

A methodology to test strategies to increase consumer's willingness to wear alternative textiles

Researchers

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Focus

The newly developed methodology of this study demonstrates the contributions of store and material information on experiences during touching of textile. The type of clothing store and way material information is provide may play a critical role in the acceptance by consumers of more sustainable textile materials.

Innovative idea and objective

Prior innovative WUR food studies demonstrated that foods, especially newer foods, may trigger certain irrational negative feelings such as feelings of disgust. Due to their subconscious nature, these negative feelings are poorly accessible by the consumer even though they may be strong enough to prevent that the food is being consumed. These negative feelings are not limited to foods, but may also be triggered by 'alternative' textiles, such as second-hand clothing, or clothing made from rest or side stream materials. Even though the consumer may rationally know that the clothing is clean and safe, the negative feelings with regard to e.g hygiene, health and intimacy may prevent the consumer from even touching these clothes which hampers widespread acceptance of these textiles.

In this wildcard project, a recent WUR methodology to objectively measure negative feelings for foods, and to test possible ways to alleviate these feelings, was applied for the first time to textiles for this project. In the case of foods, these negative feelings were not restricted to the moment food was actually consumed but probably build-up gradually during the 'journey' between the moment that the food was selected and purchased, unpacked, the product specifications were inspected, the food was prepared and was ultimately consumed. Similarly, in the case of textiles for this wildcard project the consumer made a virtual 'journey' through the various phases of exploring, label inspection, purchasing, unpacking, leading up to the moment that the textile was actually touched. During each of the phases, objective responses such as hear rate, skin conductance, and facial expressions, were continuously monitored. In this set-up it was possible to introduce in certain phases small interventions, such as specific information regarding the textiles sustainability, aimed at reducing the consumers' negative reactions during touching. Study results using this methodology identify possible interventions that increase the consumer' acceptance of 'alternative' textiles. An example of the application of this methodology to consumer acceptance of 'alternative' textiles is shown in the figure below.

The innovation of this idea lies in the fact that consumer's reactions to various types of textiles are not only measured during touching of these textiles but also during various stages preceding the moment that clothing is actually touched. These stages include entering the clothing store, selection of the clothing, inspection of the label with information about the background of the material, up to the moment that a dressing room is entered to try on the clothing. A combination of standard and advanced type of measurements provide insights into the contribution of each of these stages to consumer' acceptance of the clothing during touching. These insights may help to develop successful strategies to boost the use of alternative textiles by consumers.

Relevance to the materials transition in textiles and/or building materials?

Traditional textiles are a mayor contributor to fossil carbon use. Possible replacement materials of traditional (new) textiles include new materials such as polylactic acid or biomaterial from nettles, and reused or recycled worn materials. Identifying ways for the successful transition of traditional towards alternative textile materials will have positive environmental consequences.

What did you do?

An experimental study was developed and conducted with 31 participants. In this study we monitored consumer' reactions to four types of textile samples in one 1-hr sessions during three phases of typical clothing-consumer interactions during the purchase of a t-shirt: 1) in a clothing store (discount or upscale), 2) information about the t-shirt material (reused, recycled, PLA, organic cotton and nettles), and 3) touching the textile. Phases 1 and 2 were standardized, i.e., participants viewed video segments which displayed each phase from the perspective of the consumer. In phase 3 the participants actually probed the textile shown in the preceding videos with the fingers. Participants' reactions were monitored during the three phases 1) implicitly with heart rate, skin conductance (arousal) and facial expressions (valence) and 2) explicitly with questionnaires after touching.

Main result, achievement and highlight

Reactions during touching were not only affected by the tactile properties of textile but also by the prior information about store type and type of material. Probing material believed to come from reused clothing triggered scared and disgusting facial expressions and increased heart rate and skin conductance ($p < 0.01$). Reactions to new materials such as nettles and polylactic acid triggered were similar to reactions to organic cotton. Reused clothing triggered stronger reactions in an upscale store.

Key message

The newly developed methodology of this study demonstrates the contributions of store and material information on experiences during touching of textile. The type of clothing store and way material information is provide may play a critical role in the acceptance by consumers of more sustainable textile materials.

Visual abstract

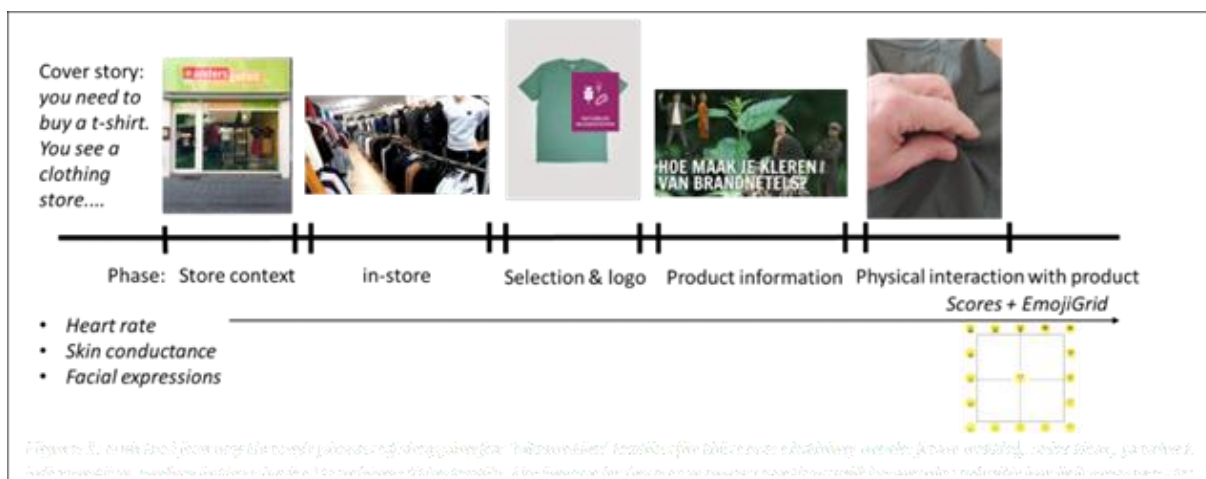


Figure 1: a virtual journey through phases of shopping for 'alternative' textiles (in this case clothing made from nettle), selection, product information, ending in the physical touching of the textile. During each phase consumer reactions will be monitored with implicit measures to identify aversive – or appreciative- reactions.