provides a new way in which to segment the luxury wine market based on consumer knowledge together with the timing of consumption.

The thesis provides a number of interesting advancements in marketing and consumer behaviour research. The first advancement examines whether secret wine societies are actually that secret at all and finds that they are not; however this finding does not absolve the need for marketers to use secrecy as a marketing tool. The second advancement provides
insight into advertising, blogs and consumer innovativeness and finds a positive relationship between attitude toward advertising and consumer innovativeness. The third advancement finds evidence that consumers’ process information by using the price-quality heuristic, for both sighted and blind tasting experiments. Furthermore, the study finds that blind tasting (deliberate thinking) reinforces sighted tasting (automatic thinking) which contributes to judgement errors about product quality. The fourth advancement is to provide a new way to segment the luxury wine market based on consumer objective knowledge, frequency of consumption and timing of consumption.

**Keywords**

Information-intensive products, consumer information search, consumer information processing, marketing strategy, wine marketing.
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To Pietra.
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CHAPTER 1: OVERVIEW OF THE RESEARCH

1.1 Introduction

“We’re not in an information age anymore. We’re in the information management age.”

Chris Hardwick, (2012)

“Great wine by its nature is mysterious, unpredictable and perhaps ultimately unknowable. We understand a lot about it, and yet so much is unresolved.”


This thesis takes an emergent research approach to analyse how information is provided to consumers and how consumers then search for and process this information for choosing a product or a brand. This processing of information results in increased consumer objective knowledge; which together with the timing and experience of consumption, is used as a new way to segment consumers in a market for an ‘information-intensive’ product. An information-intensive product has been chosen for the subject of the thesis as there has been little prior research conducted on understanding consumer search and processing behaviour for these specific products or where the decision-making environment is complex (Jiang and Rosenbloom, 2014). Wine has been selected as the product that embodies
information-intensity as it has support in the literature for this characteristic (Bruwer and Thach 2013; Vigar-Ellis, Pitt and Berthon 2015).

The thesis is grounded across several marketing and consumer behaviour literature streams including: consumer information search behaviour, consumer information processing and choice behaviour, information as labelling, advertising and blog scepticism, market segmentation and wine marketing research. In an increasingly information driven world, known as the “information age”, the consumer decision making context to purchase a product can be complex, particularly when this product can be described as an information-intensive, or complex, product such as wine. This decision-making process can be made even more challenging if the product can be described as an ‘experience good’ (Nelson, 1970) that is also cloaked in secrecy or shrouded in mystery. How information is provided to consumers and how consumers search for this information, depending on their levels of knowledge, is also important. Information search is crucial to consumers as it can lead to better choice behaviour and can be considered to be the most important aspect of the consumer decision making process (Beatty and Smith, 1987; Schmidt and Spreng, 1996). Equally, consumer search is important for firms to understand as it can assist them in their strategic decision making processes. Firms that are able to understand consumer information search, are better placed to design effective marketing strategies and campaigns as “information search represents the primary stage at which marketing can provide information and influence consumer’s decisions” (Wilkie and Dickson 1985, p. 85).
The structure of the thesis is as follows. Section 1.2 provides a broad-based literature review containing the key themes that have been developed in this research area. From this literature review emerges the research problem and research questions used to address the research problem. Section 1.3 provides the research methodology and design, which outlines three independent studies. Section 1.4 details a summary of the research findings and section 1.5 provides an overview of the four published papers. Section 1.6 provides the theoretical contribution of the thesis. Managerial implications are described in section 1.7 and some suggestions for future research are made in section 1.8. Conclusions are summarised in section 1.9. Finally, the Appendix includes each of the four published papers.
1.2 Literature Review

Consumer information search behaviour

Consumer information search behaviour is well established in marketing and consumer behaviour literature (Beatty and Smith 1987; Newman 1977; Punj and Staelin 1983; Srinivasan and Ratchford 1991; Urbany, Dickson and Wilkie, 1989, Wilkie and Dickson, 1985). In fact, there has been interest in consumer pre-purchase information seeking since 1917 (Copeland 1917). Moutinho (1987, p. 18) defines information search as “an expressed need that consumers have in order to consult various sources of information prior to making a purchase decision”.

Much of the consumer information search behaviour literature has centred on the study of the acquisition of information prior to making a specific purchase decision, also known as pre-purchase information search (Claxton, Fry and Portis 1974; Furse, Punj and Stewart 1984; Newman 1977; Punj and Staelin 1983; Bettman 1979; Olshavsky 1985). Kelly (1986, p. 273) defines pre-purchase search as “information seeking and processing activities which one engages in to facilitate decision making regarding some goal objective in the marketplace.” Consumers undertake pre-purchase search as it enhances the quality of the purchase outcome resulting in greater benefits and satisfaction with the decision to purchase (Bettman 1979; Punj and Staelin 1983). There is evidence that the extent of pre-purchase search is partially determined by the consumers’ involvement with the consumption problem resulting from risk perceptions (Clark and Belk 1979;

An alternative view to pre-purchase information search is activity that is not consumption problem specific, but that has a more general or recreational nature where the intentions for information search may not result in a purchase. Hirschmann (1980) first introduced the notion that some consumers seek cognitive or informational stimulation while others seek sensory stimulation in the consumption experience. These types of consumers may be motivated, not by the end result to purchase and solve a consumption problem, but more by the very act of search or shopping itself (Bellenger and Korgoankar 1980). Punj and Staelin (1983) also noted that some consumers get pleasure from seeking information about products. A further study by Venkatraman and MacInnis (1985) observed a cognitive or hedonic aspect of search activity in a pre-purchase context.

Rather than searching for information for specific pre-purchase purposes, consumers may also search for information on an ongoing basis. Ongoing search involves ‘information banking’ which can enhance product expertise (objective knowledge), itself a reason for consumers to search. Expertise can make a consumer feel well informed, add to feelings of self-actualisation, and improve the quality of future product selections (Fleischmann 1981). Bloch, Sherrell and Ridgway (1986) found that recreational or hedonic motives for ongoing search are more significant than practical, informational searches. Levels of ongoing search can also be seen as a function of product involvement (Bloch 1981; Bloch and
Richins 1983; Tigert, Ring and King 1976) and that product information obtained through ongoing search is more likely to be disseminated to friends and family, as product expertise is also related to opinion leadership (Leonard-Barton 1985; Price and Feick 1984).

Consumer information search behaviour encompasses both internal and external search (DeSarbo and Choi, 1998). Internal search occurs when consumers use information already stored in memory, or objective knowledge; whereas external search involves anything else. Brucks (1985) argues that more knowledgeable consumers tend to engage in more information search as they have the knowledge structure to process new information and the confidence to engage in information search.

Much of the extant literature covers the sources of information used for external search, which can take several forms (Beatty and Smith, 1987). These include: personal selling, advertising (Katona and Mueller 1955, Bucklin 1965, Udell 1966, and Thorelli 1971), product package information, product brochures, newspaper articles, interpersonal sources and direct inspection (Olshavsky and Wymer, 1995). There is also evidence that information from a source that is perceived to be more trustworthy can lead to a greater persuasiveness of that information (Hovland and Weiss, 1951; Wilson and Sherrell, 1993). Furthermore, the intentions of the source providing the information can be a key factor in the perception of trustworthiness (Eagly, Wood and Chaiken, 1978). Other studies have investigated the types of external information consumers search for, such as brand or product attribute information (Russ 1971, Russo and Dosher 1975, Tversky 1969), the number of
brands (Braden 1973, Brandt and Day 1972) and positive versus negative information (Lussier and Olshavsky, 1979). Capon and Burke (1980) looked at the effect of individual, product class and task-related factors on information-acquisition strategies and found marked differences at socioeconomic levels.

In an attempt to fill the research gap pertaining to the relationship between knowledge and external consumer information search, Jiang and Rosenbloom (2014) found that objective and subjective knowledge tended to increase search while direct experience reduces search. They observed that consumers with higher objective knowledge searched for more information when pursuing credence goods, but searched less for search or experience products. However, consumers with higher subjective knowledge were more likely to search for experience goods than search goods. In addition, the study also reported that objective knowledge facilitates more information search for complex decisions while subjective knowledge fosters more external information search in a simple decision-making context, thus building on Brucks’ (1985) earlier findings.

The literature provides a link between information search activity and perceived risk of purchase (Bauer 1960; Hansen 1972; Cox 1967, Jacoby 1975; Bennett and Harrell 1975). Studies show that certain constructs indicative of uncertainty (low prior knowledge, unfamiliarity, product category inexperience) are related to search (Bennett and Mandall 1969; Bucklin 1966; Moore and Lehmann 1980; Reilly and Conover 1983). Other researchers have noted the complexity of these relationships and argued that there may be conditions under which uncertainty actually reduces search
behaviour (Alba and Hutchinson 1987; Bettman 1979; Bettman and Park 1980; Johnson and Russo 1984; Wilkie 1975). Urbany, Dickson and Wilkie (1989) found evidence of two general types of uncertainty: knowledge uncertainty (uncertainty regarding information about alternatives) and choice uncertainty (uncertainty about which alternatives to choose) and observed that choice uncertainty appeared to increase search behaviour whereas knowledge uncertainty reduced search behaviour.

There have been a number of studies in relation to information search for the purchase of services (Murray, 1981; Guseman 1981; Murray and Schlacter 1990). As services have an intangible, ephemeral and experimental component, there appears to be less opportunity to reduce uncertainty by direct observation or trial, suggesting a longer consumer search process. Research also suggests that consumers evaluate information about services in a more complex and distinctive way (Bateson 1977; Booms and Nyquist 1981; Davis, Guiltinan, and Jones 1979) and often demand increased information (Deshpande and Krishnan 1977).

Other research has found that consumers tend to engage in more extensive search when purchasing products that are more expensive (Schmidt and Spreng, 1996) or carry more risk (Beatty and Smith, 1987; Capon and Burke, 1980; Cunningham, 1967; Moore and Lehmann, 1980; Srinivasan, 1987). An inverted-U-shaped relationship between income and external search has been reported (Carlson and Gieseke, 1983; Morgan, 1988; Ratchford, 1988). Education levels have found to be positively associated with search activities (Andreasen and Ratchford, 1976; Claxton, Fry and Portis, 1974; Hempel,
1969; Newman and Staelin, 1972; Schaninger and Sciglimpaglia, 1981) as better-educated consumers have a more extensive knowledge structure and are more capable of identifying, locating and assimilating relevant information (Schmidt and Spreng, 1996). Research has found that as consumers’ age, their information search abilities decline (Cole and Balasubramanian, 1993; Lehmann and Moore, 1980) and that the older consumers have a tendency to rely on mass media in making purchase decisions (Mason and Bearden, 1978; Philips and Sternthal, 1977), while internet usage is lowest among older people (Bucy, 2000). Other studies have addressed the extent and duration of consumer information search activity (Pennington 1967; Hempel 1969; Newman and Staelin 1971) together with how much time consumers devote to each source when the goal is to purchase a particular product or service (Claxton, Fry and Portis, 1974; McColl-Kennedy and Fetter, 1999; Urbanny, Dickson and Kalapurakal, 1996).

A number of studies have related to consumer information search behaviour and the internet. Bakos (1991) and Underhill (1999) proposed that the use of the internet for consumer’s information search makes the decision making process more efficient. Bickart and Schindler (2001) found that consumers who gathered information from online discussions reported greater interest in the product topic than consumers who acquired information from marketing generated sources, such as advertising. Similarly, Peterson and Merino (2003) reported that the internet greatly affected the way consumers search for information and offered a guide to consumers searching for information. Piscopo (2015) studied blogging and found that consumers that interact with bloggers feel a stronger connection to the
information being shared, which increases trust in that information. Hellstrom, Hammer and Martin (2015) analysed what influences consumers to use blogs as an information source and why consumers use blogs over traditional media sources. However, Hall, Caruana and Vella (2016) observed that consumer innovators are more influenced by advertising than blogs for information search. Jiang and Rosenbloom (2014) undertook a meta-analysis of studies relating to consumer knowledge and external search in conventional marketing channels and found a strong relationship between knowledge and search in the pre-Internet era. The authors provided a benchmark to gain insight into new consumer information search processes in the more modern environment of online, mobile and social networking channels.

Subject specific studies relating to consumer information search behaviour have included tourism (Fodness and Murray 1997) and investments (Lee 2004) who found that subjective knowledge, amount of investment, risk tolerance, age, education and income influence the extent of information search and the use of specific information sources. Boonen, Laske-Aldershot and Schut (2016) examined the impact of price, service quality and information search on consumers’ propensity to switch health insurers and found that this depended on health plan price, quality, age, health, education and having a supplementary or group insurance.

Theoretical studies relating to the information search construct have included Snepenger, Meged, Snelling and Worrall’s (1990) strategic search model that uses a combination of information sources. Schul and
Crompton (1983) proposed a contingency model which defines information search in terms of individual effort. Schmidt and Spreng (1996) theorised a model incorporating twenty determinants of external information search behaviour together with four mediating variables of ability, motivation, costs and benefits. Moorthy, Ratchford and Talukdar (1997) proposed a framework to explain consumer information search behaviour which incorporated the role of consumers’ prior beliefs and brand perceptions in shaping their search strategies.

In terms of consumer information processing research, Jacoby, Chestnut, Weigl and Fisher (1976) identified factors such as depth of search, sequence of search, and information content which is affected by individual and task environment variables. Bettman and Kakkar (1977) examined the effect of information presentation on consumers’ information acquisition strategies and found that consumers’ acquisition patterns were strongly affected by information format. A number of studies have found a tendency for consumers to process information by attribute rather than brand (Russ 1971, Russo and Dosher 1975, Tversky 1969). Newell and Simon (1972) argue that the structure of the task being undertaken greatly influences the processes that will be used. Adaval and Wyer (1998) studied the role of narratives in consumer information processing and found more favourable evaluation when described in narrative than when features just listed. Finally, there have been a number of studies relating to information processing overload (Malhotra 1984; Jacoby, Speller and Kohn 1974; Jacoby, Speller and Berning 1974) and Wright (1975) observed that consumers may adapt
heuristics to help with processing large amounts of information, or to limit the intake of information.

Julien, Pecoskie and Reed (2011) provide a content analysis covering trends in information behaviour research and found that, although little had changed in methods between 1999 to 2008, interdisciplinarity had increased and more academic researchers in this area was also observed.

Turning to the subject matter of the thesis, wine is of particular interest to study in the context of information provision, consumer information search behaviour and consumer information processing and choice behaviour for a variety of reasons. Wine can be considered a heterogeneous product where thousands of wine varietals and brands (Famularo, Bruwer and Li, 2010) exist. Consumers therefore have a large number of choice alternatives (Velikova, Howell, and Dodd, 2015) and as such, face search and selection challenges made even more difficult as wine can be considered to be a complicated product (Capitello, Agnolli, Begalli, Deacon and Christofi, 2015; Johnson and Bruwer, 2007; Viot, 2012) with a large number of both intrinsic (Chocarro and Cortinas, 2013) and extrinsic (Viot, 2012) attributes which consumers can use to evaluate the product (Bruwer and Buller, 2012). Wine can also be considered to be an information-rich product (Vigar-Ellis et al, 2015a) or an ‘information-intensive’ product (Bruwer and Thach, 2013). An information-intensive product is an offering that can be described in many ways, and in many different dimensions. Whereas a commodity like salt contains very little information – it is typically a powdered form of sodium chloride - a bottle of wine carries a lot of information: its vintage, the cultivar or
blend thereof, its origin, the estate, the winemaker, the story behind it, and its price, which probably exhibits a range exceeding that of just about any other product offering.

Wine also has a certain twist. Although wine can be described as an information-intensive product, in reality, consumers generally do not know that much about wine. Indeed, wine can be considered to be a product that is shrouded in mystery (Asimov, 2015) and one in which secrecy can be well applied (Hall, Pitt and Wallstrom 2015). In short, most consumers have little confidence in their ability to tell what is in a bottle of wine (Veseth, 2012).

The consumption of wine does not just relate to the material or intrinsic features of the product. Consideration of the individual consuming the wine should also be taken into account. In terms of consumer product knowledge of wine, this will significantly affect their purchasing behaviour (Lockshin and Hall, 2003; Veale and Quester, 2007). In addition to subjective and objective consumer wine knowledge, consumers will have different levels of appreciation of the product. Some consumers will have high levels of aesthetic appreciation, such as wine experts who will focus more on the intrinsic features of the product. Consumers with lower levels of aesthetic appreciation, or novices, may focus more on the surface properties of the product, such as the price, label, brand, or other extrinsic cue features.
Regulating the flow and distribution of information

Simmel (1906) defined secrecy as the “regulation of the flow and distribution of information”, writing that if human interaction is “conditioned by the capacity to speak, it is (also) shaped by the capacity to be silent”. Simmel further defined a secret society as an interactional unit characterised in its total by the fact that reciprocal relations among its members are governed by the protective function of secrecy. He argued that while secrets are largely unnecessary in small groups, because members tend to be homogenous, they are needed in large groups because there is far greater heterogeneity among members. An important feature of secret societies is that they are held together because they need to keep a secret. This causes anxiety, because a secret society without a secret is not only not a secret society, it is not a society at all. Sharing a common secret allows for a strong “we” feeling in a group. Gross (2012) points out that Simmel connected the importance of secrets to the strategic use of ignorance and argued that to get by socially, people need clearly defined realms of unknowns or “non-knowledge” for themselves.

In terms of research relating to secret wine societies, Teague (2012) observed that there are a number of societies focussed on wine that are almost as secretive as secret societies like the Freemasons. However, whether these secret wine societies really are that secret is open to debate. Grogan (2007) notes that The Wine Society based in the UK is referred to as the “secret society of Stevenage”, although not that much is really secret about it.
In addition to research around secret societies and secret wine societies, there has also been research relating to brand communities. McAlexander, Schouten, and Koenig (2002) view these social groups as fabrics or relationships built around brands, including those between the customer and the brand, the customer and the firm, the customer and the product in use, and among fellow customers. They refer to well-known brand communities such as those surrounding Harley Davidson, Jeep and DeWalt power tools. Their research on brand communities echoed their previous work on bikers on the Harley Davidson Posse Ride, whom they described as having “consciousness of kind, shared rituals and traditions, and sense of moral responsibility” (Schouten and McAlexander, 1995, p. 39).

One of the reasons that consumers love secrecy is that they are attracted to the denial of the product availability, which resonates with Reactance Theory (Brehm, 1966; Brehm and Brehm, 1981). Hannah, Parent, Pitt, and Berthon, (2014, p.52) noted:

“The secret of using secrets in marketing seems to lie in the denial of an offering’s availability: When customers want something, and it isn’t immediately available, they may want it even more; when customers want to know something and the marketer tells them it is secret and they cannot know it, they may want it even more.”

This positioning of secrecy is also aligned with Cialdini’s (1993, p. 238) ‘Scarcity Principle’, which holds that “opportunities seem more valuable to us when their availability is limited.”

Secrecy has the effect of creating scarcity of information and denies its availability to the individual. According to
Reactance Theory (Brehm, 1966; Brehm and Brehm, 1981), when an individual’s freedom of action is threatened – such as being denied access or entry to a secret society - they do their best to avoid losing any further loss of freedom and attempt to restore whatever freedom has already been lost. The stronger the reactance or the more appealing membership of a secret society is perceived to be, the more likely individuals will be to try to reconstruct their endangered freedoms (Brehm and Brehm, 1981; Wright, Wadley, Danner, and Phillips, 1992). Thus, according to Cialdini’s (1993) Scarcity Principle, when something is denied or made scarce, consumers can want it more. From a marketing perspective this is true, especially if marketers can persuade consumers that those freedoms are critical. By regulating the flow of information, firms can make information scarce to the consumer leading to a reaction from the consumer to want the product more.

Persuasive information and sources of consumer information search behaviour

Advertising and blog scepticism

Calfee and Ford (1988) proposed that the starting point to understand the effects of advertising is to assume that consumers do not trust advertising claims unless they have specific reason to trust them. There is evidence that consumers are sceptical of advertising and marketing (Barksdale and Darden, 1972; Calfee and Ringold, 1994; Gaski and Etzel, 1976). Friestad and Wright (1994) found that advertising in particular merits consumer scepticism as it is a special type of marketing
information. Obermiller and Spengenberg (2000) found evidence that consumers were more sceptical of advertising than other sources of product information and indicated that distrust of advertising information may be related to a broader distrust of information controlled by marketing agents.

Darby and Karni (1973); Ford, Smith and Swasy (1988) and Nelson (1970) studied antecedents to advertising scepticism and found evidence that consumers are socially conditioned to be sceptical towards adverts. Similarly, Calfee and Ringold (1994) found that, over time, the majority of consumers do not believe adverts. MacInnis, Moorman and Jaworski (1991) observed that consumers adopt a disbelief coping response with advert claims by discounting the advertising message rather than expending the effort to process advertising information. Advertising scepticism can also be considered a marketplace held belief held by consumers (Moore-Shay and Lutz, 1988; Duncan, 1990). Obermiller and Spangenberg (1998) argued that advertising scepticism was a stable consumer characteristic for responses to advertising. For those consumers who are sceptical towards advertising, Obermiller, Spangenberg and McLachlan (2005) found that they tended to like adverts less, relied on them less, found them less informative, less influential and less believable. Obermiller and Spangenberg developed a multi-item scale to measure advertising scepticism (SKEP) and defined this construct as “the tendency toward disbelief in advertising claims” (Obermiller and Spangenberg, 1998, p. 160).

Previous research indicates a relationship between advertising scepticism and demographics (Shavitt,
Lowery and Haefner, 1998; Wang, Zhang, Choi and D’Eredita, 2002), although the results are mixed. Shavitt et al., (1998) found evidence that younger consumers held a more favourable attitude toward advertising relative to other age groups, including television adverts (D’Alessio, Laghi, Baiocco, 2009). Simpson and Licata (2007) observed that attitudes towards marketing efforts changes over an adult’s lifespan, where the negative change is mostly apparent in advertising. Similarly, Green (1999) and Grier and Brumbaugh (1999) found that older or more educated people responded less positively to adverts. Other research has indicated a positive relationship between age an Attitude toward Advertising (Derevensky, Sklar, Gupta and Messerlian, 2010; McKay-Nesbitt, Manchanda, Smith and Huhmann, 2011).

In terms of Attitude toward Advertising, Mackenzie and Lutz (1989, p.53) define this as “a learned predisposition to respond in a consistently favourable or unfavourable manner towards an advertisement in general”. Donthu and Gilliland (1996) reported a positive attitude toward advertising for infomercial shoppers, where an infomercial is a “paid form of advertisements that last from 30 minutes to up to 2 hours and is aired during inexpensive media blocks” (Donthu and Gililand, 1996, p.69).

In relation to gender and attitude toward advertising, Robinson (1988) and Solomon (1996) suggested that females undertake the majority of shopping tasks in households, where Meyers-Levy and Sternthal (1991) found that women give greater consideration to advertising cues than men.
Blogs, or web logs, can be defined as “websites owned and written by individuals who maintain regular commentaries and diaries that may include test, graphics and video links to other blogs, web pages, usually in reverse chronological order.” (Van Heerden, Salehi-Sangari, Pitt and Caruana, 2009, p.1). Blogs are considered to be an important component in marketing communications although they did not appear to make an impression until 2006 (Benning, Parent, Pitt and Chan, 2014).

Recent research relating to blog scepticism include Wang and Chien’s (2012) study of skepticism to blog product reviews and found that individuals were more sceptical about advertisements than blog product reviews. They also observed that the credibility of the persuasive message acted as a moderator between the influence of scepticism and the persuasive effect. Colucci and Cho (2014) studied lifestyle tips and information blogs to examine factors important to Generation Y and observed that trust is built on judgments along the dimensions of content, design and the perception of a blogger.

Building on the earlier advertising scepticism work of Obermiller and Spangenberg (1998; 2000) and Obermiller, Spangenberg and McLachlan (2005); Van Heerden et al., (2009) developed a scale to measure the degree of scepticism a blogger holds towards blogs of others, called the ‘Blogging Scepticism’ scale. This scale can be used to measure the extent that readers of blogs actually believe what they read and to what extent they are sceptical about blog content and have been adopted in this study.
Consumer innovativeness and exploratory purchasing behaviour

One of the earliest definitions of innovativeness is provided by Midgley and Dowling (1978, p.236) who define innovativeness as “the degree to which an individual is receptive to new ideas and makes innovative decisions independently of the communicated experience of others.” Hirschmann (1980) includes an “inherent novelty seeking” element to the definition, whereas Goldsmith defines innovativeness as a “willingness to try new things”. Rogers and Shoemaker (1971, p.27) define innovativeness as the “degree to which an individual is relatively earlier in adopting an innovation than other members of his system” which resonates with Tellis, Yin and Bell’s (2009, p.2) definition as “a predisposition to buy new products”.

In addition to innateness, consumer innovation can be thought of as a domain specific construct describing the predisposition to buy new products in a specific category (Goldsmith and Hofacker, 1991); or where consumers that are the first to adopt a new product in one field may be laggards in another (Gatignon and Robertson, 1985). This is in contrast to a general predisposition toward the market and across product categories (Tellis et al., 2009).

More recently, Truong (2013) investigated innovativeness across cultures and found that consumer innovativeness and attitude toward innovation varied across perceived novelty, perceived value and perceived risk. Kaushik and Rahman (2014) conducted a systematic literature review of 101 articles on consumer innovativeness to provide insights for the future exploration of consumer innovativeness within a basic
conceptual model. Goldsmith, Flynn and Korzenny (2015) studied brand engagement and innovativeness and observed a positive relationship which suggests that showing how a brand can express the self-concept of the innovator may also encourage its adoption. Finally, Couture, Arcand, Senecal and Ouellet (2015) investigated the impact of tourism-specific consumer innovativeness (domain-specific innovativeness) on their information search, purchasing, and communication behaviours on tourism websites and found that the behaviours of innovative consumers documented in traditional offline settings are also exhibited online.

Van Trijp, Hoyer and Inman (1996, p.9) define exploratory or variety seeking behaviour as, "the biased behavioural response by some decision making unit to a specific item relative to previous responses within the same behavioural category, due to the utility inherent in variation per se, independent of the instrumental or functional value of the alternatives or items". Van Trijp et al., (1996) further note that understanding variety-seeking behaviour in this way means that it is different from derived variety behaviour, which is activated simply by the instrumental or functional value of the alternatives (Givon, 1984; McAlister and Pessemier, 1982). Raju (1980) however makes a distinction between ‘risk-taking exploratory behaviour’ between unfamiliar products, versus ‘variety seeking behaviour’, where brand switching occurs between familiar alternative products. Baumgartner and Steenkamp (1996) and Steenkamp and Baumgartner (1992) found evidence that variety seeking individuals possess a high need for variety seeking. Bawa (1990) and Feinberg, Kahn, McAlister (1992) observed that exploratory purchasing
behaviour is important for marketers as it can have consequences for both market share and brand loyalty as consumers will seek to switch brands for the utility of variety. Exploratory purchasing behaviour has been applied to the study of wine marketing, including wine purchases (Mitchell and Greatorex, 1988), information search processes (Dodd, Pinkleton and Gustafson, 1996) and the influence of ambient scents (Orth and Bourrain, 2005). Vigar-Ellis (2016) observed that wine knowledge types are a significant predictor of variety seeking purchasing behaviour of wine.

**Consumer processing of information and choice behaviour**

The literature in agricultural economics relating to information effects largely centres around risk information aimed at reducing consumer uncertainty in purchase decisions (Verbeke, 2005), and can incorporate discussions around food safety, product labelling and information asymmetry. Grunert (2005b) considers food safety to be an integral part of quality and contributes to determining consumer purchase intentions and choice. As a form of direct communication to consumers, labels can help to reduce information asymmetry (Rabinowicz, 1999) and deliver food quality and safety messages, although there is evidence that consumers will not necessarily understand and use this information properly (Jacoby, Chestnut, and Silberman 1977). Label information can also be inaccessible or useless to consumers (Salaun and Flores, 2001; Hobbs, 2004). Verbeke (2005) found that consumers suffer from food safety information overload; however, the provision of information can succeed if it meets the information
needs of the target audience to correct the information asymmetry.

In addition to risk information and food labelling research; a body of literature developed in food quality, consumer behaviour and psychology research provides a wider consumer-centric approach which focuses on the motives, perceptions, attitudes and behaviour of consumers (Frewer, Fischer, Scholderer, and Verbeke, 2005). These streams of research consider pieces of information, or cues, that consumers use to elicit certain attributes about the product; including perceived product quality. This study builds on this particular consumer behaviour research stream.

One study that extends “information as a labelling” research into consumer behaviour research is provided by Kole, Altintzoglou, Schelvis-Smit, and Luten, (2009). The authors assessed the perceived sensory differences between farmed and wild cod and found evidence that food labelling information about product type, price, freshness and the advantages of fish farming influenced product evaluation. In an earlier study, Kole (2001) observed that consumer beliefs about food quality depended not just on the labelling information available, but are also influenced by a consumers acquired knowledge and experience. Consumers also differ in their evaluation of product quality and perception of quality (Ophuis and Van Trijp, 1995) as they make inferences about product quality by using cues. Consumers can also face difficulties in their evaluation of product quality, particularly for unbranded and highly perishable food (Juhl and Poulsen, 2000). Cue inferences will depend on a consumers’ self-confidence in cue utilisation (Cox, 1962), or confidence relating to
their ability to make inferences based on particular cues (Grunert, 2005a).

Although the price cue (Leavitt, 1954) is the most established cue as an indicator of quality; other studies have found that quality cues are associated with product experience (Bredahl, 2003; Rao and Monroe, 1988), product interest or knowledge (Sawyer, Worthing and Sendak, 1979; Zeithaml, 1988) and perceived decision difficulty (Lambert, 1972; Pechmann and Ratneshwar, 1992; Sawyer et al., 1979; Zeithaml, 1988). Verbeke, Vermeir and Brunsø (2007) found involvement with quality and self-confidence in quality assessment to be two components of quality evaluation. These components were further found to be associated with individual characteristics, such as socio-demographics, cognitive, motivational, behavioural and information processing variables. Jacoby, Olson, and Haddock (1971) examined multi-cues and considered the effect of price, composition differences (aroma and taste) and brand image cues on the perception of beer quality. They found that price served as an indicant of product quality when it was the only cue available, but not in a multi-cue setting. Brand cue, rather than price cue, was found to indicate a stronger influence on the perception of product quality.

Prior product knowledge, or product familiarity, can influence the extent to which consumers search for, recall and use information in judgements of product quality and in product choice (Bettman, Luce, and Payne 1998; Howard and Sheth, 1969). Rao and Monroe (1988) examined the pricing cue (extrinsic cue) with intrinsic cues such as physical and performance attributes to assess product quality. They found that the assessment
of these cues depended on prior product knowledge and observed a U-shape effect where consumers use of price as an indicator of product quality decreases and then increases with familiarity for products with a wide variation in quality. For products known not to have wide quality variations, the use of price in product quality assessments tended to decrease with familiarity. Boulding and Kirmani (1993) and Dodds, Monroe and Grewal (1991) also found evidence that brand name and price are often considered indicators of product quality. Dawar and Parker (1994) studied “marketing universals” for consumer electronics products and found that few differences existed in the use of quality signals across cultures and countries suggesting that differences are more likely to be driven by individual than country or cultural factors.

In terms of the psychology based literature, metacognitive theory suggests a dual structure of rationality operated by two interconnecting systems: the sight-based “System 1” and the blind-based “System 2” (Kahneman, 2012). System 1 is governed by automatic operations of perception, and “System 2 by deliberate operations of reasoning (Kahneman, 2003).

To negotiate common-place environments, System 1 is thought to generate surface level sight-based associations, proclivities and preferences, which, when sanctioned over time by the blind and more ponderous System 2, enmesh to become a guiding architecture of more deeply embedded principles, protocols and beliefs. System 1 operands are inferential, rapid and mechanistic; mobilised like drones with little or no conscious effort or finer levels of calibration or control (Kahneman, 2012). They are governed by habit and are
therefore difficult to modify or control (Kahneman, 2003). As such they are prone to systemic errors of judgement, and hence bias. These judgement errors can be attributed to undetected “System 1” failures of intuition, licensed, in turn, by rational “System 2” failures to detect and correct as required (Morewedge and Kahneman, 2010). A consumer’s judgement can be thought of as a weighted combination of items of information, and when required to evaluate the merit of a product, weightings would be ascribed to a combination of intrinsic and extrinsic cues at hand. Judgement errors or biases are likely to occur through an overweighing of some aspects of information and an underweighting of others (Morewedge and Kahneman, 2010).

When consumers have a greater knowledge about product classes they tend to make generalisations about the product as well as about the quality associated with that product class (Pecotich and Ward, 2010). This is especially so in purchase situations where consumers are faced with an assortment of products, each with their own unique set of quality connoting attributes. To the would-be consumer, this provides a cognitively daunting challenge of discernment: identifying and processing relevant purchase information, while disregarding the rest (Rao, 2005). In such information-rich environments, there is evidence that consumers activate certain heuristic short cuts that may lead to spending less time evaluating new information (Cunha and Shulman, 2011). One of the most common is the price-perceived quality heuristic, a construct well entrenched within the literature (Chao and Schor, 1988; Erikson and Johansson, 1985; Lichtenstein and Burton, 1989; Stafford and Enis, 1969; Zeithaml, 1988). Subsequent
studies have shown that an over-reliance on price may lead to an obscuration of the true merit of a product. For example, Tellis and Wernerfelt (1987) report mixed positive correlations between objective quality and price, and caution against an over-reliance on this relationship. Likewise, a 2006 study by Priilaid showed how the marginal correlation between blind and sighted quality ratings could be explained by the deleterious influence of the price cue.

More recently, in research reported, inter-alia, by Plassmann, O’Doherty, Shiv and Rangel (2008), similar quality judgement errors were identified in instances where extrinsic cues like price appear, unconsciously, to alter the experienced utility of particular hedonic products, usually increasing or in some cases diminishing a prior subjective account of the actual intrinsic quality of the product in question. This said, the marketing literature on cue-conditioning, while acknowledging the prevalence of the effect (Shiv, Carmon, and Ariely 2005; Rao, 2005; Montague, 2006; Almenberg and Dreber, 2011) appears silent on the issues of whether and how price cues may escalate or diminish experienced utility with increasing rates of consumption. Recent sight and blind-based studies have however, examined the extent to which price effects accrue with increasing levels of experience and expertise. Goldstein, Almenberg, Dreber, Emerson, Herschkowitsch and Katz (2008) examined the extent to which experts and non-experts preferred differently priced wines when sampled blind. They reported that while experts were typically price-neutral, non-experts tended to prefer cheaper wines. Wine drinkers “who are unaware of the price do not derive more enjoyment from more expensive wine”. In reality, unless they are experts,
they actually enjoy more expensive wines slightly less (Goldstein et al., 2008, p. 1). A sight-based wine-tasting study by Priilaid, Sevenoaks, Aitken and Chisholm (2013) found that the assessments of self-confessed wine experts correlated more strongly with price than those of non-experts.

**Market segmentation**

The study of consumer knowledge has a long history in advancing consumer research, marketing theory and practice (Flynn and Goldsmith, 1999). Previous studies have distinguished between two types of consumer knowledge - objective and subjective knowledge (Brucks, 1985; Bettman and Park, 1980; Mattila and Wirtz, 2001; Park and Lessig, 1981; Park, Mothersbaugh and Feick 1994). Objective knowledge relates to actual information about the product class, or knowledge that an individual truly holds and can demonstrate (Brucks, 1985). Whereas subjective, self-assessed, knowledge relates to an individual’s perception of how much they know about a product class (Monroe, 1976). As the focus of the thesis is on objective knowledge, the literature review will focus on this thread of research.

Veale and Quester (2007, p. 2109), define objective knowledge as “current, accurate information stored by individuals in their long-term memory”. Objective knowledge has also been related to expertise. Alba and Hutchinson (1987) argue that both cognitive structures and processes determine expertise. Similarly, Aurier and Ngobo (1999, p. 569) observe that “experts and novices differ in the amount, content and organization of their knowledge.”
Several studies have investigated the distinction between experts and novices, although findings have often conflicted. Some studies have found that experts and novices possess similar abilities (Chambers and Smith, 1993; Roberts and Vickers, 1994; Wolters and Allchurch, 1994); whereas others have shown that experts outperform novices in product discrimination (Cardello, Maller, Kapsallis, Segars, Sawyer and Murphy 1982; Clapperton and Piggott, 1979; Peron and Allen, 1988; Rabin, 1988; Chollet, Valentin and Abdi 2005). In studies relating to wine attributes, Solomon (1997) showed that experts sorted wines by grape variety, whereas novices sorted wines according to more basic properties such as sweetness and fruitiness. Hughson and Boakes (2002) also found evidence of grape variety providing an important framework for wine experts. Ballester, Patris, Symoneaux and Valentin (2008) observed clear conceptual differences between experts and novices for two varietals of wine and also suggested perceptual differences. In another study, Ballester, Hervé, Langlois, Peyron and Valentin (2009) found that odour representations of red and white wines existed independently of a visual activation and that these mental representations were stable through different levels of expertise. In relation to knowledge and wine, Beverland (2006) studied luxury wine product attributes and identified six attributes of authenticity based on the strategies of ultra-premium wineries. Bruwer and Buller (2012) found that Japanese wine consumers with high objective knowledge used more intrinsic cues such as taste, variety and price, rather than extrinsic cues, such as country of origin; in their wine purchase decision. They also found that the importance attached to these
intrinsic cues increased with higher levels of objective knowledge.

In terms of consumer decision-making, the process can be characterized by successive refinements in the number of brands evaluated (Roberts, 1989). As objective knowledge reflects what is actually stored in an individual’s long term memory (Brucks, 1985; Veale and Quester, 2007), it can allow consumers to encode information more efficiently about a new product when searching among alternatives (Bargh, 1984; Chase and Simon, 1973; Egan and Schwartz, 1979; Jeffries, Turner, Polson and Atwood 1981; Voss, Versanden and Spilich 1980). Consumers with high levels of objective knowledge also have an increased ability to search for information about alternatives (Schmidt and Spring, 1996), resulting in larger consideration sets. These larger choice sets should lead to more variety-seeking behaviour (Roberts and Lattin, 1997) and a more complicated but accurate category structure (Weber and Crocker, 1983) providing an ability to distinguish between alternatives in a given category with little cognitive effort (Agrawal, 1995; Anderson, 1983; Chase and Simon, 1973). These consumers are also able to filter out irrelevant information and focus on salient attributes (Anderson, Engledow and Becker 1979; Chase and Simon, 1973). Similarly, Wirtz and Mattila (2003) found that high objective knowledge translated into larger consideration sets as it enhances the development of more refined category structures and facilitates information processing and decreased brand loyalty. Objective product knowledge can be considered to be product-related information stored in memory, including information relating to brands, product attributes, evaluations, decision heuristics, usage
situations (Marks and Olson, 1981) and price (Vanhuele and Dreze, 2002).

In the stream of literature relating to luxury products and services, there have been numerous attempts to define the term luxury (Aaker, 1996). In fact there remains division amongst scholars as to the very concept of luxury. Some scholars highlight a negative, almost socially destructive view of luxury (Sekora, 1977). Others take a more positive view where luxury represents an aspiration (Berthon, Pitt, Parent and Berthon 2009). Some scholars have highlighted the physical aspects of luxury, such as rarity or material scarcity (Dubois and Paternault, 1995) or product quality (Ervynck, Van Neer, Hüster-Plogmann and Schibler 2003). Others (Holbrook and Hirschman, 1982; Kemp, 1998; Brakus, Schmitt and Zarantonello 2009) highlight the experiential dimension of luxury brands, the behavioural, sensory and cognitive experiences of luxury created through brand packaging, communications and image. The symbolic nature of luxury, either symbolic to others (Veblen, 1994) or symbolic to oneself (Belk, Bahn and Mayer 1982) has also come under focus. Sheth, Gardner and Garrett, (1988) reported a symbolic connection between luxury products and brands and personal value and social identity. Some scholars have attempted to incorporate multiple dimensions into luxury. For example, Keller (1986) proposed that the value consumers attach to brands stems from the functional, experiential and symbolic nature of the purchase and the subsequent consumption.

Identifying a lack of conceptual understanding of luxury, Berthon et al., (2009) sought to “dimensionalise, define and differentiate luxury brands”. Drawing on
Heidegger’s Theory of Art (Young, 2001) and Whitehead’s (1978) Process Philosophy; Berthon et al., (2009) build a typology of luxury brands called the AO (Aesthetics and Ontology) framework and argue that luxury brands can be differentiated along the two dimensions of aesthetics (from novice to expert), and ontology (from transient to enduring). According to the ontological dimension, at the extreme end of endurance, luxury products are characterized as permanent or in a state of ‘being’. Here luxury products will emphasize tradition, quality, art and craftsmanship (Berthon et al., 2009). In contrast, ephemeral luxury products are characterized as more transient or in a state of ‘becoming’. This may carry connotations of excess or waste (Kahn, 2009) or be associated with conspicuous consumption and hedonism (Berthon et al., 2009; Evans 1989; Veblen 1994).

In relation to the aesthetic dimension, Kant (1973) referred to aesthetic judgement as relying on an individual’s ability to acutely discriminate between value and quality. Gardner (1993) contended that aesthetic intelligence is something that naturally develops over time. Young (2001) identifies that an individual able to bring a work of art alive through contemplation as a ‘preserver’ versus the neophyte observer who is unable to do this. Hence, the aesthetic mode ranges from the observer to preserver. The aesthetic dimension also includes an element of the concept of objective knowledge as it makes a distinction between novices (observers) and experts (preservers). In terms of marketing literature relating to ephemerality, Janssen, Vanhamme, Lindgreen and Lefebvre (2014) investigated the influence of scarcity and ephemerality on consumers’ perception of the fit between luxury and corporate social
responsibility. The study found that where luxury products are considered enduring, a scarce product is perceived as more socially responsible (provoking a positive attitude) than a more widely available product. However, this effect was absent for transient ephemeral luxury products. Other studies have looked at ephemerality and hedonism in the context of transience. Beverland (2004) observed that the luxury wine connoisseur is most likely to fit the hedonistic profile and focus on sensory pleasures rather than on price or quality. Caniato, Caridi, Castelli and Golini (2011) studied eight luxury items including watches, bags, shoes and apparel and found that hedonistic motives are more drivers of consumer behaviour and value perception than quality or performance. Juggessur and Cohen (2009) found that fashion consumers can be pleasure seekers and purchase luxury fashion items for hedonic reasons. Similarly, Miller (2013) identified pleasure seeking activities of luxury fast fashion products and found that consumers enjoy the creativity associated with ephemeral fashions and uniqueness as they add value to the customer in different ways.

There have been several studies relating to the segmentation of the wine market. Lockshin, Quester and Spawton (2001) undertook a cross-sectional wine study and segmented wine consumers on the basis of their involvement with the product and their nationality. Bruwer, Li and Reid (2001, 2002) considered wine to be a lifestyle beverage and through an exploratory study, proposed segmentation of the Australian wine market based on consumer wine-related lifestyles. Bruwer and Li (2007) further looked at wine-related lifestyles through a market segmentation based on demographic and behavioural factors. Thomas and Pickering (2003)
looked at segmentation for the New Zealand wine market involving the volume of wine purchased and consumer behavioural information. Reyneke, Pitt and Berthon (2011) also use the AO framework and segmented the wine market based on the gifting of wine. Finally, Vigar-Ellis et al., (2015a) identified four types of consumers based on their subjective versus objective wine knowledge levels and proposed segmentation on this basis.

1.2.1 Emerging Research Problem and Research Questions

Having undertaken a broad-based approach to reviewing the relevant literature, an identifiable research problem emerges which can be structured as:

How does the provision of information to consumers affect their information search, processing and choice behaviours and can this understanding be used as a new basis for market segmentation for information-intensive products?

The research problem identified has emerged from an analysis of the literature rather than being specifically called for by the research community, although Jiang and Rosenbloom (2014) call for more research relating to consumer search behaviour in complex decision making environments. Having identified the research problem, the extensiveness of the problem becomes
evident, particularly in modern day marketing and information behaviour research. Grounded in various marketing and consumer behaviour literature streams, the thesis develops several important managerial implications for firms. These include; designing and implementing effective marketing strategies, determining effective marketing tactics and employing marketing campaigns to target consumers of information-intensive products. Having identified the research problem, the problem itself can be addressed by breaking it down into sub-component parts of four research questions.

The thesis seeks to contribute to the literature on consumer information search behaviour and consumer information processing and choice behaviour as well as the literature on wine marketing. Although consumer information search has received substantial coverage in marketing and consumer behaviour research in the past, particularly in the 1970s and 1980s, little contemporary research has been conducted despite a call for “opportunities for improvement” (Julien, Pecoskie and Reed, 2011) in information behaviour research.

Most of the research relating to consumer information search behaviour has covered pre-purchase search behaviour, but no studies have been found where information is deliberately withheld or regulated by firms as a type of marketing tactic to induce consumer search. In addition to identifying this research gap, the thesis also updates the literature stream by building on the work relating to the internet (Bakos 1991; Underhill 1999; Peterson and Merino 2003) and the more recent work on blogs (Piscopo 2015; Hellstrom et al., 2015; Hall et al., 2016) and information search behaviour. A further
research gap addressed by the thesis relates to consumer information processing and choice behaviour in relation to the effect of consumption frequency and the price-quality heuristic. The thesis also seeks to update the search behaviour literature by attempting to take a more holistic and wide-reaching approach to analysing the consumer journey at each step of the process starting, with initial information search through to information processing and choice behaviour. This culminates in a new proposed way to segment a market for information-intensive luxury products.

The thesis also contributes to the literature at the product or industry level. Little is known about the marketing of information-intensive products (Glazer, 1991) and how consumers search for and process this information. Zalan and Lewis (2014) call for a general improvement in management skills within the wine industry. Similarly, Cravens and Piercy (2009) and Walker and Mullins (2014) also call for marketers to gain an understanding of consumers of wine and to develop marketing strategies to effectively target these consumers.

A number of theories and frameworks have been utilised throughout the thesis to address the research problem. These include: Reactance Theory (Brehm, 1966; Brehm and Brehm, 1981); the Scarcity Principle (Cialdini, 1983); Advertising Scepticism (Obermiller and Spangenberg, 1998); Blog Scepticism (Van Heerden et al., 2009); Innovativeness (Goldsmith and Hoefcker, 1991); Dual-systems Theory of Cognition (Frankish, 2010; Kahneman, 2003; Kahneman, 2012) and the AO Framework (Berthon et al., 2009). This ‘fragmented’ approach to theory has been taken as there does not
appear to be an over-riding, marketing or consumer behaviour theory that has been used to explain the wider consumer journey for information search behaviour outlined above.

In order to answer the research problem, four research questions have been developed; each of which provides a different perspective to help answer the research problem. The first research question examines the provision of information by firms to consumers but focuses on the regulation of the flow and distribution of that information in the context of secret wine societies. The second research question builds on the first research question but combines the provision of information by both marketing agents (advertisers) and non-marketing agents (bloggers) and analyses two types of consumers’ (innovators and explorers) search behaviour. The third research question focusses on consumer information processing and choice behaviour to study how consumers process price information at increasing levels of consumption by using choice heuristics. Finally, the fourth research question consolidates and extends the previous three research questions to propose a new way to segment the luxury wine market.

Commencing with the first research question, Simmell (1906) defines secrecy as the “regulation of the flow and distribution of information.” Secrecy can also be interpreted as the denial of the availability of information, creating scarcity of information. According to the Scarcity Principle (Cialdini, 1993), when something is made scarce, consumers want it more. This principle resonates with Reactance Theory (Brehm, 1965; Brehm and Brehm, 1981) as the denial of information represents a threat to an individual’s
freedom who will seek to restore this loss of freedom. By regulating the flow of information and withholding it by creating secrets, firms can make information scarce to the consumer leading to a reaction from the consumer to want the product more.

Secrecy can also have a social dimension as members of a secret community are governed by the protective function of secrecy. The community is held together by the very need to keep a secret. The pressure to keep the secret can create an anxiety of letting the secret out, stimulating a “we” feeling amongst community members and strengthening the bond amongst members. This suggests that firms can control the flow and distribution of information by creating and maintaining a state of ignorance in consumers and the social environment outside of the secret community. The secret can be reinforced and safeguarded by community members who control the flow of information within the community and separately to the outside world. By sharing the secret within the community enhances the social interaction amongst members of the community. For example, members are able to communicate to others within the group that they have offerings that are not available to the ordinary outside consumer. Brand communities may also arise amongst community members, some of which may not be secret but positively encouraged by the firm to share their experience with other users of the product, such as Harley Davidson. In this respect, information can be controlled and flow in two directions; firstly, downstream from the firm to the consumer and secondly, among consumers of the product within the consumer community.
Controlling the flow and distribution of information can have important implications for the marketer. Secrecy and the characteristics of secret communities can afford significant marketing benefits which leads to the first research question:

**RQ1: Do secret wine societies display some of the characteristics of secret societies and how can this knowledge be used to create effective marketing tactics?**

Research Question Two switches the focus to include the provision of information and how types of consumers search for information and what types of information source most influence these consumers. Advertising is studied as a source of persuasive information provision by marketing agents to consumers, whereas blogs represents a source of information provision that is non-marketing agent driven - although there is evidence that consumers are sceptical of both advertising and blog content. Research Question Two also reintroduces the secondary concept of secrecy and scarcity as it looks at consumer innovators. Innovators are typically the first consumers to try a new product and, in that sense, are ‘gate-keepers’ or guardians of the secret until they adopt the product and provide information about their experiences to the wider marketplace. This will be of particular interest to firms looking to launch new products into the market. The study also looks at variety-seeking and exploratory purchasing behaviour of consumers as there is evidence that larger choice sets (of which wine is a good example) lead to more variety-
seeking behaviour (Roberts and Lattin, 1997). This leads to the second research question:

**RQ2: How does attitude toward advertising and blog scepticism impact on consumer innovativeness and consumer exploratory purchasing behaviour?**

Based on risk information (Verbeke, 2005) and ‘information as labelling’ literature; Research Question Three examines how consumers process information to make inferences about product quality by using extrinsic and intrinsic product cues.

Building on the research evidence that consumers use heuristics to cope with cognitively processing large amounts of product information; the study examines a tasting experiment, which includes wine. A consumer’s judgement about a product can be thought of as a weighted combination of items of information. When the consumer is required to evaluate the merit or quality of a product, these weightings are ascribed to a combination of intrinsic and extrinsic cues at hand which may result in judgement errors or biases due to an overweighting of some aspects of information and an underweighting of others (Morewedge, 2006). Furthermore, when consumers have greater knowledge about a product, they tend to make generalisations about the product as well as about the quality associated with that product (Pecotich and Ward, 2010). This can provide the consumer with a cognitively daunting challenge of trying to identify and process some relevant purchase information, whilst disregarding other information (Rao,
1988). In such information-rich environments, there is evidence that consumers activate certain heuristic short cuts that may lead to spending less time evaluating new information (Cuhna and Shulman, 2011). One of the most common cognitive short-cuts is the price-perceived quality heuristic; however, an over-reliance on price may lead to an obscuration of the true merit of a product, Plassman et al., (2008). Although the occurrence of the cue-driven intuitive errors is well documented in marketing, little is known of how, with increasing rates of product consumption, consumers become conditioned by these extrinsic cues, leading to the third research question:

**RQ3: How does the rate of product consumption deepen the associative process in which consumers begin to twin price with quality so as to ultimately to deploy the price cue as a surrogate for genuine quality?**

Research Question Three therefore extends the research relating to objective consumer knowledge and expertise in the context of wine (Goldstein et al., 2008; Priilaid, 2006) and information, consumer knowledge and product experience (Kole, 2001).

Building on the studies relating to the provision of information to consumers (Research Question One/Two), consumer information search behaviour (Research Question Two) and how consumers process that information to make a choice (Research Question Three); Research Question Four consolidates and bridges this research into the concepts of consumer
objective knowledge, aesthetics, consumption frequency and the timing of consumption, to propose a new way to segment the luxury wine market. In this market, not only is the product characterised as an information-intensive product, it also incorporates the secondary concepts of scarcity, secrecy, consumption frequency and ephemerality.

A link between consumer information processing and consumer knowledge has been previously observed (Glazer 1991; Schmidt and Spring 1996; Wirtz and Mattila 2003; Jiang and Rosenbloom 2014). Objective product knowledge can also be considered to be product-related information stored in memory (Brucks, 1985), including information relating to brands, product attributes, evaluations, decision heuristics (Marks and Olson, 1981) and price (Vanhuele and Dreze, 2002). There is also a link between objective knowledge and variety-seeking behaviour (Roberts and Lattin, 1997) as consumers are able to filter out irrelevant information and focus on salient attributes (Anderson et al., 1979; Chase and Simon, 1973).

Research Question Four makes use of the AO Framework (Berthon et al., 2009) where one of the framework dimensions is aesthetics, which ranges from ‘expert’ to ‘novice’, hence incorporating objective knowledge and expertise (Alba and Hutchinson, 1987). The other dimension of the AO Framework relates to ontology, or the timing of consumption. Given the evidence that wine is both a search product and an experiential product (Bruwer and Johnson, 2010), Research Question Four considers ephemerality, or the inclination to ‘consume for the moment’, indicating that
the consumption of luxury wine does not just relate to the physical properties or attributes of the product.

Segmenting the luxury wine market along the dimensions of aesthetics and ontology provides marketers with a useful tool to target each consumer type with more accuracy, which leads to research question four:

**RQ4: How can the luxury wine market be segmented by aesthetics, ephemerality and objective consumer knowledge?**

The next section of the thesis describes the research methodology used to address each research question.
1.3 Research Methodology

1.3.1 Research Design and Approach

This section of the thesis covers the research design and approach together with the research method undertaken for each study. Details relating to sample selection and data collection are also provided where relevant as well as any measurement issues discussed. This is then preceded by a discussion of the specific research method used in each individual paper.

Hair, Money, Samouel and Page (2007, p. 151) advocate the use of parsimony in the selection of research design and state that “the researcher should choose a design that (1) will provide relevant information on the research questions / hypotheses, and (2) will complete the job most efficiently.” As the thesis sought to look at the research problem from four different research question perspectives, a mixed method research approach was taken using a combination of qualitative and quantitative research designs (Teddlie and Tashakkori, 2009). A mixed method approach was selected in order to gain a more complete picture of the research problem under investigation (Johnson and Onwuegbuzie, 2004). One of the key features of using a mixed method research design is its “methodological pluralism or eclecticism, which frequently results in superior research” as well as to gain an in-depth insight into addressing the research question (Johnson and Onwuegbuzie, 2004).
The research methods used in this thesis are discussed in more detail in section 1.3.3, but in summary include:

**Table 1.1**

Summary of the research methodology

<table>
<thead>
<tr>
<th>Study</th>
<th>Research Design</th>
<th>Method of Data Analysis</th>
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<tbody>
<tr>
<td>One</td>
<td>Qualitative (<em>Conceptual</em>)</td>
<td>Content Analysis</td>
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<tr>
<td>Two</td>
<td>Mixed (Focus Group &amp; Questionnaire)</td>
<td>ANOVA/Regression &amp; Clustering Procedure</td>
</tr>
<tr>
<td>Three</td>
<td>Quantitative (<em>Experiment</em>)</td>
<td>Regression</td>
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Study One, a qualitative based conceptual study was designed in order to understand how firms regulate the flow and distribution of information to consumers which sought to address Research Question One. Study Two includes a focus group and a questionnaire where data is analysed using a hierarchical clustering analysis procedure. This study addresses Research Questions Two and Four. Finally, Study Three, used an experiment to analyse how consumers process information using price as a surrogate for quality which addresses Research Question Three.

### 1.3.2 Sample Selection and Data Collection Methods

For Study One, data relating to the characteristics of secret societies was collected from online sources and
existing literature. Five secret societies were chosen from Listverse’s compilation of the world’s top ten secret societies (http://listverse.com/2007/08/27/top-10-secret-societies/). Data was also taken from other online sources and existing literature relating to well-known secret wine societies.

In Study Two, data was collected using Amazon.com’s MTurk online platform. MTurk is a web based tool which researchers can utilize to recruit respondents (workers) to complete certain tasks such as surveys in exchange for a nominal cash reward. In this study, a reward of $1 was provided to each respondent that completed the survey. When setting up the online survey, researchers are able to target a certain demographic by employing filters or stipulating certain respondent requirements before they are allowed to complete the survey. MTurk also allows a verification process to be used through tests to ensure that only the correct respondents are employed. Although respondents can be drawn across the globe, in this study it was decided to only allow US residents to participate.

The use of MTurk as a data collection tool is relatively new and has attracted concerns amongst some of the research community. One concern relates to MTurk participants who are considered ‘unusual’ with respect to their attitudes towards money and time as they are willing to sacrifice their free time to complete Human Intelligence Tasks (HITs) for relatively little monetary reward, potentially invalidating the validity of the research. However, a study by Rand (2011) verified that MTurk respondent demographic are accurate. A further study by Buhrmester, Kwang and Gosling, (2011) validated the psychometric properties of MTurk
respondents, whilst Horton, Rand and Zeckhauser (2011) replicated in MTurk the classic findings observed in behavioural economic studies and Paolacci, Chandler and Ipeirotis (2010) replicated decision-making biases.

Another concern with the use of MTurk is whether respondents pay sufficient attention to study materials as they are not supervised when they undertake HITs (Goodman, Cryder and Cheema, 2013). A further concern relates to the growing number of respondents in non-English speaking countries where there exists the potential for language and cultural differences.

Despite these concerns, there is wide acceptance and support for the use of MTurk to conduct social science experiments (Minton, Gurel-Atay, Kahle and Ring, 2013; Goodman, Cryder, and Cheema, 2013; Paolacci, Chandler and Ipeirotis, 2010). Buhrmester et al., (2011, p. 3) report that “Overall, MTurk can be used to obtain high-quality data inexpensively and rapidly.” Although gaining a sample of data using the MTurk platform in the US may not perfectly align with the characteristics of the US population, studies have found that they are also neither inaccurate nor biased and are accepted as valid alternatives to any other internet-based survey or traditional mail surveys (Minton et al., 2013; Goodman et al., 2013; Paolacci et al., 2010; Buhrmester et al., 2011).

Study Three involved an experiment which consisted of a two-staged sighted to blind product tasting. The design followed a three group pre-experimental design-format (Malhotra, 2010 p. 158), with subjects either tasting wine (n=73), orange juice (n=100) or coffee (n=105). In each of the three experiments, the first stage consisted of a blind product tasting of eight products.
The three studies are discussed separately in further detail.

1.3.3 The Research Studies

Study One

Research design and measure
The research was designed to contrast the characteristics of secret societies with those of existing secret wine societies; therefore the research method took a conceptual approach.

Foucault’s Pendulum by Umberto Eco (1989), which describes some of the world’s best known secret societies, was used to pre-screen the selection of secret societies. The final five secret societies were chosen from Listverse’s compilation of the world’s top ten secret societies (http://listverse.com/2007/08/27/top-10-secret-societies/). The five selected secret societies were: The Order of Skull and Bones (OSB); The Grand Masonic Lodge (Freemasons); The Rosicrucian Order; Order of the Temples of the East (OTO) and Opus Dei.

These five secret societies were selected as they provided contrasting characteristics to one another. For example, some secret societies were founded many years ago in the 16th century (Rosicrucian), whereas others were founded more recently in 1832 (Order of Skull and Bones). Other contrasting criteria were employed such as some secret societies possessed a religious
characteristic (Opus Dei) whereas others were non-religious (Freemasons).

The underlying characteristics of secret societies identified by Simmell (1906) were identified, together with descriptions of famous secret societies, resulted in fourteen categories of secret society characteristics. These included: “held together because they need to keep a secret”, “regulate the flow of information”, “a legendary founder”, “extent of secrecy varies”, “membership is restricted”, “levels of membership”, “regular meetings”, “rituals and behaviours”, “symbols and dress”, “documents that espouse or state secrets”, “members need to be nominated”, “initiation rites” and “hidden agendas”.

To match the five selected secret societies, five secret wine societies were selected; these were La Confrérie des Chevaliers du Tastevin (La Confrérie), the Commanderie de Bordeaux (The Commanderie), The Wine Society (UK), Opimian and the International Wine and Food Society (IWFS).

Some of the secret wine societies focussed on a particular wine region, such as Burgundy (La Confrérie) or Bordeaux (The Commanderie). Other secret wine societies drew their membership from specific countries such as The Wine Society (UK) or Opimian (Canada); whereas others have more general world-wide membership such as IWFS.

Data analysis

Data analysis was conducted by use of a 3 x 14 matrix which compared the commonalities and differences of the characteristics between the five selected secret
societies together with the five selected secret wine societies (see Table 1.2).

Table 1.2
Characteristics of secret societies and secret wine societies

<table>
<thead>
<tr>
<th>Characteristic of Secret Societies</th>
<th>Examples of Secret Societies</th>
<th>Equivalents in Secret Wine Societies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Held together because they need to be kept secret</td>
<td>Most secret societies</td>
<td>Wine societies tend to have a common cause (e.g. promote the wines of the region, promote fine wine consumption generally)</td>
</tr>
<tr>
<td>Regulate the flow of information</td>
<td>Most secret societies</td>
<td>La Confrerie The Commanderie</td>
</tr>
<tr>
<td>Extent of secrecy varies (e.g. membership not secret, rituals are)</td>
<td>Order of Skull and Bones</td>
<td>La Confrerie The Commanderie</td>
</tr>
<tr>
<td>Membership is restricted</td>
<td>Order of the Temples of the East Opus Dei</td>
<td>La Confrerie The Commanderie</td>
</tr>
<tr>
<td>Levels of membership</td>
<td>Freemasons</td>
<td>The Commanderie (fees vary by region)</td>
</tr>
<tr>
<td></td>
<td>Rosicrucians Order of the Temples of the East Opus Dei</td>
<td>International Wine &amp; Food Society (member of a branch, independent member, founder of a new branch)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Regular Meetings</td>
<td>Order of Skull and Bones Freemasons</td>
<td>La Confrerie Opimian The Wine Society Opimian International Wine &amp; Food Society</td>
</tr>
<tr>
<td>Rituals and behaviours</td>
<td>Order of Skull and Bones Freemasons Order of the Temples of the East</td>
<td>La Confrerie The Commanderie</td>
</tr>
<tr>
<td>Symbols and Dress</td>
<td>Freemasons</td>
<td>La Confrerie Opimian The Wine Society</td>
</tr>
<tr>
<td>Documents that espouse or state secrets</td>
<td>Rosicrucians Order of the Temples of the East</td>
<td>The Wine Society’s Constitution</td>
</tr>
<tr>
<td>Members need to be nominated</td>
<td>Freemasons</td>
<td>La Confrerie Opimian The Wine Society</td>
</tr>
<tr>
<td>Initiation rights</td>
<td>Freemasons</td>
<td>La Confrerie Opimian (merely an initiation fee)</td>
</tr>
<tr>
<td>Hidden Agendas</td>
<td>Order of Skull and Bones (CIA)</td>
<td></td>
</tr>
</tbody>
</table>
Data presentation

The results of Study One are reported in Paper One.


The full published research paper is presented in the Appendix.

**Study Two**

In Study Two, respondents completed the MTurk online survey within the three days that it was administered. After 300 responses had been received, the survey was withdrawn. Using two explicit quality controls, 46 completed surveys were rejected leaving 254 completed surveys that were valid resulting in a usable response rate of 85%. The first quality control measured the time each respondent to complete the survey. Those surveys that took less than five minutes were rejected as the presumption was that respondents’ could not have read each question in sufficient detail to complete the survey carefully enough. The second control included an Instructional Manipulation Check (Oppenheimer, Meyvis and Davidenko, 2009) whereby the items were interspersed into the instrument with a specific instruction for the respondent to follow, such as “answer
4 to this item on the 7-point scale”. Where respondents answered this question incorrectly, it was presumed that they had not carefully read the question and could have been consistently allocating the same scale score for all items, such as scoring a 1 or a 7, or completing the survey questions randomly. Again, these completed surveys were identified and excluded from the results of the study. A third, more implicit, quality control for the MTurk platform is that it allows researchers to rate each respondent for the quality of their participation and report those that cheat or abuse the platform. As these respondents can be identified and excluded from future surveys, respondents have an incentive to work diligently and honestly.

Study Two was divided into (A) and (B) to accommodate two separate research questions.

Research design and measure

A 25-item instrument consisting of four measures to capture each of the constructs of Attitude toward Advertising, Blog Scepticism, Innovativeness and Exploratory Behaviour was employed. In addition to measures of these constructs; respondents were also asked to provide demographic information about their age, gender and education. To measure a respondent’s attitude toward advertising, use was made of the 6-item measure of Donthu and Gilliland (1996). Although the Donthu and Gilliland study was conducted in the context of analysing infomercial shopping behaviour, it is accepted that this scale is generalizable to measure the construct of attitude toward advertising as well as being internally reliable, as the measure reported a Cronbach
alpha co-efficient of .75, exceeding the .70 threshold (Nunnally, 1978).

Blog Scepticism was captured using the 9-item measure developed by Van Heerden et al., (2009). Van Heerden et al., (2009) adapted the Obermiller and Spangenberg (1998) 9-item advertising scepticism scale to reflect scepticism towards blogs and reported a unidimensional construct to provide an overall measure for the construct of blog scepticism. Again, the scale demonstrated a Cronbach alpha of .89, exceeding the .7 threshold (Nunnally, 1978), which provided internal reliability and further support for the measure.

Innovativeness was captured using the Goldsmith and Hofacker (1991) 6-item scale. Inspired by the domain specific scales developed in the area of opinion leadership (King and Summers 1970) and the modified opinion leader scale (Childers, 1986); Goldsmith and Hofacker (1991) developed the Domain Specific Innovativeness (DSI) multi-item, self-report scale to measure consumer innovativeness. This scale addressed many of the weaknesses of earlier measures and benefitted from reliability and validity (Goldsmith and Flynn, 1992) as well as being adaptable across a variety of product domains and comparable across studies. Goldsmith and d’Hauteville (1998) provided evidence that wine innovators were also heavy users of wine and that DSI was positively correlated with wine involvement, wine opinion leadership, real and subjective wine knowledge and wine consumption. Goldsmith (2000) found evidence that the DSI scale is a reliable and valid self-report of wine innovativeness and that the DSI performs well in identifying wine innovators. Rather than using the full 6-item measure,
after preliminary testing, it was decided to drop two of the items to leave a 4-item scale.

Exploratory Purchasing Behaviour was captured using the 6-item Exploratory Consumer Tendencies measure proposed by Van Trijp et al., (1996). A number of scales have been developed to measure exploratory purchasing behaviour. Baumgartner and Steenkamp (1996) developed the Exploratory Acquisition of Products scale to measure a consumers’ “tendency to seek sensory stimulation in product purchase through risky and innovative product choices and varied and changing purchase or consumption experiences” (Baumgartner and Steenkamp, 1996, p. 6). Van Trijp et al., (1996) developed the Exploratory Consumer Tendencies (ECT) to measure a consumers’ need for variety. This scale reported a unidimensional structure and an alpha coefficient (Cronbach, 1951) of .79.

Study Two was further designed to measure and investigate aesthetics, ephemerality and objective wine knowledge involved in luxury wine consumption. A clustering procedure was used to identify common traits and characteristics of certain types of consumer of luxury wines.

A focus group of wine consumers, who were also members of a wine club, was used to identify statements relating to the dimensions of aesthetics and ephemerality. After an item purification process, thirteen common statements were then developed ranging from “I think I know a lot about wine” (Statement 2) to “If you have a good bottle of wine, you should drink it as soon as possible to celebrate the moment” (Statement 13).
Respondents were then required to score their responses to the items on the Aesthetics-Ephemerality measure on a seven-point scale ranging from “Strongly Disagree” (1) to “Strongly Agree” (7). Their objective wine knowledge was measured using the Vigar-Ellis et al., (2015b) ten question test.

The 13 items of Aesthetics and Ephemerality were then subjected to a Principal Components Factor analysis in order to investigate their factor structure which showed that the items loaded separately and distinctively onto two factors that corresponded to the two constructs of Aesthetics and Ephemerality.

Data analysis

An exploration of the relationships between Attitude toward Advertising, Blog Scepticism, Innovativeness and Exploratory Purchasing Behaviour was conducted in order to address Research Question One.

The same MTurk questionnaire used in Study (A) was used in Study (B); however, a further section of the questionnaire included 13 items relating to the constructs of Aesthetics and Ephemerality and an additional 10 items to measure objective wine knowledge. Demographic information of the respondents were also recorded which related to gender, age and frequency of wine consumption.

A hierarchical clustering procedure was then conducted using summed mean scores for each respondent for questions relating to Aesthetics and Ephemerality as well as for the objective wine knowledge test (Vigar-Ellis et al., 2015b) and questions relating to wine consumption frequency. Four separate clusters were
extracted which appeared to map the Berthon et al., (2009) AO Framework and consumer typologies.

Data presentation
The results of Study Two are reported in Papers Two and Four.


The full published research papers are presented in the Appendix.

Study Three

Finally, Study Three explored the manner in which consumption frequency effects contribute to the formation and strengthening of the price-quality heuristic.

Research design and measure
In this study, 278 subjects (141 male, 137 female) were invited to a two-stage sighted to blind product tasting experiment. The design followed a three group pre-
experimental design-format (Malhotra, 2010 p. 158), with subjects either tasting wine (n=73), orange juice (n=105) or coffee (n=100). In each experiment, subjects assessed seven products, first blind (round one); and then, sighted (round two). Tests were conducted on both blind and sighted scores to gauge the conditioning effects of price across a range of consumption-rate segmentations. The only information offered to participants was the nature of the product i.e. wine, orange juice or coffee. To dissuade respondents from predicting the sighted line-up from the blind, the order of the “sighted” second stage was shuffled, with one of the eight products removed; thus leaving only seven differently ordered products.

In the orange juice experiment, 105 respondents tasted one-litre juices ranging in price between 75 cents and $6.90. In the coffee experiment, 100 respondents tasted products with prices per 200 grams ranging between $2.20 and $9.70. In the wine experiment, 73 respondents tasted wines with prices points ranging between $2.50 and $16 per bottle.

Before the start of the tasting round, respondents were asked to provide personal details including weekly product consumption, age, and gender. Each round of tasting was scored using an 11-point Likert scale with half star calibrations, where zero denoted an unpalatable offering and five a product of exceptional character. Each respondent also completed a self-administered questionnaire and ratings for each of the tasting sessions was recorded.

Collating the seven paired ratings of each of the 278 subjects (105 + 100 + 73 as per above), a dataset of 1946 (7 x 278) corresponding blind-and sighted product
assessments was constituted. Controlling for intrinsic (blind) merit, relevant demographic factors, inter-product-class differences and individual-subject-bias, tests were conducted to determine the impact of price cues on blind and sighted scores.

**Data analysis**

An investigation of the relationship between frequency of weekly consumption and consumer preferences at differently priced products was used to address Research Question Three.

Correlations between sighted rating, blind rating, price and tastings per week were calculated using a Spearman correlation matrix.

A series of step-wise linear regressions were then run to explain the blind and sighted data across a span of three consumption-rate bands. Those bands were (1) those consuming 1 unit per week (n=151 x 7=1057), (2) those consuming 2 to 3 units per week (n=46 x 7=322) and (3) those consuming 4 or more units per week (n=112 x 7=784). The spread of age across each band was homogenous.

The regressions were run in two sequences. The first was to test for the statistical significance of the price-coefficients contributing to the blind and sighted scores across the entire dataset with no consumption-rate controls in place. The second sequence aimed to do so with such controls in place.
Data presentation

The results of Study Three are reported in Paper Three.


The full published research paper is presented in the Appendix.

The next section of the thesis provides a summary of the key findings contained in each of the three studies.
1.4 Summary of Findings

The following section of the thesis presents a summary of the research findings in relation to the four research questions which address the research problem.

The first research question examined how firms regulate the flow and distribution of information to consumers, taking wine as an example of an information-intensive product. This lead to the first research question:

RQ1: Do secret wine societies display some characteristics of secret societies and how can this knowledge be used to create effective marketing tactics?

The findings of Research Question One suggest that secret wine societies share many, but not all, of the characteristics of secret societies. It was found that secret wine societies have a common cause, such as promoting the wines of a region, but aren’t held together because they need to keep a secret like secret societies. Similar to secret societies, some wine societies regulate the flow of information by ensuring that the information is closely shared only among members. Another similarity is that some wine societies are marked by the fact that they have a legendary founder (e.g., Henri Martin, The Commanderie; Andre Simon, IWFS) and in some cases, membership of wine societies is restricted and even difficult to obtain. Just like secret societies, becoming a member of some secret wine societies, such as La Confrerie or The Commanderie relies on contacts,
nominations and approvals, a long wait, and meeting many conditions, whereas in other cases, membership is actually easy to acquire.

Like secret societies, some wine societies have different levels of membership; and like secret societies, all the wine societies considered have regular meetings of their members. The more secretive wine societies also employ particular rituals and behaviours as well as symbols and modes of dress. However, these are absent in the case of more open societies such as TWS and Opimian.

Similar to secret societies such as The Freemasons, some wine societies hold initiation rites for members. Some wine societies utilize a document, such as a Constitution, but these are not really the same as the documents on which secret societies such as The Rosicrucians are founded. It was also found that none of the wine societies are suspected of having hidden agendas.

In summary, Research Question One found that the extent of secrecy among the secret wine societies varies considerably. Some are tightly held, difficult to join, and jealously guarded, as in societies like La Confrerie and The Commanderie. In other instances, such as TWS and Opimian, membership is very open and very easy to obtain, despite the fact that TWS, for example, has been referred to in the media as being secret. Secret wine societies do possess and display some, if not all, of the characteristics and behaviours of the best-known secret societies, including legendary founders, restricted membership, initiation rites, regular meetings, rituals, symbols, and dress.

Research Question Two dealt with understanding how consumers search for information, how consumers
communicate with each other through blogs and whether advertising or blogs affected consumer innovators and variety-seeking consumers, leading to the research question:

**RQ2: How does attitude toward advertising and blog scepticism impact on consumer innovativeness and consumer exploratory purchasing behaviour?**

The effect of Attitude toward Advertising and Blog Scepticism on Innovativeness was investigated using a regression with the latter variable as the dependent variable. Results of this regression provided a statistically significant effect \( R^2 = 0.12; F = 15.04; p < 0.01 \) with Attitude toward Advertising having a negative effect on Innovativeness \( \text{Std B} = 0.35; p < 0.01 \) but Blog Scepticism having no statistically significant effect. The procedure was re-run again to investigate the effect of Attitude toward Advertising and Blog Scepticism on Exploratory Purchase Behaviour. However, results provided no statistically significant causal effects.

In order to explore the relationships between the demographic variables of gender, age and education with the four constructs of Attitude toward Advertising, Blog Scepticism, Innovativeness and Exploratory Purchasing Behaviour; a series of one-way ANOVAs and independent sample \( t \)-test were undertaken. The ANOVA results indicate that both gender and education are not related to any of the four constructs while age is statistically significantly related to Attitude toward Advertising and Innovativeness. The most positive
Attitude toward Advertising was exhibited by those aged 35 to 54, followed by those 55 and over and the least by those less than 34. In the case of Innovativeness, those 55 and over exhibited the highest level of innovativeness.

In summary, the four constructs investigated in this study consisting of Attitude toward Advertising, Blog Scepticism, Innovativeness and Exploratory Purchasing Behaviour exhibited robust psychometric properties making analysis of the relationships between them possible. Attitude toward Advertising was found to be positively related to Innovativeness but not related to Exploratory Purchasing Behaviour. This finding indicates that consumers with a positive attitude towards wine adverts are more likely to experiment and show interest or talk about the advertised wine with their peers.

Blog Scepticism was found not to be related to either Innovativeness or Exploratory Purchasing Behaviour. This finding suggests that wine adverts have more effect on consumers than blogs have, although that effect only influences consumers that have wine innovator characteristics rather than variety seeking and exploratory purchasing behaviour. Wine marketers may want to focus on their advertising efforts to win over advertising-sceptic innovators.

For the respondent demographics of gender, age and education; the cross-tabulation results and relevant statistical tests indicate that only age is significantly and positively related to Attitude toward Advertising, particularly those respondents aged between 35 and 54. This finding is in contrast to that reported by James and Kover (1992) who suggest that Attitude toward Advertising has no significant interrelationship with age,
education and gender. Age is also significantly and positively related to Innovativeness, with those respondents aged over 55 showing a higher degree of Innovativeness. These results indicate that consumers above 55 are more likely to experiment with new wines but at the same time not be positively influenced by wine adverts.

The third research question examines how consumers process information about information-intensive products, such as wine, with a particular focus on analysing the price-quality heuristic, leading to the third research question:

**RQ3: How does the rate of product consumption deepen the associative process in which consumers begin to twin price with quality so as to ultimately deploy the price cue as a surrogate for genuine quality?**

The key findings of Research Question Three is to suggest that consumption rates do indeed affect the way consumers respond to price information, which can lead to price-errors in both sighted and blind tasting assessments. The study demonstrates how price-based (System 1) judgement errors accrue and increase progressively with consumption; which is strongly evident in sighted product assessments across a span of consumption bands. Blind-based assessments also demonstrate a positive, but weaker, affect across all three consumption bands; with this affect shown to be at its strongest at the minimal rate of consumption (1 unit per week).
These findings suggest how, with increasing rates of consumption, sighted assessments appear to collect two versions of price information: (1) through price messages embedded within blind-based ratings, and (2) via price-driven heuristic interpretations of quality in sighted ratings which increasingly neglect the contribution of any intrinsic merit. In this respect, it is observed that those consuming 1 unit per week (with a price coefficient of 0.1129), appear the least affected by price information, whilst those consuming 4 or more units per week appear the most affected (price coefficient of 0.1467), indicating a significant 30% increase in price-affectation. This finding is potentially at odds with Rao and Monroe (1988). Increasing rates of product consumption would generally indicate a greater degree of product familiarity; however, under conditions of narrow variation in product quality, the use of price in product quality assessment tended to decrease with familiarity in Rao and Monroe’s study, whereas this study finds an increase in the use of price as a quality cue. Commensurately, the role of blind-based merit shows a corresponding 20% drop-off as consumption rates increase: from 0.55 blind stars for “1 unit per week” to 0.44 blind stars for “4 plus units per week”.

The coupling of these two dynamics is a finding which is an interesting advancement in consumer behaviour research and strongly resembles the process of neurological conditioning presented by Morewedge and Kahneman (2010) which ascribes such instances of sight-based judgement error to heuristic driven “System 1” cue-confusion, coupled with the blind-based “System 2’s” inability to remediate against any error bias as required. This finding will be particularly relevant to management and policy makers in the food industry as it
suggests that heavier consumers of a product are more prone to affect from pricing information. If consumers are prone to price-effect judgement errors, then it may well be that they are prone to other extrinsic cues biases such as brand for increasing rates of consumption levels.

The findings of an inverse correspondence between price affect and consumption were not anticipated in the blind tests. Applying laws of supply and demand, if anything, subjects were expected to prefer products with which they were generally familiar. Thus, assuming consumption rates to align with degrees of affluence, relative to those with low rates of consumption, one would expect higher rates of consumption to equate with a greater liking for expensive products. On blind tasting this was not the case: those with higher rates of consumption only revealed greater price preferences in sighted scores, not blind ones. In this respect, the findings of this study show some alignment with other recent work on self-confessed expertise (Priilaid et al., 2013), that indicates how sight-based price effects strengthen with growing levels of wine-tasting expertise. The blind component of this study does not however agree with Goldstein et al., (2008). Their study of blind wine ratings found that experts do not prefer cheaper wines, while non-experts do. This study suggests that on blind and sighted tastings, expensive products are preferred across all bands of consumption.

The fourth research question extends the findings of paper three and bridges the processing of information into consumer knowledge. Using objective consumer knowledge together with consumption frequency and consumption timing, leads to the fourth research question:
RQ4: How can the luxury wine market be segmented by aesthetics, ephemerality and objective consumer knowledge?

The findings of Research Question Four suggest that it is possible to segment the luxury wine market using a hierarchical clustering procedure to produce four types of luxury wine consumers which closely map the four types of consumer as depicted in the AO framework (Berthon et al., 2009).

It was found that Cluster 1 (see Figure 1.2, p. 89) consumers will likely have high levels of disposable income as they will need to afford the purchase of luxury goods. They will also gain some form of utility from spending money on lavish purchases (Elliot, 1997), so long as the purchase enables a conspicuous demonstration of their wealth to others (Elliot and Wattanasuwan, 1998). Examples of Cluster 1 consumer purchases would be buying a bottle of Cristal champagne in a fashionable night club or wearing a replica dress of a famous Hollywood actress or celebrity. In the context of luxury wine, these individuals will know enough about wine to identify and purchase a luxury brand, but surface and extrinsic properties of the wine such as packaging, label and brand (Mueller, Lockshin, Saltman and Blanford (2010) will be important so that others recognize the product. The emphasis of consumption will be in the moment, so the individual is more likely to purchase a vintage wine than a great Bordeaux. Individuals belonging to this cluster may behave in this manner because they have been influenced by the ‘celebrity culture’ and want to appear living a similar type of lifestyle. They may be influenced by emotional
based adverts, product placement in films or want to be seen in the coolest places enjoying the luxuries of life. In relation to the AO model, Cluster 1 consumers will most likely identify with the Postmodern quadrant. They will tend to be novices in terms of their wine product knowledge and aesthetic appreciation of the specific wine brand, although they will look to conspicuously consume the luxury wine where appropriate.

Cluster 2 consumers will also consume wine to enjoy the moment, but their motivations for consumption will be more mindful as they will know much more about wine. Cluster 2 consumers will also consume wine more frequently and they will gain a deep sense of personal pleasure when consuming based on an ephemeral experience. Cluster 2 consumers will most likely be wine connoisseurs, or experts, with a keen interest in wine; potentially to the extent that wine forms an important part of their life (Bloch, 1982). They will be able to distinguish between different types of luxury wine brands and have enough experience and know-how to select the most appropriate wine for the occasion. The behaviour of these types of consumers may be influenced by emotional based advertising that emphasizes enjoyment of the moment or by blogs and reviews of other wine experts. The AO framework would most likely identify Cluster 2 consumers in the Wabi sabi quadrant where they are characterized by a high position on the aesthetic mode, leaning towards expert status, combined with a high position on the ontological mode with an emphasis on becoming and transience with high ephemeral appreciation and consumption patterns.

Cluster 3 consumers have similar high aesthetic levels to Cluster 1 consumers, but lower objective knowledge;
indicating that although they know about wine, they do so at lower levels. Although they share similar high frequency consumption patterns, they may be more inclined to keep certain types of luxury wine brand, or delay the consumption of these wines (Shafir and Thaler, 2006). Cluster 3 consumers are most likely to possess a degree of wine expertise and attach value and utility to keeping the wine for potentially long periods. Rather than vintage wines, they will be interested in purchasing wines that are able to mature well such as a fine Bordeaux. Cluster 3 consumers may be influenced by tasting notes, the market price of similar types of luxury wines or other wine expert opinions about the benefits of keeping or investing in the wine (Aqueveque, 2006). They will place value on the enduring nature of the wine and may also be collectors of other enduring luxury products such as fine art, antiques and jewellery. Relating back to the theory through the AO framework, Cluster 3 consumers would most likely sit in the quadrant relating to Classic with an emphasis on aesthetic possession and product endurance.

Finally, as Cluster 4 consumers drink wine infrequently, know little about wine, they are most likely to be wine novices who purchase luxury wine as a status symbol to display their wealth (Liu and Murphy, 2007). These consumers may also actively purchase other ostentatious and conspicuous labelled luxury goods such as Gucci handbags and Rolex watches. Cluster 4 consumers will be motivated to impress others as well as gaining hedonic utility from the purchase, but they will be more likely to keep the luxury than consume it. These consumers are likely to be influenced by the surface properties of the wine, such as the brand, label, packaging, industry ratings and reviews to help them
become more informed. They will also tend not to shop for wine in specialist outlets but purchase online Atwal and Williams, (2009) or in a duty-free store Nueno and Quelch, (1998) if the luxury wine is made available. Cluster 4 consumers would be positioned in the Modern quadrant of the AO framework, characterized by a high degree of commercial conspicuous consumption, low aesthetic appreciation and an inclination for endurance over transience.

The next section of the thesis ties together each of the four research papers and provides a general overview and framework for the thesis.
1.5 Overview of the Research Papers

This section of the thesis provides an overview of each of the published research papers. The focus for each overview is on the purpose and the contribution of the research. Each of the research questions are discussed and explored in further detail. Figure 1.1 below provides a framework for the research problem and research questions together with the papers within the thesis.

Figure 1.1.
Framework for the thesis and plan for the papers

- **Paper 1**: Provision and regulation of the flow and distribution of information.
- **Paper 2**: Provision of persuasive information and consumer information search.
- **Paper 3**: Consumer information processing and the use of heuristics.
- **Paper 4**: Information search and processing as a way to segment the luxury wine market.

A new basis for market segmentation
Paper 1: The secret of secret societies: The case of wine


This paper addresses Research Question One.

Purpose: The purpose of the study is to explore how firms regulate the flow and distribution of information about wine to consumers using secrecy and secret societies to control the flow of information. The study also examines how this affects the behaviour of those consumers within these secret communities. Firms withholding product information to consumers make the information scarce, creating a reaction among consumers, resulting in them wanting to know more about the withheld information, or the secret. The study provides an understanding of the characteristics and common traits of secret wine societies, identifies why consumers might join a secret society and then applies this understanding to provide practical implications for marketers of secret products. By investigating the concepts of secrecy, scarcity of information, the characteristics of secret societies, secret wine societies and brand communities; the paper examines how marketers can use this knowledge of secrecy to formulate marketing strategies.

Contribution: The study makes an interesting advancement to Reactance Theory (Brehm 1966; Brehm
and Brehm, 1981) and Cialdini’s (1983) Scarcity Principle. The study finds that while some secret society traits and characteristics transfer well into secret wine societies, the extent of secrecy among secret wine societies can vary considerably. Some secret societies are tightly held, difficult to join with guarded secrets whilst others have memberships that are open and easy to obtain. The study finds that secret wine societies are generally not that secret at all; however, some secret wine societies do possess and display many of the characteristics and behaviours of the best known secret societies, such as the Freemasons. Armed with this knowledge, wine marketers are able to exploit the characteristics of secret societies and target market segments with precision. The study further finds that gaining an understanding of secret societies such as how they work and why people join, can enhance marketing strategies in three key ways: (1) secret societies can provide ready-made communities where their members are identifiable (2) secret societies can offer finely targetable market segments; and (3) secret societies can act as unique focussed distribution channels.
Paper 2: The effect of attitude toward advertising and blog skepticism on innovativeness and exploratory purchasing behaviour: A study of wines

Citation: Hall, D., Caruana, A. and Vella, J. [2016]. The effect of attitude toward advertising and blog scepticism on innovativeness and exploratory purchasing behaviour: A study of wines. Journal of General Management (forthcoming)

This paper addresses Research Question Two.

Purpose: This study examines the provision of information from firms and influential consumers (opinion leaders) to consumers in the context of the persuasive information mediums of advertising and blogs together with an analysis of the impact of this information provision on consumer innovators and those consumers with a tendency for variety-seeking or exploratory purchasing behaviour. The study also continues with the secondary concept of secrecy that was introduced in Paper One as consumer innovators can be viewed as ‘gatekeepers’ of the secret. The study looks at whether certain demographic factors such as gender, age and education level effect innovative behaviour.

Contribution: The study provides an interesting advancement to the literature relating to advertising scepticism (Obermiller and Spangenberg, 1998), blog scepticism (Van Heeren et al., 2009) and consumer innovativeness (Goldsmith and Hoeflecker, 1991).
The study found that attitude toward advertising was positively related to innovativeness but not related to exploratory purchasing behaviour. This finding indicates that consumers with a more positive attitude towards wine adverts are more likely to experiment and talk about the advertised wine within the consumer community. Wine blog scepticism was found not to be related to either innovativeness or exploratory purchasing behaviour, suggesting that wine adverts have more effect on consumers than blogs. The study also found that age is also significantly and positively related to innovativeness, indicating that consumers above 55 are more likely to experiment with new wines but at the same time not be positively influenced by wine adverts.
Paper 3: Frequency effects: How the price-quality heuristic correlates with rates of product consumption


This paper addresses Research Question Three.

Purpose: The purpose of the study is to examine how consumers process product information, including intrinsic and extrinsic product attributes, across different levels of weekly consumption amounts and product pricing points and how this information affects their choice behaviour. The study provides important implications for marketing managers and policymakers.

Contribution: The study provides an interesting advancement to the dual-systems Theory of Cognition (Frankish, 2010; Kahneman, 2003; Kahneman, 2012; Morewedge and Kahneman, 2010). The study finds that consumers process information about information-intensive products by using mental shortcuts, or heuristics to cope with this level of information. Although there have been numerous prior studies relating to the price-quality heuristic, the marketing literature on cue-conditioning appears silent on the issues of whether and how price cues may escalate or diminish experienced utility with increasing rates of consumption. The study contributes to the novel finding
of a two way affect relationship between consumption rates and the way consumers respond to price information.

The study finds evidence for sighted-based tests; ‘System 1’ automatic perception judgement errors accrue and increase progressively with consumption. However, for blind-based tests, affect was observed to be stronger for lower consumption rates.

This study suggests that on blind and sighted tastings, expensive products are preferred across all bands of consumption. The study shows how knowing without knowing becomes merely a function of a memory conditioned by ever increasing rates of consumption to recognise and appropriate cues as they appear to be helpful to situations potentially requiring interpretation. The findings appear to corroborate the position that intuition is nothing more and nothing less than recognition. The apparent secret of intuition is reduced to the everyday experience of memory.

This paper addresses Research Question Four.

Purpose: The purpose of this paper is to consolidate the three previous papers relating to consumer information search and consumer processing of that information, which results in objective consumer knowledge. Taking objective consumer knowledge, together with frequency of consumption and timing of consumption (ontology); the study proposes a new way to segment the luxury wine market based on these dimensions. By focussing on the luxury wine market, the paper continues with the theme of examining secrecy and scarcity as luxurious wines can be considered both scarce (due to their high price) and secret (due to product complexity and lack of general consumer awareness).

Contribution: The paper provides an interesting advancement to the literature on wine marketing and marketing strategy by adding to the AO Framework (Berthon et al., 2009). The AO Framework is a conceptual framework which segments the consumers of luxury products and services into four distinct types. This is the second study, after Reyneke et al., (2011) to
provide a practical application of the AO Framework and the first study to segment the luxury wine market based on the concepts of objective consumer knowledge, consumption frequency, aesthetics and ontology.

The next section of the thesis covers in further detail the contribution of each research question.
1.6 Theoretical Contribution of the Thesis

This thesis provides several interesting advancements in marketing and consumer behaviour research with particular relevance to the area of wine marketing research. Four interesting advancements in knowledge are highlighted below.

Providing a new basis for segmenting the luxury wine market

The thesis provides a new way of segmenting the luxury wine market based on objective consumer knowledge, consumption frequency, aesthetics and ephemerality. Segmenting the luxury wine market in this way provides marketers with a useful tool to target each consumer type more accurately. The findings contained in Paper Four build on the AO framework (Berthon et al., 2009) which provides a theoretical model for the segmentation of luxury goods and services in general. The hierarchical clustering procedure extracted four clearly identifiable types of consumers that map the four consumer typologies of the AO framework. With only one previous study identified that applies a practical application of the AO framework (Reyneke et al., 2011), Paper Four extends this work to specifically focus on information-intensive products, in this case, luxury wines. Although there have been previous studies on the segmentation of the wine market, there has not been a study based on the segmentation of the luxury wine market incorporating objective wine knowledge and ephemerality and this study seeks to fill this gap.
Discovering that secret wine societies are not that secret

The findings contained in Paper One contribute to the research relating to consumer information search behaviour by introducing the concept of secrecy and scarcity of information into this literature stream. The study finds that: (1) the extent of secrecy among secret wine societies varies considerably, (2) that secret wine societies possess and display some, if not all, of the characteristics and behaviours of the best-known secret societies, (3) some of the functions and characteristics of well-known secret societies transfer well into secret wine societies, and (4) many ‘secret’ wine societies aren’t actually that secret, therefore removing the spectre of secrecy of these secret wine societies.

The price-quality illusion can be explained by human conditioning

Paper Three contributes to the literature relating to consumer information processing and choice behaviour by finding that: (1) consumption rates do affect the way consumers respond to price information, which can lead to price-errors in both sighted and blind tasting assessments, (2) that price-based (System 1) judgement errors accrue and increase progressively with consumption, which is also evident across a span of consumption bands, (3) blind-based assessments also demonstrate a positive, but weaker, affect across all consumption bands; but with this affect shown to be at its strongest at the minimal rate of consumption, and (4) the coupling of these two dynamics is a novel finding in consumer behaviour research.
Innovators are more influenced by wine advertising than wine blogs

Paper Two contributes to the literature relating to consumer information search behaviour by finding that Attitude toward Advertising is positively related to Innovativeness but not related to Exploratory Purchasing Behaviour. This finding indicates that consumers with a positive attitude towards wine adverts are more likely to show interest or talk about the advertised wine with their peers. This finding also contributes to the literature relating to Advertising Scepticism (Obermiller and Spangenberg, 1998, 2000), Innovativeness (Engel, Blackwell and Miniard 1986; Gatignon and Robertson 1985; Midgely and Dowling 1978; Wilkie 1986) and Exploratory Purchasing Behaviour (Van Trijp et al., 1996). Blog Scepticism was found not to be related to either Innovativeness or Exploratory Purchasing Behaviour, thus extending the work of Van Heerden et al., (2009). This finding suggests that wine adverts have more effect on consumers than blogs.

With respect to demographics, the study found that only age was significantly and positively related to Attitude toward Advertising, and that there was no significant relationship observed for the other two demographic variables of gender or education on Attitude toward Advertising, Blog Scepticism, Innovativeness and Exploratory Purchasing Behaviour. Furthermore, the relationship between Attitude toward Advertising and age only existed for respondents between the ages of 35 and 54. This finding is in contrast to that reported by James and Kover (1992) who suggest that Attitude
toward Advertising has no significant interrelationship with age, education and gender.

This section of the thesis has provided a summary of the contributions of the published papers and provides an extension of the literature relating to consumer information search behaviour, focussing on information-intensive products. The next section focusses on some interesting managerial implications.
1.7 Managerial Implications

Several implications for marketing managers of information-intensive products, particularly in the wine industry and beverage and food sectors emerge, from the thesis.

Segmenting the luxury wine market by clustering consumers

The thesis proposes a new basis for segmenting the luxury wine market by using a hierarchical clustering procedure. The clustering procedure extracted four consumer types which appear to map the AO framework (Berthon et al., 2009), see Figure 1.2 below. This finding has potentially important implications for marketers of luxury wine and other luxury goods and services by segmenting consumers of information-intensive products along the dimensions of objective knowledge, the timing of consumption and the frequency of consumption.
Figure 1.2
Segmenting the luxury wine market by consumer clusters

The following clusters and description of each consumer type is described as follows:

Source: Berthon et al., (2009)
Cluster 1 consumers (‘The Postmodern’)
Cluster 1 consumers exhibit comparatively average levels of wine consumption, lower objective consumer wine knowledge, average to lower aesthetics but very high ephemeralitiy. While within the AO framework this cluster might most closely fit the description of the Postmodern, it is probably fairer to say that these consumers know little about wine and consume it in average amounts, mostly for special occasions or to drink in the moment.

Marketing strategies targeting these consumers could be to position the wine brand as the latest ‘hot thing’. Positioning will need to emphasize the high price tag of the wine and the consumer status of being seen to drink the wine. In addition to brand positioning and awareness for the purchaser, another implication that marketers will need to be aware of is the idea that Postmodern consumers also find the approval of other consumers in the market to be highly important. This will indicate the need to position the brand in a wider market context to encompass a form of elite social and conspicuous acceptance of the product.

Promotion should focus on advertising in high class lifestyle magazines such as Vanity Fair or GQ, rather than the specialist wine magazines of Decanter or the Wine Spectator. The wine brand should be positioned alongside articles about the lives of celebrities to form an association with the conspicuous nature of the modern day celebrity culture. Marketers may also appoint celebrity endorsers to promote the wine brand, or pay for product placements in films. Cluster 1 consumers have a tendency to consume the wine to celebrate a special occasion, so advertising in other magazines that
focus on special events such as weddings, anniversaries or festive occasions may also be beneficial.

Rather than using mass media distribution channels, distribution should be controlled, but not to the extent that it excludes the uneducated as all they require is the enough money to purchase the wine regardless of wine knowledge or appreciation. Effective distribution can be achieved by making the wine available at exclusive outlets, restaurants, events or certain clubs.

Price is a potential issue as it will need to be sufficiently high; otherwise there is a risk that the wine will lose its conspicuous appeal for these consumers.

Packaging and branding will also be relevant as the consumer will place importance on the need for the product to be easily recognizable by others as a status symbol. The focus of Cluster 1 consumers is on surface properties of the product, or what’s on the bottle rather than what’s in the bottle. Cluster 1 consumers may exhibit little brand loyalty and could easily switch brands or substitute wine for another ostentatious drink such as champagnes, a rare vodka or a well matured and distilled whisky.

*Cluster 2 Consumers (‘The Wabi sabi’)*

Cluster 2 consumers exhibit high wine consumption frequency, high objective consumer wine knowledge, high aesthetics and high ephemerality. While within the AO framework, this cluster would most closely fit the description of the Wabi sabi, it is probably more objective to describe these consumers as knowing and a lot about wine, consuming it often and when it pleases
them. For targeting Cluster 2 consumers, marketers may want to position their wine brand at the pinnacle of the ephemeral experience.

Product advertising may be less relevant than for Cluster 2 consumers, as wine experts will already be knowledgeable about the wine. Rather than focus on informational content, the advert will push the ephemeral message and highlight connotations of personal pleasure. This advertising could target lifestyle magazines but draw out the experiential dimension of consumption.

Distribution channels could be achieved through wine club membership, exclusive waiting lists or high end retailers. In terms of pricing, it may be that Cluster 2 consumers are less concerned about how expensive the wine as they will be able to see beyond the price tag. Similarly, packaging and branding will be less important as they will be able to determine what wine constitutes a quality offering.

The whole consumption experience will be important and may not be confined to the physical product properties but include wider considerations such as where the wine is drunk, the way the wine uncorked and poured into the glass as well as the quality of the glass. The implication is that restaurant staff that stock and serve a particular luxury brand of wine should be highly trained to possess a good understanding of the physical and aesthetic properties of the wine together with knowing the optimal conditions in which to drink the wine as they will be a key input into the wider consumption experience. These staff members in effect will need to be ambassadors of the wine brand as the
winy or distributor does not necessarily have control over this experience in the restaurant.

**Cluster 3 Consumers (‘The Modern’)**

Cluster 3 consumers exhibits high wine consumption frequency, high to average objective consumer wine knowledge, high aesthetics but low ephemerality. This consumer cluster would most closely fit the description of the Classic within the AO framework. However it might be more simple and accurate to describe them as knowing a lot about wine, and while wine is consumed frequently, there is also a cautious time element to this group. They might also keep special wines, or delay their consumption.

For targeting Cluster 3 consumers, the marketer may want to position the product and emphasize the enduring feature of the wine. Promotional messaging may require information, not necessarily about the content of the wine, but rather the benefits of keeping the wine. Tasting notes could prove a useful as well as blogs from wine experts.

Distribution channels might be provided through granting opportunities to meet the wine producer, visits to the winery and special tasting events (Lockshin and Knott, 2009). Packaging will be important to enable preservation of the wine, branding will need to emphasize the heritage of the wine.

**Cluster 4 Consumers (‘The Modern’)**

Cluster 4 exhibits low wine consumption frequency, low objective consumer knowledge of wine, low aesthetics and low ephemerality. With reference to the AO
framework, this cluster would most closely fit the description of the “Modern”. However it would probably be fairer to describe these consumers as not knowing a lot about wine, and not consuming much of it either. Cluster 4 consumers will tend to have a high aesthetic appreciation of wine together with a preference to want to keep, rather than consume the wine.

For targeting Cluster 4 consumers, the marketer may want to position the product to appeal to the enduring nature of the wine but will also need to be aware of the low knowledge base of the consumer. Communications may focus on providing information about the wine at the point of sale. Including wine ratings and awards that the wine has won on the packaging will be important.

Distribution will need to include a well-informed, educated sales force that can highlight the benefits of keeping the product and how storage conditions should be made optimal, so again packaging and bottling will be important (Boudreaux and Palmer, 2007). Pricing will need to be high enough to satisfy the conspicuous appeal of the product to the consumer. Due to not knowing too much about the wine, Cluster 4 consumers will possess low brand loyalty, so marketers will need to work extra hard to keep their brand innovative. However, repeat purchases will be less likely given the inclination to keep than consume the wine.

Segmenting the wine market by consumer innovativeness

The thesis also suggests another way for marketers to segment the wine market according to type of wine consumer based on their propensity to be product
innovators. Identifying consumers that are more open to trying new wine varietals or brands will be useful as wineries can target those consumers who are more likely to adopt the new product offering. Wine marketers should also find ways to encourage new adopters to diffuse their experience of the product through word-of-mouth or other communication tools such as blogs. Furthermore, given the evidence around product involvement, innovation and heavy use (Goldsmith and d’Hauteville, 1998); wine marketers should also look at deals, promotions and coupon offers and direct these campaigns towards innovators. Identifying, targeting and motivating innovators through the right marketing communications mix may be crucial to the success of failure of a new product launch.

**Implications for advertising and consumer innovativeness**

The thesis provides evidence that advertising influences innovators more than blogs, so where the consumer has a positive attitude toward advertising, advertising should be used to launch new products.

Those firms looking to launch new products should also target consumers aged 55 and above. Older consumers are more likely to be wine innovators, so marketers should consider tactics to make these consumers ‘brand champions’ of a new product. Firms could offer introducer discounts and find other ways that encourage these types of consumer to spread positive word of mouth about the new product (Dodd, 1997; Foxall, 1984).
Bruwer and Johnson (2010) found evidence to suggest that wine is an experiential product which means that if experience is the key product attribute for wine, (Nelson, 1970; Darby and Karni, 1973); then advertisers should focus on trying to get the experience of drinking the wine across more prominently in the adverts. However, wine marketers will have to work extra hard to do this given the body of research that supports consumers being more sceptical of experience attribute goods than search attribute goods (Ford et al., 1988).

**Implications for customer demographic targeting**

A further managerial implication relating to advertising is that middle-aged consumers of wine (35-54), have a more positive attitude to advertising. As the thesis found evidence that older consumers generally respond less favourably to adverts, marketing managers should factor these considerations into their audience targeting.

Wine marketers may also want to examine using other sources of product information than advertising. If attitude toward advertising has a negative effect on consumer innovation, then wine marketers should look at other ways to provide information about their wine other than advertising. Obermiller and Spangenberg (2000) looked at four sources of product information including adverts, salespeople, friends and consumer reports and found evidence that consumers were less distrustful if the source of product information was from a friend or consumer report. Firms could use information that contains the features of both friends and consumer reports rather than ‘hard sell’ advertising.
Increasing consumption rates lead to increased price-error judgements

The thesis found that increasing consumption rates lead to increasing price-error judgements, especially for sight-based assessments. This finding has potentially important implications as firms that are able to encourage consumers to increase consumption rates of their product will find it easier to increase price. This could be achieved through the bundling of products as a way to increase consumption.

Another way for managers to create higher levels of consumption would be to offer free product trials to the consumer. This will not only increase the consumption levels for existing consumers of the product, but also make future price increases easier. This is because the act of providing for “free” would not have the same effect of a reduction in price, as the consumer would be more likely to interpret the free product as a gift. This tactic could allow the firm to maintain high price levels without compromising price.

Firms may also look to encourage blind-based tasting experiments for their products and advertise these through mass-media channels. This could be effective as blind-based assessments, especially at the lower end of consumption levels, create a surrogate quality effect. Furthermore, although blind-based judgement errors decline with increasing levels of consumption, they do not correct the sight-based errors, but rather reinforce these judgement errors.
Managing communication of higher prices and product quality considerations

A further implication for management related to the price-quality illusion is that firms may face a dilemma of exactly how to communicate the high price of the product to the consumer without detracting from the perceived quality of the product. On the one hand, the firm will want to make the high price easily discernible so that the consumer is more likely to associate the high price with product quality, but if the high price is too obvious, or not discreet enough, this could create the perception of a lower quality ‘bargain’ product. Management will need to balance this consideration into their price communication strategy.

Marketing implications of secret societies

The thesis explored the characteristics of secret societies and wine societies and provided some potential lessons for marketers of secret products. The study found that secret societies can be valuable for three reasons: (1) they provide ready-made consumer communities, (2) they offer finely targetable market segments, and (3) they act as unique distribution channels.

Ready-made consumer communities

McAlexander et al., (2002) view ready-made consumer communities as fabrics of relationships built around brands, including those between the customer and the brand, the customer and the firm, the customer and the product in use, and among fellow customers. Examples of some well-known brand communities are those
surrounding Harley Davidson, Jeep and DeWalt power tools. As secret wine societies share many of the key traits that characterize strong brand communities, astute wine marketers should understand these and employ them in their marketing strategy. Similar to brand communities, secret wine societies will vary not only between the strength of the connections between their members but also in their adherence to a particular wine region versus wine in general. Wine marketers will realize that their success within wine societies will not rely so much on products and their positioning, as on the shared consumption experiences members have with their offerings. Consequently, members are more likely to act as missionaries for the wine styles and brands they encounter in their societies and to proselytize to other consumer groups.

*Segmenting the wine market and fine tuning marketing strategy*

Secret wine societies offer wine marketers the possibility for very fine-tuned marketing strategies and market segmentation opportunities. For example, Bordeaux producers know that in The Commanderies’ members they have an identifiable, easily reachable group of customers strongly dedicated to their offerings. Their counterparts in Burgundy appreciate that the members of La Confrérie not only love consuming their products but also look for special occasions to do so, accompanied by rituals, pomp, and ceremony. Creative wine marketers will be able to tap into these. By offering these select (secret) consumers something that ordinary wine purchasers cannot obtain, they make membership of these societies even more valuable.
More generalist wine societies such as The Wine Society are able to offer targeting opportunities to a broader range of wine marketers. By relying heavily on database marketing, these generalist societies are able to provide information to wine marketers at a fine-grained level, such as who buys what, when, and how; so that special offerings can be targeted directly at these members. Furthermore, both secrecy and scarcity come into play as a key value of membership is to be able to communicate to others that they had access to offerings not available to ordinary consumers or outsiders.

Unique distribution channels

Wine societies also offer significant distribution advantages to wine marketers. This is especially true for big national societies such as The Wine Society. These institutions purchase in significant bulk, and smaller producers in particular might find it worthwhile to use them as outlets for their entire production. Rather than distribute through a multitude of smaller outlets and longer channels, smaller producers can advantageously build alliances with societies who in turn will do much of the marketing work for them. Lower margins will be offset by lower marketing and logistics costs if managed well.

This section of the thesis has provided marketers of information-intensive products, wine marketers and wine producers with an understanding of the implications of the research and recommendations for firms that stem from the research. The next section provides suggestions for future research streams.
1.8 Suggested Future Research

Suggestions for the future direction of research are based on the findings in each published paper. Where possible, gaps in the extant literature have been identified and interesting research topics, worthy of future exploration, are described.

*Paper One* analysed secret societies and wine societies and undertook a comparison exercise to understand the similarities between these two types of societies. Suggested further research in this area could take the following direction:

**Extending the research into brand communities**

Marketing scholars and academics have long been aware of the potential of brand communities. McAlexander et al., (2002) view these social groups as fabrics of relationships built around brands, including those between the customer and the brand, the customer and the firm, the customer and the product in use, and among fellow customers. It would be interesting to extend the study of secret wine societies into these brand communities to analyse similar characteristics that might exist. Examples of brand communities could be taken from well-known communities such as Harley Davidson, Jeep and DeWalt power tools for example.

**Understanding further how marketers exploit secret societies**
A further study could build upon the comparable characteristics made in this study and understand how marketers manipulate these characteristics and fine-tune their target marketing strategies to gain the benefits of focussed distribution opportunities, thus providing a more practical stream of research to the literature.

Measuring consumer reaction to secrecy

According to Reactance Theory, introducing secrecy to a consumer will limit their freedom of choice resulting in a positive desire for the secret. However, no research has been conducted to date that analyses this effect for secret societies, rather than secret products or brands. It may be that secret societies have special characteristics from secret products that make the applicability to Reactance Theory somewhat different.

*Paper Two* analysed the relationships between the four constructs of Attitude toward Advertising, Blog Scepticism, Innovativeness and Exploratory Purchasing Behaviour. Potential directions for future research in this area could include:

Further understanding consumer innovativeness in other wine consuming markets

*Paper Two* examined only wine consumers based in the US. The US is a relatively new consumer wine market, especially when compared to the more established wine markets of Europe. Velikova et al., (2015), further reports that wine knowledge is country-specific. Because wine plays a different role in the cultures of different
nations, it would be interesting to conduct a comparative study and further understand wine consumers based in different countries. Further research could examine the extent of innovativeness and exploratory purchasing behaviour of wine and how it relates to advertising and wine blogs in those countries.

**Further understanding the relationship between blogging and advertising**

Paper Two treated the constructs of advertising and blogging separately. Further research could be conducted to examine the relationship between advertising and blogging of other information-intensive products and whether writers of these blogs are affected by adverts and/or whether this impacts the blogs that are published. It may also be the case that some blogs contain advertising. It would be useful to understand potential interactions between advertising and blogs together with the effects on consumer innovativeness and exploratory purchasing behaviour.

*Paper Three* dealt with studying the effects of increasing consumption rates on the price-quality illusion, where price can be viewed as an impersonal barrier to a consumer’s freedom of choice. Further analysis to understand the price-quality illusion link could take the following forms.
Understanding the constituent characteristics of consumption frequency effects

Further research could be undertaken to refine the constituent characteristics of the frequency effects identified in the study conducted in Paper Three. Whilst the study observed such frequency effects to manifest within a range of lower priced products (orange juice, coffee and wine), the research could also be extended to include higher priced points as well. By undertaking this study, price could be established across a range of commonly consumed goods and across the spectrum of pricing points to include not just food and beverage staples but also luxuries as well. Furthermore, these effects should also be contrasted between domains of private versus business consumption and a further contrast could be between the consumption of product versus services.

Undertaking further cue studies

A further direction of future research could be to conduct further studies into analysing how consumption frequency effects manifest cue situations where the interaction of cues like brand, price and country of origin could be contrasted with single cue studies like the one conducted in Paper Three. This would contribute to understanding further frequency effects. In Paper Three, the focus of the study was on considering price as an extrinsic cue, but it may also be the case that other extrinsic cues such as the brand of the product will also act as a surrogate for quality (Aaker and Keller, 1990; Jacoby et al., 1971), or alternatively looking at studies involving a multi-cue environment where price and
brand are considered together in the context of increasing consumption rates.

**Understanding price anchoring in further detail**

It would also be worthwhile exploring the nature of anchors more fully. Sugden, Zheng and Zizzo (2013) recently observed that anchoring effects might only be present when the anchor value is framed as a plausible price for the good for which the individual is a potential buyer or seller. Their study contends that while anchoring effects can affect market behaviour, not all anchors are effective. It may also be worthwhile to understand more the psychological link between anchoring and decision making.

*Paper Four* looked at segmenting consumers of wine based on a hierarchical clustering procedure into four segments which largely mapped the AO framework (Berthon et al., 2009). Further research arising from this study could take the following directions.

**Understand the interrelationships between consumption and ephemerality**

It would be worthwhile to understand the interrelationships between consumption, ephemerality and the occasion. It may be that a dual relationship exists between a consumer drinking wine to mark the occasion on the one hand, and on the other, it is reminiscing over the act of drinking a great wine that creates an ephemeral occasion in itself.
Understanding the frontier between consuming and investing

The AO framework assumes that the individual is a consumer; however, it may be that where a consumer is motivated to keep a wine, this decision is not based on a function of consumer utility but based on a motivation to gain financially from keeping the wine. Building on the work of Shafir and Thaler (2006), it may be that a consumer-investor frontier can be observed and that a ‘tipping-point’ exists between an individual as a consumer to that of an investor of wine.

Extension into subjective knowledge

Given recent evidence to suggest that objective and subjective knowledge are related (Vigar-Ellis et al., 2015b); it would be worthwhile to extend the study to incorporate a measure of subjective wine knowledge in addition to objective wine knowledge to produce a more rounded study that incorporated both of these components of consumer knowledge.

Finally, opportunities to add to the consumer information search and information processing literature could include:

Further understanding the link between product involvement and consumer search behaviour

There is an opportunity to build on the research relating to consumer search behaviour and product involvement rather than on objective product knowledge. This could also extend to understanding the differences in how consumer search behaviour differs between
‘information-simple’ products versus ‘information-complex’ products.
1.9 Conclusion

Having identified from the emergent research a gap in marketing and consumer behaviour research relating to consumer information search, consumer information processing and choice behaviour in the context of information-intensive products, this thesis seeks to contribute to addressing this research gap. Prior studies in consumer information search have tended to focus on the search element, the information processing element or the choice element, but few have attempted to tie the wider consumer process together to take a more holistic view. In the interests of containing the ambition of the thesis, the focus has been concentrated towards information search and processing rather than incorporating purchase decision behaviour – perhaps the natural continuation of this thesis. The thesis further seeks to contribute to the gap in research relating to complex, or information-intensive products, as prior research has again tended to focus on either less complex products or services.

The thesis employs a number of underpinning theories and frameworks to answer each research question, where each research question contributes to answering the over-reaching research problem. Combining the findings of each of the research questions, the thesis culminates in proposing a new way for firms to segment the luxury wine market based on consumer objective knowledge, consumption timing and consumption frequency.

The study provides several recommendations for wine marketers, but also has wider implications for marketers
of other information-intensive products, so will be of interest not only to academics, but also to marketing practitioners, consumer behaviourists and the food and beverage industry.

Chapter One therefore provides an overview of the four papers and provides a clear connection between the research papers, the research questions and the research problem. In addition, the purpose and contribution of each research paper was discussed and highlighted. The four published research papers are provided in the Appendix.
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Appendix – The Published Papers
Paper 1

The secrets of secret societies: The case of wine

Daniel Hall, Leyland Pitt and Asa Wallstrom

Published in
Business Horizons 58
651-658
The secrets of secret societies: The case of wine

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Abstract

Secret societies have intrigued humanity since earliest times. In this article we explore secret societies in the context of wine and how these institutions might be insightful in formulating marketing strategies. We contrast the characteristics of secret societies with those of existing secret wine societies such as The Wine Society and La Confrérie. Yet while some of these functions and characteristics transfer well, many ‘secret’ wine societies aren’t actually that secret. Some of the characteristics of secret societies are also found in consumer brand communities. Armed with this knowledge, wine marketers can exploit the characteristics of secret societies to target market segments with precision and to gain the benefits of focused distribution opportunities.

Keywords: Wine marketing; Secrecy; Secret societies; Marketing strategy.
1. The secrecy of wine

President John F. Kennedy (1961) believed that the “very word ‘secrecy’ is repugnant in a free and open society; and we are as a people inherently and historically opposed to secret societies, to secret oaths and to secret proceedings.” Yet secrecy as a marketing tactic lies at the heart of many successful organizational strategies (Hannah, Parent, Pitt, & Berthon, 2014). And secret societies still flourish and continue to fascinate. The fact is that people love secrets, and marketers know this. Many successful marketing strategies have been grounded in secrecy, as shrewd strategists have exploited the fact that consumers want things more when they are denied the availability of information. Likewise, people are enthralled by the possible existence of secret societies—organizations to which they probably can’t belong, but that conceivably exercise some power that nonetheless engrosses them.

Producers, sellers, and consumers of wine have effectively employed secrecy in their marketing and consumption of the product for decades. Wine neophytes and connoisseurs alike revel in blind tastings in which participants not only attempt to judge the quality of a wine in a seemingly unbiased way, but also try to guess its origin, its cultivar(s), its vintage, and if they are really good or really lucky, its brand. Some restaurants encourage wine consumption by selling ‘secret’ or ‘mystery’ wines in covered bottles, and reward purchasers with a free bottle if they are able to correctly identify its country of origin and the varietal or the grapes in the blend. According to Hugh Johnson (2005,
p. 292), there is a difficult secret to being able to procure a bottle of Romanee-Conti, the fabled Burgundy:

Allocation is a form of commercial diplomacy used to leverage the value of something coveted to sell what is less coveted. No one can buy a bottle of Romanee-Conti alone—that is, without buying other wines. First you must be on the mailing list, which soon spawns a waiting list to get your name on the mailing list. Then comes an email warning: the offer is tomorrow: drop everything and stand by for the postman.

Given its nature then, it is perhaps not surprising that a large number of secret societies have sprung up around wine. Some are explicitly secret, at least in name, such as the The Secret Sparkling Wine Society and The Secret Sherry Society. Others, although the term ‘secret’ is absent in their titles, bear many of the classic traits of secret societies, including exclusive associations such as La Confrérie des Chevaliers du Tastevin (La Confrérie), The Commanderie de Bordeaux (The Commanderie), The Wine Society (TWS) in the UK, the Commanderie des Costes du Rhône (oddly, based in Philadelphia, not France), and the Opimian Society in Canada. Therefore, wine marketers face the challenge of understanding how these secret wine societies work—after all, the name suggests they might be a secret. Do they display the same characteristics as better-known secret societies such as the Freemasons and the Rosicrucians? Can a good understanding of how secret wine societies work and how members aspire to join and engage in them lead
wine marketers to enhanced marketing strategies? These are some of the questions we seek to answer.

We proceed as follows: First, we consider the notion of secrecy and why it appeals to consumers. Second, we discuss so-called secret societies in general and why they have intrigued humanity since the earliest times before briefly describing some of the better known secret wine societies and how they operate. Next, we probe to what extent these wine societies exhibit the common traits of most of the better known secret societies, and explore whether these might be useful to wine marketers in formulating strategies. We conclude with general remarks on secrecy and the notion of secret societies and their relevance to marketing.

2. Why consumers love secrecy

As Hannah et al. (2014, p. 52) noted:

The secret of using secrets in marketing seems to lie in the denial of an offering’s availability: When customers want something, and it isn’t immediately available, they may want it even more; when customers want to know something and the marketer tells them that it is secret and they cannot know it, they may want to know it even more.

This resonates with Cialdini’s (1993, p. 238) Scarcity Principle, which holds that “opportunities seem more valuable to us when their availability is limited.” Secrecy creates scarcity of information and denies its availability
to the individual. According to reactance theory (Brehm, 1966; Brehm & Brehm, 1981), when an individual’s freedom of action is threatened—such as being denied access or entry to a secret society—they do their best to avoid losing any further loss of freedom and attempt to restore whatever freedom has already been lost. The stronger the reactance or the more appealing membership of a secret society is perceived to be, for example, the more likely individuals will be to try to reconstruct their endangered freedoms (Brehm & Brehm, 1981; Wright, Wadley, Danner, & Phillips, 1992). From a marketing perspective this is very true, especially if marketers can persuade consumers that those freedoms are critical.

Of special importance to the notion of secret societies as a marketing issue is how the existence and sharing of secrets within a social group enhances social interconnection so that consumers then affiliate with the group that has to guard the secret(s). People are fascinated by secret societies for the very reason that they are secret. Not having access to what happens in secret societies makes them mystical, intriguing, and appealing. As Groucho Marx (1959, p. 321) reportedly telegraphed to the Friar’s Club of Beverly Hills to which he belonged: “Please accept my resignation. I don’t want to belong to any club that will accept people like me as a member.” As soon as one is in on the secret, it isn’t a secret anymore and consequently might lose its appeal.
3. The secrets of secret societies...And are secret wine societies really that secret?

3.1 Secret societies

The first serious academic study of secrecy and secret societies was undertaken by the sociologist Georg Simmel in the early 1900s. Simmel (1906) referred to the secret as the ultimate sociological form for the regulation of the flow and distribution of information, and described secrecy as the ability or habit of keeping secrets. If human interaction is conditioned by the capacity to speak, he writes, it is also shaped by the capacity to be silent. He defined a secret society as an interactional unit characterized by the fact that reciprocal relations among its members are governed by the protective function of secrecy. He argued that while secrets are largely unnecessary in small groups because members tend to be more homogenous, they are needed in large groups because there is far greater membership heterogeneity. An important feature of secret societies is that they are held together because they need to keep a secret. This causes anxiety because a secret society without a secret is not only not a secret society, it is not a society at all. Sharing a common secret allows for a strong ‘we’ feeling in a group. Secrecy works because if people insist on revealing all, life can become tedious and dreary. As Gross (2012) points out, Simmel connected the importance of secrets to the strategic use of ignorance, arguing that to get by socially, people need clearly defined realms of unknowns or ‘non-knowledge’ for themselves.
Simmel’s (1906) conceptualization of secrecy means that the secret itself has a protective function in a secret society, and this governs the relationships among its members. This protective function relies on two things: First, the secret society’s members want to guard the ideas, objects, and activities that they care about. Second, the secret society’s members affect this safeguarding by regulating the flow of information about the things that they care about. This is achieved by creating and maintaining a state of ignorance in people and the social environment outside of the secret society. The extent of the secrecy can range from keeping every aspect of the secret society secret—including its very existence—to acknowledging the existence of the secret society but keeping some of its facets secret—such as membership, activities, and objectives.

3.2 The most famous, notorious, most secret, and least secret secret societies

There are many secret societies in the world that have fascinated people for centuries, and probably many more secret societies that aren’t known and haven’t fascinated because they really are secret. As Simmel suggested, the ones we are aware of and that captivate us possess similar and common characteristics. We now briefly describe some of the world’s best-known secret societies. In Foucault’s Pendulum, Umberto Eco (1989) refers to a large number of well-known secret societies—some more imagined than actual—including The Knights Templar, The Rosicrucians, The Gnostics, The Freemasons, The Bavarian Illuminati, The Elders of Zion, The Assassins of

The Order of Skull and Bones (OSB), originally the Brotherhood of Death, was founded in 1832 at Yale University. Membership is restricted and supposedly uses masonic inspired rituals in its semi-weekly meetings. Membership is not secret—both Presidents Bush have been members—but the rituals have been kept secret. Among the many conspiracy theories surrounding the OSB is that it has been an incubator for the CIA, which of course has vehemently denied the accusation. The Grand Masonic Lodge, better known as the Freemasons, was founded in 1717 and conducts their regular meetings in a ritualized manner with membership at different levels. Symbolism, such as aprons, is frequently employed and members use signs and secret handshakes to identify themselves to each other and prevent outsiders from gaining access. Aspirants cannot simply apply for membership: they need to be nominated and supported by incumbents.

The Rosicrucian order, which originated in late-16th century Germany, is based on three documents: Fama Fraternitatis Rosae Crucis, Confessio Fraternitatis, and The Chymical Wedding of Christian Rosenkreutz anno 1459. The documents tell the story of a mysterious alchemist, Christian Rosenkreuz, who travelled the world gathering secret knowledge, a secret brotherhood of alchemists obsessed with political and intellectual knowledge, and an invitation to participate in the chemical wedding of a king and queen in a castle of
miracles. The large number of Rosicrucian groups today also have degrees of membership. The Ordo Templis Orientis (Order of the Temples of the East [OTO]) was originally modelled on the Freemasons, but under Aleister Crowley (the “Great Beast”) it adopted Thelema, Crowley’s religious system. This secret society uses highly stylized rituals; in addition, membership at various levels requires initiation.

Made famous in Dan Brown’s (2003) novel The Da Vinci Code, Opus Dei (Latin for ‘The Work of God’) is an organization of the Catholic Church, which paradoxically forbids secret societies and membership in them. It is made up of two groups of members: church officials who live in church accommodations and private members who live in their own homes. According to Brown’s novel, Opus Dei’s aim was to defeat the Priory of Sion, a famous but fictitious secret society.

The characteristics of secret societies as identified by Simmel, as well as taken from the descriptions of famous secret societies presented above, are summarized in Table 1. Next we present a description of five of some of the best-known secret wine societies, with their characteristics also listed in Table 1.

Table 1.
Characteristics of secret societies compared to secret wine societies

<table>
<thead>
<tr>
<th>Characteristics of Secret Societies</th>
<th>Examples in Secret Societies</th>
<th>Equivalents in Secret Wine Societies</th>
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<tbody>
<tr>
<td>Held together because they need to keep a secret</td>
<td>Most secret societies</td>
<td>Wine societies tend to have a common cause (e.g., promote</td>
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</table>
| Regulate the flow of information | Most secret societies | La Confrerie
The Commanderie |
|---------------------------------|----------------------|-----------------|
| A legendary founder            | Rosicrucians (Christian Rosenkreuz)
Order of the Temples of the East (Aleister Crowley) | International Wine & Food Society (Andre’ Simon)
The Commanderie (Henry Martin) |
| Extent of secrecy varies (e.g., membership not secret, rituals are) | Order of Skull and Bones | La Confrerie
The Commanderie |
| Membership is restricted        | Order of the Temples of the East
Opus Dei | La Confrerie
The Commanderie |
| Levels of membership           | Freemasons
Rosicrucians
Order of the Temples of the East
Opus Dei | The Commanderie (fees vary by region)
International Wine & Food Society (member of a branch, independent member, founder of a new branch) |
| Regular meetings               | Order of Skull and Bones
Freemasons | La Confrerie
The Commanderie
The Wine Society
Opimian
International Wine & |
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<th>Food Society</th>
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<tr>
<td>Rituals and behaviors</td>
<td>Order of Skull and Bones</td>
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<td></td>
<td>Freemasons</td>
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<td>Order of the Temples of the East</td>
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<td></td>
<td>La Confrérie</td>
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<td></td>
<td>The Commanderie</td>
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<tr>
<td>Symbols and Dress</td>
<td>Freemasons</td>
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<td></td>
<td>La Confrérie</td>
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<td></td>
<td>The Commanderie</td>
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<tr>
<td>Documents that espouse or state secrets</td>
<td>Rosicrucians</td>
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<td></td>
<td>Order of the Temples of the East</td>
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<tr>
<td></td>
<td>The Wine Society’s Constitution</td>
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<tr>
<td>Members need to be nominated</td>
<td>Freemasons</td>
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<td></td>
<td>La Confrérie</td>
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<td></td>
<td>The Commanderie</td>
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<td></td>
<td>The Wine Society</td>
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<td>Initiation Rites</td>
<td>Freemasons</td>
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<td></td>
<td>La Confrérie</td>
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<td></td>
<td>Opimian (merely an initiation fee)</td>
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<tr>
<td>Hidden Agendas</td>
<td>Order of Skull and Bones (CIA Conspiracy Theory)</td>
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<tr>
<td></td>
<td>Opus Dei (Defeat Priory of Sion)</td>
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</table>

### 3.3 Secret wine societies

While the Freemasons, with their secret rituals, symbols, and different secret handshakes, might indeed be very secretive, Teague (2012) notes there are a number of societies focused on wine that are almost as secretive.
Whether these secret wine societies really are that secret, however, is open to debate. As we will illustrate, the extent of secrecy within some of the best known ones really varies from one society to another. Some secret wine societies are focused on a wine region, such as La Confrérie des Chevaliers du Tastevin (Burgundy) or the Commanderie de Bordeaux (Bordeaux); some serve a particular country, such as The Wine Society (UK) or Opimian (Canada); and others serve a more general membership and a world audience, such as the International Wine & Food Society (IWFS).

La Confrérie has its own song that accompanies an evening of tasting fine Burgundies. It inducts new members in special ceremonies, and many aspirants have been known to be turned down for membership—which is by recommendation from another member in good standing and for which there is a 2-year waiting list. Applicants are required to pass an examination to demonstrate their wine knowledge, and to host a dinner at a club or restaurant at which they are expected to serve wines from their cellars. Members wear ceremonial robes (similar to university academic dress) and beribboned medallions to symbolize membership. Successful candidates are expected to pay an undisclosed initiation subscription and around $1,800 in annual membership fees.

The Commanderie (see http://www.commanderie.org/) originated in 1952 when Henri Martin, a key Bordeaux wine industry figure and then president of the Conseil Interprofessionel du Vin de Bordeaux, suggested that the various organizations either involved or interested in Bordeaux wines form an independent and separate entity. Each of these 15 brotherhoods was an association
of wine growers and traders that undertook maintaining local tradition, defending and promoting its wines, and communicating its own winemaking principles. Today there are around 75 Commanderies in 26 countries, some with regional chapters, under the overall patronage of the Grand Conseil in Bordeaux. Members meet regularly for dinners (called ‘parlements’) and other events in order to enjoy, discuss, and appreciate the wines of Bordeaux. Aspiring members apply to join a local chapter. Many are turned down and then have to apply to alternative chapters until they are successful. Members also wear ceremonial gowns and dress at meetings.

Although it has been referred to as the “secret society of Stevenage” (Grogan, 2007), not much is really secret about The Wine Society (TWS). TWS had its origins in one of the Great Exhibitions in 1874, when large quantities of wines dispatched by exhibiting countries to London went unsold. The organizers set up a committee to help dispose of the wines and quickly realized that excellent wine could be acquired and resold at very reasonable prices if the buying was done in bulk. TWS was consequently established with the aim of buying wines direct from growers to ensure their authenticity and quality and to offer them to members at fair prices (see www.thewinesociety.com). TWS is a co-operative with each member owning one lifetime share (costing £40). The value attributable to a share is not repayable during the lifetime of the member, and a share can only be transmitted to a third party or its value paid out on the death of a member. According to TWS rules, “Any individual aged eighteen years or over and any corporate body recognized by law may apply to become a Member of The Society.” While the rules state that no person may
become a member of TWS unless they have been nominated by a member and approved by the committee, “The Secretary ‘proposes’ those who don’t know an obliging member” (Grogan, 2007). Today the Society’s main facility at Stevenage occupies some 175,000 sq. ft. and stores around 4 million bottles of wine. In 2007 it boasted 90,000 active members who together spent more than £1 million a week on a list made up of 1,000 wines from 20 countries (Grogan, 2007). The Society holds regular tastings for members in various parts of the United Kingdom, and members can also attend its annual general meetings.

The Opimian Society is a Canadian wine purchasing cooperative established in Montreal in 1973 by a group of British expatriates exasperated by the selection of wines available in Canada. Membership is open to all consumers of legal age, and while members are rewarded for introducing new applicants, recommendation is not a requirement for membership. Members can order selected wines from the society and can attend regional tasting events and meetings. The society boasts annual sales in excess of $20 million, and its Tidings magazine is mailed to around 20,000 members. Annual membership costs $70, and there is a $40 initiation fee–although no mention is made of any kind of initiation ceremony (Porter, 2010).

The International Wine & Food Society (IWFS) was founded by Andre’ Simon in 1933 and at the time was the only association of gastronomic enthusiasts not associated commercially with the wine and food trade. Today it is the most widespread, independent gastronomic society in the world, with more than 130 branches reaching all continents, and more than 6,500
members (http://www.iwfs.org). Branches must meet the annual requirements of the central organization or lose their charter. Membership is open to all, and aspiring members can choose to join an existing branch, become an independent member not affiliated with any branch, or start a new branch. Membership fees vary between branches and there are no initiation rites, admission tests, or nominations required. Members attend regular food and wine events, partake in tours, use the society’s library, and receive the regular publications of the society.

4. Secret societies and secret wine societies: Commonalities and differences

As can be seen from Table 1, secret wine societies share many but not all of the characteristics of secret societies. Secret wine societies have a common cause, such as promoting the wines of a region, but aren’t held together because they need to keep a secret like secret societies. Some wine societies do regulate the flow of information (e.g., La Confrérie, The Commanderie), as do secret societies, by ensuring that the information is closely shared only among members. Like some secret societies (e.g., Rosicrucians, OTO), some wine societies are marked by the fact that they have a legendary founder (e.g., Henri Martin, The Commanderie; Andre Simon, IWFS). In some cases, membership of wine societies is restricted and even difficult to obtain. Just like secret societies, becoming a member of La Confrérie or The Commanderie relies on contacts, nominations and approvals, a long wait, and meeting many conditions. In
other cases, such as TWS, IWFS, or Opimian, membership is actually easy to acquire.

Like secret societies, some wine societies have different levels of membership; and like secret societies, all the wine societies considered have regular meetings of their members. The more secretive wine societies, such as La Confrerie and The Commanderie, also employ particular rituals and behaviors as well as symbols and modes of dress. However, these are absent in the case of more open societies such as TWS and Opimian. Similar to secret societies such as The Freemasons, the wine societies La Confrérie and The Commanderie hold initiation rites for members, but these are absent in societies such as TWS and Opimian. Some wine societies utilize a document—for example, TWS’s Constitution—but these are not really the same as the documents on which secret societies such as The Rosicrucians are founded. As far as can be ascertained, none of the wine societies are suspected of having hidden agendas—the stuff of which conspiracy theories in the cases of secret societies such as the OSB and Opus Dei are made.

In summary, the extent of secrecy among the secret wine societies varies considerably. Some are tightly held, difficult to join, and jealously guarded, as in societies like La Confrérie and The Commanderie. In other instances—for example, TWS and Opimian—membership is very open and very easy to obtain, despite the fact that TWS, for example, has been referred to in the media as being secret. Secret wine societies do possess and display some, if not all, of the characteristics and behaviors of the best-known secret societies, including legendary founders, restricted membership, initiation rites, regular meetings, rituals, symbols, and dress. Are these
characteristics useful to wine marketers who might wish to incorporate these supposedly secret wine societies into their marketing strategies?

5. Exploiting the marketing benefits of secret wine societies

Should wine marketers take note of secret wine societies despite the fact that there may be little behind their facades of secrecy? We contend that these institutions are valuable for three reasons: they provide ready-made communities, they offer finely targetable market segments, and they act as unique distribution channels.

Marketing scholars and academics alike have long been aware of the potential of brand communities. McAlexander, Schouten, and Koenig (2002) view these social groups as fabrics of relationships built around brands, including those between the customer and the brand, the customer and the firm, the customer and the product in use, and among fellow customers. They refer to well-known brand communities such as those surrounding Harley Davidson, Jeep, and DeWalt power tools. Their research on brand communities echoed their previous work on bikers on the Harley Davidson Posse Ride, whom they described as having “consciousness of kind, shared rituals and traditions, and sense of moral responsibility” (Schouten & McAlexander, 1995, p. 39). The secret wine societies described above share many of the traits that characterize strong brand communities. Therefore, astute wine marketers will understand these and employ them in their marketing strategy. As brand communities, secret wine societies will vary not only
between the strength of the connections between their members (e.g., ties might be much stronger between members of The Commanderie versus TWS) but also in their adherence to a particular wine region versus wine in general (e.g., La Confrérie versus Opimian). Wine marketers will realize that their success within wine societies will not rely so much on products and their positioning as on the shared consumption experiences members have with their offerings. Secret wine societies allow wine consumers to share wine consumption experiences with others. Furthermore, they provide unique opportunities to meet with the people behind wine brands not available to non-members. Consequently, members are more likely to act as missionaries for the wine styles and brands they encounter in their societies and to proselytize to other consumer groups. They will also be motivated to offer informed feedback to marketers.

Secret wine societies offer wine marketers the opportunity for very fine-tuned marketing strategies. Bordeaux producers know that in The Commanderie’s members they have an identifiable, easily reachable group of customers strongly dedicated to their offerings. Their counterparts in Burgundy appreciate that the members of La Confrérie not only love consuming their products but also look for special occasions to do so, accompanied by rituals, pomp, and ceremony. Creative wine marketers will be able to tap into these. Secrecy’s power comes to the fore: By offering these select consumers something that ordinary wine purchasers cannot obtain, they make membership of these societies even more valuable. This is not to say that more generalist wine societies such as TWS and Opimian don’t offer targeting opportunities to a broader range of wine
marketers—indeed they do. Both TWS and Opimian rely heavily on database marketing and are able to provide information to wine marketers at a fine-grained level—who buys what, when, and how—so that special offerings can be targeted directly at these members. Yet secrecy and scarcity come into play; a key value of membership is to be able to communicate to others that they had access to offerings not available to ordinary consumers or outsiders.

Wine societies also offer significant distribution advantages to wine marketers. This is especially true for big national societies such as TWS. These institutions purchase in significant bulk, and smaller producers in particular might find it worthwhile to use them as outlets for their entire production. Rather than distribute through a multitude of smaller outlets and longer channels, smaller producers can advantageously build alliances with societies who in turn will do much of the marketing work for them. Lower margins will be offset by lower marketing and logistics costs if managed well.

We have explored the nature of secrecy specifically regarding secret societies—mysterious groupings that have fascinated people over the centuries—because of what we know about them, what we think we know about them, and what we don’t know about them (and wish we did). We have focused on secret wine societies and compared their characteristics with those of secret societies. Some observers have attributed the characteristics of secret societies to secret wine societies. However, while these transfer in many cases, the reality is that secret wine societies are never sinister and are generally not that secretive. Yet these comparable
characteristics make for an interesting and useful marketing phenomenon. Astute wine marketers will exploit these characteristics and capitalize on the functions of brand communities to fine-tune their target marketing strategies and gain the benefits of focused distribution opportunities.

Secrecy is really well applied to wine. Wine is a mystery to most consumers, who have little confidence in their ability to tell what’s in the bottle as they stand dumbfounded before the crowded wine display in a supermarket, or puzzle over a restaurant wine list (Veseth, 2012). Many consumers simply buy the same wine every time, or drink beer. Others are adventurous and treat wine as the treasure in a hunt or a mystery they could solve if they only knew the secret. And if there is a secret society behind that mystery? Well, then the mystery becomes so much more compelling!
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from http://wakeup-world.com/2011/05/20/jfks-speech-on-secret-societies/


Paper 2

The effects of attitude toward advertising and blog skepticism on innovativeness and exploratory purchasing behaviour: A study of wines

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The effect of attitude toward advertising and blog skepticism on innovativeness and exploratory purchasing behaviour: A study of wine.

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Abstract

This paper investigates attitudes towards advertising and wine blog scepticism and their impact on consumer innovativeness and exploratory purchasing behaviour in the context of wine.

Data was collected from 225 respondents based in the United States. A 25-item instrument was used to capture the constructs of attitude toward advertising, wine blog scepticism, innovativeness and exploratory purchasing behaviour. The results of a multiple regression supported an effect of attitude toward advertising on innovativeness only. ANOVA tests examined the relationship with three demographic variables; age, gender and education and found only age significantly related to attitude toward advertising and innovativeness. Implications are discussed, limitations are noted and directions for future research indicated.

**Key words:** Attitude toward advertising, wine blog scepticism, innovativeness, exploratory purchasing behaviour, wine.
Introduction

The behaviours of wine consumers can differ. Some consumers will have an exploratory or variety seeking tendency and may gain utility from switching purchase of a particular wine brand in order to fulfil an exploratory consumption need (Orth and Bourrain, 2005). Other consumers will be more novelty seeking and want to be the first to try a new wine or be the early adopters of a new wine launched into the market.

Consumers are also able to receive information about wine from a variety of sources such as adverts or blogs. Wine blogs, in particular, have been growing in popularity. According to Yarrow (2016) there are 934 active online wine blogs, an increase of nearly 200 over the last four years. Furthermore, the types of bloggers can vary from professional consumer “tastemakers” such as Robert Parker, (Deighton, Pitt, Dessain, Beyersdorfer and Sjoman, 2006) to amateur enthusiasts.

This paper explores the relationships between the four constructs of attitude towards advertising, wine blog scepticism, innovativeness and exploratory purchasing behaviour and proceeds as follows. First, relevant literature is reviewed then measures identified and data collected from a sample of US resident consumers. Results are presented and analysed, conclusions are drawn and implications for managers considered. Limitations are acknowledged, directions for future research indicated and conclusions described.
Calfee and Ford (1988) proposed that the starting point to understand the effects of advertising is to assume that consumers do not trust advertising claims unless they have specific reason to trust them. There is evidence that consumers are sceptical of advertising and marketing (Barksdale and Darden, 1972; Calfee and Ringold, 1994; Gaski and Etzel, 1976). Friestad and Wright (1994) found that advertising in particular merits consumer scepticism as it is a special type of marketing information. Obermiller and Spengenberg (2000) found evidence that consumers were more sceptical of advertising than other sources of product information and indicated that distrust of advertising information may be related to a broader distrust of information controlled by marketing agents.

Darby and Karni (1973); Ford, Smith and Swasy (1988) and Nelson (1970) studied antecedents to advertising scepticism and found evidence that consumers are socially conditioned to be sceptical towards adverts. Similarly, Calfee and Ringold (1994) found that, over time, the majority of consumers do not believe adverts. MacInnis, Moorman and Jaworski (1991) observed that consumers adopt a disbelief coping response with advert claims by discounting the advertising message rather than expending the effort to process advertising information. Advertising scepticism can also be considered a marketplace held belief held by consumers (Moore-Shay and Lutz, 1988; Duncan, 1990). Obermiller and Spangenberg (1998) argued that advertising scepticism was a stable consumer characteristic for
responses to advertising. For those consumers who are sceptical towards advertising, Obermiller, Spangenberg and McLachlan (2005) found that they tended to like adverts less, relied on them less, found them less informative, less influential and less believable. Obermiller and Spangenberg developed a multi-item scale to measure advertising scepticism (SKEP) and defined this construct as “the tendency toward disbelief in advertising claims” (Obermiller and Spangenberg, 1998, p. 160).

Previous research indicates a relationship between advertising scepticism and demographics (Shavitt, Lowery and Haefner, 1998; Wang, Zhang, Choi and D’Eredita, 2002), although the results are mixed. Shavitt et al., (1998) found evidence that younger consumers held a more favourable attitude towards advertising relative to other age groups, including television adverts (D'Alessio, Laghi, Baiocco, 2009). Simpson and Licata (2007) observed that attitudes towards marketing efforts changes over an adult’s lifespan, where the negative change is mostly apparent in advertising. Similarly, Green (1999) and Grier and Brumbaugh (1999) found that older or more educated people responded less positively to adverts. Other research has indicated a positive relationship between age and attitude towards advertising (Derevensky, Sklar, Gupta and Messerlian, 2010; McKay-Nesbitt, Manchanda, Smith and Huhmann, 2011).

In terms of attitude towards advertising, Mackenzie and Lutz (1989, p.53) define this as “a learned predisposition to respond in a consistently favourable or unfavourable manner towards an advertisement in general”. Donthu and Gilliland (1996) reported a positive attitude towards
advertising for infomercial shoppers, where an infomercial is a “paid form of advertisements that lasts from 30 minutes to up to 2 hours and is aired during inexpensive media blocks” (Donthu and Gililand, 1996, p.69).

In relation to gender and attitude towards advertising, Robinson (1988) and Solomon (1996) suggested that females undertake the majority of shopping tasks in households, where Meyers-Levy and Sternthal (1991) found that women give greater consideration to advertising cues than men.

**Blog Scepticism**

Blogs, or web logs, can be defined as “websites owned and written by individuals who maintain regular commentaries and diaries that may include test, graphics and video links to other blogs, web pages, usually in reverse chronological order.” Van Heerden, Salehi-Sangari, Pitt and Caruana (2009, p.1). Blogs are considered to be an important component in marketing communications and in 2004 became mainstream although they did not appear to make an impression until 2006 (Benninger, Parent, Pitt and Chan, 2014).

Recent research relating to blog scepticism include Wang and Chien’s (2012) study of skepticism to blog product reviews and found that individuals were more sceptical about advertisements than blog product reviews. They also observed that the credibility of the persuasive message acted as a moderator between the influence of scepticism and the persuasive effect. Colucci
and Cho (2014) studied lifestyle tips and information blogs to examine factors important to Generation Y and observed that trust is built on judgments along the dimensions of content, design and the perception of a blogger.

Building on the earlier advertising scepticism work of Obermiller and Spangenberg (1998; 2000) and Obermiller, Spangenberg and McLachlan (2005); Van Heerden et al., (2009) developed a scale to measure the degree of scepticism a blogger holds towards blogs of others, called the ‘Blogging Scepticism’ scale. This scale can be used to measure the extent that readers of blogs actually believe what they read and to what extent they are sceptical about blog content and have been adopted in this study.

**Innovativeness**

One of the earliest definitions of innovativeness is provided by Midgley and Dowling (1978, p.236) who define innovativeness as “the degree to which an individual is receptive to new ideas and makes innovation decisions independently of the communicated experience of others.” Hirschmann (1980) includes an “inherent novelty seeking” element the definition, whereas Goldsmith defines innovativeness as a “willingness to try new things”. Rogers and Shoemaker (1971, p.27) define innovativeness as the “degree to which an individual is relatively earlier in adopting an innovation than other members of his system” which resonates with Tellis, Yin
and Bell’s (2009, p.2) definition as “a predisposition to buy new products”.

In addition to innateness, consumer innovation can be thought of as a domain specific construct describing the predisposition to buy new products in a specific category (Goldsmith and Hofacker, 1991); or where consumers that are the first to adopt a new product in one field may be laggards in another (Gatignon and Robertson, 1985). This is in contrast to a general predisposition toward the market and across product categories (Tellis et al., 2009).

More recently, Truong (2013) investigated innovativeness across cultures and found that consumer innovativeness and attitude toward innovation varied across perceived novelty, perceived value and perceived risk. Kaushik and Rahman (2014) conducted a systematic literature review of 101 articles on consumer innovativeness to provide insights for the future exploration of consumer innovativeness within a basic conceptual model. Goldsmith, Flynn and Korzenny (2015) studied brand engagement and innovativeness and observed a positive relationship which suggests that showing how a brand can express the self-concept of the innovator may also encourage its adoption. Finally, Couture, Arcand, Senecal and Ouellet (2015) investigated the impact of tourism-specific consumer innovativeness (domain-specific innovativeness) on their information search, purchasing, and communication behaviors on tourism websites and found that the behaviours of innovative consumers documented in traditional offline settings are also exhibited online.
Exploratory Purchasing Behaviour

Van Trijp, Hoyer and Inman (1996, p.9) define exploratory or variety seeking behaviour as, "the biased behavioural response by some decision making unit to a specific item relative to previous responses within the same behavioural category, due to the utility inherent in variation per se, independent of the instrumental or functional value of the alternatives or items". Van Trijp et al., (1996) further note that understanding variety-seeking behaviour in this way means that it is different from derived variety behaviour, which is activated simply by the instrumental or functional value of the alternatives (Givon, 1984; McAlister and Pessemier, 1982). Raju (1980) however makes a distinction between ‘risk-taking exploratory behaviour’ between unfamiliar products, versus ‘variety seeking behaviour’, where brand switching occurs between familiar alternative products. Baumgartner and Steenkamp (1996) and Steenkamp and Baumgartner (1992) found evidence that variety seeking individuals possess a high need for variety seeking. Bawa (1990) and Feinberg, Kahn, McAlister (1992) observed that exploratory purchasing behaviour is important for marketers as it can have consequences for both market share and brand loyalty as consumers will seek to switch brands for the utility of variety. Exploratory purchasing behaviour has been applied to the study of wine marketing, including wine purchases (Mitchell and Greatorex, 1988), information search processes (Dodd, Pinkleton and Gustafson, 1996) and the influence of ambient scents (Orth and Bourrain, 2005). Vigar-Ellis (2016) observed that wine knowledge...
types are a significant predictor of variety seeking purchasing behavior of wine.

**Hypotheses Development**

To understand the interrelationships between the constructs of attitude toward advertising, wine blog scepticism, innovativeness and exploratory purchasing behaviour a series of hypotheses were developed for testing.

Yang (2003) observed a link between attitude towards advertising and innovation in the context of internet users. In our hypothesis, we propose that consumers that demonstrate a more negative attitude toward advertising will be less innovative. A higher level of scepticism of the information contained in adverts may lead consumers to be less inclined to try a new product that is advertised. Similarly, consumers demonstrating a more negative attitude toward advertising will be less likely to exhibit exploratory purchasing behaviour. Accordingly, we hypothesise that:

**H1**: Consumers with a more positive attitude toward advertising will exhibit high levels of wine innovation.

**H2**: Consumers with a positive attitude toward advertising will exhibit high levels of wine exploratory purchasing behaviour.

Where a consumer is less sceptical about blogs, they are more likely to believe the content of the blog and be influenced by the messaging in a blog (Wang and Chien, 2012). It is hypothesised that low levels of blog scepticism will be associated with higher levels of
innovation as consumers seek to be the first to try a new wine recommendation from a blog. Similarly, low levels of blog scepticism will more likely lead to consumers seeking new varieties or different brands of wine if supported by the blog. We therefore hypothesise that:

\[ \textbf{H3}: \text{The higher the level of wine blog scepticism the lower the level of wine innovation.} \]

\[ \textbf{H4}: \text{The higher the level of wine blog scepticism the lower the level of exploratory purchase behaviour.} \]

**The Research Instrument**

A 25-item instrument consisting of four measures to capture each of the four constructs of the study was developed. In addition, respondents were asked to provide demographic information about their age, gender and education.

To measure attitude toward advertising, use was made of the 6-item measure of Donthu and Gilliland (1996). Although the Donthu and Gilliland study was conducted in the context of analysing infomercial shopping behaviour, it is accepted that this scale is generalizable to measure the construct of attitude toward advertising and also internally reliable, as their measure reported a Cronbach alpha co-efficient of .75, exceeding the .70 threshold (Nunnally, 1978).

Wine blog scepticism was captured using the 9-item measure developed by Van Heerden et. al., (2009). Their scale demonstrated a Cronbach alpha of .89, exceeding the .70 threshold (Nunnally, 1978), which
again provided internal reliability and further support for the measure.

Innovativeness was captured using the 6-item Domain Specific Innovativeness (DSI) scale developed by Goldsmith and Hofacker (1991). Goldsmith (2000) found evidence that the DSI scale performs well in identifying wine innovators. Rather than use the full 6-item measure, after preliminary testing, it was decided to drop two of the items to leave a 4-item scale.

Exploratory purchasing behaviour was captured using the 6-item exploratory consumer tendencies measure proposed by Van Trijp et al., (1996). Their scale reported a unidimensional structure and an alpha coefficient (Cronbach, 1951) of .79.

A survey was administered online using the MTurk platform. MTurk is a web based tool which researchers can utilize to recruit individuals to complete certain tasks such as surveys. There is prior acceptance and support for the use of MTurk to conduct social science experiments (Minton, Gurel-Atay, Kahle and Ring, 2013; Goodman, Cryder and Chema, 2013; Paolacci et. al., 2010; Buhrmester, Kwang and Gosling, 2011). When setting up the online survey, researchers are able to target a specific demographic by stipulating certain respondent requirements before they were allowed to complete the survey. MTurk allows a verification process to ensure that only the correct respondents are employed. Although respondents can be drawn across the globe, for simplicity, only US residents were considered. After three days, the survey was closed when 300 responses had been completed. Of these, 225 were identified as being valid, resulting in a useable response rate of 75%.
Two quality controls were employed against the completed surveys. The first measured the time each respondent took to complete the survey. Those surveys that took less than five minutes were rejected as the presumption was that respondents’ could not have read each question properly to complete the survey. The second control interspersed items into the instrument with a specific instruction for the respondent to follow, such as “answer 4 to this item on the 7-point scale”. Where respondents answered this question incorrectly, it was presumed that they had not carefully read the question and were not completing the survey properly. These surveys were also excluded. A third inbuilt quality control allows researchers to rate each respondent for the quality of their participation and report those that cheat or abuse the MTurk platform. This control should incentivise honest and diligent behaviour amongst respondents.

**Analysis and Results**

Out of 225 respondents, 61.3% were female, 44.4% where over 55 years old, 38.2% where between 35 to 54 and 17.3% were less than 34 years of age. 56% of respondents held a two or four-year college degree, 18.2% had higher and 25.8% had lower qualifications.

The data collected for the constructs together with their means and standard deviations. is shown in Table 1. For the construct exploratory purchasing behaviour, we reverse-scored item 6 on the scale so that a low score would indicate that a respondent exhibits a high tendency to make exploratory purchases. The 25 items
making up the constructs were subjected to a principal component factor analysis and varimax rotation. The results demonstrated that the items for each construct loaded separately and distinctly onto the four factors corresponding to the constructs; thus providing support for convergent and discriminant validity. Computation of Cronbach Alpha was used to determine the reliability of the measures which provided alpha values for attitude toward advertising (.84), wine blog scepticism (.88), innovativeness (.80) and exploratory purchasing behaviour (.92). These all exceeded the accepted threshold of .70 (Nunnally, 1978) providing support for the reliability of the measures.

Taken together, these results provide support for the psychometric properties of the measures used and that the respondent’s scores on the items making up these scales separately could be summed to produce overall scores so that their causal effect could be investigated.

Table 1
Descriptive statistics for measures used and results of Principal Components Factor analysis followed by varimax rotation

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertisements about wine provide useful information</td>
<td>4.40</td>
<td>1.25</td>
<td>.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually do not pay attention to advertising</td>
<td>3.75</td>
<td>1.60</td>
<td>.71</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am very aware of the publications and communications of well-known wine writers and critics such as Robert Parker.</td>
<td>2.79</td>
<td>1.53</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually do not pay attention to the publications and communication of well-known wine writers and critics such as Robert Parker about wine.</td>
<td>3.35</td>
<td>1.45</td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am very aware of internet blogs about wine</td>
<td>3.92</td>
<td>1.59</td>
<td>.68</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I usually do not pay attention to internet blogs about wine</td>
<td>3.63</td>
<td>1.54</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F1. Attitude Toward Advertising</strong></td>
<td><strong>21.84</strong></td>
<td><strong>6.68</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One can depend on getting the truth</td>
<td>4.80</td>
<td>1.01</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
in most wine review blogs.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wine blogging’s aim is to inform the reader</td>
<td>5.38</td>
<td>1.00</td>
<td>.74</td>
</tr>
<tr>
<td>I believe that most wine blogs are informative</td>
<td>5.03</td>
<td>1.17</td>
<td>.48</td>
</tr>
<tr>
<td>Most wine blogs are generally truthful</td>
<td>5.07</td>
<td>.88</td>
<td>.70</td>
</tr>
<tr>
<td>Wine blogs are a reliable source of information about the quality of wine.</td>
<td>5.11</td>
<td>.96</td>
<td>.85</td>
</tr>
<tr>
<td>Wine blogging is truth well told</td>
<td>4.61</td>
<td>1.08</td>
<td>.74</td>
</tr>
<tr>
<td>In general, wine blogs present a true picture of the wine and wine-related products they write about</td>
<td>4.83</td>
<td>1.15</td>
<td>.74</td>
</tr>
<tr>
<td>Wine blogs are about wine</td>
<td>4.90</td>
<td>1.12</td>
<td>.67</td>
</tr>
<tr>
<td>A reader can feel accurately</td>
<td>6.08</td>
<td>.51</td>
<td>.75</td>
</tr>
<tr>
<td></td>
<td>F2. Wine Blog Scepticism</td>
<td>15.25</td>
<td>4.94</td>
</tr>
<tr>
<td>-----------------------------------------------------------------</td>
<td>--------------------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>informed after reading wine blogs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F2. Wine Blog Scepticism</strong></td>
<td>45.80</td>
<td>6.39</td>
<td></td>
</tr>
<tr>
<td>In general, I am among the last in my circle of friends to buy a new wine when it appears</td>
<td>3.64</td>
<td>1.59</td>
<td>.76</td>
</tr>
<tr>
<td>If I heard that a new wine was available in a store, I would not be interested enough to buy it</td>
<td>3.50</td>
<td>1.50</td>
<td>.61</td>
</tr>
<tr>
<td>Compared to my friends, I own very little wine</td>
<td>4.21</td>
<td>1.66</td>
<td>.74</td>
</tr>
<tr>
<td>In general, I am the last in my circle of friends to know the latest wine</td>
<td>3.90</td>
<td>1.48</td>
<td>.76</td>
</tr>
<tr>
<td><strong>F3. Innovativeness</strong></td>
<td>15.25</td>
<td>4.94</td>
<td></td>
</tr>
<tr>
<td>I would rather stick with a wine</td>
<td>3.92</td>
<td>1.78</td>
<td>.85</td>
</tr>
<tr>
<td>Statement</td>
<td>Rating</td>
<td>Std Dev</td>
<td>Score</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------</td>
<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>brand I usually buy than to try something I am not sure of</td>
<td>4.39</td>
<td>1.62</td>
<td>.86</td>
</tr>
<tr>
<td>When I buy wine in a wine store, I feel it is safer to buy wines that I am familiar with</td>
<td>3.84</td>
<td>1.64</td>
<td>.83</td>
</tr>
<tr>
<td>If I like a wine brand, I rarely switch from it just to try something different</td>
<td>3.72</td>
<td>1.67</td>
<td>.80</td>
</tr>
<tr>
<td>I am very cautious in trying new or different wines</td>
<td>3.93</td>
<td>1.61</td>
<td>.82</td>
</tr>
<tr>
<td>Even though certain wine brands make wines from a number of grapes, such as merlot, cabernet sauvignon and shiraz, I tend to buy the same wine each time</td>
<td>3.36</td>
<td>1.53</td>
<td>.80</td>
</tr>
<tr>
<td>I enjoy taking chances in</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The effect of attitude toward advertising and wine blog scepticism on innovativeness was investigated using a regression with the latter variable as the dependent variable. Results of this regression provided a statistically significant effect ($R^2=.12; F_{(2, 222)}=15.04; p<.01$), with attitude toward advertising having a positive effect on innovativeness (Std $B=.35; p<.01$) but wine blog scepticism having no statistically significant effect. The procedure was re-run again to investigate the effect of attitude toward advertising and wine blog scepticism on exploratory purchasing behaviour. However, results provided no statistically significant causal effects. Taken together, these results provide support for H1 but not for H2, H3 or H4.

In order to explore the relationships between the demographic variables of gender, age and education with the four constructs of the study, a series of one-way ANOVA’s and independent sample t-test were undertaken. The ANOVA results indicate that both gender and education are not related to any of the four constructs while age is statistically significantly related to attitude toward advertising and innovativeness. The
most positive attitude toward advertising was exhibited by those aged 35 to 54 (M=22.96, sd=6.16), followed by those 55 and over (M=21.85, sd=6.90) and the least by those less than 34 (M=19.33, sd=6.67); (F(2, 222)=4.08, p<.05). In the case of innovativeness, those 55 and over exhibited the highest level of innovativeness (M=16.24, sd=4.79) followed by those less than 34 (M=15.95, sd=4.83) and those between 35 to 54 (M=13.789, sd=4.87) (F(2, 222)=6.44, p<.01).

**Key Findings**

In summary, the four constructs investigated in this study exhibited robust psychometric properties making analysis of the relationships between them possible. Attitude toward advertising was found to be positively related to innovativeness but not related to exploratory purchasing behaviour. This finding indicates that consumers with a positive attitude towards wine adverts are more likely to be receptive to new wines, seek novelty, try new wines and become early adopters of a new wine.

Wine blog scepticism was found not to be related to either innovativeness or exploratory purchasing behaviour. This finding suggests that wine adverts have more effect on consumers than blogs.

For the demographics of gender, age and education; the cross-tabulation results and relevant statistical tests indicated that only age is significantly and positively related to attitude toward advertising, particularly for those respondents aged between 35 and 54. This finding
is in contrast to James and Kover (1992) who suggest that attitude toward advertising has no significant relationship with age, education and gender.

Age was found to be significantly and positively related to innovativeness, with those respondents aged over 55 showing a higher degree of innovativeness. These results indicate that consumers above 55 are more likely to try new things and become early adopters.

**Managerial Implications**

Although the subject matter of the study was wine, the findings may be applied in a broader sense and be of relevance to general managers and marketing practitioners in the food and beverage sector or in the consumer goods sector.

Those managers who are looking to launch new consumer products may want to segment their markets by identifying consumer innovators as they will be more open to trying new products or brands. Managers should find ways to encourage innovators to talk about the new products and engage with other potential consumers. Management may also seek out those consumers who are heavily involved in the product given evidence of a relationship between involvement and innovation (Goldsmith and d’Hauteville, 1998). Marketing tactics encouraging product usage such as promotions, coupons and deals should be considered. Identifying, targeting and motivating innovators through the right marketing communications mix may be crucial to the success or failure of a new product launch. Firms launching new
products may also be guided by demographic considerations and should target consumers aged 55 and over as these older consumers are more likely to be innovators. Marketing tactics that encourage older consumers to become ‘brand product champions’ should be deployed. Such inducements could take the form of discounted offers; refer a friend or other ways to encourage older consumers to champion the product (Dodd, 1977; Foxall, 1984). The study also found evidence that older consumers will generally respond less favourable to adverts, which support the findings of Green (1999) and Grier and Brumbaugh (1999), despite being more innovative.

Consumers who were less innovative demonstrated a more negative attitude towards advertising. Managers will therefore need to consider whether advertising is the best medium for a new product launch as innovative consumers, or early product adopters, may be sceptical towards the claims in the adverts which may spark a negative reaction to the persuasive message contained in the advert as consumers resist the “hard sell” which would resonate with Reactance Theory (Brehm, 1966; Brehm and Brehm, 1981). A more subtle marketing communications tool involving friends, word-of-mouth or consumer reports (Obermiller and Spangenberg, 2000) may provide a better way to target less innovative consumers. If management is insistent on using advertising as a key part of the marketing strategy then they may want to target middle-aged consumers (35-54) as this demographic appears to have a more positive attitude toward advertising.
Limitations

While MTurk has been found to recruit respondents with characteristics at least similar to those of the US population (Buhrmester et al., 2011; Goodman et al., 2013; Rand, 2012), it is not perfect survey research. MTurk respondents have to be registered as “workers” which could create respondent bias. Laws and attitudes pertaining to alcohol vary across the US so it is possible that the results are not representative of all wine drinkers in the US. Furthermore, as only US consumers were included in this study, any generalisations to other wine drinking nations must be made with caution.

Another potential limitation is that the construct of wine blog scepticism was based on the Van Heerden et al., (2009) measure that studied blogging in a B2B context which is not the nature of this study. Van Heerden et al., (2009) also measured the scepticism toward blogging of bloggers themselves and not the consumer target of blogs.

A final limitation relates to the scale of innovativeness used in the study by Goldsmith and Hofacker (1991) which is most suitable for products that consumers regularly purchase and can report on their actual or anticipated behaviour. As the data did not capture consumption frequency of wine, it may be that respondent’s purchased wine less frequently, making prediction more difficult due to the lack of a behavioural or attitudinal interaction for consumers to draw upon and report.
Future Research

A number of directions for future research become apparent. A study examining the extent of innovativeness and exploratory purchasing behaviour of wine or, indeed other beverages, in other countries than the US could be conducted which may highlight some key cultural differences in the use of blogs and advertising.

The study did not examine the relationship between advertising and blogging and whether writers of wine blogs are affected by adverts of wine. Similarly, some blogs contain explicit adverts and it would be useful to understand whether these adverts affected readers of blogs.

The study used the Donthu and Gililand’s (1996) scale to measure attitude towards advertising. It may be interesting to use an alternative scale, such as Obermiller and Spangenberg’s (1998) advertising scepticism (SKEP) scale alongside the Van Heerden et al., (2009) blog scepticism scale, so that more like for like results based on actual scepticism can be compared.

Finally, gaining a deeper understanding of the product attributes of wine would be beneficial as it may be that wine, as a product domain, is not always an experiential good (Bruwer and Johnson, 2010). There is also evidence that wine may also be a search good, or a credence good (Klein, 1998) and it would be worthwhile to understand what role bloggers play in determining the attributes of wine and the consumers experience.
Conclusions

The study considered the two marketing communication channels of advertising and blogs and investigated whether consumer attitudes towards advertising and blog scepticism impacted exploratory purchasing behaviour or innovativeness in the context of wine. A secondary investigation considered the demographic variables of age, gender and level of education and whether there was any effect on the four constructs studied.

Using the MTurk online survey platform, 225 survey responses were considered from respondents who were all US residents. The study found that there was a relationship between attitude towards advertising and innovativeness indicating that those respondents who exhibited a positive attitude towards advertising were more likely to be innovators. No other relationships between the four constructs were detected. An ANOVA was run to study the interactions between the demographic variables on the four constructs studied and a relationship was observed for age on attitude towards advertising and innovativeness, with older consumers above 55 found to have a positive relationship with attitude towards advertising and more likely to be innovators. These findings have several important implications for general managers, particularly, those looking to launch new products into the market or target certain demographics or consumer types with advertising.
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of gambling advertisements on adolescent gambling attitudes and behaviors. Int. J. Ment. Health Addiction, 8, pp.21–34.


Raju. P.S., (1980). Optimal Stimulation Level: Its Relationships to Personality, Demographics, and


Paper 3

Price-quality heuristic correlation with rates of product consumption

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Price-quality heuristic correlation with rates of product consumption

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Abstract

Purpose—The purpose of this paper is to explore the manner in which the rate of product consumption contributes to the formation and strengthening of the price-quality heuristic.

Design/methodology/approach—The research included a literature review with a series of tests across a sequence of blind and sighted tasting experiments involving 278 subjects assessing seven differently priced products of orange juice, coffee and wine.

Findings—The paper found evidence that consumption rates do affect the way consumers respond to price information and that sight-based “System 1” judgement errors accrue and increase progressively with consumption. This relationship was observed to be stronger in sight-based product assessments for consumption of four or more units per week compared to those consuming one unit per week. For blind-based product assessments, an inverse relationship between price affect and consumption was observed, with affect reported to be stronger for minimal rates of consumption.

Originality/value—The observation of sight-based and blind-based affect relationships which are dependent on the levels of product consumption appears to be an interesting advancement in consumer behaviour research. This provides support for a dual structure of rationality operated by an interconnection between “System 1” sight-based associations and “System 2” blind-based ponderous thinking. The paper further
provides support for Kahneman’s “conflation of intuition” as classically conditioned memory.

**Keywords** Decision making, Price-quality heuristic, Product consumption.

**Paper type** Research paper.
1. Introduction

(One)ne of the most powerful ways of characterizing the way the mind does anything is by looking at the errors that the mind produces while it is doing it because the errors tell you what it is doing. Correct performances tell you much less about the procedures than the errors do. [...] We focussed on errors. We became completely identified with the idea that people are generally wrong. We became like prophets of irrationality (Daniel Kahneman, 2011).

Over time, intuitive fast-acting systems of thought may be primed to solicit heuristic-type cues aimed to enable optimal swift decision-making tasked to maximise reward utility (Berridge and Aldridge, 2008). This neurological dynamic is an evolutionary antecedent, designed over millennia to either get us out of trouble fast, or to enable procreation (Taleb, 2007). With its emphasis on rapid (as opposed to rigorous) decision making, some errors in sight-based judgement are likely to occur. We explore errors as intuitive aspects of judgement mistakenly influenced through the erroneous deployment of situational cues that deleteriously serve to obfuscate the true nature of the phenomenon at hand. In our contemporary world, certain price actions have been shown to correlate with errors of this sort; their deployment is observed to influence the level of experienced utility without genuine product improvement (see, e.g. Plassmann et al., 2008).

The occurrence of these cue-driven intuitive errors is now well documented within the marketing, consumer research and behavioural economics literatures. This
said, little is known of how, with increasing rates of consumption, consumers become conditioned by these extrinsic cues. How, for example, does the rate of product consumption deepen the associative process in which consumers begin to twin price with quality so as ultimately to deploy the price cue as a surrogate for genuine quality? Through the analysis of three tasting experiments where subjects reported varying rates of weekly product consumption, we explore the manner in which such frequency effects might contribute to the formation and strengthening of the price-quality heuristic.

To address these questions, we report the results of a synthesised analysis of three tasting experiments, respectively, on orange juice, coffee and (merlot) wine. In each experiment, subjects assessed seven products, first blind (round one); and then, sighted (round two). In each experiment the sequence of blind and sighted tastings was randomized to discourage order-guessing. In the orange juice experiment, 105 respondents tasted one-litre juices ranging in price between 75 cents and $6.90. In the coffee experiment, 100 respondents tasted products with prices per 200 grams ranging between $2.20 and $9.70. In the wine experiment, 73 respondents tasted wines with prices points ranging between $2.50 and $16 per bottle.

Collating the seven paired ratings of each of the 278 subjects (105+100+73 as per above), a data set of 1,946 (7×278) corresponding blind and sighted-product assessments was constituted. Tests were conducted on both blind and sighted scores to gauge the conditioning effects of price across a range of consumption-rate
segmentations. The paper proceeds as follows: first, a brief review of the relevant literature is presented. Next, the experimental design follows, along with a fuller description of the data set and model specifications. Then, the findings of the analysis are presented. The paper concludes with an acknowledgement of the limitations of the study, a discussion of managerial implications, and an identification of avenues for future research.

2. Literature review
The literature in agricultural economics relating to information effects largely centres around risk information aimed at reducing consumer uncertainty in purchase decisions (Verbeke, 2005), and can incorporate discussions around food safety, product labelling and information asymmetry. Grunert (2005b), considers food safety to be an integral part of quality and contributes to determining consumer purchase intentions and choice. As a form of direct communication to consumers, labels can help to reduce information asymmetry (Rabinowicz, 1999) and deliver food quality and safety messages, although there is evidence that consumers will not necessarily understand and use this information properly (Jacoby et al., 1977). Label information can also be inaccessible or useless to consumers (Salaun and Flores, 2001; Hobbs, 2004). Verbeke (2005), found that consumers suffer from food safety information overload, however, the provision of information can succeed if it meets the information needs of the target audience to correct the information asymmetry.
In addition to risk information and food labelling research; a body of literature developed in food quality, consumer behaviour and psychology research provides a wider consumer-centric approach which focuses on the motives, perceptions, attitudes and behaviour of consumers (Frewer et al., 2005). These streams of research consider pieces of information, or cues, that consumers use to elicit certain attributes about the product; including perceived product quality. This study builds on this particular consumer behaviour research stream.

One study that extends “information as a labeling” research into consumer behaviour research is provided by Kole et al. (2009). The authors assessed the perceived sensory differences between farmed and wild cod and found evidence that food labelling information about product type, price, freshness and the advantages of fish farming influenced product evaluation. In an earlier study, Kole (2001) observed that consumer beliefs about food quality depended not just on the labelling information available, but are also influenced by a consumers acquired knowledge and experience.

Consumers also differ in their evaluation of product quality and perception of quality (Ophuis and Van Trijp, 1995) as they make inferences about product quality by using cues. Consumers can also face difficulties in their evaluation of product quality, particularly for unbranded and highly perishable food (Juhl and Poulsen, 2000). Cue inferences will depend on a consumers’ self-confidence in cue utilisation (Cox, 1962), or confidence relating to their ability to make inferences based on particular cues (Grunert, 2005a).
Although the price cue (Leavitt, 1954) is the most established cue as an indicator of quality; other studies have found that quality cues are associated with product experience (Bredahl, 2003; Rao and Monroe, 1988), product interest or knowledge (Sawyer et al., 1979; Zeithaml, 1988) and perceived decision difficulty (Lambert, 1972; Pechmann and Ratneshwar, 1992; Sawyer et al., 1979; Zeithaml, 1988). Verbeke et al. (2007) found involvement with quality and self-confidence in quality assessment to be two components of quality evaluation. These components were further found to be associated with individual characteristics, such as socio-demographics, cognitive, motivational, behavioural and information processing variables. Jacoby et al. (1971) examined multi-cues and considered the effect of price, composition differences (aroma and taste) and brand image cues on the perception of beer quality. They found that price served as an indicator of product quality when it was the only cue available, but not in a multi-cue setting. Brand cue, rather than price cue, was found to indicate a stronger influence on the perception of product quality.

Prior product knowledge, or product familiarity, can influence the extent to which consumers search for, recall and use information in judgements of product quality and in product choice (Bettman et al., 1998; Howard and Sheth, 1969). Rao and Monroe (1988) examined the pricing cue (extrinsic cue) with intrinsic cues such as physical and performance attributes to assess product quality. They found that the assessment of these cues depended on prior product knowledge and observed a U-shape effect where consumers use of price
as an indicator of product quality decreases and then increases with familiarity for products with a wide variation in quality. For products known not to have wide quality variations, the use of price in product quality assessments tended to decrease with familiarity. Boulding and Kirmani (1993) and Dodds et al. (1991) also found evidence that brand name and price are often considered indicators of product quality. Dawar and Parker (1994) studied “marketing universals” for consumer electronics products and found that few differences existed in the use of quality signals across cultures and countries suggesting that differences are more likely to be driven by individual than country or cultural factors.

In terms of the psychology based literature, metacognitive theory suggests a dual structure of rationality operated by two interconnecting systems: the sight-based “System 1” and the blind-based “System 2” (Kahneman, 2012). System 1 is governed by automatic operations of perception, and “System 2 by deliberate operations of reasoning (Kahneman, 2003).

To negotiate common-place environments, System 1 is thought to generate surface level sight-based associations, proclivities and preferences, which, when sanctioned over time by the blind and more ponderous System 2, enmesh to become a guiding architecture of more deeply embedded principles, protocols and beliefs. System 1 operands are inferential, rapid and mechanistic; mobilised like drones with little or no conscious effort or finer levels of calibration or control (Kahneman, 2012). They are governed by habit and are therefore difficult to modify or control (Kahneman,
2003). As such they are prone to systemic errors of judgement, and hence bias. These judgement errors can be attributed to undetected “System 1” failures of intuition, licensed, in turn, by rational “System 2” failures to detect and correct as required (Morewedge and Kahneman, 2010). A consumer’s judgement can be thought of as a weighted combination of items of information, and when required to evaluate the merit of a product, weightings would be ascribed to a combination of intrinsic and extrinsic cues at hand. Judgement errors or biases are likely to occur through an overweighting of some aspects of information and an underweighting of others (Morewedge and Kahneman, 2010).

When consumers have a greater knowledge about product classes they tend to make generalisations about the product as well as about the quality associated with that product class (Pecotich and Ward, 2010). This is especially so in purchase situations where consumers are faced with an assortment of products, each with their own unique set of quality connoting attributes. To the would be consumer, this provides a cognitively daunting challenge of discernment: identifying and processing relevant purchase information, while disregarding the rest (Rao, 2005). In such information-rich environments, there is evidence that consumers activate certain heuristic short cuts that may lead to spending less time evaluating new information (Cunha and Shulman, 2010). One of the most common is the price-perceived quality heuristic, a construct well entrenched within the literature (see Chao and Schor, 1988; Erikson and Johansson, 1985; Lichtenstein and Burton, 1989; Stafford and Enis, 1969; Zeithaml, 1988). Subsequent
studies have shown that an over-reliance on price may lead to an obscuration of the true merit of a product. For example, Tellis and Wernerfelt (1987) report mixed positive correlations between objective quality and price, and caution against an over-reliance on this relationship. Likewise, a 2006 study by Priilaid showed how the marginal correlation between blind and sighted quality ratings could be explained by the deleterious influence of the price cue.

More recently, in research reported, inter-alia, by Plassmann et al. (2008), similar quality judgement errors were identified in instances where extrinsic cues like price appear, unconsciously, to alter the experienced utility of particular hedonic products, usually increasing or in some cases diminishing a prior subjective account of the actual intrinsic quality of the product in question. This said, the marketing literature on cue-conditioning, while acknowledging the prevalence of the effect (Shiv et al., 2005; Rao, 2005; Montague, 2006; Almenberg and Dreber, 2011) appears silent on the issues of whether and how price cues may escalate or diminish experienced utility with increasing rates of consumption. Recent sight and blind-based studies have however, examined the extent to which price effects accrue with increasing levels of experience and expertise. Goldstein et al. (2008) examined the extent to which experts and non-experts preferred differently priced wines when sampled blind. They reported that while experts were typically price-neutral, non-experts tended to prefer cheaper wines.

Wine drinkers “who are unaware of the price do not derive more enjoyment from more expensive wine”. In
reality, unless they are experts, they actually enjoy more expensive wines slightly less, they claimed (Goldstein et al., 2008, p. 1). A sight-based wine-tasting study by Priilaid et al. (2013) found that the assessments of self-confessed wine experts correlated more strongly with price than those of non-experts.

In the light of such findings, this study would anticipate a degree of correspondence between rates of consumption and the afore-noted constructs of product experience. We examine the prevalence of price-effect errors as they might manifest across a range of consumption-rate strata. A priori it is predicted that increases in consumption per week will see an increasing magnitude of sight-based errors signalled by bias towards disclosures of price information.

3. Data description and model construction
3.1 Data description
In this analysis 278 subjects (141 males, 137 females) were invited to a two-stage sighted-to-blind product tasting. The design followed a three group pre-experimental design-format (see, Malhotra, 2010, p. 158), with subjects tasting either wine ($n=73$ subjects), orange juice ($n=100$ subjects) or coffee ($n=105$ subjects). In each of the three experiments, the first stage consisted of a blind product tasting of eight products. The only information offered to participants was the nature of the product, i.e. merlot wine, coffee or orange juice. To dissuade respondents from predicting the sighted line-up from the blind, the order of the “sighted” second stage was shuffled, with one of the eight products removed; thus leaving only seven differently ordered products.
The products sampled were orange juice (price per litre): OJBrandA ($0.75), OJBrandB ($1.20), OJBrandC ($1.40), OJBrandD ($1.69), OJBrandE ($1.87), IJBrandF ($2.66) and IJBrandG ($6.90); coffee (price per 200 grams): CBrandA ($2.20), CBrandB ($2.70), CBrandC ($2.70), CBrandD ($2.70), CBrandE ($8.00), CBrandF ($9.60), and CBrandG ($9.70), and merlot wines (per 750ml bottle): WBrandA ($2.50), WBrandB ($3.00), the WBrandC ($4.50), WBrandD ($4.50), WBrandE ($8.50), WBrandF ($11.60) and WBrandG ($16.00).

Before the start of the first tasting round, respondents were asked to provide personal details including weekly product consumption, age and gender. Each round of tasting was scored using an 11-point Likert scale with half star calibrations, where 0 denotes an unpalatable offering, and 5, a product of exceptional character.

Consolidating information on frequency of weekly consumption, age and gender; from the 278 self-administered questionnaires and ratings for each of the products sampled blind and sighted, a data set of 1,946 product paired blind and sighted assessments was assembled (see Table I for details). Controlling for intrinsic (blind) merit, relevant demographic factors, inter-product-class differences and individual subject bias, tests were conducted to determine the impact of price cues on blind and sighted scores.

3.2 Model construction
Analysing the “sighted tasting” column in Table II Spearman correlation matrix of the described variables, across the meta-sample a strong positive correlation
(0.56, \( p=0.00 \)) is observed between the blind and sighted ratings. In line with expectations, price is the next strongest correlate at 0.41 (\( p=0.00 \)), suggesting some influence of price information on sighted assessments. The correlation between price and blind scores (0.25, \( p=0.00 \)) is mild and significant at the 95 per cent level of confidence, suggesting that these variables may assist in explaining sighted assessments without the possibility of multicollinearity. Additionally the relatively high correlation between price and tastings per week 0.43 (\( p=0.00 \)) is explained by the different sample rates across the three product classes. Wine and coffee products were sampled the most frequently; in extreme instances between 21 and 35 times per week. The sample rate of orange juice was much lower, peaking at only four times per week. Since orange juice is significantly cheaper than coffee and wine, (respectively, the most expensive coffee, wine and juice being $9.70, $16.00 and $6.90), the correlation between price and sample rate as measured across all three products classes is unusually strong, and would be weaker were this metric computed on a product-by-product basis. Finally the 0.12 (\( p=0.00 \)) correlation between age and consumption frequency should be observed.

Table I.
Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Sighted rating</th>
<th>Blind rating</th>
<th>Price</th>
<th>Weekly consumption</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.72</td>
<td>2.64</td>
<td>4.88</td>
<td>5.40</td>
<td>34.52</td>
</tr>
<tr>
<td>Median</td>
<td>3.00</td>
<td>3.00</td>
<td>2.70</td>
<td>2.00</td>
<td>26.00</td>
</tr>
<tr>
<td>Mode</td>
<td>3.00</td>
<td>3.00</td>
<td>2.70</td>
<td>1.00</td>
<td>23.00</td>
</tr>
<tr>
<td>SD</td>
<td>1.25</td>
<td>1.20</td>
<td>3.83</td>
<td>6.71</td>
<td>17.03</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>−0.74</td>
<td>−0.63</td>
<td>0.53</td>
<td>3.31</td>
<td>−0.64</td>
</tr>
<tr>
<td>Scenes</td>
<td>−0.18</td>
<td>−0.18</td>
<td>1.10</td>
<td>1.93</td>
<td>0.77</td>
</tr>
<tr>
<td>Range</td>
<td>5</td>
<td>5</td>
<td>15.25</td>
<td>34</td>
<td>66</td>
</tr>
<tr>
<td>Count</td>
<td>1,946</td>
<td>1,946</td>
<td>1,946</td>
<td>1,946</td>
<td>1,946</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Largest</td>
<td>5</td>
<td>5</td>
<td>16.00</td>
<td>35</td>
<td>77</td>
</tr>
<tr>
<td>Smallest</td>
<td>0</td>
<td>0</td>
<td>0.75</td>
<td>1</td>
<td>11</td>
</tr>
</tbody>
</table>

Notes: Total participants: 278: 141 males, 137 females. Prices in US Dollars

Table II.
A correlation matrix using observations across the entire data set

<table>
<thead>
<tr>
<th></th>
<th>Sighted rating</th>
<th>Blind rating</th>
<th>Price</th>
<th>Tastings per week</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sighted rating</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind rating</td>
<td>0.56**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>0.41**</td>
<td>0.25**</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tastings per week</td>
<td>0.05*</td>
<td>0.00</td>
<td>0.43**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>−0.02</td>
<td>−0.03</td>
<td>0.01</td>
<td>0.12**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Notes: n=1,946. *,**Correlation is significant at the 0.05 and 0.01 level (two-tailed), respectively

Proceeding from the correlations presented in Table II, a series of step-wise linear regressions was run to explain the blind and sighted data across a span of three consumption-rate bands. These bands are first, those consuming one unit per week (n=151 × 7=1,057), second, those consuming two to three units per week (n=46 × 7=322) and three, those consuming four or more units per week (n=112 ×7=784). As witnessed by the afore-noted 0.12 age to consumption rate correlation, the spread of age across these bands is homogenous, with a breakdown as follows: one unit band: mean age: 33.0, SD: 17.0, min: 11, max: 76; two to three unit band: mean age: 36.02, SD: 18.09, min: 16, max: 77; and the four or
more unit band: mean age: 35.29, SD: 16.12, min: 15, max: 75.

The regressions were run in two sequences, the first of which was to test for the statistical significance of the price coefficients contributing to the blind and sighted scores across the entire data set with no consumption-rate controls in place (see Equations (1) and (2) below). The second sequence aimed to do so with such controls in place (see Equations (3) and (4)).

Accordingly, the sequence one model specifications are as follows:

Blind score\(_i\) = 2.42 + 0.0515 *Price\(_i\) - 0.0075.D\(_{coffee}\)*Price\(_i\) + 
\[t \text{ score: } (18.55) (3.99) (-3.26)\]
0.2339.D\(_{OJ}\)*Price\(_i\) - 0.50 Coffee control + 0.80 OJ control - 0.01*Weekly
\[-9.54) (-2.63) (-5.33) (-2.59)\]
- Cons + 7 order effects + 9 subject effects + \(\varepsilon_{bi}\) \hspace{1cm} (1)

Sighted score\(_i\) = 1.58 + 0.1372*Price\(_i\) - 0.0233.D\(_{coffee}\)*Price\(_i\) + 
\[t \text{ score: } (10.55) (13.27) (-1.56)\]
.0152.D\(_{OJ}\)*Price\(_i\) - 0.92.D\(_{coffee}\) - 0.94.D\(_{OJ}\) + 0.13*Blind\(_i\) + 0.43.D\(_{coffee}\)*Blind\(_i\)
\[(0.69) (-5.12) (-5.38) (3.71) (9.59)\]
+0.45.D\(_{OJ}\)*Blind\(_i\) - 0.0032.b\(_{s9}\)*Weekly-Cons + 5 order effects + 23 subject effects + \(\varepsilon_{si}\). \hspace{1cm} (2)
\[(9.51) (-0.81)\]
Where:

\( \alpha_b \) and \( \alpha_s \) is the estimated intercept term for the blind and sighted regressions respectively. \( D_{\text{coffee}} \) = Dummy variable controlling for coffee-specific quality, coded 1, else 0.

\( D_{\text{wine}} \) = Dummy variable controlling for wine-specific quality, coded 1, else 0.

\( D_S \) = Dummy variable(s) used to control for levels of tasting bias across individuals, coded, 1 or 0 for each taster in the sample.

\( S \) = number of such significant subjects.

As dummy comparators, the aforementioned intercept terms thus represent the base-case for product quality, in this case orange juice (where \( D_{\text{coffee}}=D_{\text{wine}}=0 \)), and incorporates too the ratings of subjects not included in \( S \) above.

\( b_{b1}, b_{b2}, b_{b3} \) and \( b_{b,\text{sub}} \) = the perceived marginal effects of price, coffee quality, wine quality and individual subject bias within blind scores.

Within sighted scores, \( b_{s1}, b_{s2}, b_{b3}, b_{b4} \) and \( b_{s,\text{sub}} \) = the perceived marginal effects of price, blind scores, coffee quality, wine quality and individual subject bias, respectively.

\( \varepsilon_b \) and \( \varepsilon_s \) = residual error terms for the blind and sighted regressions, respectively.

The second sequence sought to test for relative consumption-rate variances within the meta-sample. To enable the control of differing consumption band-
sample-sizes, here the absolute value of the slope of each of the three consumption coefficients was examined in conjunction to one another in one comprehensive model. This strategy to control for varying band-sample-sizes cannot be conducted when consumption-rate bands are regressed independently.

For the three consumption-rate bands the sequence two model specifications read thus:

Blind score}_i = 2.48 + 0.0695*Price_i + 0.0069.D_{coffee}*Price_i +

\[ t \text{ score: } (19.06) (5.07) (3.00) \]
\[ 0.2667.D_{OJ}*Price_i - 0.44*D_{coffee} - 0.85*D_{OJ} \]
\[ (10.57) (-2.32) (-5.67) \]
\[-0.02*Weekly-Cons -0.0581.D_{unit}*Price_i -0.0180.D_{2or3}*Price_i +7 \text{ order} \]
\[ (-4.67) (-4.90) (-1.51) \]
\text{effects} + 9 \text{ subject effects} + \epsilon_{bi} \quad . (3) \]

Sighted score}_i = 1.66 + 0.1587*Price_i - 0.0319.D_{coffee}*Price_i +

\[ t \text{ score: } (11.05) (13.79) (-2.12) \]
\[ 0.0381.D_{OJ}*Price_i - 0.88*D_{coffee} - 1.01*D_{OJ} +0.11*Blind_i + \]
\[ (1.63) (-4.88) (-5.79) (2.82) \]
\[ 0.43.D_{coffee}*Blind_i + 0.46.D_{OJ}*Blind_i - 0.0129*Weekly-Cons - \]
\[ (9.55) (9.02) (-2.71) \]
\[ 0.0453.D_{unit}*Price_i - 0.0433.D_{2or3} \text{ Price}_i \]
+ $0.01 D_{1\text{unit}} \cdot \text{Blind}_i + 0.03 D_{2or3} \cdot \text{Blind}_i + 5 \text{ order effects} + 22 \text{ subject effects} + \varepsilon_{si}.$  \hspace{1cm} (4)

where in addition to the specifications laid out in sequence one above; $D_{1\text{unit}}=1$ if subject consumes one unit per week, 0 if otherwise;

$D_{1\text{unit}} = 1$ if subject consumes 1 unit per week, 0 if otherwise.

$D_{2or3} = 1$ if subject consumes 2 or 3 units per week, 0 if otherwise.

$b_{b1}$ and $b_{s1}$ as previously defined: now expressing the relationship for subjects consuming 4 or more units per week, serving as the base-case where $D_{1\text{unit}} = D_{2or3} = 0$.

Within blind scores, $b_{b4}$ and $b_{b5}$ = the perceived marginal effects of price on those consuming 1 unit per week and 2 to 3 units per weeks, respectively.

Within sighted scores: $b_{s5}$ and $b_{s6}$ is the perceived marginal effects of price on those consuming one unit per week and two to three units per weeks, and $b_{s7}$ and $b_{s8}$ is the equivalent marginal effects of blind scores.

In terms of the above therefore, for the base-case consumption-rate-band of those consuming four units or more per week, coefficients $b_{b1}$ and $b_{s1}$ represent the marginal effects of price within the respective blind and sighted models; within the latter of which $b_{s2}$ explains the marginal effect of blind scores.
Employing the general meta-level data set, this second sequence yielded two models in all: blind and sight-based general models for consumption-rate bands as specified, respectively in Equations (3) and (4).

4. Results

4.1 Blind models

Table III below presents the blind-based models specified in Equations (1) and (3).

4.1.1 Blind meta-model. The meta-sample regression output explaining blind scores without consumption-rate controls (as per Equation (1)) is presented below with a residual error term ($\varepsilon$) and underpinning $t$-statistics. For the sake of space, specifics regarding the 38 cases of subject bias are excluded (see Table III for details):

Blind score$_i = 2.40 + 0.0749 \text{ Price}_i - 0.38 \text{ Coffee control} + 0.0078 \text{ Wine control} + 38 \text{ subject controls} + \varepsilon_i$

\[\begin{align*}
    t \text{ score:} & \quad (56.36) \quad (11.25) \quad (-6.46) \quad (0.10)
\end{align*}\]

The difference between the model constant (2.40) and mean blind score of 2.57 ($t=61.56$, estimated in unreported tests with product and subject controls) is explained by the effect of price, with the 0.0749 coefficient ($t=11.25$) likely to add 0.375 rating points for every $\$5$ increment. (Note from Table I that the mean price across the meta-sample is $\$4.88$). This suggests that when sampling blind, subjects prefer more expensive products. Reportage of the consumption-rate
controlled model that follows reveals how this broader preference adjusts with increasing rates of consumption.

4.1.2 Blind-based model of consumption rate.

Using blind assessments, this analysis explains how different rates of consumption align with price. As per Table III, the output for the pre-specified Equation (3) indicates that on blind tasting, those with higher frequencies of product consumption tend to be more affected by price than those with lower ones:

\[
\text{Blind score}_i = 2.38 + 0.0694 \cdot D_{\text{unit}} \cdot \text{Price}_i + 0.0128 \cdot D_{2or3} \cdot \text{Price}_i + \\
\text{t statistic: } (51.14) \quad (7.90) \quad (1.19) \quad (0.25)
\]

\[-0.34 \text{ Coffee control} + 0.05 \text{ Wine control} + 38 \text{ subject controls} + \varepsilon_i
\]

\[(-4.79) \quad (0.61)\]

**Table III.**

Step-wise regressions explaining blind assessments with price, subject and consumption band controls

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Final t statistic</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-model (Ad $R^2$: 17.26%, F=11.14 (p=0.0000), n=1,946)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Constant</td>
<td>2.40</td>
<td>56.36</td>
<td></td>
</tr>
<tr>
<td>2. Price-effect</td>
<td>0.0749</td>
<td>11.25</td>
<td></td>
</tr>
<tr>
<td>3. Coffee control</td>
<td>-0.38</td>
<td>-6.46</td>
<td></td>
</tr>
<tr>
<td>4. Wine control</td>
<td>0.0078</td>
<td>0.10</td>
<td>0.92**</td>
</tr>
</tbody>
</table>

Blind: model further incorporating three consumption-rate bonds (Ad $R^2$:17.20%, F=10.39 (p=0.0000)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Final t statistic</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Constant</td>
<td>2.38</td>
<td>51.14</td>
<td></td>
</tr>
<tr>
<td>2. Price-coefficient</td>
<td>0.0694</td>
<td>7.90</td>
<td></td>
</tr>
<tr>
<td>3. Price-coefficient: 1 unit weekly</td>
<td>0.0128</td>
<td>1.19</td>
<td>0.23**</td>
</tr>
<tr>
<td>4. Price-</td>
<td>0.0029</td>
<td>0.25</td>
<td>0.80**</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>coefficient: 2 to 3 units weekly</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Coffee control</td>
<td>-0.34</td>
<td>-4.79</td>
</tr>
<tr>
<td>6. Wine control</td>
<td>0.05</td>
<td>0.61</td>
</tr>
</tbody>
</table>

**Notes**: Blind: meta-model analyses with controls for price, product type and subject. Dependent variable: blind rating. Models 1 and 2 explain equations (1) and (3), respectively. Blind rating: mean: 2.57 (t=61.56; estimated with controls). Unless otherwise indicated (**) all variables are statistically significant at the 5 per cent level, their coefficients presented by order of the absolute value of their associated t statistic which appears in parenthesis.

Reading from the equation above, the meta-sample price coefficient is 0.0694 ($t=7.90$), effectively adding one-third of a rating point for every $5 increment (0.0694 \times 5=0.347). This is the base-case comparator for the Equation (3) and represents the price-effect for those consuming four or more units per week. An additional price coefficient of 0.0128 ($t=1.19$) applies for those consuming one unit per week, thus adding a marginal 0.064 stars for every $5 increment. This yields a total addition of 0.41 stars per $5 increment for this consumption band. The price coefficient for those consuming two or three units is only 0.0029 ($t=0.25$), adding 1.45 per cent of a star for every $5 increment (0.0029 \times 5=0.0145), yielding a total addition of just over 0.36 of a star per $5 increment.

Though neither of these marginal price coefficients are statistically significant at the 95 per cent level, in analysing the spread of price coefficients across the blind-based bands of increasing consumption (see Table IV), this represents a 16 per cent retrace from 0.0822 for those consuming one unit weekly, to 0.0694 for those consuming four or more units. Using a $5 increment,
this represents slightly less 6.4 per cent a star’s difference (5 \times 0.0128 = 0.064 stars) across the three bands.

In terms of the above we should note that these blind assessments are void of any cue bias since price remains undisclosed. It is more likely that these price-coefficient variances are due to some measure of acquired discernment, the rate of which correlates to levels of consumption.

Accounting for the price cues, the coffee and wine product controls present with coefficients of −0.34 (t=−4.79) and 0.05 (t=0.61), respectively. Compared to the orange juice comparator, the difference in wine quality is clearly insignificant. Coffee drinkers appear more critical, deducting one-third of a star by comparison. Finally note that 38 of the 278 subjects present with blind assessments either statistically significantly higher or lower than those of their peers (see model 2 in Table III for details).

4.2 Sighted models
Table V below presents the sight-based models specified in Equations (2) and (4).

4.2.1 Sighted meta-model.
As per Table V, the general regression equation describing the sighted score for each wine, \( i \), is laid out below together with a residual
Table IV.
Blind-based price coefficients across the models developed in this study, as derived from Table III

<table>
<thead>
<tr>
<th>Blind model type</th>
<th>General: Model 1 (Equation (1))</th>
<th>One unit</th>
<th>Two to three units</th>
<th>Four plus units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price-coefficient</td>
<td>0.0749</td>
<td>0.0128</td>
<td>0.0029</td>
<td>Base-case</td>
</tr>
<tr>
<td>t-stat.</td>
<td>11.25**</td>
<td>1.19</td>
<td>0.25</td>
<td>Base-case</td>
</tr>
<tr>
<td>SE</td>
<td>0.0067</td>
<td>0.0108</td>
<td>0.0118</td>
<td>Base-case</td>
</tr>
</tbody>
</table>

Notes: Blind tastings reveal how subjects generally prefer more expensive products (see equation (1)). In Equation (3) observe how the price-to-consumption-rate correlation weakens as rate of consumption increases. The caveat here is that neither the one nor the two-to-the unit band is statistically significantly different from the four-unit plus base-case which is the least affected by price information.

**Correlation is significant at the 0.01 level (two-tailed)

Table V.
Step-wise regressions explaining sighted assessments with price, blind rating, subject and consumption band controls

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Final t-statistic</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meta-model (Adj. R^2: 46.52%, F=55.59 (p=0.0000), n=1,946)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Constant</td>
<td>0.99</td>
<td>17.10</td>
<td></td>
</tr>
<tr>
<td>2. Blind rating</td>
<td>0.50</td>
<td>27.31</td>
<td></td>
</tr>
<tr>
<td>3. Price-effect</td>
<td>0.1305</td>
<td>19.95</td>
<td></td>
</tr>
<tr>
<td>4. Coffee control</td>
<td>-0.30</td>
<td>-5.43</td>
<td></td>
</tr>
<tr>
<td>5. Wine control</td>
<td>-0.32</td>
<td>-5.12</td>
<td></td>
</tr>
<tr>
<td>Sighted: model further incorporating three consumption-rate bonds (Adj. R^2:47.44%, F=35.43 (p=0.0000)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Constant</td>
<td>0.94</td>
<td>14.74</td>
<td></td>
</tr>
<tr>
<td>2. Blind rating</td>
<td>0.44</td>
<td>17.90</td>
<td></td>
</tr>
<tr>
<td>3. Blind</td>
<td>0.11</td>
<td>3.44</td>
<td></td>
</tr>
<tr>
<td>Coefficient</td>
<td>1 unit weekly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>4. Blind-coefficient: 2 to 3 units weekly</td>
<td>0.06</td>
<td>1.79</td>
<td>-0.07*</td>
</tr>
<tr>
<td>5. Price-coefficient</td>
<td>0.1467</td>
<td>17.22</td>
<td></td>
</tr>
<tr>
<td>6. Price-coefficient: 1 unit weekly</td>
<td>-0.0338</td>
<td>-2.62</td>
<td></td>
</tr>
<tr>
<td>7. Price-coefficient: 2 to 3 units weekly</td>
<td>-0.0328</td>
<td>-2.17</td>
<td></td>
</tr>
<tr>
<td>8. Coffee control</td>
<td>-0.21</td>
<td>-2.93</td>
<td></td>
</tr>
<tr>
<td>9. Wine control</td>
<td>-0.22</td>
<td>-3.00</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** Sighted: meta-model analyses with controls for price, blind rating, product type and subject. Dependent variable: sighted rating. Models 1 and 2 explain Equations (2) and (4), respectively. All variable coefficients are presented by order of the absolute value of their associated t-statistic which appears in parenthesis. Sighted rating: mean: 2.60 (t=54.56, estimated with controls). *Indicates variable statistically significant at the 10 per cent level, otherwise all variables statistically significant at the 5 per cent level.

Reading from the equation above, note that the model’s constant is 0.99, meaning that if all the independent variables are held at zero, the sighted score is likely to be a fraction under one star. Next observe that for each error term (ε) that conforms to the classical assumptions. Relevant t-statistics appear in brackets below:

\[
\text{Sighted score}_i = 0.99 + 0.50 \text{ Blind rating}_i + 0.1305 \text{ Price}_i - 0.30
\]

\[
t score: (17.10) \quad (27.31) \quad (19.95) \quad (-5.43)
\]

\[
\text{Coffee control} - 0.32 \text{ Wine Control} + \varepsilon_i
\]

\[
t score: (-5.12)
\]
“intrinsic” “blind” star, the sighted score is likely to increase by a half a star. Thus the net contribution of three blind stars would be one-and-a-half sighted stars. Thereafter the effect of the price cue is described by the coefficient 0.1305. Therefore, with all other factors held constant, including intrinsic merit, a $7.5 increase in price, will ramp the sighted score of a product by approximately one star; a significant error of intuition.

Accounting for the statistically dominant price and blind cues, the wine and coffee product controls present with \(-0.32\) and \(-0.30\) stars, respectively; meaning that relative to the orange juice control-comparator, respondents were likely to deduct approximately one-third of a star for these two product classes. Orange juice was obviously rated more highly. Finally, through unreported subject controls, note that 27 of the 278 subjects presented with sighted assessments either statistically significantly higher or lower than those of their peers (see model 1 in Table V for details).

4.2.2 Sight-based of consumption rate.
As per the controls specified in Equation (4), the meta-model for sighted scores computed across bands of increasing consumption is featured below (for details see Model 2 Table V):

\[
\text{Sighted score}_i = 0.94 + 0.44 \cdot \text{Blind}_i + 0.11 \cdot D_{\text{unit}} \cdot \text{Blind}_i + 0.06 \cdot D_{2or3} \cdot \text{Blind}_i + 0.1467 \cdot \text{Price} - 0.0338 \cdot D_{\text{unit}} \cdot \text{Price}_i
\]

\[
t \text{ statistic: } (14.74) \quad (17.90) \quad (3.44) \quad (1.79) \quad (17.22) \quad (-2.62)
\]

- 0.0328 \(D_{2or3} \cdot \text{Price}_i – 0.21 \) Coffee control – 0.22 Wine Control + 30 sbj. controls + \(\varepsilon_i\)
Reading from the equation above, note that the model’s constant is 0.94. Thus if all independent variables are held at zero, the sighted score is likely to be a fraction under one star. Blind-based effects are also noted; the meta-sample blind-coefficient being 0.44 ($t=17.90$), representing the base-case of those consuming four or more units per week. For the two consumption bands of one and two to three units per week, the blind rating coefficients are observed at an additional 0.11 ($t=3.44$) and 0.06 ($t=1.79$), respectively. Thus with increasing consumption, observe how these coefficients decrease by 11 basis points from 0.55 stars for those consuming one unit, down to 0.44 stars for those consuming four or more units weekly, a retrace of 20 per cent (For ease of comparison see Table VI).

**Table VI.**
Sight-based price and blind coefficients computed across the models developed in this study (as per Table V)

<table>
<thead>
<tr>
<th>Sighted model type</th>
<th>General: Model 1 (Equation (2))</th>
<th>One unit</th>
<th>Two to three units</th>
<th>Four plus units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption rate controls (Equation (4))</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base-case: price coefficient: 0.1467**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t-stat.: 17.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE: 0.0085</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blind-coefficient: 0.44**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>t-stat.: 17.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE: 0.0088</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Panel 1: Sighted price coefficients across rates of weekly consumption**

<table>
<thead>
<tr>
<th>Price-coefficient</th>
<th>0.1305**</th>
<th>-0.0338**</th>
<th>-0.0328</th>
<th>Base-case</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-stat.</td>
<td>19.95</td>
<td>-2.62</td>
<td>-2.17*</td>
<td>Base-case</td>
</tr>
<tr>
<td>SE</td>
<td>0.0065</td>
<td>0.0129</td>
<td>0.0151</td>
<td>Base-case</td>
</tr>
</tbody>
</table>
Panel 2: sighted blind coefficients across rates of weekly consumption

<table>
<thead>
<tr>
<th>Blind-coefficient</th>
<th>0.50**</th>
<th>0.11**</th>
<th>0.06</th>
<th>Base-case</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-stat.</td>
<td>27.31</td>
<td>3.44</td>
<td>1.79</td>
<td>Base-case</td>
</tr>
<tr>
<td>SE</td>
<td>0.0000</td>
<td>0.0308</td>
<td>0.0356</td>
<td>Base-case</td>
</tr>
</tbody>
</table>

Notes: In Panel 1, observe how sighted price coefficients strengthen in step with increasing rates of consumption (see Equation (4)), while in Panel 2 observe how the contribution of (blind) intrinsic quality decreases commensurately. *,**Coefficient is significant at the 0.05 and 0.01 level (two-tailed), respectively

Once more, price is significant; showing a marked correlation with increasing rates of consumption. For the meta-sample, the price coefficient, representing those who consume four or more units per week is 0.1467 ($t=17.22$). This effectively adds three quarters of a star for every $5 increment ($0.1467 \times 5=0.7335$). In relation to this base case comparator, the price coefficient for those consuming one unit per week is $-0.0338$ ($t=-2.62$), and for those consuming two to three units: $-0.0328$ ($t=-2.17$). The coefficient difference between the two outer bands is 0.0338, representing an increase of 30 per cent from 0.1129 for those consuming one unit, up to 0.1467 for those consuming four or more units weekly (see once more Table VI).

Note too that the coffee and wine product controls presents as statistically significant, respectively deducting 0.21 ($t=-2.93$) and 0.22 ($t=-3.00$) stars relative to those consuming orange juice. Finally, 30 of the 278 subjects are observed with statistically significant evidence in sighted score bias either higher or lower than those of their peers.
5. Discussion
With respect to the blind and sighted models developed in this study, and the summative overview of blind and sighted price cues, respectively presented in Tables IV and VI, a number of issues emerge which are important to academics, managers and policy makers.

The key finding of the study is to suggest that consumption rates do affect the way consumers respond to price information, which can lead to price-errors in both sighted and blind tasting assessments. The study demonstrates how price-based (System 1) judgement errors accrue and increase progressively with consumption; which is strongly evident in sighted product assessments across a span of consumption bands. Blind-based assessments also demonstrate a positive, but weaker, affect across all three consumption bands; with this affect shown to be at its strongest at the minimal rate of consumption (one unit per week).

These findings suggest how, with increasing rates of consumption, sighted assessments appear to collect two versions of price information: first, through price messages embedded within blind-based ratings, and second, via price-driven heuristic interpretations of quality in sighted ratings which increasingly neglect the contribution of any intrinsic merit. In this respect, we should observe that those consuming one unit per week (with a price coefficient of 0.1129), appear the least affected by price information, whilst those consuming four or more units per week appear the most affected (price coefficient of 0.1467), indicating a significant 30 per cent increase in price-affectation. This finding is potentially at odds with Rao and Monroe (1988).
Increasing rates of product consumption would generally indicate a greater degree of product familiarity; however, under conditions of narrow variation in product quality, the use of price in product quality assessment tended to decrease with familiarity in Rae and Monroe’s study, whereas this study finds an increase in the use of price as a quality cue. A potential avenue for future research could be to understand further whether increasing consumption rates are an antecedent to familiarity and involvement. Commensurately, the role of blind-based merit shows a corresponding 20 per cent drop-off as consumption rates increase: from 0.55 blind stars for “1 unit per week” to 0.44 blind stars for “4 plus units per week” (See Figure 1 for illustration).

The coupling of these two dynamics is a finding which is an interesting advancement in consumer behaviour research and strongly resembles the process of neurological conditioning presented by Morewedge and Kahneman (2010) which ascribes such instances of sight-based judgement error to heuristic driven “System 1” cue-confusion, coupled with the blind-based “System 2’s” inability to remediate against any error bias as required. This finding will be particularly relevant to management and policy makers in the food industry as it suggests that heavier consumers of a product are more prone to affect from pricing information. If consumers are prone to price-effect judgement errors, then it may well be that they are prone to other extrinsic cues biases such as brand for increasing rates of consumption levels. Again, this could provide another potential avenue for future research. Furthermore, as blind-based “System 2” cognition does not correct for this affect, consumers may need more protection from these thinking errors.
The finding of an inverse correspondence between price affect and consumption, which was not anticipated in the blind tests. Applying laws of supply and demand, if anything, subjects were expected to prefer products with which they were generally familiar. Thus, assuming consumption rates to align with degrees of affluence, relative to those with low rates of consumption, one would expect higher rates of consumption to equate with a greater liking for expensive products. On blind tasting this was not the case: those with higher rates of consumption only revealed greater price preferences in sighted scores, not blind ones. In this respect, the findings of this study show some alignment with other recent work on self-confessed expertise (Priilaid et al., 2013), that indicates how sight-based price effects strengthen with growing levels of wine tasting expertise. The blind component of this study does not however, agree with Goldstein et al. (2008). Their study of blind wine ratings found that experts do not prefer cheaper wines, while non-experts do. This study suggests that on blind and sighted tastings, expensive products are preferred across all bands of consumption.

Finally, notwithstanding controls aimed to absorb intrinsic blind-based merit and any such embedded price effects, within sighted assessments, a pricing effect is still shown to manifest and strengthen across bands of consumption. Within sighted scores the scale of these price effects is greater than in blind scores (sighted maximum is 0.1477, blind maximum is 0.0822), as is the divergent spread of these coefficients across the bands of consumption, (sighted spread is 33.8 basis points, blind is 12.8 basis points).
6. Conclusions
By way of conclusion, it should be observed that any notification of statistically significant price effects effectively flag the presence of those judgement errors alluded to in the Kahneman quotation cited in this paper’s introduction. As such, these effects tell us what the human mind is doing as it struggles to grapple with the situation at hand.

Figure 1.
Coefficients explaining sighted tastings across weekly consumption frequency bands. Observe how, with frequency, price coefficients increase in strength while blind coefficients weaken simultaneously.

In the three experimental situations presented in this research, specifically, the mind is attempting to discern the utility of a product in the presence of a potentially enabling price cue. In his book *Thinking, Fast and Slow*, (2012, p. 237) Kahneman’s quote from the work of psychologist Herbert Simon (1992, p. 155) is instructive here: “The situation has provided a cue, this cue has given the expert access to information stored in memory, and the information provides the answer. Intuition is
nothing more and nothing less than recognition” (2012, p. 237). Through the lens of Simon’s definition of intuition Kahneman continues from this passage, observing how “the apparent magic of intuition” is thus reduced “to the everyday experience of memory”. He concludes by stating then that “the moral of Simon’s remark is that the mystery of knowing without knowing is not a distinctive feature of intuition; it is the norm of mental life”.

Certainly, from this study we can observe from the ongoing amplification of the price cue, how “knowing without knowing” becomes merely a function of a memory conditioned by ever increasing rates of consumption to recognise and appropriate cues as they appear to be helpful to situations potentially requiring interpretation. Discounting for potential cohort effects, and the possibility that the assessment of other hedonic products proves less malleable in the presence of extrinsic cues, the study presented here would thus seem to corroborate Kahneman’s conflation of intuition as classically conditioned memory. Given repeated cue exposure from a tender age, it would seem inevitable that with escalating rates of consumption, young blank-slates become increasingly sensitised by the persuasion of extrinsic cues, including price. Clearly this neurological conflation once served an important prehistoric function. However, given the extent to which the architecture of associative memory can increasingly provoke systemic errors in intuitive judgement – as shown in this study – the contemporary importance of this phenomenon should be conditioned by what ameliorative steps should be considered to protect the vulnerable from instances where price-ramping
strategies amount to no more than unfounded persuasion. In this regard there is still some work to do.

The findings of the study have several important implications for policy makers and managers in the food and agribusiness sector. The key finding that increasing consumption rates lead to increasing price-error judgements, especially for sight-based assessments, could influence some firms to find ways to encourage consumers to increase consumption rates of their product as this will make it easier for them to increase the price. Bundling products would be a key way to increase consumption whilst maintaining price. This could be achieved through marketing pricing tactics such as “buy one get one free” to create a dual effect of increasing rates of consumption whilst at the same time maintaining a higher price than would be the case of offering each product separately at half the price. Another way to create higher levels of consumption would be to offer free product trials to the consumer. This will not only increase the consumption levels for existing consumers of the product, but also make future price increases easier. This is because the act of providing the product for “free” would not have the same effect of a reduction in price as the consumer would be more likely to interpret the free product as a gift. Again, this tactic could allow the firm to maintain high price levels without compromising price. Firms may also look to encourage blind-based tasting experiments for their products and advertise these through mass-media channels such as television commercials. This could be effective as the study suggests that blind-based assessments, especially at the lower end of consumption levels, create a quality affect. Another dual dynamic
could be expected as although blind-based judgement errors decline with increasing levels of consumption, they do not correct the sight-based System 1 errors, but rather reinforce these sight-based judgement errors.

Finally, management may face a dilemma of how to communicate the high price of the product without detracting from the perceived quality of the product. On the one hand the firm will want to make the high price easily discernible so that the consumer is more likely to associate the high price with product quality, but if the high price is too obvious, or not discreet enough, this could create the perception of a lower quality “bargain” product.

It should also be noted that although this study focused on price as the extrinsic cue, it may be that other extrinsic cues such as the brand of the product will also act as a surrogate for quality (Asker and Keller, 1990; Jacoby et al., 1971). When price and brand are considered together in a multi-cue environment, in the context of increasing consumption rates, this may ultimately make price increases easier to achieve than if just price is used as the cue.

For the policy maker, price judgement errors will need to be closely monitored as they are potentially detrimental to consumers as the higher product price can create a mirage of actual product quality. Policies may be required in order to correct this pricing-error through mass-media advertising or direct consumer communication methods. Depending on the vulnerability of the consumer, sterner market intervention policies may be required to protect against
price-ramping strategies targeted as certain vulnerable consumer segments. Policymakers may also wish to distinguish between a price increase based on a commercially-driven increase in price or one driven by higher taxes. Delineating a price displayed on a product between the pre-tax price and tax amount may assist in this respect and policy makers may wish to draw upon the labelling literature for best practice to achieve this. Finally, the use of government agricultural subsidies may lead to a perception amongst consumers that the lower priced product is of lower quality if the subsidy feeds into lower prices. Public awareness campaigns targeting certain consumer segments that emphasise the high quality of the product may be required, such as the “Great British Food Campaign” or “Campaign For Real Farming” used by the UK government in the past.

6.1 Further research
Some work is required to further refine the constituent characteristics of the frequency effects identified here. While such effects are shown here to manifest within a range of lower priced products this province of research should be extended to include higher price points as well. More so, these effects should be contrasted between domains of private vs. business consumption, and contrasted too between the consumption of products vs. services. It would also be worth exploring the nature of anchors in this type of research more fully. As Sudden et al., (2013) have recently shown, anchoring effects might only be present when the anchor value is framed as a plausible price for the good for which the individual is a potential buyer or seller. In simple terms, they contend that while anchoring effects can affect market behaviour, not all anchors are effective. While Solana’s
et al. (2013) caution against overenthusiasm in the current stages of the technology’s development, neuroscience might offer research insights into decision making, rewards, memory and emotions, especially with regard to the role of brain mechanisms in the processing of marketing stimuli. Finally analysis should be conducted into how frequency effects manifest in multiple cue situations where the interaction of cues like brand, price and country of origin could be contrasted with single cue studies such as this. Studies conducted along such avenues would contribute to our understanding of the frequency effects presented here.
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Rabinowicz, E. (1999), “EAAE presidential address. Redesigning the CAP to meet the challenges of EU enlargement and the WTO: what can agricultural


Further reading


Paper 4

Exploring wine knowledge, aesthetics and ephemerality: Clustering consumers

Daniel Hall

Published in
Journal of Wine Business Research (forthcoming)
Exploring wine knowledge, aesthetics and ephemerality: Clustering consumers

Hall, D.E.

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Introduction

As the global economy pulls out of recession, the demand for luxury wine continues to grow. Total annual Bordeaux wine exports reached 277 million bottles in 2015, generating a turnover of US$2 billion (http://www.lepanmedia.com/china-shows-renewed-thirst-for-bordeaux/). In the US, luxury wine is predicted to grow at a rate of 14-18% (http://www.singaporewinevault.com/blog/state-of-the-wine-2015-q2-global-wine-industry-outlook-and-highlights), which is particularly pertinent given that the US has recently overtaken France as the worlds’ foremost wine consumer (BNP Paribas Report, 2015). However, in terms of luxury wine production, France dominates, with 84 out of the 100 most famous brands in the world being French. This is also reflected in pricing, with first growth Bordeaux’s commanding $800 and the great Burgundies even more, some of which can only be purchased through mailing lists or waiting lists for mailing lists (Johnson, 2005, p. 292).

To talk about luxury wine as a single homogenous product type is misleading. Not only are there thousands of wine varietals (http://www.vinodiversity.com/wine-variety-table.html), there are also multitudes of luxury wine brands; each with a different appeal. Given the large number of competing luxury brands, consumers face search and selection challenges, made even more difficult as wine can be considered an information rich product (Vigar-Ellis et al., 2015a). There is also evidence that wine is both a search product as well as an experiential product (Bruwer and Johnson, 2010), in the context of Nelson’s (1970) schedule.
The consumption of luxury wine does not just relate to the physical features of the product. Consideration of the consumer of the luxury wine should also be taken into account. In terms of product knowledge, some consumers may think that they know a lot about wine, indicating that they possess a high level of subjective knowledge; whereas others will actually know a lot about wine, demonstrating high objective knowledge levels. Demographic factors may also influence an individual’s knowledge of wine, such as their gender, age and level of education (Robson et al., 2014). In addition to consumer wine knowledge, consumers will also have different levels of aesthetic appreciation and ontological consumption timing patterns of the luxury wine.

The term aesthetics is derived from the Greek, aisthanesthai – “to perceive” (Zangwill, 2001) and the term ontology can also derive from the Greek word ontos, or being (Griswold, 2001) and relates to the state of permanence versus flux, or the difference between being or becoming. The concepts of aesthetics and ontology form the two modes in Berthon et al.,’s (2009) Aesthetics and Ontological (AO) framework. Within two of the quadrants of the AO framework, depicted by high levels of transience exists the concept of ephemerality; which is translated from the Greek word ephemeros means “lasting only one day”. Studying the concepts of aesthetics, ephemerality, objective consumer wine knowledge and wine consumption frequency; allows the creation of a clear identification schedule for different types of luxury wine consumers. Segmenting the luxury wine market along these concepts provides marketers with a useful tool to target each consumer type with more accuracy. Furthermore, although the AO framework indicates hypothesized relationships between
these concepts (Berthon et al., 2009), there has only been one study to date using this framework in the context of luxury wine (Reyneke et al., 2011), indicating a theoretical justification for further study in this area.

The paper proceeds as follows. First, the relevant literature on objective consumer wine knowledge, aesthetics and ephemerality is reviewed and discussed followed by a review of Berthom et al.’s (2009) AO framework. A study that explores the relationship between these concepts is conducted through a hierarchical clustering procedure with implications for practitioners considered, limitations acknowledged and suggestions for future research provided.

Literature Review

The study of consumer knowledge has a long history in advancing consumer research, marketing theory and practice (Flynn and Goldsmith, 1999). Previous studies have distinguished between two types of consumer knowledge - objective and subjective knowledge (Brucks, 1985; Bettman and Park, 1980; Mattil and Wirtz, 2001; Park and Lessig, 1981; Park et al., 1994). Objective knowledge relates to actual information about the product class, or knowledge that an individual truly holds and can demonstrate (Brucks, 1985). Whereas subjective, self-assessed, knowledge relates to an individual’s perception of how much they know about a product class (Monroe, 1976). As the focus of the study is on objective knowledge, the literature review will focus on this thread of research.
Veale and Quester (2007, p. 2109), define objective knowledge as “current, accurate information stored by individuals in their long-term memory”. Objective knowledge has also been related to expertise. Alba and Hutchinson (1987) argue that both cognitive structures and processes determine expertise. Similarly, Aurier and Ngobo (1999, p. 569) observe that “experts and novices differ in the amount, content and organization of their knowledge.”

Several studies have investigated the distinction between experts and novices, although findings have often conflicted. Some studies have found that experts and novices possess similar abilities (Chambers and Smith, 1993; Roberts and Vickers, 1994; Wolters and Allchurch, 1994); whereas others have shown that experts outperform novices in product discrimination (Cardello et al., 1982; Clapperton and Piggott, 1979; Peron and Allen, 1988; Rabin, 1988; Chollet et al., 2005). In studies relating to wine attributes, Solomon (1997) showed that experts sorted wines by grape variety, whereas novices sorted wines according to more basic properties such as sweetness and fruitiness. Hughson and Boakes (2002) also found evidence of grape variety providing an important framework for wine experts. Ballester et al., (2008) observed clear conceptual differences between experts and novices for two varietals of wine and also suggested perceptual differences. In another study, Ballester et al., (2009) found that odor representations of red and white wines existed independently of a visual activation and that these mental representations were stable through different levels of expertise. In relation to knowledge and wine, Beverland (2006) studied luxury wine product attributes and identified six attributes of authenticity based on the strategies of ultra-premium
wineries. Bruwer and Buller (2012) found that Japanese wine consumers with high objective knowledge used more intrinsic cues such as taste, variety and price, rather than extrinsic cues, such as country of origin; in their wine purchase decision. They also found that the importance attached to these intrinsic cues increased with higher levels of objective knowledge.

In terms of consumer decision-making, the process can be characterized by successive refinements in the number of brands evaluated (Roberts, 1989). As objective knowledge reflects what is actually stored in an individual’s long term memory (Brucks, 1985; Veale and Quester, 2007), it can allow consumers to encode information more efficiently about a new product when searching among alternatives (Bargh, 1984; Chase and Simon, 1973; Egan and Schwartz, 1979; Jeffries et al., 1981; Voss et al., 1980). Consumers with high levels of objective knowledge also have an increased ability to search for information about alternatives (Schmidt and Spring, 1996), resulting in larger consideration sets. These larger choice sets should lead to more variety-seeking behavior (Roberts and Lattin, 1997) and a more complicated but accurate category structure (Weber and Crocker, 1983) providing an ability to distinguish between alternatives in a given category with little cognitive effort (Agrawal, 1995; Anderson, 1983; Chase and Simon, 1973). These consumers are also able to filter out irrelevant information and focus on salient attributes (Anderson et al., 1979; Chase and Simon, 1973). Similarly, Wirtz and Mattila (2003) found that high objective knowledge translated into larger consideration sets as it enhances the development of more refined category structures and facilitates information processing and decreased brand loyalty. Objective
product knowledge can be considered to be product-related information stored in memory, including information relating to brands, product, attributes, evaluations, decision heuristics, usage situations (Marks and Olson, 1981) and price (Vanhuele and Dreze, 2002).

In the stream of literature relating to luxury products and services, there have been numerous attempts to define the term luxury (Aaker, 1996). In fact there remains division amongst scholars as to the very concept of luxury. Some scholars highlight a negative, almost socially destructive view of luxury (Sekora, 1977). Others take a more positive view where luxury represents an aspiration (Berthon et al., 2009). Some scholars have highlighted the physical aspects of luxury, such as rarity or material scarcity (Dubois and Paternault, 1995) or product quality (Ervynck et al., 2003). Others (Holbrook and Hirschman, 1982; Kemp, 1998; Brakus et al., 2009) highlight the experiential dimension of luxury brands, the behavioral, sensory and cognitive experiences of luxury created through brand packaging, communications and image. The symbolic nature of luxury, either symbolic to others (Veblen, 1994) or symbolic to ones-self (Belk et al., 1982) has also come under focus. Sheth et al., (1988) reported a symbolic connection between luxury products and brands and personal value and social identity. Some scholars have attempted to incorporate multiple dimensions into luxury. For example, Keller (1986) proposed that the value consumers attach to brands stems from the functional, experiential and symbolic nature of the purchase and the subsequent consumption.

Identifying a lack of conceptual understanding of luxury, Berthon et al., (2009) sought to “dimensionalise, define
and differentiate luxury brands”. Drawing on Heidegger’s Theory of Art (Young, 2001) and Whitehead’s (1978) Process Philosophy; Berthon et al., (2009) build a typology of luxury brands called the AO (Aesthetics and Ontology) framework and argue that luxury brands can be differentiated along the two dimensions of aesthetics (from novice to expert), and ontology (from transient to enduring), see Figure 1.

Figure 1.
The AO Framework – A Typology for Luxury Brands
According to the ontological dimension, at the extreme end of endurance, luxury products are characterized as permanent or in a state of ‘being’. Here luxury products will emphasize tradition, quality, art and craftsmanship (Berthon et al. 2009). In contrast, ephemeral luxury products are characterized as more transient or in a state of ‘becoming’. This may carry connotations of excess or waste (Kahn, 2009) or be associated with conspicuous consumption and hedonism (Berthon et al. 2009; Evans 1989; Veblen 1994).

In relation to the aesthetic dimension, Kant (1973) referred to aesthetic judgement as relying on an individual’s ability to acutely discriminate between value and quality. Gardner (1993) contended that aesthetic intelligence is something that naturally develops over time. Heidegger (2001) identifies that an individual able to bring a work of art alive through contemplation as a ‘preserver’ versus the neophyte observer who is unable to do this. Hence, the aesthetic mode ranges from the observer to preserver. The aesthetic dimension also includes an element of the concept of objective knowledge as it makes a distinction between novices (observers) and experts (preservers). In terms of marketing literature relating to ephemerality, Janssen et al., (2014) investigated the influence of scarcity and ephemerality on consumers’ perception of the fit between luxury and corporate social responsibility. The study found that where luxury products are considered enduring, a scarce product is perceived as more socially responsible (provoking a positive attitude) than a more widely available product. However, this effect was absent for transient ephemeral luxury products. Other studies have looked at ephemerality and hedonism in the context of transience. Beverland (2004) observed that
the luxury wine connoisseur is most likely to fit the hedonistic profile and focus on sensory pleasures rather than on price or quality. Caniato et al., (2011) studied eight luxury items including watches, bags, shoes and apparel and found that hedonistic motives are more drivers of consumer behavior and value perception than quality or performance. Juggessur and Cohen (2009) found that fashion consumers can be pleasure seekers and purchase luxury fashion items for hedonic reasons. Similarly, Miller (2013) identified pleasure seeking activities of luxury fast fashion products and found that consumers enjoy the creativity associated with ephemeral fashions and uniqueness as they add value to the customer in different ways.

There have been several studies relating to the segmentation of the wine market. Lockshin et al., (2001) undertook a cross-sectional wine study and segmented wine consumers on the basis of their involvement with the product and their nationality. Bruwer et al., (2001, 2002) considered wine to be a lifestyle beverage and through an exploratory study, proposed segmentation of the Australian wine market based on consumer wine-related lifestyles. Bruwer and Li (2007) further looked at wine-related lifestyles through a market segmentation based on demographic and behavioral factors. Thomas and Pickering (2003) looked at segmentation for the New Zealand wine market involving the volume of wine purchased and consumer behavioral information. Reyneke et al., (2011) also uses the AO framework and segmented the wine market based on the gifting of wine. Finally, Vigar-Ellis et al., (2015a) identified four types of consumers based on their subjective versus objective wine knowledge levels and proposed segmentation on this basis.
The aim of the study is to provide a new basis for segmenting the luxury wine market based on objective knowledge, frequency of wine consumption, aesthetics and the ephemerality of wine. Although the AO framework has been used in the past as a basis in which to segment the luxury wine market (Reyneke et al., 2011), this is the first study that uses the framework to investigate these particular concepts in combination. The AO framework has been selected as it not only provides a useful market segmentation tool (Reyneke et al., 2011), but provides the theoretical framework for a further investigation into the hypothesized relationships between these concepts.

**Research Method**

The study was designed to measure and investigate the relationship between luxury wine, aesthetics, ephemerality, objective consumer wine knowledge and frequency of consumption by using a clustering procedure. The motivation for the study was to fill a gap in the extant marketing literature on aesthetics, ephemerality, objective consumer wine knowledge and wine consumption frequency in the context of luxury wine and to provide academics and practitioners with useful insights to identify marketing tactics to target luxury wine consumers.

Scales to measure objective wine knowledge have been developed in previous studies. Forbes et al., (2008) measured objective wine knowledge using a six-item test based on a multiple-choice format, whereas Vigar-Ellis et al., (2015b) used a ten-point objective wine knowledge
scale. This study has adopted the Vigar-Ellis et al., (2015b) scale as it is not only the most recent objective wine knowledge scale developed but demonstrates robust psychometric properties including unidimensionality, internal consistency and validity. Berthon et al.,’s (2009) AO framework was used as the theoretical underpinning for the study. The model allows for the conceptualizing of luxury brands along the dimensions of aesthetics and ontology, producing a typology of four consumer type quadrants of luxury brands.

In terms of describing each quadrant, or consumer characteristic of the AO framework; the Modern quadrant depicts novice aesthetics and high endurance. Generally, these types of consumers do not have a deep knowledge, or appreciation of the luxury product. However, they are more likely to keep the product rather than consume it, but when they do consume; it is typically a conspicuous consumption. This quadrant has been referred to as the “democratization of luxury” Berthon et al., (2009, p. 59). The Classic quadrant depicts a high degree of endurance but with a high degree of expert aesthetics, indicating the consumer has deep knowledge and aesthetic appreciation of the luxury product. These types of consumers are more inclined to keep the product rather than consume it, so the emphasis is on product possession. This quadrant has been described as “purist luxury,” Berthon et al., (2009). The Postmodern quadrant is positioned in the space of novice aesthetics and transience. Consumers will tend to be novices with respect to knowledge and appreciation but have an inclination to conspicuously consume the luxury product rather than keep it. These kinds of luxuries will typically be the “latest, hottest, thing”
(Berthon et al., 2009). Finally, the Wabisabi quadrant depicts a high degree of expertise and aesthetic appreciation, together with a higher degree of transience. These consumers will possess high ephemerality where they are very mindful of the present and look to enjoy the moment.

A focus group of wine consumers who were members of a wine club were used to identify statements relating to the dimensions of the concepts of aesthetics and ephemerality. After an item purification process, thirteen common statements were then developed. Along the ontological mode, the statements ranged from “If I had money, I would buy really good wine and store it to drink in the future” (Statement 12), as an indication of high enduring; to “If you have a good bottle of wine, you should drink it as soon as possible to celebrate the moment” (Statement 13), as an indication of high transience. Along the aesthetic mode, Statement 2 “I think I know a lot about wine” was used to indicate high expert aesthetics and Statement 10 “I like it when I know that other people are seeing me drink a really good wine”, to indicate novice aesthetics. The 13 items are shown in Table 1. below.

Table 1.

13 Statements from Focus Groups

<table>
<thead>
<tr>
<th>Position on AO Dimension</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Expert (Aesthetics)</td>
<td>2. I think I know a lot about wine</td>
</tr>
<tr>
<td>High Expert (Aesthetics)</td>
<td>3. I like to read about wine</td>
</tr>
<tr>
<td>High Enduring</td>
<td>1. I am very interested in wine</td>
</tr>
<tr>
<td>High Transience</td>
<td>4. I often wish I could travel to wine regions</td>
</tr>
<tr>
<td>High Novice</td>
<td>10. I like it when I know that other people are seeing me drink a really good wine</td>
</tr>
<tr>
<td>Novice</td>
<td>9. I don’t really know a lot about wine</td>
</tr>
<tr>
<td>Ephemeral</td>
<td>6. I like to visit my local wine shop</td>
</tr>
<tr>
<td>Ephemeral</td>
<td>8. I am interested in learning about wine</td>
</tr>
<tr>
<td>Ephemeral</td>
<td>7. I often wish I could travel to wine regions</td>
</tr>
<tr>
<td>Example 1</td>
<td>5. I think I know a lot about wine</td>
</tr>
<tr>
<td>Example 2</td>
<td>11. I am very interested in wine</td>
</tr>
<tr>
<td>Example 3</td>
<td>12. If I had money, I would buy really good wine and store it to drink in the future</td>
</tr>
<tr>
<td>Example 4</td>
<td>13. If you have a good bottle of wine, you should drink it as soon as possible to celebrate the moment</td>
</tr>
<tr>
<td>4. I enjoy shopping for wine in stores</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>5. In a restaurant, I like to look carefully at the wine list</td>
<td></td>
</tr>
<tr>
<td>6. When dining in a restaurant with friends and family, people often ask me to choose the wine from the list</td>
<td></td>
</tr>
<tr>
<td>7. I would spend quite a lot of money to buy a really good wine</td>
<td></td>
</tr>
<tr>
<td>8. If someone gave me a really expensive bottle of champagne as a gift I would try to drink it as quickly as possible in order to celebrate something</td>
<td></td>
</tr>
<tr>
<td>9. A good wine should be drunk “in the moment”, spontaneously, to enjoy with friends</td>
<td></td>
</tr>
<tr>
<td>10. I like it when I know that other people are seeing me drink a really good wine</td>
<td></td>
</tr>
<tr>
<td>11. I buy wine to keep for a long time so that it can mature</td>
<td></td>
</tr>
<tr>
<td>12. If I had the money, I would buy really good wine and store it to drink in the future</td>
<td></td>
</tr>
<tr>
<td>13. If you have a good bottle of wine, you should drink it as soon as possible to celebrate the moment</td>
<td></td>
</tr>
</tbody>
</table>

A survey containing the 13 aesthetics-ephemerality items, the 10-item objective wine knowledge scale, and
some items polling demographics was then administered online using the MTurk platform. MTurk is a web based tool that researchers can utilize to recruit individuals to complete certain tasks such as surveys in exchange for a nominal cash reward. When setting up the online survey, researchers are able to target a certain demographic by employing filters or stipulating certain respondent requirements before they are allowed to complete the survey. Although respondents can be drawn across the globe, in this study it was decided to only allow US residents to participate. There is wide acceptance and support for the use of MTurk to conduct social science experiments and surveys (Minton et al., 2013; Goodman et al., 2013; Paolacci et al., 2010; Buhrmester et al., 2011).

After three days, the survey was closed when 300 surveys had been completed. Of the completed surveys, 254 were identified as being useable, resulting in an effective response rate of 85%.

The sample profile is shown in Table 2, below.

Table 2.
Descriptive Statistics – age, gender and wine consumption frequency

<table>
<thead>
<tr>
<th>Age</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-25</td>
<td>76</td>
<td>30.0%</td>
</tr>
<tr>
<td>26-35</td>
<td>99</td>
<td>39.0%</td>
</tr>
<tr>
<td>36-50</td>
<td>58</td>
<td>22.8%</td>
</tr>
<tr>
<td>50 and older</td>
<td>21</td>
<td>8.2%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Male</td>
<td>136</td>
<td>53.5%</td>
</tr>
<tr>
<td>Female</td>
<td>118</td>
<td>46.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wine Consumption Frequency</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I drink wine very seldom (A few glasses a year)</td>
<td>42</td>
<td>16.5%</td>
</tr>
<tr>
<td>I seldom drink wine (A glass or two a month)</td>
<td>64</td>
<td>25.2%</td>
</tr>
<tr>
<td>I often drink wine (About once a week)</td>
<td>101</td>
<td>39.8%</td>
</tr>
<tr>
<td>I drink wine very often (More than once a week)</td>
<td>36</td>
<td>14.2%</td>
</tr>
<tr>
<td>I drink wine daily (Daily)</td>
<td>11</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

The study used two quality controls. The first control measured the time to take each respondent to complete the survey. Those surveys that took less than five minutes were rejected as the presumption was that respondents’ could not have read each question in sufficient detail to effectively complete the survey carefully enough. For the second control, items were interspersed into the instrument with a specific instruction for the respondent to follow, such as “answer 4 to this item on the 7-point scale”. Where respondents answered this question incorrectly, it was presumed that
they had not carefully read the question and could have been consistently allocating the same scale score for all items. These completed surveys were identified and excluded from the results.

The 13 items of aesthetics and ephemerality were then subjected to a principal components factor analysis in order to investigate their factor structure. The results in Table 3. show that the items load separately and distinctively onto two factors that correspond to the two constructs in the study of aesthetics and ephemerality.

Table 3.
Rotated Factor Loadings

<table>
<thead>
<tr>
<th></th>
<th>F1</th>
<th>F2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am very interested in wine</td>
<td>0.797</td>
<td></td>
</tr>
<tr>
<td>2. I think I know a lot about wine</td>
<td>0.771</td>
<td></td>
</tr>
<tr>
<td>3. I like to read about wine</td>
<td>0.676</td>
<td></td>
</tr>
<tr>
<td>4. I enjoy shopping for wine in stores</td>
<td>0.691</td>
<td></td>
</tr>
<tr>
<td>5. In a restaurant, I like to look carefully at the wine list</td>
<td>0.719</td>
<td></td>
</tr>
<tr>
<td>6. When dining in a restaurant with friends and family, people often ask me to choose the wine from the list</td>
<td>0.728</td>
<td></td>
</tr>
<tr>
<td>7. I would spend quite a lot of money to buy a really good wine</td>
<td>0.692</td>
<td></td>
</tr>
<tr>
<td>8. If someone gave me a really expensive bottle of champagne as a gift I would try to drink it as quickly as possible in order</td>
<td>0.627</td>
<td></td>
</tr>
</tbody>
</table>
to celebrate something

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>A good wine should be drunk “in the moment”, spontaneously, to enjoy with friends</td>
<td>0.566</td>
</tr>
<tr>
<td>10.</td>
<td>I like it when I know that other people are seeing me drink a really good wine</td>
<td>0.513</td>
</tr>
<tr>
<td>11.</td>
<td>I buy wine to keep it for a long time so that it can mature</td>
<td>0.583</td>
</tr>
<tr>
<td>12.</td>
<td>If I had the money, I would buy really good wine and store it to drink in the future</td>
<td>0.563</td>
</tr>
<tr>
<td>13.</td>
<td>If you have a good bottle of wine, you should drink it as soon as possible to celebrate the moment</td>
<td>0.866</td>
</tr>
</tbody>
</table>

**Table 4.**

Cluster Summary – Cluster Means

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Count</th>
<th>How often do you drink wine?</th>
<th>Total Objective Knowledge (OK)</th>
<th>Aesthetics</th>
<th>Ephemeralinity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>62</td>
<td>3.613</td>
<td>2.629</td>
<td>4.203</td>
<td>4.968</td>
</tr>
<tr>
<td>2</td>
<td>57</td>
<td>4.333</td>
<td>5.30</td>
<td>4.756</td>
<td>4.444</td>
</tr>
<tr>
<td>3</td>
<td>57</td>
<td>4.263</td>
<td>3.561</td>
<td>4.554</td>
<td>2.783</td>
</tr>
<tr>
<td>4</td>
<td>78</td>
<td>2.718</td>
<td>2.680</td>
<td>2.992</td>
<td>3.154</td>
</tr>
</tbody>
</table>
Aesthetics and ephemerality mean scores were calculated for each respondent, see Table 4. Then using these scores, along with their scores on the objective wine knowledge test and their wine consumption frequencies, a hierarchical clustering procedure was conducted to segment the market.

Market segmentation is a widely accepted tool in marketing research (Myers, 1996) and cluster analysis has provided multiple techniques to determine the characteristics and the number of segments (Wedel and Kamakura, 2000). Although the use of cluster analysis in marketing research has been less than satisfactory (Dolnicar, 2003) it has been used for over thirty years (Punj and Stewart, 1983) and has enjoyed wide application (Saunders, 1980) and recent use (Mustapha, 2014). Cluster analysis has also been used in wine marketing research (McKinna, 1986; Johnson et al., 1991; Spawton, 1991; Hall and Winchester, 1999).

Cluster analysis is a statistical technique that can be applied to data that exhibits natural groupings. Rather than distinguishing between dependent and independent variables, the raw data set is examined and through an inductive process, groups data points into clusters. Each cluster represents a homogenous group of data points which have similar characteristics to each other, as well as dissimilar characteristics to other clusters. In hierarchical clustering, the procedure measures the distance between data points that are being clustered, through a measure called Euclidean distance, and then determines any similarity between groups of data points (Ward’s Method). This procedure is in contrast to other, non-hierarchical clustering
procedures, such as K-means which pre-specifies the number of clusters. Hierarchical clustering was used in this study as the number of clusters was not pre-specified.

**Research Results**

The results of the clustering procedure are shown in Figure 2.
Figure 2.
Cluster Means
Cluster 1 exhibits comparatively average levels of wine consumption, lower objective consumer wine knowledge, average to lower aesthetics but very high ephemerality. While within the AO framework this cluster might most closely fit the description of the Postmodern, it is probably fairer to say that these consumers know little about wine and consume it in average amounts, mostly for special occasions or to drink in the moment.

Cluster 2 exhibits high wine consumption frequency, high objective consumer wine knowledge, high aesthetics and high ephemerality. While within the AO framework, this cluster would most closely fit the description of the Wabisabi, it is probably more objective to describe these consumers as knowing a lot about wine, consuming it often and when it pleases them.

Cluster 3 exhibits high wine consumption frequency, high to average objective consumer wine knowledge, high aesthetics but low ephemerality. This consumer cluster would most closely fit the description of the Classic within the AO framework. However it might be more simple and accurate to describe them as knowing a lot about wine, and while wine is consumed frequently, there is also a cautious time element to this group. They might also keep special wines, or delay their consumption.

Cluster 4 exhibits low wine consumption frequency, low objective consumer knowledge of wine, low aesthetics and low ephemerality. With reference to the AO framework, this cluster would most closely fit the description of the “Modern”. However it would probably
be fairer to describe these consumers as not knowing a lot about wine, and not consuming much of it either.

Discussion

Cluster 1 consumers will likely have high levels of disposable income as they will need to afford the purchase of luxury goods. They will also gain some form of utility from spending money on lavish purchases (Eliot, 1997), so long as the purchase enables a conspicuous demonstration of their wealth to others (Eliot and Wattanasuwan, 1998). Examples of Cluster 1 consumer purchases would be buying a bottle of Cristal champagne in a fashionable night club or wearing a replica dress of a famous Hollywood actress or celebrity. In the context of luxury wine, these individuals will know enough about wine to identify and purchase a luxury brand, but surface and extrinsic properties of the wine such as packaging, label and brand (Mueller et al., 2010) will be important so that others recognize the product. The emphasis of consumption will be in the moment, so the individual is more likely to purchase a vintage wine than a great Bordeaux. Individuals belonging to this cluster may behave in this manner because they have been influenced by the ‘celebrity culture’ and want to appear living a similar type of lifestyle. They may be influenced by emotional based adverts, product placement in films or want to be seen in the coolest places enjoying the luxuries of life. In relation to the AO model, Cluster 1 consumers will most likely identify with the Postmodern quadrant. They will tend to be novices in terms of their wine product
knowledge and aesthetic appreciation of the specific wine brand, although they will look to conspicuously consume the luxury wine where appropriate.

Cluster 2 consumers will also consume wine to enjoy the moment, but their motivations for consumption will be more mindful as they will know much more about wine. Cluster 2 consumers will also consume wine more frequently and they will gain a deep sense of personal pleasure when consuming based on an ephemeral experience. Cluster 2 consumers will most likely be wine connoisseurs, or experts, with a keen interest in wine; potentially to the extent that wine forms an important part of their life (Bloch, 1982). They will be able to distinguish between different types of luxury wine brands and have enough experience and know-how to select the most appropriate wine for the occasion (Hall et al., 2001). The behavior of these types of consumers may be influenced by emotional based advertising that emphasizes enjoyment of the moment or by blogs and reviews of other wine experts. The AO framework would most likely identify Cluster 2 consumers in the Wabisabi quadrant where they are characterized by a high position on the aesthetic mode, leaning towards expert status, combined with a high position on the ontological mode with an emphasis on becoming and transience with high ephemeral appreciation and consumption patterns.

Cluster 3 consumers have similar high aesthetic levels to Cluster 1 consumers, but lower objective knowledge; indicating that although they know about wine, they do so at lower levels. Although they share similar high frequency consumption patterns, they may be more inclined to keep certain types of luxury wine brand, or delay the consumption of these wines (Shafir and Thaler,
Cluster 3 consumers are most likely to possess a degree of wine expertise and attach value and utility to keeping the wine for potentially long periods. Rather than vintage wines, they will be interested in purchasing wines that are able to mature well such as a fine Bordeaux. Cluster 3 consumers may be influenced by tasting notes, the market price of similar types of luxury wines or other wine expert opinions about the benefits of keeping or investing in the wine (Aqueveque, 2006). They will place value on the enduring nature of the wine and may also be collectors of other enduring luxury products such as fine art, antiques and jewellery. Relating back to the theory through the AO framework, Cluster 3 consumers would most likely sit in the quadrant relating to Classic with an emphasis on aesthetic possession and product endurance.

Finally, as Cluster 4 consumers drink wine infrequently, know little about wine, they are most likely to be wine novices who purchase luxury wine as a status symbol to display their wealth (Liu and Murphy, 2007). These consumers may also actively purchase other ostentatious and conspicuous labelled luxury goods such as Gucci handbags and Rolex watches. Cluster 4 consumers will be motivated to impress others as well as gaining hedonic utility from the purchase, but they will be more likely to keep the luxury than consume it. These consumers are likely to be influenced by the surface properties of the wine, such as the brand, label, packaging, industry ratings and reviews to help them become more informed. They will also tend not to shop for wine in specialist outlets but purchase online Atwal and Williams, (2009) or in a duty-free store Nueno and Quelch, (1998) if the luxury wine is made available. Cluster 4 consumers would be positioned in the Modern
quadrant of the AO framework, characterized by a high degree of commercial conspicuous consumption, low aesthetic appreciation and an inclination for endurance over transience.

**Practical Implications, limitations and Future Research Recommendations**

When conceptualizing luxury under the AO framework, the focus shifts away from the definition of luxury as a product to that of considering the attributes of individuals that consume or purchase luxury products. A luxury good to one generation may be considered commonplace to the next generation (Twitchell, 2001). Similarly, a simple bottle of any wine, even the simplest and least expensive, may be considered a luxury in a country where consuming alcohol is forbidden, whereas anything less than a great Bordeaux or Burgundy might be considered commonplace among wealthy connoisseurs. It could also be the case that individuals purchasing an identical bottle of wine are driven by very different motivations. The Classic consumer, with high aesthetic appreciation of wine will have a preference to want to keep, rather than consume the wine. In contrast, the Postmodern will have a low level of aesthetic appreciation but will want to consume the wine immediately. An unfocussed marketing strategy targeting all consumer types could easily lead to brand dilution or encourage the ‘wrong type’ of consumer, such as those who quaff magnums of vintage champagne in nightclubs merely to boast their wealth. In addition to brand positioning and awareness for the purchaser,
another implication that marketers will need to be aware of is the idea that Postmodern consumers also find the approval of other consumers in the market to be highly important. This will indicate the need to position the brand in a wider market context to encompass a form of elite social and conspicuous acceptance of the product. Clustering consumers and fitting these clusters to the AO framework can potentially assist marketers to segment the market and implement an appropriate marketing strategy.

Marketing strategies targeting Cluster 1 consumers could be to position the wine brand as the latest ‘hot thing’. Positioning will need to emphasize the high price tag of the wine and the consumer status of being seen to drink the wine. Promotion should focus on advertising in high class lifestyle magazines such as Vanity Fair or GQ, rather than the specialist wine magazines of Decanter or the Wine Spectator. The wine brand should be positioned alongside articles about the lives of celebrities to form an association with the conspicuous nature of the modern day celebrity culture. Marketers may also appoint celebrity endorsers to promote the wine brand, or pay for product placements in films.

Cluster 1 consumers have a tendency to consume the wine to celebrate a special occasion, so advertising in other magazines that focus on special events such as weddings, anniversaries or festive occasions may also be beneficial. Rather than using mass media distribution channels, distribution should be controlled, but not to the extent that it excludes the uneducated as all they require is the enough money to purchase the wine regardless of wine knowledge or appreciation. Effective distribution can be achieved by making the wine
available at exclusive outlets, restaurants, events or certain clubs. Price is a potential issue as it will need to be sufficiently high; otherwise there is a risk that the wine will lose its conspicuous appeal for these consumers. Packaging and branding will also be relevant as the Postmodern consumer will place importance on the need for the product to be easily recognizable by others as a status symbol. The focus of Cluster 1 consumers is on surface properties of the product, or what’s on the bottle rather than what’s in the bottle. Cluster 1 consumers may exhibit little brand loyalty and could easily switch brands or substitute wine for another ostentatious drink such as champagnes, a rare vodka or a well matured and distilled whisky.

For targeting Cluster 2 consumers, marketers may want to position their wine brand at the pinnacle of the ephemeral experience. Product advertising may be less relevant than for Cluster 1 consumers, as wine experts will already be knowledgeable about the wine. Rather than focus on informational content, the advert will push the ephemeral message and highlight connotations of personal pleasure. This advertising could target lifestyle magazines but draw out the experiential dimension of consumption. Distribution channels could be achieved through wine club membership, exclusive waiting lists or high end retailers. In terms of pricing, it may be that Cluster 2 consumers are less concerned about how expensive the wine as they will be able to see beyond the price tag. Similarly, packaging and branding will be less important as they will be able to determine what wine constitutes a quality offering. The whole consumption experience will be important and may not be confined to the physical product properties but include wider considerations such as where the wine is drunk, the way
the wine uncorked and poured into the glass as well as the quality of the glass. The implication is that restaurant staff that stock and serve a particular luxury brand of wine should be highly trained to possess a good understanding of the physical and aesthetic properties of the wine together with knowing the optimal conditions in which to drink the wine as they will be a key input into the wider consumption experience. These staff members in effect will need to be ambassadors of the wine brand as the winery or distributor does not necessarily have control over this experience in the restaurant.

For targeting Cluster 3 consumers, the marketer may want to emphasize the enduring feature of the wine. Promotional messaging may require information, not necessarily about the content of the wine, but rather the benefits of keeping the wine. Tasting notes could prove a useful as well as blogs from wine experts. Distribution channels might be provided through granting opportunities to meet the wine producer, visits to the winery and special tasting events (Lockshin and Knott, 2009). Packaging will be important to enable preservation of the wine, branding will need to emphasize the heritage of the wine.

Finally, for Cluster 4 consumers, the marketer may want to appeal to the enduring nature of the wine but will also need to be aware of the low knowledge base of the consumer. Communications may focus on providing information about the wine at the point of sale. Including wine ratings and awards that the wine has won on the packaging will be important. Distribution will need to include a well-informed, educated sales force that can highlight the benefits of keeping the product and how storage conditions should be made optimal, so
again packaging and bottling will be important (Boudreaux and Palmer, 2007). Pricing will need to be high enough to satisfy the conspicuous appeal of the product to the consumer. Due to not knowing too much about the wine, Cluster 4 consumers will possess low brand loyalty, so marketers will need to work extra hard to keep their brand innovative. However, repeat purchases will be less likely given the inclination to keep than consume the wine.

There are a number of limitations to the study. Firstly, online surveys can suffer from respondent bias. Secondly, there was no control to stop respondents from searching online for the correct answer to questions about wine. Thirdly, the generalizability of results could be limited as all respondents were based in the US where consumption behavior and cultural factors may differ to other parts of the world.

A number of directions for future research have been identified. Given recent evidence to suggest that objective and subjective knowledge are related (Vigar-Ellis et al., 2015b); it would be worthwhile to extend the study to incorporate a measure of subjective wine knowledge in addition to objective wine knowledge.

In an attempt to address one of the limitations of the study, it would also be worthwhile to undertake a comparative study to include consumers located in other parts of the world with different consumer behavior and cultural factors.

Another future direction of research would be to understand the interrelationships between consumption, ephemerality and the occasion. In may be that a dual relationship exists between a Cluster 2 consumer
drinking wine to mark the occasion on the one hand; and on the other hand, it is the reminiscing over the act drinking a great wine creates an ephemeral memorable occasion in itself.

Finally, the AO framework assumes that the individual is a consumer; however, it may be that where a consumer is motivated to keep a wine, this decision is not based on a function of consumer utility but based on a motivation to gain financially from keeping the wine. Building on the work of Shafir and Thaler (2006), it may be that a consumer-investor frontier can be observed and that a ‘tipping point’ exists between an individual being identified as a consumer to that of an investor of wine.

Conclusion

The purpose of the research was to understand consumer behavior relating to the consumption of luxury wine and to identify a new way of segmenting this market based on a consumer’s objective wine knowledge, frequency of consumption, aesthetics and ephemerality. Based on the AO framework (Berthon et al., 2009) a clustering procedure was used as a way of capturing these dimensions to provide a basis for segmentation. Although there have been previous studies on the segmentation of the wine market, and indeed the luxury wine market, there has not been a study based on the segmentation of the luxury wine market incorporating objective wine knowledge and ephemerality and this study seeks to fill this gap. The hierarchical clustering procedure extracted four clearly identifiable types of consumer cluster that exhibited similar consumer
characteristics to the four consumer types described in the AO framework. In addition to providing useful insights for marketers of luxury wines, the study contributes to marketing theory by applying and developing the concept of the AO model as a useful market segmentation tool for consumers of luxury wines.
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