

Designing a personal floatation device and other safety equipment

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ABSTRACT

The article describes the situation in Norway where recreational boaters now have to wear a floatation device. The article consists of several examples of different products that have gone through a shift of social acceptance. It shows what different aspects of the design and promotion of the product that are necessary for the product to be successful. The result is a guide of what to think about when designing a personal floatation device for personal use. The guide describes the following areas: the products desired semantics, price, media exposure, hiding or showing the product, the feeling of effectiveness, collaboration with and promotion with professionals.

KEYWORDS: safety products, psychology in design, life jacket, personal floatation device

1. INTRODUCTION

1.1 Background for the article

In May 2015, a new law passed legislation in Norway – saying that everyone on board a moving boat shorter than 8 meters, has to wear an appropriate personal floatation device [1]. The most commonly used devices are buoyancy aids, life jackets or inflatable life jackets. Until this point, the only requirement has been that there has to be an ISO/CE approved floatation device on board for every person on the boat [2], but there was no requirement to wear them. This new law has triggered many discussions in the Norwegian boat using population. Some people seem to be very negative to the idea of having to use life jackets [3]. In order to design a good product for this purpose, it is important to understand why people dislike the existing solutions, and what features that should be implemented in future products. To get a better grasp of this problematique, it is relevant to observe similar products, such as helmets, ice

grippers and glasses, and analyze how these products have succeeded or failed.

1.2 Method

The author has gathered different examples of products that have faced a change in social acceptance. In addition, the author has conducted qualitative interviews [4] with 6 users of life jackets, with a variety of qualifications in boating.

2. DEEPER INVESTIGATION OF THE PROBLEM

2.1 Understanding the underlying problem

Based on interviews [4] and observations in public online forums [5], it seems that some of those who react to the new law are basing their arguments on the opinion that the government's role is not to micromanage it's citizens, and that people should be able to determine risk on their own.

What makes people so negative to a device that is meant to be helpful and save lives? Since it has

been a requirement to have floatation devices on board for everyone on the boat, but not to actually having to wear it, people have rather prioritized buying cheaper, rather than comfortable buoyancy aids [6]. This has led to a focus in the design of many of these products on making them cheaper, rather than more comfortable. As a result, there are a lot of cheap, uncomfortable buoyancy aids stored in boats around the country [6]. Now people have to start wearing these products, or get a new, more expensive, and more comfortable option.

A survey done in Norway in 2013, before the new law was introduced show what people say about wearing floatation devices and people's reasons for not wearing them [7]. It says that the most normal reasons for not wearing floatation devices are 'I can swim', 'I do not have a floatation device', 'I do not know' and 'it is uncomfortable'. A bit further down the list, in sixth place, comes 'I look stupid with a floatation device'. These are interesting answers, but answers to questionnaires are not always trustworthy [8]. These questions need to be answered by a different approach. By observing people, a lot could be learned about their way of thinking.

The author has conducted qualitative interviews with 6 different users in the age groups 20-40 years [4]. During the interviews a number of small tasks were done to observe how the users were acting in different situations, and seeing if this corresponded to the answers people had given in the survey [7]. One example of these tasks were that the user was asked to put on different kinds of floatation devices, and then expressing their opinions about each one. The users were, without knowing it, trying on the vests in a room without a mirror. When trying on the first product, 5 of the 6 users asked if there was a mirror nearby. The most relevant piece of information gathered from this research was that people more than anything care about their looks when wearing a floatation device, perhaps more than they know.

2.2 Existing ways of dealing with the problem

The traditional tactics for making people wear the buoyancy aids have been to point fingers and telling people to wear it. However, the rescue company Redningsselskapet tried something new a few years ago. They issued a calendar featuring pictures of famous Norwegian people wearing different kinds of floatation devices [9]. Here, the icons of society set an example, trying to convince people that wearing your life jacket is normal. The idea of making famous people do something, and then expecting other people to follow, is a good one. These famous people were, according to Redningsselskapet, not even paid to do the photoshoot. This should have actually increased the effect of the advertisement.

2.3 Men over 40

The group of people involved in most drowning accidents in boats are men over 40 years old [10]. These accidents most of the time happen at night, and there is often alcohol and/or high speeds involved. This is also the group of people who are generally bad at using floatation devices [11].

An example of a product that has succeeded in marketing towards this demographic group, is Tesla. Tesla's electric cars bring with them driving comfort, low expenses, engine power, and a good looking design, as well as an environmental aspect [12]. Here the environmental aspect comes far down the list. The environmental aspect still gives the user a good conscious when driving.

2.4 Why so unpopular?

Why are the buoyancy aids so unpopular? According to many suppliers, people want products that are comfortable [6]. But what is comfort? According to Patrick Jordan [13], in order for a product to be successful, the product needs to give the user four kinds of pleasure; physical, social, psychological and ideological pleasure. How a product is perceived by the user is a result of these four. The physical pleasure is determined by the semantics of the product,

what it looks like, what it smells like, how it feels to touch it, etc. The sociological pleasure given by the product is determined by what group of people the product represents. The psychological pleasure given by the product is determined by interactions with the product, and the ideological pleasure is determined by how the product defines who the user is.

3. EXAMPLES OF SAFETY PRODUCTS AND OTHER SIMILAR PRODUCTS

3.1 Skiing helmets

Recent research shows that the use of helmets have increased drastically the last few years[14], and research shows that skiers and snowboarders on expert level are significantly better at wearing a helmet [15] than beginners, intermediates and good riders. So when a user is wearing a snowboard helmet, he or she can relate to the professionals. Part of the reason for this could be that professionals have had to wear helmets in the Olympics and in FIS arranged snowboard competitions for quite some time now. This has resulted in focus on product development in that area. It is important to have lightweight and comfortable equipment. The professionals often even have their own product lines, named after the riders [16]. The riders have to vouch for the product. People want to wear what the pros are wearing. This indicates that the helmet gives the user socio-pleasure. In addition, it could make the user feel that the helmet is increasing his or her abilities, giving psycho-pleasure [13].

Even though it is not a requirement in all snowboard competitions, it is now very rare to see professional snowboarders not wearing a helmet. Sponsorships have added to the media exposure of helmets. The helmet is a very good advertising area, where

a logo can be placed right above a recognizable face. During TV broadcasted sports events, for example in ski jumping competitions, the jumper is interviewed immediately after he or she has landed. The audience has in time got very used to seeing professional snowboarders and skiers with their helmet on.

3.2 Bicycle helmets

According to statistics from TryggTrafikk [17], men in Norway are generally better at wearing bicycle helmets than women. This is interesting. Are men really more cautious? What makes men use a 'safety product' on the road, but not at sea? Men often use their bikes for exercising [19], and this often includes high speeds. In addition, it has become more normal lately to spend more money on sports equipment [19]. It could seem as if it is more acceptable to use helmets when going in high speeds. Maybe an expensive helmet that is ultra-light and super-aerodynamic will actually make the user think that it will increase his performance? Here we can see that the helmet gives the user psycho-pleasure[13]; the product makes the user feel that the performance is being increased. This in turn gives the user physio-pleasure, as the user gets in shape.

Bicycle helmets have faced a bit of the same development as skiing helmets, and the professionals (and those who want to impersonate the professionals) are wearing expensive, aerodynamic helmets, designed to give the impression that the user knows what he is doing. This gives the user socio-pleasure[13]. However, these 'professional' helmets are not suitable for 'recreational' biking. They look a bit weird in the wrong context. It is therefore important to think of the context in which the product will be used

when designing a new floatation device. The socio-pleasure of helmets seem to be lost for recreational biking.

A bicycle helmet is very similar to buoyancy aids in many ways, but it is not applicable for the same legislation as buoyancy aids. We want to encourage as many people to use their bikes as possible. A mandatory use of helmets will on the contrary make many people choose to take their car to work, rather than the bike. This in turn will be more damaging to society and the overall health of the population than an occasional head injury.

3.3 Glasses

A classic example of how an aid has gone through a development from being something bad to something good is the use of glasses. Glasses are in reality an aid for people with bad eyesight, but today they represent something more. A person with glasses is perceived as someone who reads a lot, someone who is smart [19]. People who have nothing wrong with their eyesight are wearing glasses with no strength in them, to fit in with a social group, giving the users socio-pleasure[13].

3.4 Ice grippers

Using Ice grippers is very practical. It is a device that prevents people from slipping on icy roads. They used to be associated with elderly women, but now shopkeepers report that they are more acceptable to wear for men and women at all ages [20]. And when people see that they are popular, more people will buy them. Here we see a case of reducing the 'absence' of socio-pleasure [13]. People used to feel uncomfortable wearing the product because of negative associations, but now the associations are reduced. The product has not been particularly cool, but at least more acceptable than before.

The Norwegian design agency 'Eggs' have designed ice grippers for Nordic Grip [21]. They made the product more physio-pleasing [13] by making the product look good. In addition, they made the product more psycho-pleasing by making the product easy to use, store and carry, and thereby improving the interactions with the product. This, in turn, has increased the social acceptance of the product, making it socio-pleasing for the user.

3.6 Seatbelt

Even though using a seatbelt is not particularly cool, it is something that is completely acceptable to wear nowadays. This was not the case 40 years ago. When first introduced as mandatory, the public reacted strongly. People did not see the risk of crashing as significant enough [22]. Now you would never consider putting your kids in the car without fastening their seatbelt. This is an example that people often are generally conservative and reluctant to change.

The seatbelt law is a good example of how legislation can affect people's behavior. Even though it has taken over 40 years, it still made a drastic difference to people's daily life. The wearing of the seat-belt itself does not give people pleasure, but the absence of wearing it, makes people anxious.

According to Sintef [23], 30 to 37 % of those who died in traffic, did not wear a seatbelt. Additionally, they say that 90 % of people use their seatbelt (2007). It appears that people who do not wear seatbelts are more likely to crash. Can the same argument be used for reckless boating and the use of buoyancy aids? The Sintef research also indicates that young drivers are more likely to not wear seatbelts in crashes than older people. This is quite opposite of the statistics at sea, where men over 40 are the ones who crash and do not wear appropriate safety gear [11].

3.7 Safety reflectors

A safety reflector is a very practical product that makes you visible when walking in the streets after dark. However, according to Tryggtrafikk, only 31 % of pedestrians wear reflectors in average in Norway [24]. This is something that the insurance company 'If Skadeforsikring' is working on, in collaboration with the famous clothing designer company 'Mardou & Dean'. They are making clothing and accessories with integrated reflectors [25], and they are making the products expensive. This is a completely different approach to reflector design than what has traditionally been done. Often reflectors are produced cheaply to be able to give them away for free. The campaign introduces an aspect of socio-pleasure [13] to the user; a feeling of being part of an exclusive community. However, the effect of the campaign is yet to be seen. Perhaps the campaign is merely of a way of making people think that "If Skadeforsikring cares about your wellbeing", rather than an effort to change people's behavior.

The Norwegian newly started company 'Morild Norway' focuses on making people who would not otherwise wear reflectors, wear them. Their products differ from Mardou & Dean's by trying to hide the reflective abilities in the fabric, and disguising the reflector as a normal piece of clothing [26]. This approach does not bring with it a feeling of socio-pleasure. Instead, perhaps the product gives the user a feeling of having to hide a product he or she initially did not want to use.

This last approach by Morild Norway could be compared with the buoyancy aids that have been designed to look like jackets or normal vests. In addition to being too warm on hot days, these products do not address the problem of the negative associations related to uncomfortable buoyancy aids.

Finland has made pedestrian reflectors mandatory by law, and this has resulted in an increase in usage [27].

3.8 Boots / wellingtons

Using waterproof boots have traditionally not been something that make you look good. It has been a functional product for use in situations where your looks have been of little relevance. Hunter is an example of a brand that has been more successful than their competitors in this area. After multiple magazines started commenting on the superstar Kate Moss wearing Hunter boots at the Glastonbury Festival in 2005, a trend started immediately amongst young women [28]. Wearing Hunter boots had suddenly become socially acceptable and fashionable. When a trend starts in the confined space of a festival, it is easy to understand how the trend can spread. The socio-pleasure [13] of wearing the Hunter boots had increased, practically overnight.

3.9 Compression Tights

Expensive compression tights have recently become very popular in Norway, and specifically those from the brand X2U. According to the company website, the product improves the blood circulation, increased stamina, faster restitution, amongst other things [29]. However, the X2U product has faced criticism from people with research that shows that they have no documentable effect on your training at all [30].

Whether the product has a direct effect on the body or not, is up for discussion. However, as long as the user thinks it has an effect, it will give the user psycho-pleasure [13]. As a result, the user will be more motivated and exercise more, giving a feeling of physio-pleasure. These tights also give others the impression that the user is an athlete who needs professional equipment, which gives the him or her socio-pleasure.

4. Design Guidelines

When designing the product, it is important to keep in mind Jordan's four pleasures [13]. Failing to think about one of them could make the product fail. These guidelines are intended for

the design of a floatation device, but could be used for the design of other safety products also.

4.1 Give the product a semi-professional, semi-technical appearance

A professional and technical appearance will give the impression that you know what you are doing on the sea. A too professional and technical appearance will, however, limit the use of the product to extreme situations. The product will look strange in less extreme situations. A semi-professional appearance should work better.

4.2 Make people feel like part of a community filled with positive associations

Marketing the product with the people you want the users to relate to, is important. This should be people with experience, not amateurs. An example could be to show the product worn by professional wakeboarders. Other celebrity idols will also give the users positive associations to the product from the start. The best effect will be accomplished if the recipients of the marketing campaign are not aware that they are being marketed towards. Simply posting a selfie of Petter Northug on Instagram, wearing the floatation device, will have a big impact.

4.3 Develop the product in collaboration with professionals

In order to ensure that professionals will use the product, it could be a good idea to develop the product together with the professionals. Designing the product with the professional user in mind, should emphasize the professional and experienced expressions of the product, and reflecting it back on the user.

4.4 Can the product give you the impression that you are more effective at what you are doing?

Can the product be made with certain qualities that make the user feel more effective? An aerodynamic design could give this effect for example. Jordan mentions people feeling that the time spent ironing decreases the more aerodynamic the iron is [13]. Even though it has

no real effect on the use, it improves the experience of using the product.

4.5 Make sure the price is relatively high

Setting the price high will help distance the product from the cheapest competitors. It will emphasize the argument that this product is better than all others, that it represents quality and comfort.

4.6 A lot of media exposure

The amount of exposure the product has in the media will make people used to seeing the product, and thus giving the impression that it is normal and therefore popular. For a floatation device, a way of doing it could be to arrange a sailing competition where everyone needs to wear the product.

4.7 Do not try to hide the product

Hiding the product like Morlid Norway does, will only emphasize that the original product is something bad. Instead the product should be made into something that people are proud of, and a product the user will want to show to everyone.

5. DISCUSSION

After one season where everyone has had to wear a floatation device, the new law is being evaluated. If it has been seen as unsuccessful, things may go back to the way things were before. This in turn means that the guidelines in this article also will have to be re-evaluated. The conclusion is expected to come during the summer of 2016.

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