

COMPARATIVE PERCEPTION(S) OF CONSUMER GOODS PACKAGING: CROATIAN CONSUMERS' PERSPECTIVE(S)

NIKOLA DRASKOVIC
LEEDS METROPOLITAN UNIVERSITY, UK

JOHN TEMPERLEY
LEEDS METROPOLITAN UNIVERSITY, UK

JURICA PAVICIC
UNIVERSITY OF ZAGREB, CROATIA

Abstract

For centuries, packaging communicates and is capable of attracting consumer's attention. In the B2C market it usually communicates images influencing consumer perception, appeal to the consumer's emotions, and generate desire for some specific product. Therefore, packaging could be considered as promotional tool, especially within the retail industry environment. However, to understand how packaging communicates and influences consumers it is necessary to emphasize the way how consumers perceive packaging in general. The "communicational" dimensions of packaging are factors that could affect consumers and influence their purchasing behaviour. While some of the communicational dimensions of packaging (e.g. design, size, colour, and carried information) attracted modest attention among academic researchers, there is a relative lack of studies dealing with the packaging material. It is the purpose of this paper to provide a limited insight/overview to generic consumer's perception of packaging material by combining the findings from the current seminal research studies and primary research used in this paper. Focus groups findings indicate that consumers are merely aware of different packaging material and their characteristics. Consumers are expressing needs for safe packaging, yet the importance of convenience seems to be the most important and they are prepared for some trade-offs in order to maintain usage convenience. It is indicative that preferences of particular packaging material over another are moderated by certain factors (e.g. age, place of consumption, occasion, and product category). Due to sample and research

methodology limitations the findings are limited regarding their generic value. However, the indications given can be considered as valuable guidelines necessary for further research in the field.

Key words - perception, packaging material, consumer behaviour, Croatia, packed beverages industry

nikola.draskovic@kr.t-com.hr

Introduction

Packaging could be defined as a technology and the art of preparing a commodity for convenient transport, storage, and sale (Encyclopaedia Britannica, 2008). On the other hand, many marketers have called packaging a "fifth P", along with price, product, place and promotion (Kotler, 2003), pointing out its importance in the marketing context. Therefore, packaging should be considered as an element of both product and brand. Packaging communicates and is capable of attracting consumer's attention. It can communicate images that influence consumer perception, appeal to the consumer's emotions, and motivate desire for the product. Packaging should be also considered as a promotional tool, especially within the retail environment (Vranesevic, Vignali and Vrontis, 2004). However, to understand how packaging communicates and influences consumers it is important to understand how consumers perceive packaging. In other words, it is necessary to define the way packaging communicates to consumers. Marketing communications related

publications and research propose the concept of the communication dimensions of packaging (Kestic, 1997; Shimp, 2003; Underwood, 2003; Fill, 2006). According to this concept, packaging communicates via its shape, colour, size, carried information and packaging material. While some of the communicational dimensions of packaging (e.g. shape, size, colour, and carried information) attracted modest attention among academic researchers, the quantity of studies dedicated to the packaging material is very limited.

It is the purpose of this paper to provide a limited insight to generic consumer's perceptions of packaging material. The first aim of this paper is to provide an overview of the current research related to packaging material perception, while the second aim is to further explore this area with the interpretation of the primary research results. The combination of both will provide a modest contribution to the existing knowledge and relevant marketing theory.

Perception, perceptual process and packaging

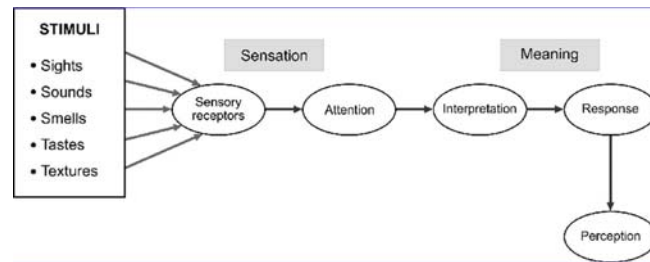
Zimbardo et al. (1995) suggested that perception is 'the task of making sense of sensation'. Perception could be described as mental organization and interpretation of sensory information and is influenced by a variety of factors, including the intensity and physical dimensions of the stimulus; such activities of the sense organs as effects of preceding stimulation; the subject's past experience; attention factors such as readiness to respond to a stimulus; and motivation and emotional state of the subject (Columbia Electronic Encyclopaedia, 2006).

In the context of marketing and consumer behaviour perception is well recognised from both the practitioner and academic perspective. Knowledge of consumer perception and the perceptual process is a necessity for successful marketing communications. The perceptual process could be approached from two main directions. The psychological approach is dealing with the conversion of ambient stimulation of senses into the electrical energy of nerve impulses (Noë and Thompson, 2002). On the other hand, the behavioural approach to perception focuses on the relationship between the physical properties of stimuli and the perceptual response to this stimuli, and just as learning, thinking and emotions are

all behaviours, perception is behaviour as well (Goldstein, 2006). The perceptual process could be broken down to two major stages (see Figure 1). The first one is related to sensation collected by our senses while the second one is related to the understanding of the meaning of lived sensation. The process itself begins with biological processes within our senses that are initiated by various stimuli in our surrounding. Our senses of sight, hearing, smell, taste, and touch are consisting of sensory receptors that are receiving stimulus within their reach from the surrounding and transferring electrical signals through nerves to the brain for further processing (ibid). After the sensation stage, stimuli are getting meaning through the interpretation and response.

Packaging perception is related to the communicational dimensions of packaging because consumers perceive what packaging communicates to them. The communication dimensions of packaging are interacting with the consumer with the senses stimulation. There are two levels of analysis of marketing stimuli – conceptual and perceptual analysis. During the conceptual analysis consumers integrate information from the stimulus with pre-existing knowledge, they imagine events related to the stimulus, and they actively (counter) argue with the position taken by stimulus (Payne, Bettman and Johnson, 1993). Before and during conceptual analyses, consumers engage in perceptual analyses (Greenwald and Leavitt, 1984) when devoting focal attention to the stimulus. In perceptual analyses, consumers examine sensory features of the stimulus, such as shape, colour, and size, they decipher the stimulus into categorical codes, such as brand name, pictorial and textual information for a brand package, and they select certain elements of the stimulus over others (Pieters and Warlop, 1999). Consumer's total perception of packaging is a sum of separate perceptions of shape, size, colour, packaging material and carried information. The success of packaging design and its ability to communicate appropriate messages is, at the end, judged by consumers. It should be noticed that the move to larger supermarkets and increased segmentation of markets has led to proliferation of products, so that packaging has to work in a more crowded competitive context, both in the retail environment and in the kitchen (Thompson, 1996). Consumer's behaviour needs to adapt to specific situations in the purchasing process.

Figure 1: Perceptual process



Source: Solomon, M., Bamossy, G. and Askegaard, S. (2002) *Consumer Behaviour: A European Perspective*. Harlow, Pearson Education Limited

Researchers showed quite significant interest about perception of carried information or packaging labels, especially in the context of packaged food. A study conducted by the European Heart Network (2003) identified 307 papers dealing with consumer understanding of nutrition labelling. Studies are showing that the majority of consumers read the food (and beverage) labels (MAFF, 1995), while the reading frequency is associated with the degree of uncertainty about the product (Wandel, 1999). This was also confirmed by more recent studies (e.g. European Heart Network, 2003; Cowburn and Stockley, 2004; Grunert, 2006; Drichoutis et al., 2006; Navigator, 2007). Nutrition knowledge relevant to the interpretation of labels was reported to be generally low and some terms used on nutrition labels are not well understood (European Heart Network, 2003). However, in majority of cases information on label is perceived as a buying aid when it comes to the decision process (Glanz et al., 1989; Pudel, Spirik and Westenhofer, 1996; Nayga, Lipinski and Nitin, 1999;). Time pressure is also having impact on the perception of verbal and non-verbal stimuli. According to Rettie and Brewer (2000), under conditions of rapid perception (i.e. time pressure), there is an advantage for verbal stimuli perceived from the right-hand side, and for non-verbal stimuli perceived from the left-hand side of the packaging (i.e. label).

The effect of the packaging shape and size on consumer's purchasing behaviour seems to initiate some debate among scholars. More than fifty years ago Jean Piaget studied children's perception of volume (Saxe, 1983). Piaget found that primary school children appeared to use only the height

of container when making volume judgements (Raghubir and Krishna, 1999). Afterwards, the effect of package's height or elongation on consumer's perception was researched by many scholars (e.g. Homberg, 1975; Frayman and Dawson, 1981). In his research focused on consumer's behaviour, Wansink (1996) found that large package sizes encourage more use than smaller package sizes. In a more recent study, Raghubir and Krishna (1999) pointed that package's shape affects preferences, choice and post consumption satisfaction. Furthermore, consumers tend to simplify the size judgement task by using a single package's dimension at a time (Krider, Raghubir and Krishna, 2001). Packages that have shapes that are perceived as attracting more attention are also perceived to contain a greater volume of a product than same sized packages that attracts less attention (Folkes and Matta, 2004). The research results from Yang and Raghubir (2005) showed that the more elongated a container, the lower is the purchase quantity. In the recent study, Raghubir and Greenleaf (2006) focused on the consumers' reaction to rectangles. The results showed that the ratio of the side of a rectangular product or package can influence purchase intention and preferences.

Colour perception is a rather popular topic in marketing and consumer behaviour (e.g. Grossman and Wisenblit, 1999; Kotler, 2003; Solomon, 2004; Hawkins, Best and Coney, 2004; Fill, 2006) Titles with more global approach and international marketing related titles are also pointing out how the colour perception is related to the culture (e.g. Muhlbacher, Leihns and Dahringer,

2006; Doole and Lowe, 2008) and connotations that a particular colour is having in one country or region could be completely opposite in another. However, the research focused on the perception of packaging colour is very limited. In case of food products, a study showed that consumers in terms of packaging are mostly noticing the packaging colour and transparency (Dantas et al., 2004). Colour is also reported as very important element in the case of the wine packaging perception (Rocchi and Stefani, 2005)

Research with a focus on the packaging material and how it affects consumers' perception and behaviour is sparse. However, there is a number of studies dedicated to the technological and environmental side of the packaging material (e.g. Lund, 2000; Laroche, Bergeron and Barbaro-Forleo, 2001; Madocks, Rewhinkle and Barton, 2005; Ivusic et al., 2006; Rokka and Uusitalo, 2008), or even ethics related to the usage of particular packaging material (Johnson, Sommer and Mayes, 1985; Bone and Corey, 2000). From time to time, packaging companies and associations tend to publish some results from their research studies intended to improve certain packaging material's rating among consumers (e.g. Consumer Preferences in Packaging Materials, 2006; Glass education, 2008) or are making conclusion from the findings gathered from a very limited and non-representative sample (e.g. George, 2006). Since this studies are having clear goals to be advocates for the usage of particular packaging material, their objectivity and thus the value in the scientific context is very questionable.

Research aim and methodology

The main aim of the primary research was to explore if and how consumers perceive different packaging materials in the context of soft drinks and a focus group interview was chosen as the most appropriate qualitative research method.

The research was conducted in Zagreb, Croatia with two focus groups each consisting of eight persons in which women and men were represented equally. Since the group interview was exploratory in its nature, research sample was gathered in a way to include soft drinks consumers of the relatively narrow age range, rather than being representative of the total Croatian population. Participants in the first group were relatively younger (i.e. age range from 25 to 40) while the second group consisted

of relatively older participants (i.e. age range from 41 to 60). The focus group agenda included the following types of packaging materials: glass, polyethylene terephthalate (PET), carton and can.

Main research findings

Purchasing phase

During the purchasing phase participants are mostly focused on brand and price. Next is the product content. When it came to packaging, participants are thinking that design is important and that it is affecting their purchasing decision. Packaging size also matters. Bigger packages are usually purchased during weekly and other planned shopping. During occasional shopping smaller packages are mostly bought due to convenience.

There is some indication that age is related to the shopping behaviour. Older participants are doing their weekly and monthly shopping mostly in big shopping centres to save on time, while younger respondents prefer daily shopping (more frequent, but with fewer products bought). Furthermore, older participants are more careful with the planning of weekly shopping.

When it came to the packaging material, soft drinks purchased in HORECA are almost exclusively in glass. Situation is quite different in retail. Syrups are mostly in glass, but some cheaper brands are usually packed in PET. Carbonated soft drinks are mostly packed in PET while the biggest portion of juices and nectars is packed in carton and some smaller portion in PET. Non-carbonated packaged water is mostly purchased in PET while carbonated packaged water is also purchased in glass.

During the purchasing phase older participants are not that much concerned about the packaging type (i.e. material) while younger participants prefer PET and carton packaging. In HORECA participant are concerned about the product's type, brand, packaging size and packaging material. Participants expressed their preference towards glass in purchases within HORECA. For outdoor consumption participants are looking for convenient packaging and prefer PET and carton over other packaging materials.

Consumption phase

Products characteristics that are important to participants differ between product categories. However, in most cases content temperature is the most important characteristics, followed by packaging size and convenience, producer/brand, price and product quality.

PET packaging seems to be in overall the most preferred packaging type, followed by glass and carton. Glass is, on the other hand, preferred as packaging material in HORECA. An overview of importance and required product characteristics and packaging material preferences is shown in the following table.

Perception of packaging in the context of product category

Packaged water

Majority of participants are buying mineral water in glass bottles and the think that this type of packaging is prestigious and is more attractive than other types of packaging. Participants noticed that glass is relatively heavy but the really downside of this type of packaging is its breakability. Since glass packaging is commonly used as returnable or refillable, scuffing marks could be sometimes visible. This visual imperfection is affecting glass packaging attractiveness. PET is, on the other hand, perceived as more convenient, especially by younger participants.

Carbonated soft drinks

In overall, participants prefer PET packaging for carbonated soft drinks. PET is perceived as more convenient packaging type than others, especially because of light weight and it can not be broken. However, participants were complaining on the PET's occasional lack of rigidity which is especially noticeable in case of bigger packaging sizes (e.g. 2 litre Coca-Cola PET bottles). The bottle's softness could cause content spoilage when one is manipulating with the package with just one hand or when the pressure applied by hands to squeezes the bottle. Glass packaging is only desirable for the consumption in HORECA. Participants showed the lowest preference towards the can. According to them, can is not hygienic and it gives some kind

of metallic taste to the content. Furthermore, can is not considered as convenient packaging mainly due to the lack of resealing feature.

Juices and nectars/Still drinks/Iced tea

Products in this category are usually packed in carton which is mostly considered as convenient. However, there are some complains about the lack of features that are enabling resealing in some cases (e.g. smaller packages). Due to its nature, carton is not transparent so the content is fully hidden. Participants are missing the transparency that glass and PET packaging are providing. Furthermore, participants are complaining about the inconvenience to drink directly from the carton package. Smaller size carton packages are particularly considered as appropriate for children.

PET is preferred packaging type for iced tea and is considered as very convenient due to its light weight and its ability to be resealed. As in case of carbonated soft drinks, cans are considered as unattractive and non-hygienic.

Perception of packaging types/materials

Glass

All participants think that glass looks the best and is usually related to the best quality products. It has a long tradition and is considered as nice looking, especially for special occasions. Glass is considered to have very good protective function and it does not affect the taste of content. It is environment friendly and could be reused and recycled. Participants were also stressing the overall quality of glass as a packaging material. Its transparency and design are improving the quality of product itself. Glass is considered as prestigious packaging material and a must for special occasions. Participants think that products look nicer in glass. However, participants also noticed some disadvantages of glass packaging. First of all, it is breakable and relatively heavy. It is not very convenient and it is rather difficult to transport heavy returnable bottles back to the outlet (n.b. it seems that glass packaging is mostly considered as returnable by participants). Furthermore, participants are complaining about scuffing marks that could be noted in some cases and issues with the resealing of some mineral water bottles.

Figure 2: An overview of important product characteristics and packaging material preferences depending on the consumption occasion

Consumption occasion		Important product characteristics and preferred packaging material	
DAILY/AT HOME	characteristics	content temperature, product quality	
	packaging type	Fruit juices and CSDs – PET, carton water – glass, PET	
TRAVELS	characteristics	YOUNGER PARTICIPANTS – content temperature, convenient packaging, price	
	packaging type	YOUNGER PARTICIPANTS – PET, carton	
OUTDOORS	HORECA	characteristics	Fruit juices and CSDs are more preferred than water; price, producer/brand
		packaging type	Glass
	On the go	characteristics	producer, brand, refreshment, content temperature, importance of packaging size, convenient packaging, type of packaging closure
		packaging type	PET
SPECIAL OCCASIONS		characteristics	type of product, product quality (more natural, without preservatives and additive), packaging size
		packaging type	glass (if available)
PHYSICAL ACTIVITY		characteristics	packaging size, content temperature, convenient packaging; water is preferred over fruit juices and CSDs
		packaging type	PET

Carton

Carton is mostly considered as a light-weighted type of packaging. Participants are finding carton appropriate for transportation and storage. There is almost a consensus among participants that carton is more environmentally friendly packaging than PET or can, which is, actually, wrong. Yet, minority of participants (especially older) noted that carton packaging is not as environmentally friendly as it was thought. Carton may look as made of paper from the outside but there are also aluminium and plastic follies inside. Carton is considered as convenient for handling, unbreakable and space saving (i.e. it could be squeezed). Participants are finding carton as a trendy packaging. In overall, carton is considered as convenient packaging but resealing is not always very convenient. Participants are thinking that carton packaging is changing the taste of the content. Furthermore, it completely covers and is not transparent so the content is not visible to the consumer, which is considered as a downside.

PET

PET is generally considered as a very convenient type of packaging. This was especially expressed by younger participants, while the older participants were not that much excited. Furthermore, PET is appropriate for transportation due to easy handling and light weight. It is appropriate for purchasing of bigger quantities (i.e. bigger volume, multi-pack options). PET is considered as unbreakable packaging material. Participants are also aware about some disadvantages of PET packaging. They are considering it as a less environmentally friendly type of packaging due to the fact that oil is main raw material for the production of PET and that is not degradable. Furthermore, participants said that PET is affecting the taste of content and that there are some migrations of gases from the package to content. Participants noticed that also the carbonization level of carbonated soft drinks packed in PET is dropping during the time. One relatively important disadvantage is that the content in PET tends to heat up very quickly.

Can

Can is considered as a packaging which is convenient for transportation and storage. It is light weighted and easy to handle. The content of can could be quickly cooled and can is providing good protection. Participants also noticed that soft drinks packed in cans could be bought on the vending machines which is considered as an advantage over some other types of packaging (e.g. glass). However, participants are mostly considering can as not so good packaging. They are especially concern about the health issues related to the fact during the consumption mouth is touching a surface of package which is being exposed all time and therefore could contain germs. Some of the older participant even noticed that cans are containing lead as an ingredient in the packaging material. Majority of participants complained about the "metal taste" which can gives to the soft drinks.

The importance of packaging characteristics and their relation to the packaging material

Participants were asked to express their opinion towards certain packaging characteristics and to evaluate their importance. In overall, glass is mostly perceived as a material with the best characteristics, followed by PET, carton and can.

Furthermore, a simple projective technique was used in order to confirm a finding that participants are preferring glass. All participants were asked to name one packaging material in which they will feel the best if they were a soft drink. The majority of participants pointed glass as a material in which they would feel the best. Participants described that they prefer the transparency of glass and the fact that it is natural. Just a minority of participants mentioned carton. This is in line with the previous ranking of packaging material characteristics but it also raises some new questions and concerns. There is an obvious gap between consumer's attitudes and behaviour in terms of the packaging material choice.

Figure 3: An overview of perceived advantages and disadvantages by packaging type

	GLASS	CARTON	PET	CAN
Associations	quality, it preserves quality, tradition, environmentally friendly, desirable, transparent, inconvenient, breakable	juice and milk, for hot drinks, easy to handle and to store, aluminium layer – could deceive (younger participants)	convenient, giving bad taste to the content, not environmentally friendly, unbreakable packaging, oil, chemistry (older participants), multipacks, big quantities of products	taste of metal in mouth, easy to heat up, not very hygienic, difficulties with the package opening, possibility of breakage, risk of injuries
Advantages	quality, tradition, preserves product's aroma, better test of content, environmentally friendly, price (in case of returnable bottles), could be reused for other purposes, attractive, prestigious packaging	transportation, environmentally friendly, unbreakable, convenient for storage, light weighted, reduced waste, no concerns about the returning of the package back to the outlet, trendy	convenient, transportation, simple handling, light weighted, nice design, appropriate for bigger package content (volume), unbreakable	convenient, transportation, convenient for storage, light weighted, simple handling, quick cooling, product is well preserved, wending machines
Disadvantages	breakable, returnable bottles, transportation, weight, price (non returnable packaging), not trendy, not very convenient for handling, scuffing marks on returnable packaging	it alters the taste, non transparent (the content is not visible), resealing issues, it looks environmentally friendly but it has aluminium layer beside paper	it alters the taste, carbonation level drops over the time, shorter product lifetime, the content would quickly become warm if exposed to sun, not environmentally friendly, non-degradable, migration from package into the content	hygiene, potential health issues, not very convenient (no resealing), metal taste, single use, not trendy, the content would quickly become warm if exposed to sun, danger of injuries (i.e. cuts)

Conclusion

Consumers are aware of different types of packaging materials and different characteristics that these materials are having. Glass is overall perceived as the packaging material with the best characteristics. Yet, packaging statistics (e.g. Ingham, 2002; Business Insights, 2003; Future Innovation Today, 2006) are showing that PET and carton are much more popular packaging materials. It seems that consumers are trying to be rational while expressing their opinions but in real life packaging convenience seems to be the main motivator over the choice of a particular packaging material. Furthermore, it seems that consumers are prepared for trade-offs in order to maintain the usage convenience of the package. This leads to the conclusion that in case of packaging type preferences there is a gap between attitudes and actual behaviour.

This research also pointed out some potentially moderating variables of consumer's perception of packaging material, like age, occasion, product category and place of purchase/consumption (distribution channel). However, on a larger scale research these variables, and maybe some other variables (e.g. sex, culture) could be revealed as important factors that could moderate consumers' perception of packaging material.

It could be taken for granted that the role of packaging in the B2C market is important and should be considered in the context of better understanding of consumer's perception towards the product and brand. Unfortunately, theoretical background on this rather specific area is not sufficient and studies like this one provide valuable insight on this topic. Although, due to the research methodology limitations the general applicability of findings is questionable in terms of general cross-industrial acceptance, they provide valuable guidelines for further research.

References

Bone, P.F. and Corey, R.J. (2000) Packaging Ethics: Perceptual Differences among Packaging Professionals, Brand Managers and Ethically-interested Consumers Journal of Business Ethics, Vol. 24, pp 199-213

Business Insights (2003) The European Soft Drinks Outlook to 2006 Business Insights Ltd

Consumer Preferences in Packaging Materials (2006) Norman, National Survey, Newton Marketing & Research

Columbia Electronic Encyclopedia (2003) 6th ed., New York, Columbia University Press.

Cowburn, G. and Stockley, L. (2004) Consumer understanding of nutrition labelling: a systematic review Public Health Nutrition, Vol. 81 No. 1, pp 21-28

Dantas, M.I.S. et al. (2004) The Effect of Packaging on the Perception of Minimally Processed Products Journal of International Food & Agribusiness Marketing, Vol. 16 No. 2, pp 71-83

Doole, I. and Lowe, R. (2008) International Marketing Strategy, 5th ed. Thompson Learning

Drichoutis, A.C., Lazaridis P. and Nayga, R.M. (2006) Consumers' use of nutrition labels : a review of research studies and issues Academy of Marketing Science Review, Vol. 2006 No. 9, pp 1-22

Encyclopaedia Britannica (2008) Packaging. Chicago, Encyclopædia Britannica Online [Internet] Available from: <http://www.britannica.com/EBchecked/topic/437852/packaging> [Accessed 8 December 2008]

European Heart Network (2003) A systematic review of the research on consumer understanding of nutrition labelling Brussels, EHN

Fill, C. (2006) Marketing communications: contexts, strategies, and applications Harlow, Pearson Education

Folkes, V. and Matta, S. (2004) The Effect of Package Shape on Consumers' Judgements of Product Volume: Attention as a Mental Contaminant Journal of Consumer Research, Vol. 31 September, pp 390-401

Frayman, B.J. and Dawson, W.E. (1981) The effect of object shape and mode of presentation on judgements of apparent volume Perception and Psychophysics, Vol. 29 No. 1, pp 56-62

Future innovation today (2006) Consumer packaging report, London, Rexam

George, J. (2006) Perception huge in beverage packaging ShelfImpact! [Internet] Available from: <http://www.shelfimpact.com/archives/2006/09/

perception_huge_in_beverage_pa.php>
[Accessed 10 December 2008]

Glanz, K. et al. (1989) Point of choice nutrition information, federal regulations and consumer health education: a critical view *Journal of Nutrition Education*, Vol. 21, pp 95-100

Glass education (2008) GPI [Internet] Available from: <<http://www.gpi.org/glassresources/education/designdifferentiation/section-41-consumer-preference.html>> [Accessed 10 December 2008]

Goldstein, E.B. (2006) *Sensation and Perception*, 7th ed. Belmont, Wadsworth Publishing

Greenwald, A. G. and Leavitt, C. (1984) Audience involvement in advertising: Four levels *Journal of Consumer Research*, Vol. 11, pp 581-592

Grossman, R.P. and Wisenblit, J.Z. (1999) What we know about consumers' color choices *Journal of Marketing Practice: Applied Marketing Science*, Vol. 5 No 3, pp 78-88

Grunert, K.G. (2006) A review of research on consumer response to nutrition information on food labels Brussels, European Food Information Council

Hawkins, D.I., Best, R.J. and Coney, K.A. (2004) *Consumer Behavior: Building Marketing Strategy*, 9th ed. New York, McGraw-Hill/Irwin

Holmberg, L. (1975) The Influence of Elongation on the Perception of Volume of Geometrically Simple Objects *Psychological Research Bulletin*, Vol. 15 No. 2, pp 1-18 Quoted in: Raghurir, P. and Krishna, A. (1999) Vital Dimensions in Volume Perception: Can the Eye Fool the Stomach? *Journal of Marketing Research*, Vo. 36, pp 313-326

Ingham, A. ed. (2002) *The soft drinks service: Annual report (2002 cycle) – Croatia* Basingstoke, Canadean

Johnson, S.L., Sommer, R. and Mayes, L. (1985) Prices of Unpackaged and Packaged Foods. *The Journal of Consumer Affairs*, Vol. 19 No. 2, pp 305-315

Kesic, T. (1997) *Marketinska komunikacija (Marketing communications)* Zagreb, Mate

Kotler, P. (2003) *Marketing Management*, 11th ed. New Jersey, Pears Education

Krider, R.E., Raghurir, P. and Krishna, A. (2001) Pizzas: π or Square? Psychophysical Biases in Area Comparisons *Marketing Science*, Vol. 20 No. 4, pp 405-425

Laroche, M., Bergeron, J. and Barbara-Forleo, G. (2001) Targeting consumers who are willing to pay more environmentally friendly products *Journal of Consumer Marketing*, Vol. 18 No. 6, pp 503-520

Lund, H.F. ed. (2000) *The McGraw-Hill Recycling Handbook*, 2nd ed. New York, McGraw-Hill

Madocks, J., Rewhinkle, J. and Barton, L. (2005) Packaging barrier films deposited on PET by PECVD using a new high density plasma source *Materials Science and Engineering B*, Vol. 119 No. 3, pp 268-273

MAFF (1995) *Nutrition Labelling Study* Ministry of Agriculture, Fisheries and Food, London, Research Services Ltd

Muhlbacher, H., Leihs, H. and Dahringer, L. (2006) *International Marketing: A Global Perspective*, 3rd ed. Thomson Learning

Navigator (2007) *Front of Pack Signpost Labelling – Exploratory Research (Report)* Bucks, Navigator

Nayga, R.M., Lipinski, D. and Nitin, S. (1998) Consumers' use of nutritional labels while food shopping and at home *Journal of Consumer Affairs*, Vol. 32 No. 1, pp 106-120

Noë, A. and Thompson, E. eds. (2002) *Vision and Mind: Selected Readings in the Philosophy of Perception* London, The MIT Press

Payne, J.W., Bettman, J.R. and Johnson, E.J. (1993) *The Adaptive Decision Maker* Cambridge, Cambridge University Press Quoted in: Pieters, R. and Warlop, L. (1999) Visual attention during brand choice: The impact of time pressure and task motivation *International Journal of Research in Marketing*, Vol. 16 No. 1, pp 1-16

Pudel, V., Spirik, J. and Westenhofer, J. (1996) The use of information from food labels as a buying aid in the food choice of German consumers *Nutrition report for the Federal Republic of Germany*. German Nutrition Society, pp 307-325

Raghurir, P. and Greenleaf, E. (2006) Ratios in Proportion: What Should be the Shape of the Package *Journal of Marketing*, Vol. 70 No. 2, pp 95-107

Raghurir, P. and Krishna, A. (1999) Vital Dimensions in Volume Perception: Can the Eye Fool the Stomach? *Journal of Marketing Research*, Vol. 36, pp 313-326

Rettie, R. and Brewer, C. (2000) The verbal and visual components of package design *Journal of Product & Brand Management*, Vol. 9 No. 1, pp 56-70

Rocchi, B. and Stefani, G. (2005) Consumers' perception of wine packaging: a case study *International Journal of Wine Marketing*, Vol. 18 No.1, pp. 33-44

Rokka, J. and Uusitalo, L. (2008) Preference for green packaging in consumer product choices - Do consumers care? *International Journal of Consumer Studies*, Vol. 32 No. 5, pp 516-525

Saxe, G.B. (1983) Piaget and Anthropology *American Anthropologist, New Series*, Vol. 85 No. 1, pp 136-143

Shimp, T.A. (2003) *Advertising, Promotion, and Supplemental Aspects of Integrated Marketing Communications* Mason, South-Western

Solomon, M. (2004) *Consumer Behavior: Buying, Having, and Being*, 6th ed. Upper Saddle River, Pearson Education

Thompson, L. (1996) Lifting the lid on packaging research *The Journal of Brand Management*, Vol. 3 No.5, pp 289-95

Underwood, R.L. (2003) The communicative power of product packaging: Creating brand identity via lived and mediated experience *Journal of Marketing Theory and Practice*, Vol. 11 No. 1, pp 62-76

Vranesevic, T., Vignali, C. and Vrontis, D. (2004) *Upravljanje strateskim marketingom (Strategic marketing management)* Zagreb, Accent

Wandel, M. (1999) Food labelling from a consumer perspective *British Food Journal*, Vol. 99 No. 6, pp 212-219

Wansink, B. (1996) Can Package Size Accelerate Usage Volume? *Journal of Marketing*, Vol. 60 No. 3, pp 1-14

Yang, S. and Raghurir, P. (2005) Can bottles speak volumes? The effect of package shape on how much to buy *Journal of Retailing*, Vol. 81 No. 4, pp 269-281

Zimbardo et al. (1995) *Psychology: A European Text*. London, HarperCollins Publishers Quoted in: Moore, D.R. (2001) Visual perception theories and communicating construction industry concepts *Work Study*, Vol. 50 No. 2, pp 58-62