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ABSTRACT

The findings of an experimental study exploring the taste testing of wine with varying degrees of expertise and in the presence of variations in quality, brand and country of origin (COO) cues are reported. Novices experienced difficulty in evaluating quality and even when detecting a quality difference were unable to assign an intelligent meaning to that difference. Experts did use physical quality and price evaluations, but in a complex and unexpected manner. Novices were found to use brand name in a limited fashion and relied mainly on COO information. The results demonstrated the importance of the extrinsic cues for both novices and experts. Surprisingly, there was no clear evidence of domestic preference.

INTRODUCTION

Researchers in marketing and consumer behaviour have been faced with major problems emanating from the decision making context of their disciplines and the necessity to predict purchase behaviour (e.g., Bartels 1976; Engel, Miniard, and Blackwell 2001; Hunt 1976; Jacoby, Johar, and Morrin 1998; Lehmann, Gupta, and Steckel 1997). Similar problems have plagued the other social sciences, for example, experimental social psychology where there has been controversy concerning the realism of the research approaches and the capacity to infer from the laboratory to human action in day to day life (Abelson, Frey, and Gregg 2004; Harré and Secord 1972; Hastie 2001). Consumers exist in a complex multi-cue, uncertain environment where they must make risky "decisions under the constraints of limited knowledge, resources, and time" often when bombarded with far too much information (Hoffrage and Reimer 2004, p. 437). In attempting to understand these

processes marketing scholars have followed reductionist principles to simplify the structure and so make the intricacies tractable to experimental manipulation and or non-experimental evaluation (Cohen and Chakravarti 1990; Jacoby, Johar, and Morrin 1998; Loken 2006; Simonson et al. 2001; Tybout and Artz 1994).

While this has resulted in progress it has, nonetheless, led to questions regarding external validity and generalizability. It is, therefore, surprising that in their search for more realistic consumer decision making milieus researchers in consumer behaviour have not shown more interest in taste testing in multi-cue situations. This is an area that offers a realistic environment that is amenable to experimental manipulation and provides an opportunity to resolve some critical issues in consumer behaviour theory. Indeed, despite a long history in marketing, research involving "sensation and perception" has been relatively neglected (e.g., Allison and Uhl 1964; Garber, Hyatt, and Starr 2003; Greenberg and Collins 1966; Hadary 1945; Hong, Pecotich, and Schultz 2002; Jacoby, Johar, and Morrin 1998; Keeney and Raiffa 1976). Jacoby, Johar and Morrin (1998, p. 322) emphasize this point by stating that "the relatively under researched sensory processes of smell, taste and touch suggest promising avenues for future work." The wine tasting context is particularly attractive for this kind of research because even in its most controlled, blind-tasting experimental situation, it exits in a highly commercial realistic setting (Garber, Hyatt, and Starr 2003; Jackson 2002). The results of such tests are widely disseminated, and appear as text and graphics on the label and or as some form of quantitative score in promotional materials. Taking this as a point of departure, it is the purpose of this study to investigate the taste testing of wine in a consumer decision making situation involving varying degrees of expertise and in the presence of variations in quality, brand and country of origin (COO) cues.

CONCEPTUAL DEVELOPMENT

The interdisciplinary or more appropriately transdisplinary nature of marketing and consumer behavior has greatly complicated research as sound scholarship requires knowledge of, and collaboration with, a wide variety of disciplines most of which are highly varied and house a myriad of schools of thought and approaches (Engel, Miniard, and Blackwell 2001; Harré and Secord 1972; Jacoby, Johar, and Morrin 1998). For example, consumer research may be approached from the management or consumer point of view with a descriptive or

normative perspective and with methodologies from different research traditions (e.g., Anderson 1996; Clough 1984; Engel, Miniard, and Blackwell 2001; Gigerenzer, Todd, and the ABC Research Group 1999; Hastie 2001; Kahneman, Slovic, and Tversky 1982; Keeney and Raiffa 1976; Weiner 2003; Zukin and Maguire 2004). The evaluation and integration of such research becomes extremely difficult, and often depends on the research tradition, training and experience that form the scholar's knowledge base. Therefore, it is inevitable that in developing a conceptual background for any study it is necessary to make some challenging decisions concerning observation and methodology.

With reference to our research perhaps a suitable beginning is in asserting that "there is a real world that exists independently of us and our experiences" (Searle 1998, p. 10) and in that world there are objects and events (Searle 1998; Williamson 2000). There also exist people who are observers that perceive, evaluate and act. Objects have properties or characteristics, and people have *perceptions* about the extent to which objects posses these properties (intensity) and f*eelings* about whether this is good or bad. Events have end states or occurrences, and people have *perceptions* about the extent to which they have occurred or are likely to occur, and f*eelings* about whether this is good or bad (Searle 1998; Williamson 2000). Given this there are two additional problems that plague research efforts – properties of objects and states of events tend to be hierarchical in nature, and often extend in time. For example, properties for wine may be taste and colour, which in the hierarchical sense themselves have properties such as bitter or sweet, or red or white. A choice therefore has to be made as to what to observe and at what level. This choice is further complicated by the time element, decisions have to be made as to when to observe the particular variables and this brings problems associated with process and stability as well as the measurement of change (Anderson 2001; James, Mulaik, and Brett 1982). While research at any level is acceptable and valid, different traditions and research questions often lead to confusion due to unclear explication. For example, within the multiatribute decision modelling tradition the integrative rules is assumed and the mathematical model is determined a priori, in contrast the research in information integration attempts to test the integrative rule both by experimental and statistical means (e.g., Ajzen 2001; Anderson 1996; Anderson 1982; Carterette and Friedman 1974; Fishbein and Ajzen 1975; Green and Wind 1973; Hastak and Hong 1991).

In both the consumer purchase and the wine tasting situation the bottle purchased and or tasted may be viewed as an *object* whose properties may have implications for *events* or the propensities of their occurrence. The properties are many and the context is complex, the researcher therefore, faces some critical decisions that must be logically defensible. Fortunately, the evidence suggests that in a complex multi-cue situation consumers use simplifying strategies and a smaller number of cues so that a similar simplification in the research design stages is acceptable and realistic (Ajzen 2001; Anderson 1996; Carterette and Friedman 1974; Gigerenzer, Todd, and the ABC Research Group 1999; Hastie 2001). In the applied wine marketing context according to the Economist (1999, p. 1) the issues are as follows: "for wine producers and retailers, it is vital to know what makes shoppers take one bottle off a supermarket shelf in preference to another. Once they have decided not simply to buy the cheapest, three main factors seem to guide their hand: country of origin; variety of grape; and brand." Given the importance of price and working within a particular variety, quality as measured by taste becomes a critical factor that is framed by country of origin (COO) and brand as important signals in the decision making context (Alvelos and Cabral 2005, in press; Brochet and Dubourdieu 2001; Economist 2005; Economist 1999; Hughson and Boakes 2002; Jackson 2002; Lynch and Ariely 2000; Melcher and Schooler 1996; Orth, Wolf, and Dodd 2005; Pangborn, Berg, and Hansen 1963; Parr, White, and Heatherbell 2004). The extent of knowledge or expertise is expected to moderate the effects of the framing variables (COO, brand and quality) on perceptions of quality, price, value and intent. Prior to developing our hypotheses it is necessary to discuss the nature of the independent variables.

The Independent Variables

  Country of origin (COO). Perhaps with no other product is COO so strongly meaningful and relevant as in the wine industry where it is a major component of marketing strategies and consumer awareness (Economist 2005; Economist 1999; Jackson 2002; Orth, Wolf, and Dodd 2005). In marketing research COO is regarded as an extrinsic cue that forms a part of a positive or negative frame in consumer decision making (Grewal, Gotlieb, and Marmorstein 1994; Maheswaran 1994). Unfortunately much of this research has confounded the hierarchical nature of the COO construct as a broad, molar concept (Tolman 1932) at a high level in the conceptual chain, its properties (e.g., Parameswaran and Pisharodi 1994) and its applications in the specific product class situation and has, consequently, failed to clearly

demonstrate its importance as a cue in the decision making process (Peterson and Jolibert 1995).

Learning and experience through a visual chunking process results in a better recognition and classification of stimuli as well as more efficient information processing (Johnson 2003; Petty, Wegener, and Fabrigar 1997). A chunk consists of lower order elements combined to form higher order elements (Anderson 1996; Haggbloom, Birmingham, and Scranton 1992; Laird, Rosenbloom, and Newell 1986; Tolman 1932). This kind of knowledge compilation helps consumers to cope with complexity and to make more efficient purchase decisions. The evidence indicates that in the applied purchase situation consumers form an overall hierarchy of COO's as a part of classifying processes that helps to simplify judgements when information is lacking or when there is an overload of information (Agbonifoh and Elimimian 1999; Audhesh, Kulkarni, and Gopal 2003; Balabantis et al. 2000; Economist 1999; Hong, Pecotich, and Schultz 2002; Kotabe et al. 2005; Paswan and Sharma 2004; Pecotich, Pressley, and Roth 1996; Pecotich and Rosenthal 2001). Formalizing COO as a higher order chunk the research leads to the conclusions: (1) that there exists an overall preference for domestic goods and services; (2) that foreign countries may be ordered in terms of their overall expected competence in producing products and services; and, (3) that the a COO's reputation may vary according to the product class involved.

Therefore, when conducting research at the broad, macro level the choice of nations must take into account these three conceptual elements. The first element that consumers use as macro chunk in product evaluation is domestic preference. Essentially the domestic nation defines itself and it is assumed that consumers are knowledgeable concerning its nature, and that the associated positive emotions are transferred to purchase action. Second for the non-domestic nations a hierarchy of foreign countries in terms of consumer response variables exists (Agbonifoh and Elimimian 1999; Audhesh, Kulkarni, and Gopal 2003; Hong, Pecotich, and Schultz 2002; Papadopulos and Heslop 1993; Pecotich, Pressley, and Roth 1996; Pecotich and Rosenthal 2001; Peterson and Jolibert 1995). Both of these elements are higher order chunks of information that are used positively or negatively in the consumer decision making process. The narrower conceptualisation of *country/product image* "deals with the referent image which consumers are assumed to conjure up when exposed to information about where a product was made, assembled, designed or conceived" (Papadopulos and Heslop 1993, p. 2). Its measurement, therefore, must be anchored to the referent product

class. The study of country of origin as a macro high order chunk has shown some broad ordering effects to occur, while the study of country of origin as associated *with particular product class* has shown these effects to be more specific or limited to referent product class. It is necessary to specify the theoretical conditions under which these conceptions may differentially operate.

Brand.

The preceding discussion on COO parallels that of global branding and Olson (1977) suggests that the influence of brand name in determining product quality is linked to its familiarity. More familiar brands are likely to have greater effects on product evaluation due to "information chunking" or use of brand as a Summary Construct. The summary construct ideas are essentially based on the notion that consumers recode and abstract individual elements of information into higher order units around the brand because information chunks are easier to store and retrieve from long-term memory (i.e., the brand acts as a cohesive grouping factor for all the information.) As the familiarity with the brand increases it is argued that consumers are less likely to use other extrinsic cues such as country of origin, because the information "chunked" or retrieved in the brand name becomes more useful (Audhesh, Kulkarni, and Gopal 2003; Brucks, Zeithaml, and Naylor 2000; Hong, Pecotich, and Schultz 2002; Jacoby, Johar, and Morrin 1998; Kotabe et al. 2005; Miyazaki, Grewal, and Goodstein 2005; Rao and Monroe 1989). A familiar brand is a powerful cue that may even overcome or enhance the country of origin effect particularly where there is a strong association of a brand name with a country (Hong, Pecotich, and Schultz 2002; Pecotich and Rosenthal 2001; Sadrudin and d'Astous 2004; Sadrudin, d'Astous, and Zouiten 1993). It is particularly useful to consumers with prior knowledge as a means of retrieving information about the product. Han (1989, p.,223) suggest that "information chunking may evolve around a brand" and that the brand name may be even a more powerful summary construct than the country of origin. Whether brand name or country of origin is more important in the determination of product evaluation (particularly quality) is debatable. For example, some studies show a greater importance of country of origin than brand name in the determination of product quality (Peterson and Jolibert 1995), while others suggest the converse (Sadrudin, d'Astous, and Zouiten 1993). Research also suggests that country of origin and brand names each have important framing the effects not only separately but may influence direction and intensity of each other. As will be discussed the nature of the framing effect the brand name and country of origin is expected to be influenced by expertise.

Physical quality

Product quality is assessed in terms of physical product difference or intrinsic cues, which are designed to show the superiority or inferiority of products. Although not univocally results from research suggest that objective quality, rather than extrinsic cues such as price, COO and brand name have the largest effect. (Brucks, Zeithaml, and Naylor 2000; Hastak and Hong 1991; Hong, Pecotich, and Schultz 2002; Jacoby and Mazursky 1985; Jacoby, Olson, and Haddock 1971; Miyazaki, Grewal, and Goodstein 2005; Monroe and Krishnan 1985; Orth, Wolf, and Dodd 2005; Rao and Monroe 1989; Sadrudin and d'Astous 2004; Teas and Sanjeev 2000; Thakor and Lavack 2003; Zeithaml 1988). A central issue in this research has to do with the extent to which consumers are able to judge quality, disregard other cues and make decisions accordingly. In the case of wine, although much is made of this capacity, the judgment of quality by ordinary, untrained consumers is problematical (Allwood 1984; Bartoshuk and Beauchamp 1994; Brochet and Dubourdieu 2001; Economist 1999; Garber, Hyatt, and Starr 2003; Orth, Wolf, and Dodd 2005; Pangborn, Berg, and Hansen 1963). With this in mind the most acceptable position is that when physical quality or objective quality is hard to assess or the product is based on fashion or style, extrinsic cues such as brand or country of origin, become more important (Holbrook, Lehmann, and O'Shaughnessy 1986). Han (1989) also argues that the use of the country of origin image is most likely to occur when actual quality differences are hard to detect or consumers lack knowledge and are forced to rely on country of origin as a naive basis of evaluation. The critical issue therefore concerns consumer expertise in the evaluation of quality differences. The response to extrinsic cues will depend on the extent to which consumers are able to evaluate quality and or are willing to make sacrifices for more visible elements.

Dependent Variables

In applied marketing and consumer research the major aim is to predict purchase behaviour, however, the difficulties associated with observation and control of real human action has resulted in the use of numerous proxy dependent variables (Engel, Miniard, and Blackwell 2001; Garber, Hyatt, and Starr 2003; Jacoby, Johar, and Morrin 1998). While these variables may predict behaviour and are therefore of intrinsic interest resolving issues associated with their interrelationships merit further investigation. Further, it is increasingly recognised that consumer responses are interconnected and that, for example, perceptions of product quality are influenced by the extent of sacrifice manifested in the price. Similarly perceptions of value are dependent on a comparison of sacrifice and perceived quality all of

which impact on purchase intent and the purchase itself (Dodds, Monroe, and Grewal 1991; Jacoby, Olson, and Haddock 1971; Teas and Sanjeev 2000; Tybout and Artz 1994; Zeithaml 1988). It was, therefore, decided to use four consumer response variables (perceived quality, price perceptions, perceived value and purchase intent) in this study.

The effect of country of origin on the expression of perceived quality has been the most widely debated topic in COO research. Studies have shown perception of quality to be consistent with the expected county hierarchy where the order has been, the well developed nations such as the USA, Japan and Germany followed by the developing nations, (e.g. Korea, China and The Philippines) with countries about which very little is known being rated the lowest (Agbonifoh and Elimimian 1999; Alashban et al. 2002; Papadopulos and Heslop 1993; Pecotich, Pressley, and Roth 1996; Pecotich and Rosenthal 2001; Peterson and Jolibert 1995). However, despite the quantity of this research the effects of various cues on perceived quality are unresolved and it remains an important variable for further investigation.

The price consumers accept can be seen as a measure of sacrifice based not only on monetary expenditure, but includes additional search and effort costs for the consumer. Research involving the cues used in this study has shown that the price consumers are willing to pay for products varies as a function consumer perceptions of these cues (Brucks, Zeithaml, and Naylor 2000; Chang and Wildt 1994; Dodds, Monroe, and Grewal 1991; Grewal, Gotlieb, and Marmorstein 1994; Lynch and Ariely 2000; Miyazaki, Grewal, and Goodstein 2005; Rao and Monroe 1989; Sadrudin and d'Astous 2004). While this is consistent with the findings in relation to perceived quality further research is necessary to clarify the relationships. In contrast, it appears that no studies have examined the role of COO as an influence on the perception of value. This is not surprising as the role of perceived value in influencing purchase intent has only recently been recognised (Agarwal and Teas 2001; Dodds, Monroe, and Grewal 1991; Steenkamp, Batra, and Alden 2003; Teas and Sanjeev 2000; Zeithaml 1988). Value can be defined as ratio between price perception and perceived quality. This is a similar to the notion of perceived quality as subjective response, and can be based on lower level abstractions such as economy, utility at a price level, or higher level abstractions such as pleasure and fun. Value and perceived quality may thus overlap either in the consumers' minds or its formulation as a concept in consumer behaviour.

Purchase intent in marketing is still regarded as one of the most accurate predictors of future behaviour (e.g., Chang and Wildt 1994; Hong, Pecotich, and Schultz 2002; Liu and Johnson 2005; Loken 2006; Morwitz and Schmittlein 1992) . It is believed consumers will be positively disposed to purchase a product if it provides value (Chang and Wildt 1994; Loken 2006; Zeithaml 1988), yet many studies have addressed intent in isolation, without reference to a price or level of expected quality and there is still a degree of controversy as to its importance as a predictor of behavior. Given this controversy it is important to re-assess the aetiology of purchase intent in a multi cue situation.

Expertise - The Development of the Hypotheses

In any consumer decision making situation issues associated with prior knowledge, experience or expertise are of decisive relevance. In this study it is proposed to use controlled and carefully chosen extrinsic cues (COO and brand) as well as the intrinsic cue of quality with consumers varying in expertise in a wine tasting context. The empiricist point of view holds that all of our knowledge emanates from our interaction with the world through our senses (Bartoshuk and Beauchamp 1994; Brochet and Dubourdieu 2001; Gallagher and Nelson 2003; Hastie 2001; Johnson 2003). Essentially, the senses may be classified as proximal (e.g., touch and taste) or non-proximal (e.g. vision and hearing), and while these may involve different mechanisms and neural processes our knowledge concerning the world around us derives from the synthesis of data from diverse sensory inputs. This information processing synthesis must deal with many different inputs of data, develop knowledge through learning, as well as have the capacity for incremental dynamic change and adjustment to a continuous barrage of stimuli (Healy and Proctor 2003). The capacity to discriminate between and classify stimuli is a fundamental necessity for efficient consumer behaviour. To assist in this humans use simplifying strategies such as the process of chunking when frequently encountered and meaningful events are organized so as to be easily recalled and used. The necessary neural codes are developed through interactive direct experience and direct perception through the senses. This process leads to classification and storage in the form of concepts that are associated with names, and that with other concepts form the frame for the consumer decision (Pecher and Zwaan 2005). Although there may be a genetic component that facilitates the development and acuity of prior knowledge the learning of concepts and processes forms the essence of expertise particularly in relation to taste testing.

The nature of, and the bases of expertise have been investigated from diverse points of view leading to many different conclusions (Aaker and Maheswaran 1997; Allwood 1984; Choe and Cho 2000; Edwards and Fasolo 2001; Hastie 2001; Holbrook, Lehmann, and O'Shaughnessy 1986; Johnson 2003; Kahneman, Slovic, and Tversky 1982; Laird, Rosenbloom, and Newell 1986; Loken 2006; Maheswaran 1994; Maheswaran and Sternthal 1990). There is however evidence indicating that expertise may be developed through training, and the enhancement of knowledge and information processing ability (Anderson 1996; Newell and Simon 1972; Shanteau 1992). Anderson (e.g., 1996) has demonstrated in numerous experiments that, when trained, people can make complex judgments that seem to conform to sophisticated mathematical models (see also Dawes 1979). However, outside the laboratory people (even when experts) simplify, exercise choice in the cues they use, and may be subject to biases due to the nature of the configuration of cues (frames) and the context involved (Alba and Hutchinson 1987; Gigerenzer, Todd, and the ABC Research Group 1999; Kahneman, Slovic, and Tversky 1982; Loken 2006; Maheswaran 1994; Maheswaran and Meyers-Levy 1990).

Research into the role of perception in skilled behaviour (chess playing) has suggested that expertise requires the acquisition of a large collection of relatively small chunks that through retrieval from memory, and discrimination processes lead to appropriate action and judgments (Chase and Simon 1973; Simon and Chase 1973). Further, as a result of practice, experience and or training experts develop larger configurations that may be understood and treated as one unit. In marketing Han (1989, 1990) by explicating the operation of cues in consumer behaviour has taken a position that may be interpreted form a similar vantage point. He suggested that through learning and information "chunking," at a high level, COO, brand or other cues may serve as a highly simplified *Halo* used to form a general perception about a product or service. That is, consumer evaluations of products and services are based on their global perception of extrinsic cues such as the COO or brand (e. g. overall the Japanese make good quality products, in the absence of other information in the frame, the conclusion is: this is a camera from Japan, therefore it must be good quality). The use of COO or brand as a *Halo* to directly infer product beliefs may be based on a consumer's limited ability to infer quality before purchase. This may occur because actual quality differences are hard to detect or because consumers lack familiarity with the product particular product class and or other prior knowledge (Allison and Uhl 1964; Han 1989; Han 1988; Miyazaki, Grewal, and Goodstein 2005; Petty, Wegener, and Fabrigar 1997). More

experienced consumers may form more sophisticated chunks by linking extrinsic cues (e.g. brands or COO) concerning products within a particular a particular product class analogous to Han's (Han 1989) *Summary Construct,* (e. g. I know, from experience that the Japanese (cue) make poor quality wine (product class), this is a wine from Japan, and therefore I would expect it to be of poor quality). This occurs when consumers have greater knowledge about products classes from a particular country or brand; and, then generalise only to that specific product class, but these relatively expert consumers are also capable of judging quality. This process is analogous to stereotyping and is similar to that described in the price/quality literature (Jacoby, Olson, and Haddock 1971; Lynch and Ariely 2000; Miyazaki, Grewal, and Goodstein 2005; Wheatley, Ghiu, and Goldman 1981; Zeithaml 1988).

The first point, therefore, is that the *Halo process* involves the use broad high level chunks such as brand or country *images* that extend across different products or services, while the *Summary Construct* encompasses the use of more detailed chunks linking extrinsic cues to particular product classes leading to a *country or brand product* images that are represented by the reputation of the country as a producer of particular classes of goods as well as an ability to evaluate intrinsic cues such as taste qualty. Thus, there is a need to create critical test conditions to examine the use of country of origin as a *Halo* for countries with a overall good or poor reputation across product categories contrasted to carefully chosen product class, brand level and quality conditions that encapsulate the *Summary Construct* explanations. Stated more directly, if consumers use COO as a *Halo* then product evaluations should be consistent with the overall image of that country. Product evaluations should follow the same pattern as that expected by the hierarchy of the overall image of countries in broadly producing all goods and services. On the other hand, if consumers use COO as a *Summary Construct* then product evaluations should be consistent with the image of the country of origin in producing the referent class of merchandise. Product evaluations should thus follow the pattern of that expected by the hierarchy of the product-image of countries in producing that particular type of goods or services.

The second factor that distinguishes the processing strategies of cues is the extent of consumer knowledge. Generally, the more expert and knowledgeable the consumers the more likely they are to use cues as a Summary Construct. The use of COO and brand is as an "information file," that forms the basis for consumer evaluations and responses. This "information file," emanates from experience with the *particular* product or service from the

specific countries involved (Han 1989). In terms of information processing this is a selective and analytical use of extrinsic cues. It is a selective process because the more expert and knowledgeable the consumer, the more likely extrinsic cues will only be of importance if it is consistent with past experience of a product from a relevant country or brand. It is an analytical decision making process in as much as it is only of relevance to more knowledgeable consumers when actual quality matches past experience. This will be the case for more knowledgeable consumers even when differences in quality are difficult to determine.

It is, therefore, expected that consumers lacking in knowledge will use country of origin as a *Halo* because they are unlikely to be able to judge quality where differences are not obviously apparent. These "novice" consumers do not have extensive knowledge of countries, brands, products from a particular countries or general product class knowledge from which to form a Summary Construct ("information file") about a product or service they are evaluating. They will rely more on the overall image of a country when rating products and services along with information contained in extrinsic cues. They are holistic processors because they use surface differences as a basis of decision making. More knowledgeable consumers, on the other hand are heuristic processors using country of origin only when it is relevant to a product and consistent with a level of detected quality. Given these postulated differential effects the most extreme case where these strategies may be placed in a critical test is in a situation involving novices and experts.

The wine industry is particularly attractive for the evaluation of these notions particularly in relation to novices and experts. Even a highly controlled experimental context is highly similar to the actual realistic tasks faced by actual consumers. Wine promotions involve many variations of promotional modes (e.g., cellar door tasting, store product sampling, appreciation and training parties) as well as forms of blind and framed (e.g., COO or brand) taste testing (Economist 2005; Economist 1999; Jackson 2002) . While progress has been made in the study of chemical senses (Bartoshuk and Beauchamp 1994) and a mythology concerning wines and their quality exists, the evidence for the veracity of the taste testing in the wine marketing context is scarce. The research that does exist suggests that both genetic ability, and experience and or training as well as the framing context is important (Alvelos and Cabral 2005, in press; Bartoshuk and Beauchamp 1994; Brochet and Dubourdieu 2001; Hughson and Boakes 2002; Jackson 2002; Lynch and Ariely 2000;

Melcher and Schooler 1996; Orth, Wolf, and Dodd 2005; Pangborn, Berg, and Hansen 1963; Parr, White, and Heatherbell 2004).

Consumers enter the tasting context with expectations with regard to quality based on the expense, brand, COO and vintage, and while experts and novices are likely to be influenced by these framing variables they may be primarily differentiated on the basis of the knowledge (Allwood 1984; Mercer 2005; Payne, Bettman, and Johnson 1992). For example, Hughson and Boakes (1994) in a series of experiments compared recall for wine-related words by experts and novices demonstrated that expertise relies on explicit knowledge, and that differences were partly due to the novice deficits in vocabulary and knowledge. Alba and Hutchinson (1987, p 423) provide a number of knowledge based reasons for the existence of differences in the use of product related cues. For example, in a discussion of differences in classification processes they conclude: "Experts are more likely than novices to engage in analytic classification, and novices are more likely to engage in holistic classification". The Summary Construct approach involves classification using analytic inferences based on attributes of the object, which is summarised into a chunk of information, such as a brand name or possibly country of origin. Novices, lacking knowledge about product attributes, are more likely to use extrinsic cues to construct product inferences rather than more technical attributes. Another key difference is that experts unlike novices are more likely to detect quality differences, and so may rely less on extrinsic cues as a basis of their decision making (Maheswaran 1994).

There is also support in the psychology literature that experts and novices differ in their use of information analogous to that of Halo/Summary Construct thesis. These differences are due to the interrelationship between perception and the use of knowledge. In terms of knowledge, experts know more about a domain; have fewer, simpler and more abstract concepts of organisation (Hardiman, Dufresene, and Mestre 1989; Kolodner 1983; Loken 2006). Expert knowledge organisation reflects higher order properties of information while that of a novice reflects "surface" or literal features (Hardiman, Dufresene and Mestre 1989). These differences in knowledge determine the differing nature of perception between these two groups. In terms of perception expert knowledge creates expectations of "what to look for" and "to know where to find it" (Kundel, Nordine, and Carmody 1978) and experts will scan the task environment to look for cues likely to provide diagnostic information.

Experts are also more able than novices to recall, reorganised meaningful stimulus or analytic stereotypes, which are often organised as a "chunk of information" representing

feature configurations of the object. Novices, on the other hand, search the environment for simple, surface apparent differences since their knowledge is fragmentary and complex in its organisation, which makes its recall, use for generalisation and analysis of the object, difficult. These differences in knowledge and perception are directly analogous to the use of a Halo or Summary Construct. It is, therefore, expected that novices will use the extrinsic cue (COO) information purely as an image in the *Halo* context regardless of whether it is consistent with actual product quality. And "experienced" experts will use the cue (COO) information with direct reference to the country/product configuration in the *Summary Construct* manner. Brand use is anticipated to follow a similar pattern. Novices, being unable to accurately detect quality differences will simply use the *Halo*, of the COO as a noticeable holistic, i.e. "this represents quality" rather than an analytic cue (Maheswaran 1994). The differences between experts and novice use of the COO are set out in the hypotheses and the discussion that follows. This specification is integrative and is based on the preceding discussion.

It is expected that the process followed by novices in the use of COO will be that of a *Halo* under all country/product conditions. This is expected to occur because novices use COO as a holistic, non-analytic means of evaluation, and they are not likely to be able to notice quality differences. In experimental circumstances where countries, products, brands and quality are systematically varied product evaluations are expected to occur as follows:

H$_1$: For novices, a significant country effect will be demonstrated.

H$_2$: For novices, a significant brand effect will be demonstrated.

H$_3$: For novices, **no** significant quality effect will be demonstrated.

H$_4$: For novices the significant country effect will be based on the use country of origin image as a *Halo*. The order of the product evaluation means will occur regardless of actual quality differences and be based on image order and domestic preference.

H$_5$: For novices, a significant interaction between country of origin and brand will be demonstrated.

Experts use of country of origin and/or brand name is expected to be as predicted by the *Summary Construct* process under theoretically justified and empirically selected product/

country conditions expected to induce this effect. Otherwise experts' differences in product evaluation will be based on objective quality differences. To summarize more directly, experts will use COO according to the *Summary Construct* when product evaluations are consistent with the image or of the country of origin in producing that particular type of goods and *only if the country's reputation is consistent with quality*. This will be manifested by interactions. Under product conditions where the use of country of origin is expected to be that of Halo experts will simply base their judgments on physical quality differences.

H$_6$: For experts, a significant quality effect will be demonstrated.

H$_7$: For experts, there will be a significant interaction between country of origin and brand.

H$_8$: For experts, there will be a significant interaction between country of origin and quality.

H$_9$: For experts, there will be a significant interaction between brand and quality.

H$_{10}$: For experts, there will be a significant interaction between country of origin, brand and quality.

An implication of these hypotheses is that the use of country of origin by experts is product specific and that expert decision making is considered to be limited to a product class. Novice use of country of origin is image based on the *Halo* format and is expected to be broadly consistent across product classes. Overall, this necessitates the use of more than one product and a number of subject groups to determine expert's specific use of country of origin as a *Summary Construct* versus that of the broad use of COO as a Halo by novices. These issues will be fully described in the methods section.

METHODOLOGICAL PRELIMINERIES

Given the previous discussion (above) it was necessary to identify, select and validate: (1) the wine quality manipulation; (2) nations that captured the necessary *global image* and specific *country/product* image distinctions, provided the necessary separation and were sufficiently realistic to provide a high degree of external validity; (3) brand names linked to the domestic and foreign countries given each country's overall or product specific reputation; (4) experimental quality levels that in physical terms were sufficiently discernible

to be clearly detectable; and (5) a clear valid basis for the definition and identification of the novices and experts who are to form the samples.

Design and Instrumentation

In the first phase of this research, to provide the stimuli combinations necessary for the experimental treatments preliminary surveys were developed and implemented. The objective to identify and select the experimental conditions was a prerequisite for the second stage. The second stage involved the execution of a series of experiments designed to provide a test of the research propositions. This derivation of the experimental conditions from empirical sources as well as the literature increased the external validity of the experiments and supplied a strong realistic basis for the structure of the study. Two questionnaires were used to provide information concerning consumer: (1) knowledge of various countries, (2) perceptions of the extent of similarity between various countries, (3) views about the quality of products from the countries, (4) specific conceptions of country/product linkages, and (6) knowledge and perceptions of quality about domestic and international brands.

Seventeen of the top importers (collectively accounting for 89% of total imports) into Australia (the domestic country in the study) comprised the list of 18 countries that formed the backbone of the questionnaires. This list was considered adequate although the burden on the respondents was still heavy and, accordingly, it was decided to conduct two separate surveys to collect the necessary information. The first questionnaire, (Questionnaire A), was designed to collect information on items which could be measured by scale values. These included; knowledge of countries (measured on a five point Likert scale ranging from (1), "know nothing about" to five (5) "know all about"), similarity judgments of various countries (again from (1) "Exactly the same as Australia", to five (5) "Completely different to Australia"), general quality of products and services of those countries (response categories ranging from one (1) "Very poor quality", to five (5) "Very good quality"), knowledge of domestic and international brands and the opinions of quality of such brands (respondents were asked to list Australian and foreign brand names that they could recall and to rate the quality of each brand on a five point quality scale as described above). The second questionnaire (Questionnaire B) was used to collect a list of products or services each country was perceived as good or poor at producing. This was collected by unprompted recall, and

thus recorded in open-ended format. Both the questionnaires concluded with the usual demographic items that were useful in describing the nature of the sample.

The data was collected by telephone interviews with the sample frame for both surveys emanating from the telephone directory of a major regional area. The samples were selected as in Warwick and Lininger (1975) and a systematic, cluster sample for each interviewer in the study was selected (a random page and column number start.). Each column served as a cluster sample and was sampled exhaustively from top to bottom. The sample size for Questionnaire A was 258 and for Questionnaire B, 282. Response rates were 21% for A and 20% for B which was considered adequate (Groves 1990). The samples had similar gender proportions (e.g. women were 51.6 and 56.7%) and average ages (36 years for A and 39 for B).

Results

The states with the appropriate *global country images* were primarily identified from the ratings of knowledge, quality and similarity in Questionnaire A while taking brand and *country/product* linkages from Questionnaire B into account. Further, in order to ensure the external validity all countries used had to be credible producers of wine. Australia was included because it was the domestic nation with a high overall image rating (quality mean 4.00) and, as expected, the highest knowledge level (mean rating 3.96). It was considered a good wine producer based on unprompted positive mention by 7% of the respondents, no negative mentions and strongly positive wine brand quality evaluation. USA was included as a well-known nation (mean knowledge 3.93) with a strong overall rating of quality (*Halo*) (mean 4.12), a high similarity rating (mean 2.76) and a poor image as a wine producer by consumers in Australia. Wine produced in the USA is rarely sold or mentioned in Australia. To provide a clear contrast to the United States, France was included as a country with a positive *global image (*quality rating of 3.57, knowledge 2.41 and similarity 3.53) that although lower than USA was higher than 11 of the countries in the sample but more importantly with a strongly positive image for producing wine. China was selected as the country with an overall poor image (unfavourable Halo) with a very low rating of quality (mean 2.75), intermediate level of knowledge (mean 2.34) and very low level of similarity to Australia (mean 4.46). China also was regarded as a poor producer of wine.

The respondents did not show a strong low rating for any *country/product* combination. The manipulation of country of origin as a poor Summary Construct was then

based on a country not having a positive reputation for producing a product or service rather than a negative one. This conceptualisation of equating an unknown reputation is equivalent to using an unknown brand name as an unfavourable experimental condition (see Grewal, Gotlieb, and Marmorstein 1994; Olson 1977; Rao and Monroe 1989). Because the relatively unknown nations in the survey (Papua and South Korea) were not seen as credible producers of wine, it was decided to select the unknown country - Morocco - because it was perceived as capable of producing wine. This decision was confirmed by two pilot experiments the details of which are available from the authors.

Following the price/quality literature two types brand name treatments were used: a well known brand with a high rating of quality and an unknown brand name, with a low rating of quality (Dodds and Monroe 1985; Monroe and Krishnan 1985). This approach to the use of familiar and unfamiliar brand name treatments has also been used in country of origin research (Papadopulos and Heslop 1993). Each type of brand name treatment was linked to either a domestic country or a foreign country. The brand names selection was on the basis of their mention in the survey, sales figures and pre-testing. Brand names recalled by respondents were generally of high quality. For wine, Australian brands were well known and rated highly in quality but foreign brands, apart from *Dom Perignon* were not well known or rated as highly in quality. The most familiar brand of wine was an Australian brand, *Brown Brothers* (mentioned by 29% of respondents, with 48% of those recalling this brand rating it at least good quality). While *Dom Perignon* was the most highly rated French brand it was strongly associated with champagne and therefore not considered suitable for the experiments where red wine was to be used. A not so familiar French brand (*Delas Saint E'Sprit*), which is neither well known nor a big seller in the Australian market was selected. Both wines were of a similar wine variety, a shiraz style, and were sold on the same mid price range segment of the market at price $10-13 dollars a bottle. A pretest blind wine tasting by 10 experts and 10 novices showed in terms of taste and overall opinion of quality, experts rated the high quality wine higher wine than that of the low quality wine. Novices on the other hand, failed to notice any differences in quality between high quality and low quality wine. For the sake of brevity, these results are not presented here but are available on request from the authors.

Thus with wine experiments, a well-known domestic brand and lesser-known foreign brand was used. The necessity to limit the burden on the subjects precluded further expansion of the already complex design. Because the choice of quality levels, and the

differentiation between experts and novice is specific to each experimental setting the processes involved shall be described in that context.

EXPERIMENT 1 - WINE NOVICES

Method

Participants. Wine novices were 31 university students (58% female with average age 20) who had never drank wine. Assessment of product class knowledge (extent of expertise) included both "subjective" and "objective" These was measured in similar manner to that suggested by Rao and Monroe (1988), and consisted of asking respondents what was meant by the wine related terms as well as to provide a list of factors which would be helpful for a friend or relative selecting a bottle of wine. A measure of self reported experience based on frequency of purchase and ownership was also used. This was simply measured by asking how much the respondent thought they you knew about product category used in the study as compared to the average person. Responses were recorded on 5 point scale from one (1) of the Least Knowledgeable to five (5) of the Most Knowledgeable. This was a similar procedure to that used by Rao and Monroe (1988) to assess the subjective knowledge - a measure that has been found to discriminate well between subject groups of known product knowledge and expertise.

A check on product class knowledge scores confirmed that these subjects were less objectively knowledgeable about wine than the experts in experiment 2 (expert mean of 2.79, compared to a mean of .161 for novices, t=5.65, p< .01). Expert subjects also scored much higher in terms of shopping knowledge (mean of 3.88) versus novices (mean of .322, t= 6.61, p< .01). Experts also provided a much higher self assessment of their knowledge (mean of 3.16) than was the case for novices (mean of 1.93, t=4.18, p< .01). Experts in the latter experiment had also bought a much larger amount of wine (mean of 47.45 bottles) over the last six months than had the novices interviewed (mean of .096, t=3.47, p<.01).Only 16.1% (5) respondents correctly guessed the purpose of the study but no significant differences were discovered between the two groups.

Design. The design for this experiment was also a 5X2X2 within subject factorial. Factor 1 consisted of five levels of COO in this case the product/country images were (Australia - domestic country with a positive country/product image for wines; USA - positive country

image and poor country/product image (this was found to be true in this consumer context although the US is in fact a producer of very fine wines); France - positive country image and positive country/product image; China - poor country image and poor country/product image; and Morocco - unknown country image and unknown country/product image). Factor 2 comprised of *Brown Brothers* a well known, positive image, domestic brand and *Delas Saint E'Sprit*, a relatively unknown image French brand. Factor 3 consisted of two levels of high and low quality wines that were identified and selected by wine experts. To ensure that there was sufficient separation in quality a very poor low priced wine was contrasted to an excellent higher priced wine of exactly the same vintage and variety. The levels were pre-tested and found unanimously to have adequate separation and clear quality differences. This experiment therefore used physical products which respondents could trial (taste) rather than a set of product descriptions and thus provided a more realistic examination of the hypotheses of interest.

Measurement.

To assess perceived quality the international industry standard was used (Economist 2005; Economist 1999; Jackson 2002; Spurrier 1986). This consisted of three measures; appearance scored out of maximum of 3, bouquet scored out of 7 and taste scored out of 10. Included also was an assessment of overall quality on a five-point scale from very good to very poor quality. These four items were combined to provide a measure of quality with coefficient alphas .71 for novices and .80 for experts. The measurement of price perceptions although similar to that described in the price/quality literature encompassed an auction system accepted in economics(Chang and Wildt 1994; Dodds and Monroe 1985; Monroe 1973; Monroe and Krishnan 1985; Olson 1977; Rao and Monroe 1989; Shorgren et al. 1994; Wheatley, Ghiu, and Goldman 1981) . Each respondent was first required to express the price they would be willing to pay for each product and then to express if they considered the market price (winning bid price) as expensive or cheap on a five point rating scale (Shorgren et al. 1994). It was felt this would make the experimental tasks more relevant to respondents as well as providing a more realistic manipulation of pricing effects. Perceived value was measured by a combination of four items (value for money, economical, good buy, appears to be a bargain) each using a five point Likert scale (Loken 2006; Morwitz and Schmittlein 1992; Zeithaml 1988) . To measure purchase intentions a graphic ratings scale was used, with polar labels of 0 to 100 to represent respondent certainty of purchasing the particular product.

This is a variant of measures is frequently used in psychology and marketing research (Anderson 2001; Anderson 1996; Morwitz and Schmittlein 1992).

Procedure. The experimental procedures were pilot tested (9 subjects), evaluated and fine tuned before implementation. In the experiment proper the participants were seated in sequence at 2 seat intervals and were presented with a questionnaire and an empty wineglass. Standard wine testing procedures common in the wine industry were used, i.e., respondents could only taste the wine and were told to spit the contents of each glass into a spittoon. The experiment was approved by the University ethics committee and due to the potentially deleterious nature of the product sampling by naïve subjects we ensured that no semblance of coercion was involved. Ethical guidelines of experimentation were followed scrupulously. All subjects in the experiment had to be over the legal drinking age in order to participate and as cautionary statement concerning the effects of alcohol was read to each participant.. The questionnaire contained a covering letter, an overall guide to the experimental procedure, brand and country of origin descriptions for each product labelled 1 to 20, each with a series of dependent measures and concluded with a series of measurements of individual variables and manipulation checks. The purpose of the study was disguised in the cover letter in which it was stated that the objective was to "evaluate whether in the wine industry technology can overcome differences in terrain and climate". Participants then read the overall guide to experimental procedure and completed the qualifying questions. No one was eliminated as a result and the subjects proceeded with the experimental tasks. The sequence of presentation of the within subject factors was random and the participants were specifically asked to evaluate the product samples at a brisk pace without any communications. The tasting proceeded in sequence and standard procedures employed in blind wine tasting were followed. The respondents than judged the wines on the dependent variables using the bidding procedure (see experiment 1). On completing the wine tasting tasks the participants were then asked to describe the purpose of the study followed by completion of the demographic questions, manipulation checks and debriefed. During debriefing each participant was again given the cautionary statement concerning drinking and the deleterious effects of alcohol.

Results

The general analytical procedure followed involved, (1) an evaluation of the measurement properties of the scales (reported in the measurement section) and descriptive

statistics, (2) exploratory data analysis and residual examination, and (3) the specific statistical analysis pertaining to the hypotheses and manipulation checks. Because the experiment involved multiple correlated dependent variables it was necessary to use MANOVA for the third component of the statistical analysis. The procedure used involved the exploratory data analyses, fitting of the overall model and conducting an omnibus test followed by full univariate evaluation for the significant results (Barker and Barker 1984; Hummel and Sligo 1971; Keppel 1973; Keppel and Wickens 2004; Tabachnick and Fidell 1989). While there is some controversy pertaining to the use of a within subject design (e.g., DeSarbo, Lehmann, and Hollman 2004; Monroe and Krishnan 1985; Olson 1977), there exist strong reasons for their employment. Within subject designs have the advantages of lower costs, reduced sample size, and easier discovery of the net effects (Keppel and Wickens 2004). But perhaps the major reasons for their use is that when carefully designed the disadvantages may be overcame and the increased realism, as much of consumer behavior (particularly wine tasting) is analogous to a within subject experiment.

Exploratory evaluation revealed no serious problems and data analysis was implemented. The correlations between the dependent variables were all found to be significant (p<.01, see Table 1, Experiment 1) (quality-price = .46; quality-value = .56; quality-intent = .52; price-value = .43; price-intent = .44; value-intent = .74). This with the was consistent with previous research with exception of price, which was found to have a positive correlation with value contrary to earlier results (Zeithaml 1988).

INSERT TABLE 1 ABOUT HERE

The multivariate results were consistent across the three criteria and all the main effects and two way interactions were significant (see Table 2 – Experiment 1). There was preliminary support for hypotheses 1, 2, and 5. However contrary to Hypothesis 3 a significant quality effect was discovered as well as two unhypothesized interactions (country by quality and brand by quality). The amount of variance explained by quality, was however, low (η^2=.02). The highest proportion of variance was explained by country of origin (η^2=.31), followed by interaction between country of origin by quality (η^2=.29), country by brand (η^2=.20) and brand by quality (η^2=.05).

INSERT TABLE 2 ABOUT HERE

The univariate results shown in Table 3– Experiment 1 demonstrate further consistent support for Hypotheses 1 (i.e. there was a significant main effect for country of origin across all the dependent variables; $F_{4,570}=2.55$, $p<.05$, and $\eta^2=.02$ for quality, $F_{4,570}=13.12$, $p<.01$ and $\eta^2=.08$ for price, $F_{4,570}=25.08$, $p<.01$ and $\eta^2=.15$ for value and $F_{4,570}=9.63$, $p<.01$ and $\eta^2=.06$ for intent). There was mixed support for hypotheses 2, brand name having only a significant impact on price ($F_{1,570}=12.98$, $p<.01$ and $\eta^2=.02$) and value, ($F_{1,570}=12.47$, $p<.01$ and $\eta^2=.02$) as there was for hypotheses 3, with physical quality only a significant factor for the perception of value ($F_{1,570}=4.26$, $p<.05$). The proportion of variance of value explained by quality was small ($\eta^2= .01$). With the exception of quality support was found for the country by brand interaction (H5) across the dependent variables ($F_{4,570}=5.02$, $p<.05$ for price, $F_{4,570}=10.94$, $p<.01$ for value and $F_{4,570}=2.39$, $p<.05$ for intent). Eta squareds were found to be small being .03, .07 and .02 for price, value and intent respectively. There was also evidence to support two un-hypothesized interactions: country X quality interaction was found significant for price ($F_{4,570}=12.76$, $p<.01$), value ($F_{4,570}=11.41$, $p<.01$) and intent ($F_{4,570}=3.42$, $p<.01$) with eta squareds of .08, .07, and .02 respectively; and the brand X quality interaction was found significant for price ($F_{1,570}=1.35$, $p<.05$), and value ($F_{1,570}=5.13$, $p<.05$) with small effect sizes of .00 and .01 respectively.

INSERT TABLE 3 ABOUT HERE

Scheffé post hoc multiple comparison evaluation of the differences between the means of the COO manipulation, indicated no significant differences in quality between the nations. The French wine (mean price $19.36) was rated as more expensive than wines produced in the other countries ($p<.05$). Surprisingly Australian wines were seen as having the poorest value for money (mean of value 9.30, $p< .05$). Wine from the USA (mean of purchase intent = 37.94) was rated close to the French (mean of intent =35.51), and was preferred to wine from Morocco (mean of intent = 29.22, $p<.05$) and Australia (mean of intent = 22.72, $p<.01$). This may be explained as an indication of a strong *Halo* in the apparent absence of a domestic

preference and a *Summary Construct* effect for Australia. There was mixed support for H4; the *Halo* effect was demonstrated, but, no indication of domestic preference was discovered. Indeed the consistent lower rating for Australia across all the dependent variables is puzzling. A possible explanation emanates from the novice limited ability to judge wine (only 2.35% of the variance of quality was attributable to the independent variables) as well as their lack of knowledge. Further, in the absence of domestic preference, and the lack of a strong product/country image for Australian wines or brand knowledge these participants may have been consistent but confused in their judgments. A closer examination of means in Table 6 shows that even though novices would pay more for the Australian *Brown Brothers* brand (17.05 to 15.5) they believed the French wine brand to be superior in value (mean of 12.58 to 11.5). This result is interesting since it mirrors that of the product evaluations of Australian wine and shows that a brand name can be a powerful image transmitter. Similary to Leclerc, Schmitt and Dube (1994) this study suggests that a French sounding brand name will be linked to France (68% of or 21 novices believed that *Delas Saint E'Spirt* is a French wine) so allowing access to the positive country image of France. For value only the means of quality were in the reverse direction so suggesting that despite the detection of a quality difference novices were not able to use this information in a consistently meaningful manner.

INSERT TABLE 4 ABOUT HERE

The plots for the significant interaction for Experiment 1 – Wine Novices are shown in Figures 4. The patterns of the COO X brand interactions were not consistent across the dependent variables (Figure 1, Panels A, B, C); it was not significant for quality, and it was caused by the crossover for Australia (apparently due to the enhancement by the brand name *Brown Brothers* for price judgments), but by the change of slopes for value and intent. These findings appear to suggest that stronger brand names enhance the price but have a detrimental effect on value and intent. The COO X Quality interactions display both crossover and slope changes (Figure 1, Panels D, E and F) that suggests that novices had some difficulty in assigning consistent meaning to the perceived improvement in quality. The French wine plot for example, showed a downward slope with improvement in quality for price. In terms of intent, there was evidence that novices used a broad country hierarchy as a basis of selecting a wine. Across both levels of quality American wine was the most likely to be chosen

followed by that of France, and for higher quality wine China, Morocco and Australia. This result is surprising since the USA was not considered to have a positive reputation as wine producer and provides evidence of the use of the use of USA as a Halo. The low ranking of Australia further supports the lack of domestic preference and the failure of the *Summary Construct* explanation for novices. The two significant quality X brand interactions (Figure 1, Panels G and H) appear to be caused by slope changes that further reiterate the novice problems with the judgment of quality (high quality is rated lower) and the belief that the positive image domestic brand is more expensive but poorer value.

INSERT FIGURE 1 ABOUT HERE

Conclusions

The data provided some support for H1 (a significant country effect), H2 (a significant brand effect limited to price and value), H3 (contrary significant evidence for value only), H4 (support for *Halo* effect but none for domestic preference) and H5 (a significant COO X Brand interaction except for quality). Despite detecting a quality difference (which occurred only for value and was in the wrong direction), novices judged the wine sampled as homogenous in quality, price and intent. The results thus provided further evidence on their reliance on extrinsic cues and some support for the use of country of origin as a *Halo*. The differential findings across the dependent variables further emphasize the necessity to exercise care in the choice of dependent variables for market research.

EXPERIMENT 2 – WINE EXPERTS

Method

Participants. There were 19 participants (50% were male with average age 48) members of wine tasting society recognized as experts within the industry. The differences between them and novices were described in experiment 1.

Results

The procedure and the analysis duplicated Experiment 1. Exploratory analysis revealed no serious problems. The correlations between the dependent variables were all found to be significantly greater than zero (p<.01, see Table 1, Experiment 2) (quality-price = .67; quality-value = .62; quality-intent = .63; price-value = .75; price-intent = .72; value-intent = .71) and the pattern was similar to the previous experiments although in absolute terms larger. The multivariate results (Table 2- Experiment 2) are with the exception of those for brand name consistent across all the three criteria. There were significant main effects for country of origin and physical quality and for one multivariate criteria, the Hotelling-Lawley test, brand name. All two way interactions were significant across each of multivariate tests. At this stage, there was, therefore, support for H6, H7, H8 and H9 but not for H10. The results also revealed an un-hypothesized a significant main effect of country of origin and brand name. The highest proportion of the variance was explained by country of origin (η^2=.24), followed by the interaction between country of origin and brand name (η^2=.18), country by quality (η^2=.17), quality (η^2=.07) brand by quality (η^2=.05) and brand name (η^2=.02).

The univariate results as presented in Table 3 – Experiment 2 showed some support for H6 (i.e., there was a significant main effect for quality), which was significant only for quality ($F_{1, 342}$=14.55, p<.01, η^2=.04), and price ($F_{1, 342}$=9.66, p<.01, η^2=.03). There was further evidence for the interaction of country of origin and brand name (H7). This was significant for quality ($F_{4, 342}$=2.55, p<.05) and intent ($F_{4, 342}$=2.50, p<.05, Eta squared being .03 for both). Stronger evidence was found for H8, the interaction of country of origin and quality being significant across all the dependent variables ($F_{4, 342}$=2.96, p<.05, for quality, $F_{4, 342}$=5.97, p<.01 for price, $F_{4, 342}$=3.92, p<.01 for value and $F_{4, 342}$=9.65, p<.01 for intent). Eta squareds were found to be .03, .03, .04 and .10 for quality, price value and intent respectively. There was support for H9, the interaction between brand name and quality being significant for quality ($F_{1, 342}$=11.11, p<.01, η^2=.03), price ($F_{1, 342}$=10.86, p<.01, η^2=.03) and intent $F_{1, 342}$=11.43, p<.01, η^2=.00). There was no further support for the un-hypothesised main effect of brand name. The main effect of country of origin though was significant across all the dependent variables ($F_{4, 342}$=11.32, p<.01, for quality, $F_{4, 342}$=7.01, p<.01 for price, $F_{4, 342}$=11.48, p<.01 for value and $F_{4, 342}$=15.79, p<.01 for intent). Eta squared being .12, .08, .12 and .16 for quality, price value and intent respectively. Experts in this study thus saw country

of origin as more valuable than brand name which was the opposite case to that in past research (Amend, d'Astous and Zouiten 1993 and Leclerc, Schmitt and Dube 1994).

INSERT TABLE 5 ABOUT HERE

In Table 5 are shown the surprising results in relation to the un-hypothesized COO effect. Experts did not appear to distinguish between wines with exception of the wine produced in France (mean of quality of 12.43, $p<.05$) which was rated as the lowest quality across all the dependent variables ($p< .05$). Given that France was specifically selected because it had a positive image (*Halo)* as well as a positive country/product image (*Summary Construct*) this result is puzzling. However, there is the possibility that experts were able to accurately assess the quality market range within which both types of wine fell (i.e. the lower mid-range of the market) and that, therefore, the evaluation was influenced by the experts knowledge that French wine in this price range was liable to be worse than that produced by the other countries. This possible explanation is supported by the bid prices of wines that for experts were close to that of the actual prices of the two quality samples of around $13.00 for the high quality and $11.00 for the low quality wine. There was no significant brand effect for experts so supporting our theoretical position contrary to past research (Leclerc, Schmitt and Dube 1994) that suggested that a French sounding brand name should be easily linked to France.

The results provided support for H7 (although the country by brand interaction was significant only for quality ($p< .05$) and intent ($p< .05$). The crossover and the slope changes (Figure 5, Panels A and B) suggesting that the *Brown Brothers* brand name enhanced the quality of Australian and French wines while decreasing that of Morocco and China. This finding is consistent with past research (Ahmed, d'Astous and Zouiten 1993 and Johansson and Nebenzahl 1986), and provides some evidence that the use of a positive brand name may have an interactive effect even for experts. Support was also discovered for H8 and the interaction between country of origin and quality was significant for all the dependent variables (Figure 1, Panels C, D, E, and F). The crossover and the changes of slope provide a puzzling picture as the quality increase appeared to have an enhancing effect on all nations except for France in which case it appeared to have a decremental effect. Across all the dependent variables high quality wine from France was given the lowest evaluation (mean of

quality being 12.04, mean price = $8.36 and mean of value = 9.71) and was the least likely wine to be chosen (mean of intent = 17.39%). Given that experts were able to detect quality, it would appear that the poor reputation of French wines in this market niche has influenced the creditability of any improvement in quality, reversing the effect on product evaluations and choice. H9 also received support and the interaction between brand name and quality was significant for quality, price and intent respectively (Figure 5, Panels G, H and I). The significance appeared to be due to the crossover because higher rating of the higher quality wine when associated with the French name. This seems consistent with the earlier explanation that experts use of a *Summary Construct* has an enhancing effect only when it is accompanied by higher quality. There was no support for H10.

Conclusions

Surprisingly both sets of experiments demonstrated the importance of country of origin information to novices and experts when choosing, judging and pricing wine. These results suggest that the type of use of country of origin information for products such as wine may be more complex than the simple *Halo / Summary Construct* duality as proposed by Han (1989). In some cases, the use of country of origin as a *Summary Construct* to differentially weight physical quality may be relevant for knowledgeable consumers, i.e it is not creditable that the French can make a good quality and reasonably priced wine. These expert product inferences were also based on a greater ability to detect actual quality differences.

DISCUSSION AND CONCLUSION

The purpose of this study was to investigate the effects of country of origin and global branding in conjunction with a quality manipulation in a complex multi cue context involving novices and experts on multiple dependent variables. The results demonstrated the importance of the country of origin cue for both novice and experts. Although it appears that country of origin information may have greater relevance for price and quality evaluations rather than as a determinant of value or purchase intent. Other cues were also found to have varying degrees of influence on the dependent variables and the importance of these cues differed. This further highlighted that different decision making processes (and therefore different uses of cues) occurred for different dependent variables. This should be of concern

for consumer researchers because choice of a dependent variable is an important research decision both in the theoretical and applied context.

While it may be argued that product descriptions are a common realistic representation of a product, nonetheless, the context is artificial and the cues are clearly visible. To overcome this criticism the two wine experiments provided a more realistic situation involving a physical taste testing frequently found in the marketplace. In this context the novices experienced difficulty in evaluating quality and even when detecting a quality difference (for value only) were unable to assign an intelligent meaning to that difference. Experts did appear to use physical quality as a guide to quality and price evaluations but apparently in a quite complex and unexpected manner . Novices were found to use brand name in a limited fashion and relied mainly on country of origin information. There was no clear evidence of domestic preference; a finding that was particularly surprising given the powerful strongly positive country/product image of Australia as a winemaker. For novices, country of origin was only used as a limited Halo, with French wines enjoying superior prices, Australian wines being seen as poor value for money and the least likely to be purchased. The results also showed that novices may have used France as a naive *Summary Construct*. They were even prepared to discard quality improvements of wines from Australia, Morocco and China in favour of low quality wine from France. When selecting a wine, it also appears that novices used country of origin again as a limited *Halo*. For example, the intentions ratings were highest for wine from the USA; a country with a positive image but not a strong reputation as a wine producer. Wine experts appeared to use country of origin as *Summary Construct*; that is, they considered country/ product image along with physical quality. This though did not occur in the manner as expected. France because of its superior *terrain* and has a reputation as a producer of expensive (but not affordable), fine wines. Experts appeared to limit their evaluations to a market segment range within which the country/product image of France as a producer of affordable fine wines was not strong and therefore negatively weighted their judgments in that range. This finding presents interesting possibilities for future research as it suggests that COO effects may be differential according to the market segment within which the evaluations take place.

Novices thus appeared to use country of origin as a *Halo* while experts used this information as a *Summary Construct* to weight physical quality. This study suggests that the use of country of origin may be more complex than previously theorised. The use of product descriptions and the difficulties associated with quality and brand manipulations leads to

relatively simple even cross-sectional designs that although convenient and efficient preclude the drawing of powerful generalizations. This has not only been recognised in country of origin research but in the price -quality literature as well (Monroe and Krishnan 1985 and Olson 1977). This study presents an attempt at complex, considered manipulations that should encourage future more finely honed research to resolve the enigmas associated with this important area of research.

There are a number of important implications for exporters, domestic companies and government of these results. When marketing to novices, country of origin labelling could be stressed if the country image is favourable or a well-known global brand could be used to counter an unfavourable country image. When marketing wine to experts, the types of product country image and brand associations need to be carefully considered. In terms of the physical quality of their products, exporters can be less concerned with novices than experts. Even if they detect quality novices will still mainly rely on country image and to a less extent brand name. Greater attention to physical quality needs to be made for experts, since there is some evidence that physical quality has a greater role in their decision making. The consistency of quality standards and a country's reputation in wine needs to also be considered by exporters when marketing products to experts.

The findings of this study are limited by the nature of research and depth of inquiry. Only one product with country of origin and brand effects were investigated. This product had physical quality differences that were in difficult to judge. The experimental conditions were carefully designed to allow for the best possible test of the use of country of origin by novices and experts. Price was also not included in this study as a directly manipulated independent variable. Past research (Olson 1977) has shown it to be an important cue in decision making and to limit the extent of the country of origin effect (Hastak and Hong 1991

For this study to have significant value to both theory and practice, future research should be directed at replicating these results using a different types of wine in a different cultural and nationally settings. For example, contrary to past research, no strong domestic preference was found for the realistic wine experiments. The methodology used in this study could easily be replicated to a number of other wines from different countries in different markets.

Globalisation while recognised as the dominant late twentieth development has not yet created a borderless and homogenous world where brands move unencumbered from

marketplace to marketplace. Rather, there is interplay between global brands and country of origin effects that consumer behaviour researchers need to consider. Further, the technological and communication developments that seem to provide the capacity for global domination have within them the potential to allow for unforseen fragmentation. The issues addressed in this study are, therefore, likely to remain of importance for future generations of consumer researchers.

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FIGURE 1 THE INTERACTIONS FOR EXPERIMENT 1A - WINE NOVICES
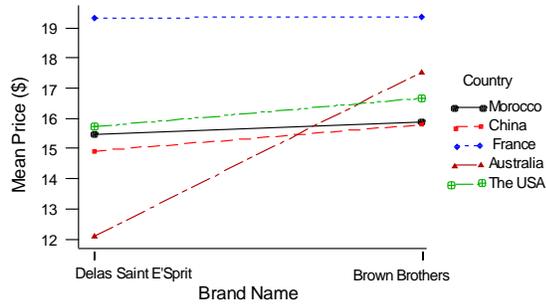
A. Country of origin by brand name for price
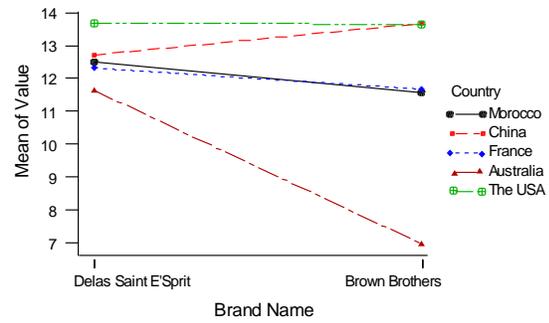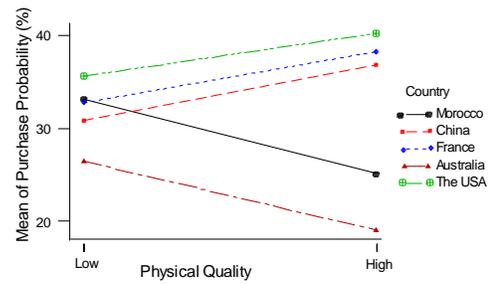
B. Country of origin by brand name for value
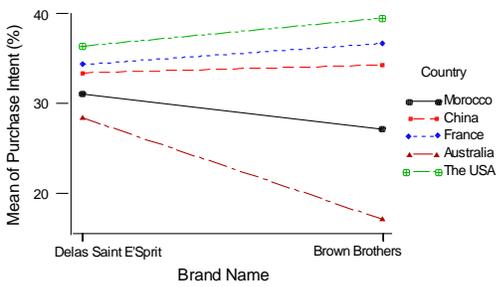
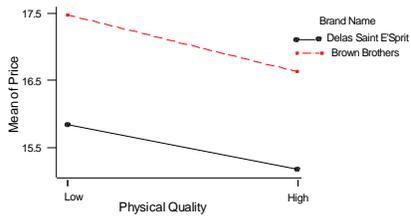C. Country of origin by brand name for intent
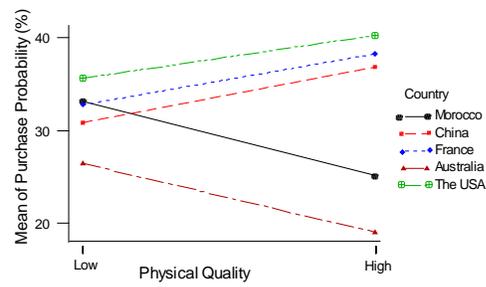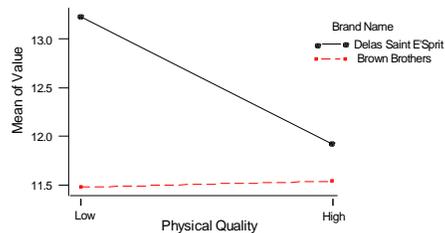
D. Country of origin by quality for price
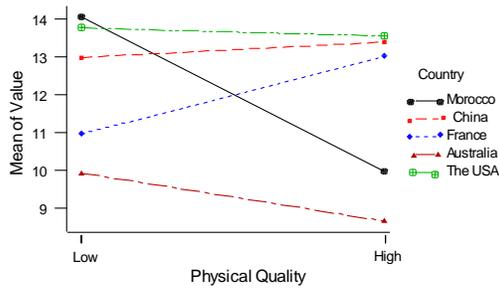
E. Country of Origin by quality for value
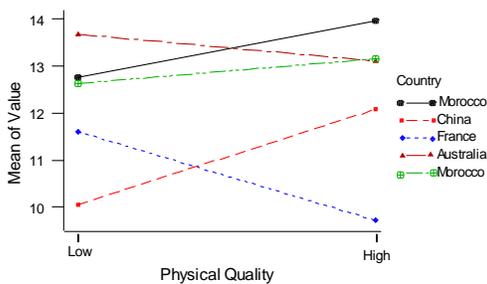
F. Country of origin by quality for intent
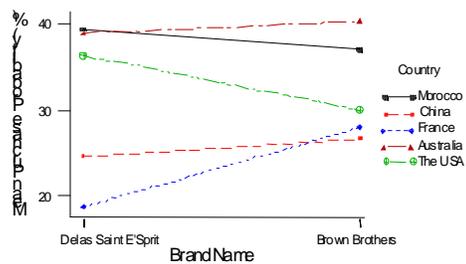
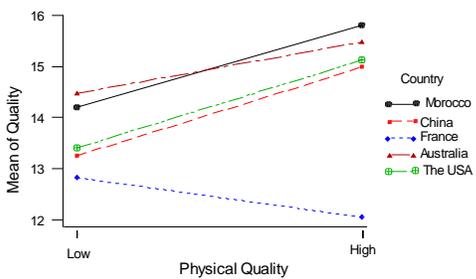G. Brand by quality for price

H. Brand by quality for value

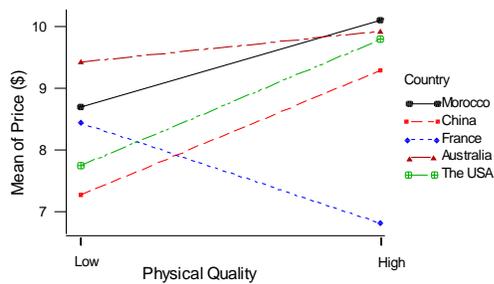**FIGURE 2** THE INTERACTION FOE EXPERIMENT 2A – WINE EXPERTS

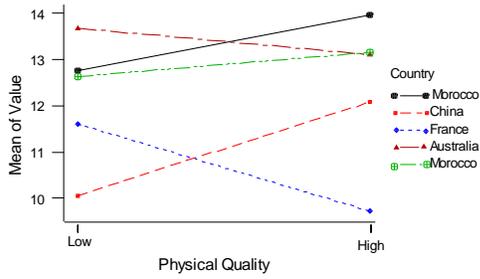A. Country of origin by brand for Quality

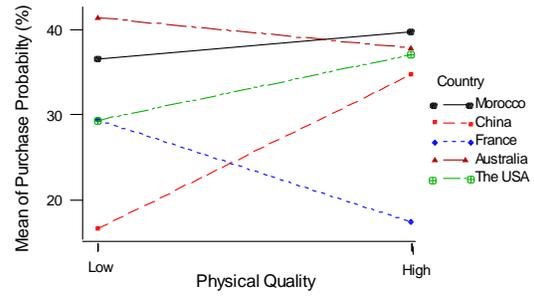B. Country of origin by brand for Intent

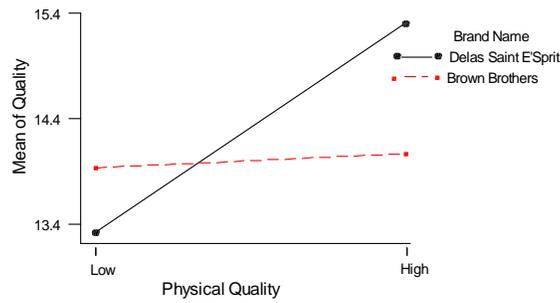

C. Country of origin by quality for Quality

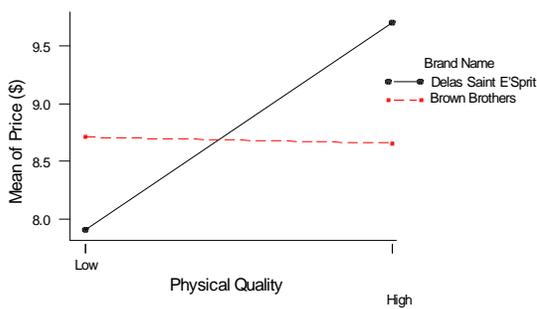D. Country of origin by quality for Price

E. Country of origin by quality for Value

F. Country of origin by quality for Intent

G. BRAND BY QUALITY FOR QUALITY

H. BRAND BY QUALITY FOR VALUE
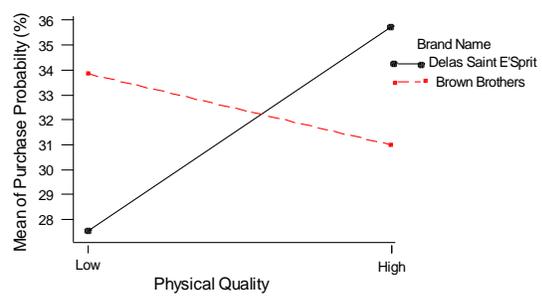
I. BRAND BY QUALITY FOR INTENT

TABLE 1

CORRELATIONS BETWEEN DEPENDENT VARIABLES (WINE, NOVICE AND EXPERT
EXPERIMENTS)

Experiment 1 *Wine novice*

	Quality	Price	Value	Intent
Quality				
Price	.46**	-		.
Value	.56**	.43**	-	
Intent	.52**	.44**	.74**	-

Experiment 2 *Wine expert*

	Quality	Price	Value	Intent
Quality	-			
Price	.67**	-		
Value	.62**	.75**	-	
Intent	.63**	.72**	.71**	-

p<.05, **p<.01

TABLE 2
MANOVA RESULTS FOR WINE, NOVICE AND EXPERT EXPERIMENTS

EXPERIMENT 1 - WINE NOVICE

Variable	d.f	Wilks Lambda	Pillai Trace	Hotelling - Lawley
Country (C)	1732	.69**	.33**	.40**
Brand (B)	567	.90**	.10**	.11**
Quality (Q)	567	.98*	.02*	.02*
Country X Brand	1732	.80**	.21**	.26**
Country X Quality	1732	.71**	.29**	.38**
Brand X Quality	339	.95**	.05**	.06**
Country X Brand X Quality	1036	.95	.05	.05

EXPERIMENT 2 - WINE EXPERT

Variable	d.f	Wilks Lambda	Pillai Trace	Hotelling - Lawley
Country (C)	1036	.76**	.28**	.29**
Brand (B)	339	.98	.02	.01**
Quality (Q)	339	.93**	.07**	.08**
Country X Brand	1036	.82**	.19**	.22**
Country X Quality	1036	.83**	.17**	.19**
Brand X Quality	339	.95**	.05**	.06**
Country X Brand X Quality	339	.95	.05	.05

*p< .05, **p<.01.
 NOTE: Degrees of freedom varied slightly but are not included so as to avoid clutter.

TABLE 3

UNIVARIATE ANOVA RESULTS FOR THE WINE, NOVICE AND EXPERT EXPERIMENTS

EXPERIMENT 1 - WINE NOVICE					
Main Effects					
Country	4	2.55*	13.12**	25.08**	9.63**
Brand	1	.39	12.98**	12.47**	1.05
Quality	1	1.31	2.92	4.26*	.01
2 Way Interactions					
Country X Brand	4	.79	5.02*	10.94**	2.39*
Country X Quality	4	2.21	12.76**	11.41**	3.42**
Brand X Quality	1	.93	1.35*	5.13*	.25
3 Way Interactions					
Country X Brand X Quality	4	1.15	2.22	.85	.24
EXPERIMENT 2 WINE EXPERT					
Main Effects					
Country	4	11.32**	7.01**	11.48**	15.79**
Brand	1	1.22	.19	.08	.24
Quality	1	14.55**	9.66**	.55	2.68
2 Way Interactions					
Country X Brand	4	2.55*	1.76	2.33	2.50*
Country X Quality	4	2.96*	5.97**	3.92**	9.65**
Brand X Quality	1	11.11**	10.86**	3.83	11.43**
3 Way Interactions					
Country X Brand X Quality	4	.71	.17	1.03	.90

*p<.05, **p<.01

TABLE 4

EXPERIMENT 1 - WINE NOVICE: DESCRIPTIVE STATISTICS

	Quality Mean (Std. Dev.)	*Price* Mean (Std. Dev.)	*Value* Mean (Std. Dev.)	*Intent* Mean (Std. Dev.)
Country				
Australia	14.11 (3.53)	14.81 (7.28)	9.30 (4.26)	22.72 (24.52)
U.S.	15.24 (3.36)	16.20 (5.82)	13.67 (4.28)	37.94 (24.82)
France	15.19 (3.80)	19.36 (8.95)	12.00 (4.58)	35.51 (26.87)
China	14.65 (3.68)	15.35 (6.00)	13.20 (4.25)	33.84 (24.57)
Morocco	14.67 (3.62)	15.67 (7.03)	12.94 (5.27)	29.09 (25.18)
Brand				
Delas Saint E'Spirt (Low)	14.69 (3.51)	15.50 (7.18)	12.58 (4.48)	32.71 (25.56)
Brown Brothers (High)	14.85 (3.72)	17.05 (7.27)	11.50 (4.74)	30.93 (25.84)
Quality				
Low	14.92 (3.42)	16.66 (7.64)	12.35 (4.43)	31.75 (23.52)
High	14.62 (3.80)	15.90 (6.86)	11.73 (4.83)	31.89 (27.74)

TABLE 5

EXPERIMENT 2 - WINE EXPERT: DESCRIPTIVE STATISTICS

	Quality Mean (Std. Dev.)	*Price* Mean (Std. Dev.)	*Value* Mean (Std. Dev.)	*Intent* Mean (Std. Dev.)
Country				
Australia	14.98 (2.89)	9.67 (2.33)	13.39 (2.73)	39.65 (16.97)
U.S.	14.26 (3.56)	8.76 (3.21)	12.89 (3.83)	33.21 (19.90)
France	12.43 (3.96)	7.62 (3.80)	10.66 (3.97)	23.40 (19.83)
China	14.12 (4.20)	8.28 (3.80)	11.07 (3.89)	25.67 (19.79)
Morocco	15.01 (3.16)	9.39 (2.65)	13.37 (3.51)	38.21 (18.14)
Brand				
Delas Saint E'Spirt(Low)	14.31 (3.81)	8.81 (3.61)	12.23 (3.85)	31.63 (19.95)
Brown Brothers (High)	14.00 (3.57)	8.68 (2.92)	12.33 (3.72)	32.43 (20.02)
Quality				
Low	13.69 (3.27)	8.31 (2.98)	12.15 (3.72)	30.68 (20.13)
High	14.69 (4.00)	9.18 (3.51)	12.41 (3.85)	33.37 (19.76)