

Marileena Koskela & Markus Vinnari (editors)

# FUTURE OF THE CONSUMER SOCIETY

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# CONSUMER VALUES AND ECO-FASHION IN THE FUTURE

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*ABSTRACT – This paper discusses the consumer values, attitudes and expectations regarding sustainable textiles and clothing. Consumers' interest in ethical issues is currently raising ethical questions in the mass market. What does a consumer expect from sustainable products in the apparel industry? And what is future eco-fashion?*

## INTRODUCTION AND BACKGROUND

The growth in cheap industrial mass production has led to growing consumption: the post-modern consumer is marketing-prone, and inexpensive products tend to lead to unsustainable consuming behaviour. This materialistic way of fulfilling inner needs leads to a negative attitude towards the environment.<sup>1</sup>

However, cheap textile and clothing production in low-cost countries has taken on a bad reputation, and this is slowly changing the attitudes of consumers. Fortunately, the principles of sustainable product design are rather well researched, and material innovations and technological development have provided new eco-design and -production possibilities in the textile and clothing field. Even radical changes in system design and production are possible. Still, rather little has been studied regarding the consumer's readiness to accept these new eco-possibilities. Development in the textile and clothing field has been technological and cost-sensitive up to now. The textile industry has emphasized the price of the end product and efficiency in production. The question remains, however: what kind of textiles and clothes do future consumers want?

This paper discusses future eco-design opportunities and links these to consumer attitudes and wishes. The main interest is in the consumer's ethical purchasing decision, clothing and fashion consumption, and how it interlinks to identity construction. The paper also discusses possibilities to help a consumer's ethical decision-making by increasing the amount of available ethical information, changing textile maintenance habits, increasing the producer's environmental responsibility and public authority's actions. Finally the paper concludes future possibilities to do eco-design according to consumer attitudes.

## ECO-DESIGN

Product design and development has a fundamental role in designing and producing sustainable products. The decisions made during the product design and development process affect up to 80% of the environmental and social impacts of a product. The choices made in materials, forms, colours and production systems also affect the use and disposal of the product in the whole life cycle, and the designer thereby also influences patterns of sustainable consumption.<sup>2</sup>

In product development there have been two main approaches to sustainability since the 1990's: eco-efficiency and eco-sufficiency. In eco-efficiency the principle is to produce the same or more products from less material. In eco-sufficiency the aim is to gain the same welfare benefit out of fewer goods and services.<sup>3</sup>

Eco-design includes product life-cycle thinking. In designing for the environment the designer must consider not only aesthetical, trend and fashion issues, but also the production process, logistics, the use and maintenance of textile items and finally the recycling or disposal of the product.<sup>4</sup>

## CONSUMER ATTITUDES

An inquiry into the attitudes and expectations of Finnish consumers towards sustainable products in the textile and clothing field was conducted as an online survey in April 2009 by the author. A total of 249

respondents participated in the survey. The survey is thus not extensive regarding Finnish consumers, but it nevertheless offers some guidelines to future eco-design opportunities. The largest group of respondents was students, 40.4%, and the second largest group consisted of civil servants (29%). The majority of respondents were fairly young: 38.4% of them were 18 to 25 years old, and 41.6% were 26 to 35 years old.

In earlier studies of consumers' ethical attitudes it has been pointed out that environmentally-active consumers appear to be more educated, have a high income, and are more often female. This shows that women in general are slightly more interested in ethical purchasing than men. In a study by Oksanen, for example, it was found that in Finland, 74.3% of women say that ethical aspects do affect their purchase decisions. With men, the number is 63.2%.<sup>5</sup>

In the 2009 consumer attitude study by author, 91.8% of respondents were women and 8.2% men. Regarding the respondents' interest in ethical consumption and products' environmental impact, 62.7% of the respondents answered that they were very interested in this issue and 28.3% were somewhat interested (total 91%). Regarding actual ethical consuming behaviour 20.8% agreed that they behave ethically as consumers and 57.1% agreed slightly with this. This group thus totalled 77.9% of all respondents. This shows that people are rather sincere while estimating their attitude and desire to act ethically and their real, everyday consuming behaviour. When asked about the ethicality, product safety and environmental impact aspects of textiles and clothing while purchasing, 49.2% reported thinking about these aspects often and 16.7% always. And when asked about their real textile and clothing purchasing decision and how often consumers have actualized ethical thinking in clothing purchasing decisions at some level, 56.1% of these respondents have done so (always 8.9%, often 47.2%) (see Table 1).

Table 1. Consumers' interest in ethical consumption.

Attitude	never %	seldom %	can't say %	often %	always %
ethical interest in general	4.1	3.7	1.2	28.3	62.7
real ethical consuming behaviour	2.4	14.7	4.9	57.1	20.8
ethical interest in textiles and clothing	1.6	24.4	8.1	49.2	16.7
real ethical purchasing decision in textiles and clothing	2.4	28.9	12.6	47.2	8.9

## ETHICAL PURCHASING DECISIONS

Ethical consumption refers to ethical, environmentally-conscious consumption decisions as well as, instead of buying products, investing in services. In the textile field this involves, for example, promoting Fair Trade products, regionally produced items, eco-labelled products, recycled materials and less purchasing in general.

In the centre of attention should emerge the eco-efficiency of consumer choices and the importance of environmental aspects in consumers' everyday purchasing decisions<sup>6</sup>. Yet consumer choices are somewhat irrational and not always well connected to his/her values. A consumer fulfils deep inner motivations and unconscious needs by consuming.

Consumption includes two kinds of functions while fulfilling a person's needs, targets and values. The consumer can try to achieve individual or collective benefit by consuming. Ethical products manifest individual motives or collective benefit for the person. Individual benefit involves issues such as price, quality, saving of time and purchase convenience.<sup>7</sup>

Ethical decision-making relates to the consumer's social orientation, ideals and ideology. Ethical consumption can create an individual, symbolic feeling of advantage which links to a certain lifestyle or expression of personal identity and other social values.<sup>7</sup>

Lifestyle as a theoretical concept means the totality of a person's social practices as well as the story that he/she tells about them. Person thereby states reasons for himself/herself and others about his/her actions. When a person realizes that his/her thinking is contradictory to his/her own everyday choices, practices, habits and routines through some new perspective (for example ethical consumption),

and these old habits do not bend to his/her new inner picture of himself/herself, for example as a ethical consumer, he/she will change his/her habits and practices. He/she thus harmonizes his/her own self-image and tries to maintain an undamaged one. Through this shift a person keeps his/her dignity and self-conception, and he/she balances his/her "life story" with his/her everyday routines.<sup>8</sup>

This is how a consumer's discourse awareness develops, changes and is challenged, through discussion, new information and experiences, and, on the other hand, this discourse awareness changes into practical knowledge that the consumer uses in everyday routines.<sup>9</sup> The entire time the consumer has to balance between individual needs and social benefit. At the same time the consumer wants to fulfill his/her present desires and future needs.<sup>10</sup> While consuming ethically, the consumer knows that he/she acts morally correctly and in this way he/she approaches an ideal ethical world<sup>5</sup>.

## CONSUMING FASHION AND SELF CONSTRUCTING

Fashion is symbolic production. As a concept it differs from clothing, which is material production linked to physical needs for protection and functionality. Fashion links us to our emotional needs; it expresses our inner individual personality by external marks and symbols, brands and status items.<sup>11</sup>

Psychological human needs include affection, understanding, participation, creation, recreation, identity and freedom<sup>12</sup>. Fashion enables identity building, participation in social groups and class, and also creativity.

Up to now fashion and trends have led consumers' choices in the clothing business. In the USA in 2004, eight out of ten consumers said that environmental issues are important. They considered themselves as environmentalists. However in real life when buying clothes they do not actualize environmentalist thinking and values. Price and style are more dominant factors when they buy clothes and especially fashion items. The consumer's need for newness and to practice a form of fashion has created the opposite situation to sustainable values. How can fashionable and environmental aspects in clothing be combined in the future? Or can sustainability become a fashion?<sup>13</sup>

In this study 84.1% of respondents said that price affects their clothing purchase decisions. However, suitability, colour, and quality are also important factors while shopping for clothes, according to this study.<sup>14</sup>

Fashion cycles are short, and the race for cost efficiency is tight. The cost of clothing and the value of goods have steadily gone down.<sup>15</sup> However, the 'Slow' movement has also reached designers and producers in the clothing industry. 'Fast' fashion and cheap mass production is especially stimulating a counter-reaction among consumers. Slow fashion is produced at a slower rate; clothes are made with more care, resulting in better quality. Slow fashion needs deeper consideration, taking responsibility for one's own clothing purchase acts and their effect on the environment as well as social responsibility. While making a 'slow fashion' decision the consumers respect high quality, made-to-last characteristics as well as ethical or even local production and the lowest possible environmental impact of the production and use of product.

Future consumers want to feel good about their consuming behaviour. Yet the concept of feeling good and happiness may change in the future. Perhaps consumers will make a selective purchase decision according to their inner ethical values. Consumers may even feel good when avoiding shopping, fashion, and external processes of identity construction. Consumers may also feel good when changing the purchasing decision to renting or other services.

In the 2009 study respondents were also asked about the meanings of clothing. A total of 91.4% answered that clothes mean the owner's own identity, and when asked if clothing reflects the direction in one's life (for example building identity), 53.9% of the respondents agreed strongly or slightly with this. When asked if clothing means practicality to you 93.5% agreed with this statement.

The respondents were also asked about the facts that strongly affect their clothing purchasing decisions: they answered in the following way. "Suitability" was chosen by 98.3%, "multi-functionality" 94.9%, the real need for new clothing 93.5%, colour 93%, quality 92.2%, price 84.4%, need to renew 62.2%, brand only 28.4%, and following fashion trends 19.5%. Perhaps these respondents have stronger

ethical values than the average consumer, or consumers do not recognize when they are following trends or fashion, even ethical ones. It can be stated thus that fashion and trends affect us also in a subconscious way.

## ENVIRONMENTAL INFORMATION

In this 2009 study 56.7% of consumers strongly agreed that it is difficult to find information about products' environmental impact and ethicality, and 36.3% somewhat agreed with this (total 93%). Finding ethical information from the consumer point of view is problematic. Because consumers do not find this information, they still select products on the basis of price, appearance, design, convenience, ergonomics and functionality.<sup>16</sup>

In Oksanen's study of ethical products, according to the opinion of 74.2% of the surveyed consumers, finding ethical information is complicated. Younger generations and the group of higher educated respondents are also suspicious of the information companies give about their ethicality.<sup>5</sup>

In the 2009 study the respondents estimated which sources of environmental and ethical information in textiles and clothing are the best sources, and the most reliable ("excellent") were standardized environmental labels. Second-best ("good") was information from authorities, civic organizations and the Consumer Office. The mass media seems to be satisfying as an information source only to the same level as companies, producers, importers and trade organizations.

It confuses consumers that a company might have one ethical line and, at the same time, produce unethically; producers thus do not help consumers to make ethical purchase decisions by offering contradictory information<sup>5</sup>. Consumers cannot easily find ethical or environmental information from different products and at the same time there are so many different kinds of this information on textile products that it is very difficult to compare it. Lately the public focus has shifted toward the ethical production of clothes, and this information has become more common in the textile area.

Nevertheless the consumers' need to acquire information is strong. In the 2009 inquiry it was also asked what environmental information the consumer wants to find regarding textiles and clothing in the future. All the existing labels were given strong support: the Nordic Swan and European environmental labels, as well as the Fair Trade logo and Ethical Production labels. This reveals that producers simply must provide more ethical and environmental information for consumers' use. At the same time researchers have to develop further environmental labelling so that it is easy for the consumer to evaluate products on the basis of sustainability.

## ETHICALITY AND PRICING

The consumer's expectations of ethical products are somewhat unrealistic. Consumers prefer the sustainable products to be at the same price level as other products. In this case purchasing decisions would be easy to make on the basis of environmental aspects.

On the other hand consumers realize that sustainable production following better and newer processing technologies and using safe and sustainable materials also means extra costs that have an influence on the end price of the product. In the 2009 study, 58.8% of the respondents agreed that it is too expensive to consume ethically. When they had to estimate how much more they would be ready to pay for sustainable textiles and clothing, the dispersion was rather widespread. A total of 29.7% said that they would be ready to pay 10–14% more, and 19.9% said that they would be ready to pay 5–9% more. Only 3.7% said that they do not want to pay more at all, and, on the other hand, 9.3% were even ready to pay more than 25% for sustainability (see Table 2).

Table 2. Consumers' readiness to pay more for sustainable textiles and clothing.

how much more you would be ready to pay	respondents
not at all	3.7%
1-4% more	12.6%
5-9% more	19.9%
10-14% more	29.7%
15-19% more	14.2%
20-24% more	10.6%
more than 25%	9.3%

Traditional products which harm the environment are not priced to include all environmental costs of their production. Externalities associated with production are often subsidized by society and the result is lower prices for the consumer. In contrast less environmentally harmful products are not subsidized by society and therefore all costs from development are passed on to the consumer in the form of higher prices.<sup>17</sup>

Some researchers recommend pricing the product by taking into account also the environmental load of production. The pollution load would affect the final price of the product. This system would be controlled by public authorities, and the responsibility would thus move from consumers to public authorities.<sup>6</sup> Environmental and green taxation seems to be a very effective way to move towards sustainability<sup>18</sup>. The idea of adjusting product prices by green taxation has received encouragement from consumers. In the 2009 study 51.2% of respondents strongly agreed and 34.8% somewhat agreed that mass production with a heavy environmental load should be levied a tax (total 86%). There is a will and interest from the consumers' side to change industrial processes towards more sustainability and ethicality even if it means higher prices.

In the same study 92.2% of respondents said that while buying clothes quality is an important aspect and higher quality means a higher price. The consumer weighs up the purchasing decision more when buying valuable items. If the clothes are expensive, they will be used longer; they will be repaired, maintained and recycled, especially if they are made of high quality materials. This raises the following question: how can good quality products be produced and, at the same time, make sustainability and ethical production such important elements that it will be accepted that they raise costs? As one of the respondents answered: *"We should return in our consuming behaviour back to the time, to the stage where we bought a little, but expensive and good. Now cheap products block in the way to realize this ideal."* The best decision for sustainable development would be minimizing consumption in total, in which case an increase in prices in general would be a best alternative as this would affect more the total volume of consumption<sup>19</sup>.

## TEXTILE MAINTENANCE

Textile and clothing manufacturing creates a big environmental impact through the fibre cultivation and manufacturing processes. Maintenance of the textiles, however, especially clothing, also has an important environmental load (washing, drying, and ironing). These two processes are critical when doing a textile LCA. Textile maintenance uses very much energy and water. One study done in the Netherlands found that the average piece of clothing stays in the wardrobe for 3 years and 5 months. The customer has worn it for 44 days during that time, and it is worn for 2.4 to 3.1 days between washing.<sup>20</sup> Clothes frequently washed have the highest environmental impact. By optimizing the best textile materials and product colours for each purpose and use, the designer as well as the consumer can minimize the number of washing times during the use of textiles.

Clothing, workwear and household textiles have a large relative environmental impact during use. Their impact during production and disposal are estimated to have a small relative impact.<sup>11</sup> Depending on the material and its need to be washed frequently, the impact of consumer care can be as high as 75–80% of the total environmental impact of a cotton shirt.<sup>21</sup> In this case better environmental (eco-labelled) material choices do not actually offer much improvement to the environmental aspect in the total LCA.

In the same 2009 study the consumers were asked about their interest in finding more information about products' environmental impact during wear and maintenance. A total of 66.7% of consumers were keen to find this kind of information on textiles and clothing in the future. This kind of information is completely lacking at the moment, yet it seems that consumers are interested in their own actions and how they link to environmental load. Still, information about the environmental load of textile manufacturing was more important from the consumers' point of view (85.8% would like to find this information in the future).

Furthermore minimizing ironing and lowering washing temperatures can also have a strong effect.

When asked how many would be ready to lower the washing temperature for environmental reasons, 76.6% were ready to do this. It is estimated that lowering the washing temperature by 10 degrees essentially lowers the energy consumption during consumer care. This is quite possible to do by selecting suitable materials for 30°C washing in regularly laundered clothes.

But when asked if textiles' and clothing's maintenance will need more work in the future (for example, hand-washing with cool water), 69.3% did not agree with this statement. However, 50.8% agreed when asked if future textiles and clothing could be less frequently washed and if consumers could change their conception of cleanliness a bit. In addition, when asked if the consumer himself would be ready to do this (wash clothes less frequently) 65.7% were ready to change their washing behaviours. We know that only 7.5% of laundry is heavily soiled. The majority is washed more for cultural or behavioural reasons.<sup>22</sup>

Yet it is even possible to design clothes that need minimum washing or do not need washing or ironing at all, and their quality and style can be optimized for the real lifespan of the clothes. With the right kind of material choices clothes can be designed so that they last a certain time of use and after use they can be recycled. However consumers are not ready to buy short life-cycle clothes. Only 7.9% of the respondents agreed with this. However, if the clothes designed to last a short time are biodegradable 34.5% were ready to consider this kind of fashionable clothing. At the same time 96.7% want clothes to be made with high quality and 98.4% want clothes to be long lasting.

Clothes can also be designed with a modular structure so that only those parts that actually become dirty will be washed. The consumers studied are even ready for this (56.4%).

## GLOBAL CONSUMER

While textile manufacturing has moved to lower-cost countries so also are the environmental impacts. In the Western world and especially in the EU environmental laws are strict; the situation is quite different in Asian countries, however. Through consuming more and more mass-produced, cheap textiles, consumers affect environments on the other side of the world.

Lately the ethical production of textiles has been strongly in public discussion but not yet the environmental impacts that western countries' consumer habits have on other countries. This can also be seen in the answers of the 2009 study: 91.8% wanted to see information on the ethicality of production and 92.6% of respondents wanted to see the Fair Trade label on the product in the future. Through regular information in the mass media, unfair production systems have become familiar to Western consumers.

There are several options for informing the end user about the global impact of textile production. These concepts are the carbon footprint and water footprint. A carbon footprint is the estimated figure of the impact a person's activities has on the environment: it includes all greenhouse gases. It is estimated that in a typical person's total carbon footprint in the developed world, 4% goes to clothing. The carbon footprint includes the primary footprint of direct CO<sub>2</sub> emissions (also including domestic energy consumption and transportation) and the secondary footprint (the whole life cycle of products we use). It is also possible to calculate individual products' carbon footprint, and this gives the consumer the possibility to compare different products. In cheap, mass-produced clothes, cotton cultivation and logistics result in a very large footprint.<sup>23</sup>

A water footprint is an indicator of both direct and indirect water use of a consumer or a producer. Many countries, especially in the Western world, have externalized their water footprint by importing water-intensive products from elsewhere. Global international trade implies international flows of virtual water. For example the water footprint of one cotton shirt is 2700 litres.<sup>24</sup>

The carbon footprint and water footprint are also linked directly to the total amount of consumption and welfare of nationalities. These are good indicators to evaluate consumption levels and consumption's environmental load.

In the 2009 study respondents were asked about their interest in seeing this information, the water footprint and carbon footprint, on textiles and clothing. A total of 72.6% of respondents wanted to see a water footprint figure and 77.1% a carbon footprint figure on clothing products. While these are rather new figures, last summer in England there was a strong demand for carbon-footprint-labelled clothes.

The whole production chain of textiles is very fragmented and complicated. The "Made in" label does not truly give the needed information any longer. Nonetheless in the same study 91.3% of respondents want to see a "Made in" label (the origins of the product) in future textiles and clothing, and 60.5% want future clothing to be produced in neighbouring areas.

## POWER GIVEN TO THE CONSUMER

In the 1990's Finnish public authorities believed that by increasing information about sustainable products and product life cycles, consumers will act wisely and choose products with less environmental load. It would thus be possible to decrease the environmental load of consumption and industrial production. A key responsibility was thereby moved onto the shoulders of the individual consumer. It was also presupposed that in this way the number of ethical products on the market would increase. A majority of consumers feel that their values are based on ethicality, but the authorities have given too much power and, at the same time, too much responsibility to individual consumers.<sup>25</sup>

In the 2009 study consumers were asked about their wishes regarding products' environmental optimization. A total of 73.4% of respondents agreed that it would be good if products in the future were automatically optimized according to environmental impact and thus no extra environmental labelling would be needed (38.8% somewhat; 35.1% strongly).

While discussing best practices to change the present development in consumption, the respondents raised some interesting comments. Some consumers want public authorities and producers to take responsibility more clearly in environmental matters. *"Producers have to carry the responsibility. In shops there should only be ecological and ethical clothes and other products. It is incomprehensible that now the responsibility has been pushed to consumers and while maximizing profits we have ended up in a situation where consumers have to separately demand ethicalness and 'ecological-ness'. Enterprises should somehow be forced to follow ethical and ecological principles with the help of legal institutions and laws, and these have to be tight enough."*

More information about the ethical bases of production and the actual tracing of makers (Made by labels and transparent production) in textile and clothing production are desired by 96.7% of respondents. This reveals that consumers are most eager to find more information and actually have the possibility to themselves check the background values of a product.

While asked about the best ways to change consumer consumption behaviour 41.6% feel that increasing information is the best way and 37.4% feel that increasing green taxation and other public authorities' controlling measures would be the best way to make an essential change.

In conclusion, consumers still want to have the power and possibility to weigh their own individual purchase decisions, but at the same time they wish to have help from producers, legislation and authorities.

## ACCEPTANCE OF ECO-CONCEPTS

We do have various possibilities to design and produce textiles and clothing differently in the future. Yet these new eco-concepts, material choices, designs, aesthetical concepts, and maintenance habits depend on the consumer's acceptance and willingness to change his/her preconceptions and routines.

Consumers connect strongly to social mores, which have a moral connotation and are based on the central values of the culture<sup>26</sup>. Acceptance of mores is considered mandatory. Rules on dress necessitate appropriate professional appearance such as a coat and tie for a man.<sup>27</sup> In the 2009 study one of the respondents said, about the meaning of clothes: *"I have tested it: in my workplace I make progress only when I am dressed in the code of my profession that means wearing a tie."*

In some situations clothes have the function to confirm or change our own role, and this affects other people's attitudes. Clothes and fashion are linked to acceptance and social codes and consumers have the deep need to participate in social groups and classes. Can we break or change even some of these accepted social norms? When the maintenance of clothes has a significant environmental impact, can we change this aspect of clothing? All assumptions and preconceptions have a slow historical change pattern. Our conception of cleanliness has changed radically in 100 years. The technical development of washing machines, tumble dryers and better detergents has also driven our concepts of the cleanliness of clothes. The same kind of change can be seen in the concept of comfort and convenience in clothing. Convenience as a concept is linked to rush and an existing busy lifestyle. This interconnects to the use of polyester clothes, easy washing, tumble drying and no need for ironing. Yet we know that polyester clothes need more frequent washing because they cause more sweat.<sup>28</sup>

Can future fashion be wrinkled, recycled, less colourful and acceptable in the office? This new eco-fashion concept seems to be not as easy to accept among consumers. In the study 70% of respondents want eco-clothes to look exactly the same as ordinary clothes. Consumers do not want apparel to be different in design or appearance. Only 30.2% of consumers want clothes to declare eco-aesthetics. It might be more advisable to develop the eco aspects in materials, production and textile maintenance than in new design concepts.

## ECO-FASHION IN THE FUTURE

Value change is the most important factor in sustainable development<sup>29</sup>. For sustainable development it would be best to consume less. However nowhere near all consumers are willing to reduce consumption and by doing so create their identity without external symbols. Behind the need to consume there are, besides the actual need, other deeper reasons such as the need to be associated with some social class, or constructing personal identity through product symbols and brands, and this is obvious in consuming clothes and especially fashion. To change this tendency in consumption, critical aspects can be seen in individual consumers and their set of ethical values.<sup>19</sup>

Yet in the future through material innovation and production processes it is possible to produce textiles and clothes with different quality and life cycles and target these for different consumer groups. Perhaps there should be fast fashion and slow fashion production systems and different taxation and labels for these.

Slow fashion would be designed according to an ethical consumer's values. The clothes would be designed to be durable, high quality and in sustainable materials. The production lines would be ethical and perhaps even local production. The style would be more classical and longer lasting in design, colour and print. The clothes would be long-life products made from durable materials. The material choices would be optimized so that the clothes need very little maintenance, especially washing and ironing. And materials and clothes could also be reused and even recycled into a new textile material. Multifunctionality and a modular structure is important, and producers can also offer new service concepts, such as repairing, recycling, changing, renting and leasing clothes.<sup>30</sup>

Fast fashion would be directed towards the younger generation, and it would be based upon their need to consume and build identity with fashionable items. This might mean new sustainable clothing materials which are optimized for the real lifetime of the product. Perhaps they are used for only 6–12

months, and they are then recycled into new materials. They are mainly made from recycled materials and not virgin ones. There would be a good recycling system for these clothes or they could be biodegradable. Perhaps they would not need to be washed at all during their short lifetime. Fast fashion could also mean do-it-yourself design or tuning, and this could deepen the customer's relationship to the product as well as his/her level of self-actualization, thus extending the product lifespan.

In the future we all have to satisfy our needs in a longer lasting manner than by consuming products. This means a huge step and change in our behaviour. By balancing prices between sustainable and unsustainable products using green taxation, this might help consumers to behave more rationally. As one of the respondents commented, cheap clothes confuses consumers rational behavior, meaning to buy more expensive clothes and also to invest in better quality and sustainability. In this inquiry 94.6% of respondents were ready to buy better quality, durable, repairable, more expensive clothes in the future and use them longer to decrease their own environmental impact.

## DISCUSSION AND CONCLUSION

Better consideration of what consumers expect and value in the future might offer new design and production opportunities. Sustainability and eco-design will be a megatrend, and consumers are ready for this and even ready to pay more for sustainability. When production systems, designers and retailers understand better the consumers' values it is possible to extend the supply of sustainable items on the market.

Enterprises have been taking into account production systems' environmental impacts more and more in recent years. In Finland producers are far ahead in terms of using LCA tools, but a true radical change in design thinking is still waiting to emerge. A radical systematic approach to sustainable design is needed, and we have to challenge the consumer to actualize his/her own ethical values into purchasing behaviour. To change consumption habits, the consumer wishes to have help from producers and public authorities.

If concern for the environment actualizes in radical political measures such as green taxation, sustainability may also be the only way of designing and producing products in the future. The early bird catches the worm: it may therefore be advisable for producers to specialize in sustainability as soon as possible.

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