Abstract: This paper discusses how different sensory stimuli can be used as a means of communication in packaging design. Packaging is a unique marketing medium in the sense that it can be used to impact all consumers’ senses. Visual cues and storytelling are effective ways of communicating ideas and impressions with packaging, but also other sensory stimuli such as touch, sound, smell and even taste can be used to create meanings. Packaging has many functions but its potential for communicating values, stories and meanings to its end users is often overlooked, when packaging is thought of merely as a container and logistic device. Packaging can communicate information about the brand values, product features, use, origin and quality in various ways; visual appearance is just one of them. Packaging engages the consumer with the product and the brand.

I will discuss how different sensory stimuli can be designed and meanings created and communicated with impressions through multisensory packaging. So far there have been only a few studies addressing this matter. I will use some visual packaging examples together with theories of communication and semantics to illustrate and explain this holistic approach to communication through packaging design.

Keywords: Multisensory; packaging design, storytelling, impressions, branding

1. Introduction

Majority of research on human sensation and perception has focused on exploring the senses individually, in other words, sensory modalities like vision, touch and audition have been studied in isolation [1]. Packaging has traditionally focused on communicating to customers mostly through visual stimuli such as colors, pictures, graphics, shapes, type and texts. However recent studies [2,3,4] indicate that senses are blending, affecting and working in interaction with each other. Our perception of the world is fundamentally multisensory.

In packaging design multisensory appeal can build a deeper connection with the customer [4]. Meaning can be designed into products so that they are able to communicate and connect with the consumer on emotional level.

In this paper the subject of multisensory communication and storytelling is studied from the point of view of semiotics. In chapter 2. the prevailing practice of packaging design as a means of communication is explained. Meanings are designed and communicated by utilizing semiotics and visual rhetoric. Different visual elements are used for building an image of the product. Visual elements are often are used in a narrative manner.

In chapter 3. a new communication model will be introduced. It uses product semantics as a starting point but utilizes all five senses as means of communication. In this model packaging design is seen as a holistic media in which every single sensory element is considered in the design process and is communicating qualities about the product.

2. Packaging Semiotics and Visual Communication

Semiotics deals with studying signs as a means of communication. Umberto Eco proposes that every cultural phenomenon can be studied as communication. [5] Charles Morris has divided semiotics to three subgroups: semantics, syntactics and pragmantics. Semantics focus on how meanings are formed in signs. Syntactics are concerned with how signs are connected together and pragmantics focus on how signs are actually used by people [6].

Product semantics are concerned with the non-verbal communication of manufactured objects, such as packaging. The designer transmits a message to the user by using the designed object itself as a device of transmission. Objects communicate information about themselves and when these objects are properly designed, users will be able to decode this information. An object can communicate through its design information, such as how the product should be used, when it should be used and by whom it should be used [7].

In Wilbur Schramm's communications model (figure 1.) communication requires three elements — the source, the message and the destination. Source encodes a message and transmits it to its destination via a channel, where the message is received and decoded. Sociological and situational aspects affect the communication and for understanding to take place between the source and the destination, they must have something in common. Communication can take place when the source's and destination's fields of experience overlap. If there is no
overlap, or only a small area in common, communication is difficult and the message is not understood. Overlapping experiences makes it easier to communicate successfully [8].

The success of communication is evaluated by how close the response is matching to the original signal. The closer the match is, the better communication is achieved through the design process. The designer needs to understand and articulate clearly through his work what has to be communicated and transmitted with the particular design. The clearer a signal is at its source the greater are its chances of being clearly understood by the user.

Roger Sametz and Andrew Maydoney [9] argue that design elements like type, color, space and images tell stories about the product. This is called visual storytelling. The design engages the "teller" and "listener" in a dialogue that builds comprehension, commitment, participation, loyalty, and trust. Stories are entertaining, memorable and engaging to feelings. They can simplify the complex and enhance or change consumers’ product or brand perceptions. In the design process desired brand attributes are connected to the product in a meaningful way. Stories tell about the brand and product and answer questions like what, how, why and for whom. Communication designers combine verbal and non-verbal “vocabularies” to generate persuasive, engaging, and memorable stories.

This iconic Finnish oatmeal packaging (figure 2.) functions as an example for visual storytelling. Its visual look communicates traditions, values and national romanticism. Since the creation of the original package in 1925 [10] the package has gone through a few remakes and updates, but the idea and traditional look has actually not changed that much over the years. Consumers of today find this nostalgic packaging still appealing.

The illustration style is very national romantic and the design uses lots of semiotic symbols. The girl is dressed in an old fashioned national dress. She is a stereotypical representation of a brisk Finnish blond girl. She is holding a sickle and sheaf in her hands, representing labor and work in the fields. The girl is happy, she is looking at the horizon and her expression and pose suggest that she is expecting something or someone. The whole setting is similar to scenes from old Finnish movies about the countryside, where something is just about to happen. Yellow fields indicate that the crop is ripe and plentiful. The blue field at the top symbolizes a clear sky and it indicates that the conditions for harvesting are also good. The colors of the logo, blue and white, represent the national flag of Finland. The name Elovena is combined from the Finnish word Elo that means crop and the latin word for oat Avena Sativa [11]. The name also is connected to the original milling plant that started producing this product, Myllyosakeyhtio Elo.

The product picture on the packaging is created in a different style than the illustration. Mikko Lehtonen argues that consumers consider photography to be a more reliable way of depicting products than illustration, and that is why photography is popular for food product shots. However, usually photographs depict a rather idealized image about what the product might look like in optimal conditions [12]. According to Giles Calvert [13] a picture can encapsulate a core proposition, and communicate it quickly and effectively. Images are tools for immediate and long-lasting communication. They are remembered four times better than words. The product picture on this package is created in a style of a service
suggestion and the apple slices and cinnamon stick on top of the oatmeal are indicators of the products’ flavor.

Next to the oatmeal plate there is a small graphic symbol that is showing how this instant oatmeal is prepared in one minute by mixing the contents with hot water. It is remarkable how this information can be understood instantly without using words. Pictures are a faster and more memorable way of communicating ideas than words. A picture can communicate instantly numerous things, impressions, values, product knowledge, price category, for whom the product is intended to, where the product is coming from, what it is made from etc. [14].

In semiotics and product semantics communication and meaning is studied through visual cues. However, product semantics as such don’t give tools for understanding non-visual communication, so there is a need for a more comprehensive theory. Touch, smell and sound have also an impact on the way we perceive and evaluate packaging.

3. Multisensory Communication

Charles Spence, who is a cognitive psychologist at Oxford University’s Cross-modal Research Lab, says that the idea of senses working autonomously and in isolation is fundamentally wrong. The design communication process needs to be understood in a wider scope. For packaging design to be truly effective and compelling it needs to be more than just communication relying on visual bias. [2]

Martin Lindstrom, who is a specialist in sensory branding, argues that a brand needs to become a sensory experience that extends beyond sight in order to survive in constantly growing and more diversified competitive market. Therefore multisensory approach is relevant also in packaging design. Sensory synergy between product, brand and sensory experience will make the customer connect with the product at a deeper level. [4]

In our product perception we combine various sensory cues that are present in a product, package, or environment. Consistent sensory cues offer a stronger experience and build an emotional bond between the customer and the brand [4]. Spence argues that customer decisions are actually determined by sensory stimulation [3].

Spence argues that the human brain is wired so that senses are interrelated. An appealing packaging isn’t just seductive to eyes, but it will make the mouth water and the hands expect. Neuroscience has shown that human brain is limited in its capacity to cope at any one time with all of the different sights, sounds, and smells, etc., that incite the senses. Therefore our brains use a number of heuristic processes, or cognitive shortcuts, in order to reduce the amount of information we have to process. There are some rules how the brain deals with in multisensory cues. Spence talks about super-additivity, which means that the brain combines individual sensory signals to build a perception, that is far stronger than the sum of its parts. This can happen when sensory cues are in synergy. If not, the contradicting cues will suppress the perception, which is called multisensory suppression. Sensory dissonance is weakening the overall perception. Sensory dominance means that one sense outweigh others at the time of perception, for instance seeing a color can affect how we taste. [3].

There is a need for tools that can ensure synergy between consumer perceptions and sensory realities. Based on traditional communication models I have developed a multisensory communication model to illustrate a more holistic approach to packaging design (figure 3).

This multisensory model is used as a starting point for empirical case studies. The ideal product for the first case study utilizes numerous sensory stimuli in a product relevant and narrative manner in its packaging. Currently several products are being under consideration. Multisensory communication will be studied by using sensory evaluation techniques in a test group and the relationship between sensory stimuli and their responses will be examined. In the sensory studies the number and quality of sensory stimuli is controlled in each test. The analyzed results are then used for further developing a model for multisensory stimulation in packaging design.

The aim is to explore with prototype iteration how resonance and synergy can be built between different sensory stimuli in a controlled manner. The case studies will also test how the current communications model works with empirical data. The research will provide information about achieving sensory synergy between what the test subjects smell, see, touch and hear and also provide information about how sensory cues can be used.
in a narrative manner for enhancing the product experience.

Packaging communication is most relevant at the point of choosing a product. Of all the senses, taste is not present at this point, so it will most likely be excluded from these case studies.

This multisensory approach might not be suitable for all product categories and bulk products, because of the higher packaging costs, but in many cases it can add value to the perceived product quality and give a competitive edge especially for premium products. It is an approach worth considering in new product development and its full potential is most suitable for luxury products with a clear brand story to communicate or products that deal with entertainment, strong experiences, beauty or pleasure.

The packaging can have a dramatic effect on people’s perception of the product within. Even simple change of the color of a can change our perception of what’s inside, no matter whether the product is a soft drink or a deodorant spray [3, 4]. People often choose one product over another based on their looks, but they don’t realize what effect the visual has on their other senses.

Touch is also providing a lot of information to the consumer about the qualities of a product, but in packaging design it is a underused sense. Different surface textures, materials and tactile jacquers can be applied to make the package feel soft, smooth or rough. Also the shape and the grip of the packaging express qualities. According to Lindstrom, however irrational it may be, the feel of a product is essential in forming the perception we have of the brand [4].

Smell affects us more than we are aware of. Smells evoke images, sensations, memories, and associations. Spence argues that smell is connected to memory and sound is connected to mood. Specific sounds are associated with specific goods, and we might not even be aware of it. Even subtle auditory cues can be very powerful. Our brain is picking up subtle signals about our surrounding all the time. Noisy packaging suggests noisy food. According to Spence you can create anticipation through the sound of packaging [1].

Smell and taste are closely interlinked and they are known as the chemical senses [4]. Adding a scent relating to the packed product gives a strong indication about the taste of the product. On the other hand, in non-food products adding a scent that is not related to a product, makes it possible to build a new level to the brand experience. Smell of a tropical fruit for instance in a packaging for sunglasses might bring your thoughts back to a tropical holiday. The sensory cues that are not directly related to the product ought to be chosen to complete or add something new to the brand story, and therefore they possess a narrative function. However, sense of smell is often overlooked as medium of communication.

Figure 4. illustrates the differences between a multisensory packaging in which all sensory cues are coherent and a multisensory packaging in which the sensory cues are inconsistent. In the first example all sensory cues are in synergy, communicating the same attribute of the product through different senses, which creates a strong impression about this attribute. In the second example they communicate different meanings, which on one hand, enables sensory cues to be used in a more narrative way to create a more complex brand experience, but on the other hand, there is a higher risk of multisensory suppression or that the sensory cues are misinterpreted.

Figure 4. Two ways to design for senses. (Joutsela 2010)

A) Sensory cues communicating the same meaning creating sensory synergy and a super-additive sensory perception.
B) Sensory cues communicating different meanings creating a sensory dissonance and a possibility for sensory narration.

4. Conclusions

Nowadays packaging designers are often briefed to design packaging that builds a strong emotional attachment between the consumer and the brand. Visually biased design might not do the trick anymore. A multisensory design process is a different, more holistic approach to design. All manufactured products communicate through many senses simultaneously, intentionally or not, and a skilled designer is aware of what kind of message the design is sending and whether it is really communicated the intended meaning. The designer cannot assume that the end user has the same level of design understanding, so the sensory cues for comprehension need to be clear and apparent in the design.

When thinking about multi-sensory design, it is important to consider which packaging features the consumer notices and is conscious of. Which sensory attributes in the consumer’s mind make a product stand out from the others. A multisensory approach for packaging design doesn’t necessary mean, that all possible sensory cues should be used or that the design process need to be very expensive. It is more about realizing which senses are relevant to the packaging and product in question and try to work with improving their sensory cues.

Sensory evaluation panels can be used for analyzing perceived sensory strengths and weaknesses in products...
and packaging.

People make decisions based on information they get through impressions from their surroundings. When a product is perceived, knowledge and experience are combined with what is being seen and sensed. In the packaging different design elements are used for building a story about the product. Each element has the potential to convey different meanings. Design is thought of as a sort of language that communicates and it is not just the visual impressions that communicate, but also touch, scent, sound, shape, material etc. A message that is appealing to several senses stands a better chance of breaking through and makes a stronger connection between the sender and receiver of the message.

References


