

The selection of detergents for lavatory cleaning

Marja Aulanko

A lavatory is a necessity in every home and workplace. A clean lavatory is important for hygienic and safety reasons. It is also a pleasant part of the home. When a lavatory is cleaned regularly, strong cleaning chemicals are unnecessary. The aim of this research was to find what young adults consider when they choose cleaning agents for lavatory cleaning and on what basis they choose their cleaning agents. The material was collected from essays on the selection of detergents written by first-year university students. The material was analysed using content analysis. The findings indicate that young adults select cleaning agents for lavatory cleaning on the basis of practical factors, pleasure factors, price and environmental aspects.

1 Introduction

Cleaning has traditionally been considered work that anyone can do, and everybody cleans different objects following her/his own individual cleaning habits. What is more, the variety of cleaning chemicals on the market is very large. Aalto (1996) has found four working models in household cleaning: sporal cleaning, evasive cleaning, routine cleaning and cleaning procedure development. It is evident that these working models each have an influence on the choice of cleaning products. Timonen (2002, p. 59) speaks about everyday reasoning based on one's own experiences. Everyday reasoning is central to a well-performed cleaning task. Performing the task skillfully means properly identifying the dirt and

surface material as well as choosing the correct cleaning method and proper cleaning chemicals.

Social factors as well as traditions have had an influence on the development and knowledge of cleaning. Society and culture are bound together and can be understood through each other (Talvenmäki 2003, p. 29). The performance of cleaning is an important cultural inheritance.

2 Characteristics of lavatory cleaning

According to Lagerspetz (2006, p. 37), every object has its own way of being dirty or clean. Visible dirt is unpleasant when it contrasts with the average dirtiness in rooms. Visible dirt on a toilet seat is disgusting, and for this reason it is easy to see the need for cleaning. However, invisible dirt also presents its own dangers and is therefore hazardous.

The general principle is that the cleaning operations should be performed in an aseptic order i.e., from clean surfaces to dirty ones. When an aseptic order is followed, harmful microbes are not transferred to clean areas. As to the toilet bowl, the aseptic order is not always the same. The dirtiest area is the interior of the toilet bowl, but the dirtiness of the exterior is very much determined by the number of users and their behaviour in the lavatory. In a similar way, there are cleaner and dirtier areas of a washbasin. It is important to note that the taps, knobs and grips are the most hazardous objects. Cleaning must not cause any hygienic risk.

Die Auswahl des Reinigungsmittels für die Reinigung der Toilette

Eine Toilette ist eine Notwendigkeit in jeder Wohnung und an jedem Arbeitsplatz. Eine saubere Toilette ist wegen der Sicherheit und der Hygiene wichtig. Sie ist auch ein angenehmer Bestandteil des Hauses. Wird die Toilette regelmäßig gereinigt, so benötigt man keine starken Reinigungsmittel. Das Ziel dieser Untersuchung war es herauszufinden, was junge Erwachsene, denken wenn sie Reinigungsmittel für die Reinigung der Toilette wählen und welches die Gründe für ihre Kaufentscheidung sind. Das Material umfasste 39 Aufsätze von Universitätsstudentinnen des ersten Jahres. Das Material wurde mittels der Inhaltsanalyse analysiert. Die Resultate zeigen, dass die jungen Erwachsenen die Reinigungsmittel aufgrund ihres Preises und ihrer praktischen, angenehmen und umweltfreundlichen Eigenschaften auswählen, dass aber ihre Kenntnisse von den Reinigungsmitteln ziemlich schwach sind.

The impacts of lavatories extend in many directions, and they are an important factor in people's welfare. However, cleaning them demands certain skills. Venkula (1993, p. 04) speaks about vertical, horizontal, substantial and memorial contexts which are connected with routine and skilful performance. The vertical level means the understanding of the reasons behind a certain method. It is easy to understand that a clean lavatory is important for hygiene and safety reasons. If cleaning is neglected, hygienic safety is endangered. The horizontal level concerns the connections of the importance of cleanliness to the surroundings. A clean lavatory is a pleasant part of the home. On the substantial level it is understood why certain types of cleaning chemicals are used and why a lavatory needs its own equipment. In the memorial context people remember how untidy public lavatories can be and are not willing to accept the same level of cleanliness in their own lavatory.

According to Shove (2003, p. 80, 86), cleanliness can be connected to moral, social and symbolic meanings. Thus, there are social and material differences in how comfort and cleanliness are specified and attained. However, in practice cleanliness is a very realistic thing and is connected with everyday safety. Shove sees that people connect decay and bad odours to danger and illness; in miasma-based theories of illness, air transmits injurious elements which make people ill. These thoughts are very natural to have in lavatories.

In a recent survey by the European Tissue Symposium it was found that 72 % of washroom users see hygiene as the most important factor when drying their hands (Laffeaty 2009, p. 23). The concern for hygienic safety can be seen in a wide variety of washroom products and high tech facilities which make even paperless toilets possible. Generally speaking, thoughts of cleanliness are highly emphasised. For example, Clayhill (1996, p. 54), points out that nowadays the demands of cleanliness have been connected to one's own body and to clothes, which spend more time being washed than worn.

3 Lavatory cleaning as a job

A lavatory is a necessity in every home and workplace. A clean lavatory is a pleasant place to use, and its importance can be considered in many ways.

The qualities of lavatories vary according to the age of the buildings that they are in and the habits and values of society. A lavatory can be small and simple but also large and luxurious. The surface materials vary from painted surfaces to plastic, ceramic tiles and stone. The facilities vary depending on needs and financial limitations. The most important object to clean is the toilet bowl. In most

lavatories, a washbasin and a mirror are an essential part of the fittings. Depending on the space and requirements, the lavatory may also be fitted with shelves and cupboards. When a lavatory is cleaned regularly, strong cleaning chemicals are not needed. A slightly alkaline detergent (pH value 8–10) is often efficient enough. An acidic detergent is needed now and then for lime incrustations. Although disinfectants are needed only in exceptional cases, it is evident that habits and thoughts in this respect vary. However, if disinfectants are used to be on the safe side, there is a danger that they will be ineffective when real disinfection is needed.

The instructions regarding lavatory cleaning differ somewhat from each other. The main difference is the order of the tasks, especially when the toilet seat is brushed. However, it is logical to first flush the toilet, pour cleaning solution into the toilet bowl and let it soak. When the exterior of the toilet seat has been cleaned, the bowl can be brushed. According to Finnish cleaning standard 13127 A (VVM, 1971b), it takes 1.0 minutes to clean a toilet seat of average dirtiness. If the toilet seat is very dirty, the cleaning takes 1.5 minutes, and if it is extremely dirty, 2.5 minutes are needed for the cleaning. In the same way according to standard 13125 A (VVM, 1971a), it takes 1.0 minute to clean a washbasin. If it is very dirty, it takes 1.5 minutes, and if it is extremely dirty, the time demand is 2.2 minutes. However, all toilet bowls and washbasins are not similar. Some constructions and designs are very difficult to keep clean. In addition it takes 0.45 minutes to clean a mirror.

On the basis of the previous thoughts, in terms of cleaning, a lavatory can be seen in many different ways:

- a lavatory as an indoor space and a part of the whole dwelling
- a lavatory as a work place and the object of work
- a lavatory as a dirty room

These factors can be assumed to influence how an individual chooses cleaning chemicals for lavatories. One person can consider microbes, the second individual can think about the safety of her hands, and a third may emphasise comfort. The aim is to get a good cleaning result.

Cleaning chemicals for their part have many roles. They clean, they care, and they protect. They can improve the appearance of an object. Their scent may give a certain impression to a space. The goal is a good impression, whatever method of cleaning is used. Besides esthetics and comfort, economic reasons and safety have been mentioned as reasons for cleaning. The accomplishment of these aims

means a positive primary result. Cleaning also produces negative results, or secondary results. Alongside the positive results, something negative is produced: a surface is scratched, a colour fades and material wears. In addition to primary and secondary results, it is possible to speak of tertiary results. These refer to how cleaning influences the environment. In the immediate environment these results can be felt as particles in the air, unpleasant scents and the irritation of eyes and skin.

4 Dirt

A lavatory is considered as a dirty space. In average speech 'dirty' usually means visible dirt. When visible dirt is removed, the surface is clean. When invisible dirt is taken into account, the hygienic point of view strengthens. Douglas (2000) and Lagerspetz (2006) have stated that a symbolic order is created in the world with the categorisation of clean and dirty. In fact, dirt represents disorder. Dirty things are kept in places reserved for them, and people avoid touching dirty things. Cloths and mops bind dirt. They become dirty as they simultaneously are needed to remove dirt. They are at the boundary between clean and dirty.

Chemical, physical, microbiological, visual or purposeful cleanliness depends on the situation. A very thorough cleaning is not always needed, but the emphasis and the demands vary according to the object and the circumstances. The cleanliness of a thing is evaluated in relation to its task.

The same principle is valid in the selection of cleaning chemicals. The properties of detergents are inspected in relation to the demands of a cleaning situation. The purpose of an item determines if a detergent is suitable for a certain task. According to Lagerspetz (2002, p. 97), we can never say that some object is dirty. After washing there are still microbes on the floor, but it is not wrong to call the floor clean. At home, neither floors nor other objects need to be microbiologically clean; visual cleanliness is enough. Purposeful cleanliness means that a certain amount of dirt is acceptable.

All tasks are not pleasant. For these tasks, efficient-looking equipment makes people believe that unpleasant tasks can be performed more quickly using them. When an item of equipment makes tasks more pleasant, it answers certain psychological needs. Manufacturers of cleaning equipment and supplies have taken this into account. Jordan (2000, pp. 42–43) speaks about psycho-pleasure. Beautiful colours give pleasure. Thus, cleaning chemicals can also be beautiful. Their colour can be nice, and the package beautiful or practical. Their scent can be pleasant and give the impression of efficiency or luxury.

5 Contradictions

Airaksinen (2003) asks how the principle of consumer freedom is realised nowadays when the relation between technology and general welfare has become somewhat problematic. The case is the same in the selection of cleaning chemicals. In principle, an individual is free to buy a product or not. In practice a consumer cannot make conscientious choices because it is very difficult to get information on the contents of products. In addition, the average consumer does not understand the complicated names of chemicals, not to speak of their common effects. Although the typical detergent user may not be interested in its components, a sensitive individual needs information on what preservatives have been used in products. Many people are also sensitive to perfumes.

On the basis of scent, people notice that a room has been cleaned. Scents irritate many people, who then experience a very mild scent as strong. On the other hand, some people like scents. They consider it to be important that cleaning chemicals have a good scent. The use of perfumed detergents is psychological. Even if the cleaning done is rather light, the scent of a detergent gives a person entering the room the feeling that the room has just been cleaned. A scent makes people believe that the cleaning has been performed well, and they feel safe. When the use of chlorine compounds was common in lavatories, the scent of chlorine gave the feeling that the space was clean, even though the product was not on the surfaces long enough to have any influence.

Detergents contain different scented oils which do not evaporate simultaneously. For this reason, the first impression can differ from the impression felt later. (Hauthal 2004, pp. 104–107.) Different scents produce different impressions, which the manufacturers have taken into account. People react in different ways to different scents. If a pleasant scent is competing with an unpleasant scent, the unpleasant scent is considered somewhat weaker.

6 Visions of the future

Hauthal (2004) has suggested that in the future people will lose their basic knowledge of the contents of cleaning chemicals. This may cause problems, including reduced effectiveness of cleaning performance. Airaksinen (2003) has made similar conclusions. According to him, the technical world of devices has reshaped the world of cultural consumption so that individuals are not able to produce as much as before.

Three pillars of sustainable development are social responsibility, economy and ecology. All these areas can be

connected to the selection and use of cleaning chemicals. The realisation of social responsibility from the viewpoint of cleaning chemicals includes issues of healthy living conditions, consumer protection and safety at work. It also encompasses a moral responsibility, which means that social responsibility is directed to everybody, everywhere. In the case of cleaning chemicals, this social responsibility can mean the safe manufacturing of chemicals and the selling of chemicals at a reasonable price.

The role of product development and innovations in these processes and others should not be forgotten. For example, the tasks and properties of cleaning chemicals are closely connected with their use. New technology gives surfaces and detergents properties which help cleaning performance. However, the most central and decisive factor is individuals' behaviour as they clean. If the behaviour is not responsible, the benefits of new technology and innovations will vanish or become weaknesses.

According to Zoller (2004, p. 808), the long-lasting influence of cleaning agents on the environment is not mainly a technological problem but a behavioural and moral one.

7 Objectives, material and method

The aim of this research was to find

- what young adults consider when they choose cleaning agents for lavatory cleaning, and
- on what basis young adults choose cleaning agents for lavatory cleaning.

The research material was collected from 39 first year university students who wrote short essays on the themes mentioned above.

They were asked to imagine that they were in a shop selecting cleaning agents for their lavatory.

They were asked to describe their thoughts at the detergent shelves and to tell on what basis they make their choices.

The essays were analysed using content analysis. The material was categorised according to the themes that appeared in the writings, which were reduced and conceptualised. (Figures 1-4.)

8 Findings

One common thought was that there is an enormous variety of cleaning chemicals. The respondents did not consider the matter at length, but stated it shortly.

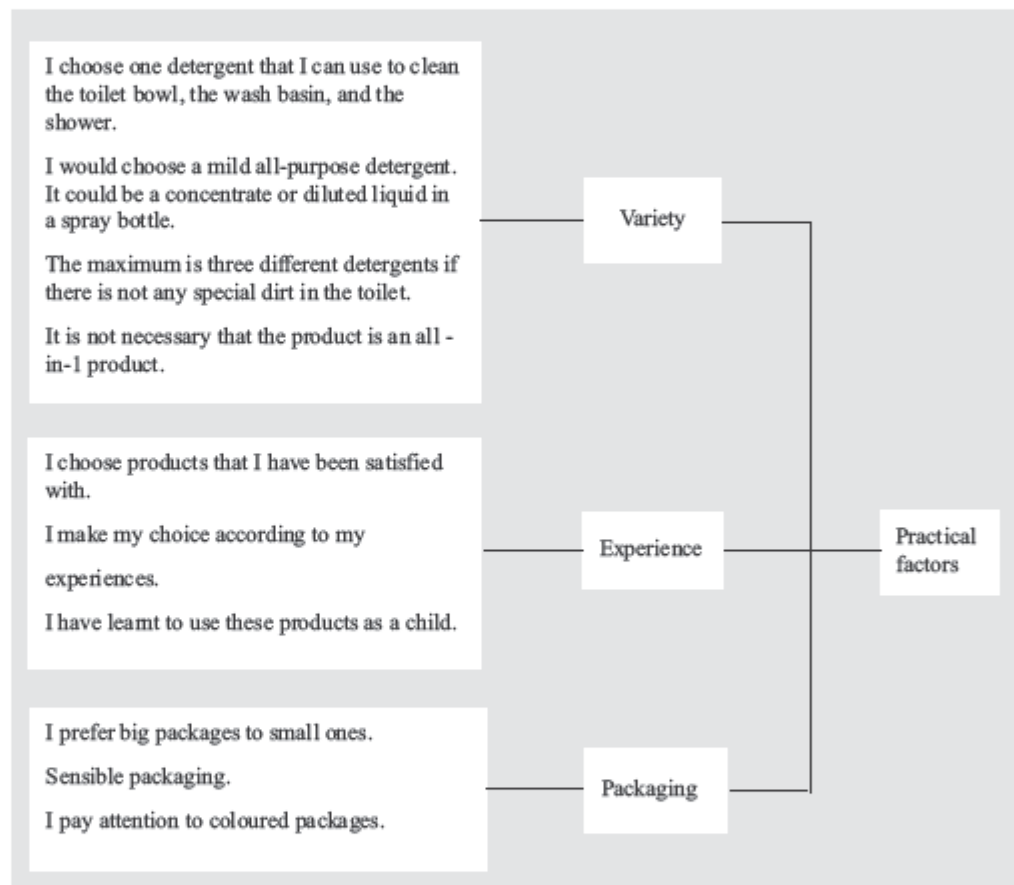


Figure 1: Reduction of data. Practical factors

The variety is large. It is not possible to evaluate which product is the best.

The variety is so enormous that among similar products I make my choice according to scent.

There are too many different products.

8.1 Practical orientation

The most common reason for a selection was practicality. Important aspects were the variety of cleaning chemicals, individuals' own experiences, and packaging. (Figure 1.)

Variety

More than 60 % of the respondents wrote about the variety

of products. The selection they made was usually sensible. The respondents emphasised that many types of cleaning agents are not needed. The most important products were an all-purpose detergent and a cleaning agent for the cleaning of the toilet bowl. Some respondents emphasised the need for a disinfectant. Although the respondents had not studied anything about cleaning chemicals, the general opinion of important products was very positive. However, there were differences among the choices. It is possible that these differences were due to different circumstances, as it is evident that all the respondents did not think of similar lavatories.

I choose one detergent that I can use to clean the toilet bowl, the wash basin, and the shower.

I would choose a mild all-purpose detergent. It could be a concentrate or diluted liquid in a spray bottle.

The maximum is three different detergents if there is not any special dirt in the toilet.

A product must be suitable for many objects in the toilet.

It is not necessary that the product is an all-in-1 product.

Some respondents considered it to be convenient to have many different bottles. They were aware that an all-purpose detergent is usually enough, but they liked to have a special product.

Experience

Many of the respondents bought products which they had used earlier and considered good. About half of the respondents mentioned earlier experiences and familiar products. The use of a familiar product is part of one's routine.

I make my choice according to my experiences.

If some brand has not turned out to be good, I change the brand.

I choose products that I have been satisfied with.

I have learnt to use these products as a child.

Some respondents emphasised the efficiency of a product, which relates to experience in that without experiencing the product it is not possible to have any idea of its effects. Efficiency was a favoured property. An efficient detergent makes the work pleasant. Many respondents emphasised disinfectants and regarded them as important chemicals in lavatory cleaning. They also emphasised the bleaching properties of disinfectants.

The detergent should have disinfectant properties.

Packaging

The respondents thought that the packaging should be practical. Many of them favoured spray bottles with liquids which were diluted and ready to use. Some people responded to beautiful and many-coloured packages, which indicates the importance of psycho-pleasure (Jordan 2000, pp.42-43).

I prefer big packages to small ones.

Sensible packaging.

I pay attention to coloured package.

An unknown product with improper packaging would not be my choice.

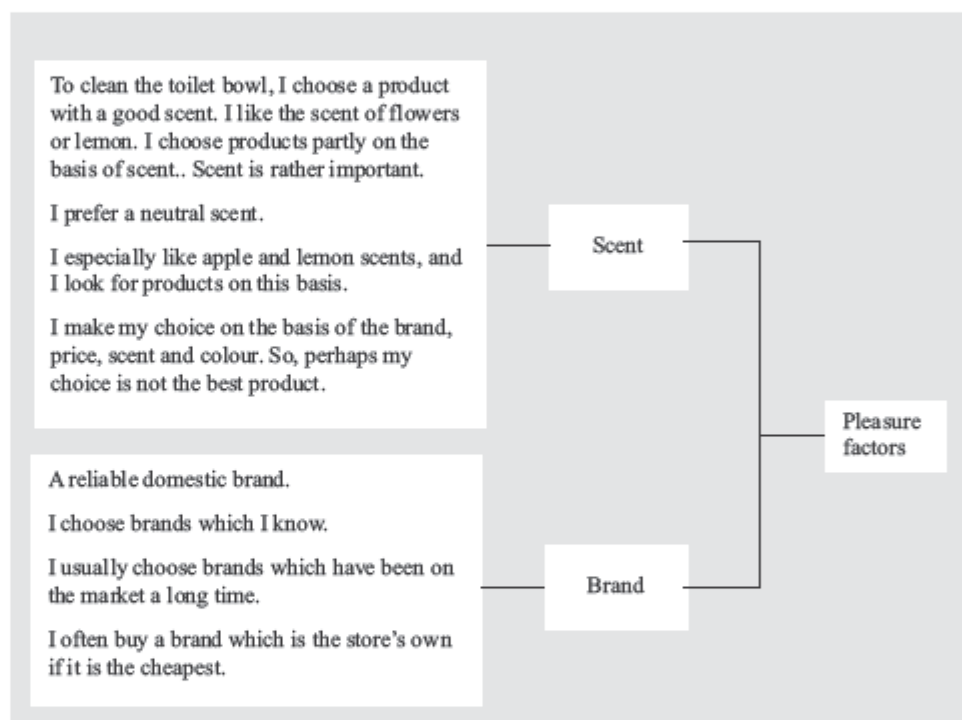


Figure 2: Reduction of data. Pleasure factors

8.2 Pleasure orientation

The respondents considered the pleasant properties of cleaning agents to be very important. Scents and brands were especially significant. (Figure 2.)

Scent

Scent was a very important property. Almost all the respondents wrote about scents. Some preferred unscented cleaning chemicals. However, most of the respondents favoured scents. Some liked flower scents; some always bought cleaning chemicals with an orange or lemon scent.

To clean the toilet bowl, I choose a product with a good scent. I like the scent of flowers or lemon. I choose products partly on the basis of scent.

Scent is rather important.

I prefer a neutral scent.

I especially like apple and lemon scents, and I look for products on this basis.

I make my choice on the basis of the brand, price, scent and colour. So, perhaps my choice is not the best product.

Brand

A few respondents emphasised brands. Certain store brands were important to some respondents. Well-known brands were important to a few respondents. They thought that a well-known brand guarantees the quality of a product.

A reliable domestic brand.

I choose brands which I know.

I usually choose brands which have been on the market a long time.

I often buy a brand which is the store's own if it is the cheapest.

8.3 Price orientation

Price was an important factor for many of the respondents. (Figure 3.) More than the half of the respondents mentioned paying attention to the price. Price is often thought to guarantee good quality. Some of the respondents compared prices. It is often thought that a good consumer is aware of

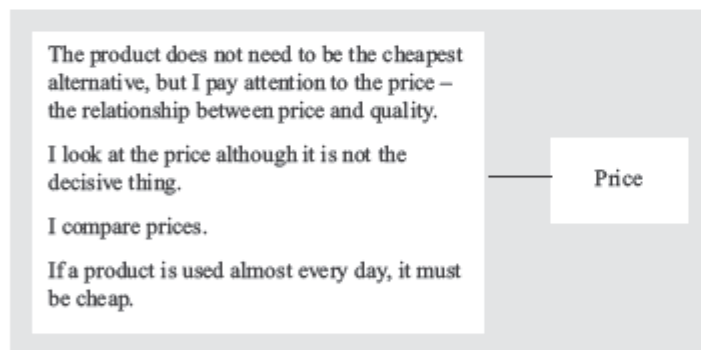


Figure 3. Reduction of data. Price

prices. The respondents usually favoured less expensive products, although there were also other kinds of opinions.

The product does not need to be the cheapest alternative, but I pay attention to the price – the relationship between price and quality.

I look at the price although it is not the decisive thing.

I compare prices.

If a product is used almost every day, it must be cheap.

8.4 The environmental orientation

Many of the respondents mentioned environmental issues. (Figure 4.) They were worried about the harmful components of cleaning chemicals. Some thought about the

waste water. It is rather difficult to get information on the ecological properties of products. However, an eco label proves that the ecological properties of the products have been evaluated. Few of the respondents especially mentioned the eco label. It is possible that the respondents had eco labels in mind when they wrote about environmentally friendly selections. Some of the respondents did not care about ecological alternatives.

I prefer environmentally friendly alternatives.

The eco label.

I am not a very environmentally oriented consumer. After cleaning, the toilet must shine, and the scent must be fresh and disinfected.

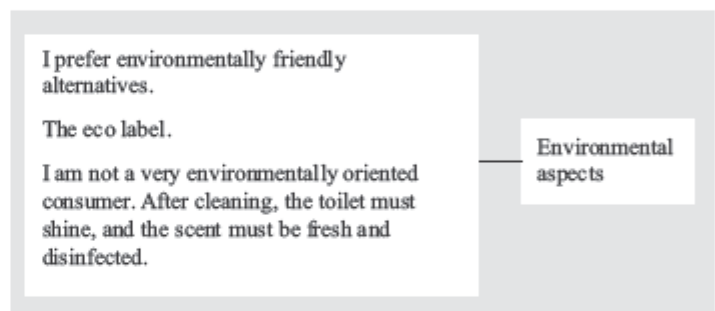


Figure 4. Reduction of data. Environmental aspects

9 Discussion

It can be concluded that the students' considerations behind the selection of cleaning agents for lavatory cleaning were relatively sensible. It is rather easy to choose basic products because their use is mentioned on the label. In this sense a great deal of knowledge of detergents is not needed to make a correct choice. Ecological issues are current at the moment, and the harmful properties of cleaning chemicals were spoken of. Therefore, it is natural that ecological properties were important in the students' considerations.

It was somewhat surprising that almost all of the respondents emphasised scent when the efficiency of products could be said to be a more important property. However, a consumer can only know the efficiency of a product if he/she has used it. Scent is a pleasure factor. On the other hand, the consumer does not know anything about the scent if the product is not familiar or if the scent is not mentioned on the label. Perhaps the emphasis on a scent indicates the demands of individuality, which according to Brackmann, Mayer and Viehhaus (2001, p. 78) is a demand found at the level of consumption.

The fact that pleasure factors, especially scent, are strongly emphasized gives plenty of possibilities for marketing. Attitudes towards scents vary, but the popularity of unscented products have increased as respiratory passage

for marketing. Attitudes towards scents vary, but the popularity of unscented products have increased as respiratory passage irritations have become more common. On the other hand, the variety of different scents may increase because many people want to buy scented products. A scent gives an impression of a clean space. According to Hauthal (2004, p. 107, 192) fragrance plays an increasing role and the variety of fragrances on the market is big.

It is somewhat contradictory that many respondents emphasised low price but simultaneously chose a dilute product, which is relatively expensive compared with self-made dilutions. It indicates that although people want to be economically sensible, they are not price conscious. It also indicates that people are not aware of the components of detergents. They do not know when they buy water or "real" chemicals. Convenience plays a big role. Roth (2004, p. 297) has stated that in the last few years the consumer demand of sprayable cleaning agents has increased. The findings show that people need more basic knowledge of cleaning chemicals. Experience helps in making a selection, but in the long run it cannot compensate for knowledge.

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Marja Aulanko

Opettajankoulutuslaitos (Department of Teacher Education)

Kotitalousopettajan koulutus (Home Economics Science)

PL 8 (P.O.Box 8)

00014 Helsingin yliopisto (00014 University of Helsinki)

puhelin +358 9 191 29794

marja.aulanko(at)helsinki.fi