

# Emotion and disgust as a moral emotion psychology essay

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This research study aims to explain the relationship between feelings of disgust, cleanliness, and moral judgments, and also their potential impact on willingness to pay for fair trade products. In our experiment, participants watched a video including disgust issues and according to their cleanliness priming they cleaned their hand with a sanitizer, with hand wipe, or no cleaning. In the control condition, they only answered questions without seeing the movie. Based on literature review we proposed that there is a negative correlation between state of moral cleanliness and their willingness to pay for ethical products. If people are too moral, their willingness to pay decreases or if they feel immoral, their willingness to pay increases for fair trade products. The findings were not supporting the idea that cleanliness make moral judgments less severe and willingness to pay for fair trade products decreases.

Keywords: emotion, disgust, morality, moral judgment, embodiment; embodied cognition, moral licensing, moral cleaning, fair trade products, willingness to pay.

## **How can Disgust Feelings Impact on Purchasing Decision of Fair Trade Products?**

We do our decisions either rational or emotional. Now think about the scene that you are in a store and standing in front of shelves, and you fetch the fair trade labeled product. After coming home, you realize that you bought so many fair trade labeled products. Normally, you do not buy these kinds of products, but today was different. Does fair trade labeled product make you feel better? Do you think that you are more ethical now? There might be a

significant correlation between your instant emotional state, moral judgments and your decisions. Previous studies demonstrated that decision process is related with emotions. In this paper, we want to study the impact of emotions on decision making process. In this research paper, we want to focus on disgust as emotion and its possible association with moral judgments and influence on decision making process. We especially want to focus on economic decisions, because we want to see if it is possible to implement marketing campaigns of fair trade product based on moral judgments related issues.

## **Emotion and Disgust as a Moral Emotion**

Emotions are crucial both in shaping moral judgment and behavior and as reactions to morally-relevant behavior. For this reason, there are so many studies addressing emotions (e. g., fear, anger, disgust, etc.). According to the social intuitionist model of moral reasoning (Haidt, 2001), emotions are the primary driver for shaping moral judgments. This perception is closely in same line with other study, it emphasizes on quick and automatic valuations, in other word intuitive-emotional processes, are critical in the judgment process (Greene & Haidt, 2002). People use their affective feelings as a source of information and interpret their conditions in the environment. According to the state of their feeling (e. g., positive or negative), people's interpretations show differences when making evaluative judgments. In other words, people usually like when they feel positive and dislike when they feel negative about the situation (Schnall, Benton, & Harvey 2008). This concept is similarly stated in the affect-as-information framework; there is a

relationship between emotion and cognition (Schwarz & Clore, 1983, 1988, as cited in Schall et al, 2008). According to Niedenthal et al. (2005), “ social information processing involves embodiment, where embodiment refers both to actual bodily states and to simulations of experience in the brain’s modality-specific systems for perception, action, and introspection” (p. 184). Processes of embodied cognition is both online and offline. While online embodiment uses physical objects, offline embodiment has to do with abstract objects in the surroundings. In order to make a meaningful interpretation of symbols, individuals have a count on the relevant, first online embodiment (Niedenthal et al., 2005).

Herein, we want to stress on disgust more specifically because it is more related with the focus of our research subject. We often use disgust in a food related concept, but it is also proper for socially immoral people, situations, and behaviors. For instance, a violation of a moral issue regarding to purity has been shown to stimulate disgust feelings (Rozin, Lowery, Imada, & Haidt, 1999). Especially, its evolutionary position as a protective emotion, disgust seemed to be a particularly significant emotion concerning moral judgment (Pizarro, Inbar, & Helion, 2011). There is also other research addressing the same mechanism of disgust with another remark. According to Rozin, Haidt, and McCauley (2000), the mechanism of disgust has been changed from being a protection of body from harm to being a shield for the soul in case of harm. At this level, disgust becomes moral sense and powerful form of negative socialization. Several studies underlined that pure disgust and moral disgust not only create a similar impact in body, i. e., face expression

and physiological activation (Rozin, Lowery, & Ebert, 1994 as cited in Zhong& Liljenquist, 2006) but also have a place in particularly same brain areas, essentially in the frontal and temporal lobes (Moll et al., 2005, as cited in Zhong& Liljenquist, 2006).

In order to understand the moral judgment mechanism, we should look at a bit closer the social intuitionist model. According to this model, people usually make their moral judgments according to their feelings (Haidt, 2001). For instance, previous studies showed that moral disgust has immediate impact on judgments and make moral judgments more severe (Schnall et al., 2008; Wheatley & Haidt, 2005). Social intuitionist model proposes that moral judgments are shaped by various factors including intuition and instinct, and hardly because of a cognitive process. In other words, intuitions and emotions do not require effort, and they are instant; and that we are not aware of the process consciously. Intuition with reasoning is purposeful, conscious, and to have need for several steps. Moreover, emotional state may play a role, but they do not affect the moral judgment in a straight line. The roles of moral reasoning might be looking for a reason to defend own instant instinctive responses, using logic to share judgments with others and influence them to agree, and counting on reasoning in case of no initial intuition or conflict situation in intuitions(Haidt, 2001).

In their study, Schall et al., (2008) stated that disgust feelings can be conveyed to objects for which they are not related. This shows that judgments are under the effect of disgust emotions even it is not interrelated with the situation or object. For instance, Lerner, Small, and Loewenstein

(2004) investigated the relationship between emotions and their impacts on endowment effect. They showed that induced disgust emotion by former, unrelated situation had carry-over-effect to normatively independent financial decisions. As a result of inducing disgust when it compared with being in a neutral mood reduced the capital amount that participants were willing to pay for certain objects and endowment. Additionally, the research results of Schall and colleagues (2008) point out a causative relationship between physical disgust feelings and moral criticism. In their experiment, participants made their moral decisions while going through extraneous feelings of disgust. Manipulation of disgust performed by a bad smell, working in a disgusting room, recalling disgusting experience, and watching a disgusting video clip. In common, the results indicated that disgust causes to moral judgments more severe when it compared to the control condition. More specifically, the participants who were exposed to the unpleasant smell had more severe in their judgments. Additionally, people who showed a high level of body consciousness were more severe in their moral judgments.

## **Cleanliness and Moral Judgments**

The consideration of cleanliness helps to form a key moral judgment that developed from the need to protection from possibly hazardous materials (Haidt & Joseph, 2008, as cited in Schnall et al., 2008). Investigation of the relationship between physical cleansing and moral judgments by (Schall et al., 2008) helped out to understand the importance of cleanliness over moral judgments. They observed that, after washing their hands with cleanser and water participants can reduce their moral judgment severity of video clip

including disgust issues. Based on this finding, they assumed that physical cleansing can reduce feelings of disgust and the severity of the moral judgments.

With similar viewpoint Zhong and Liljenquist (2006) conducted a study in order to investigate an interchangeability relationship between physical and moral purity, to put it in a different way, physical cleansing acts as a substitute for moral purification. They asked participants to recall a moral or immoral action from their past, as a result of an immoral action came up with more words with cleaning related than those who remembered a moral act. Afterwards, they examined whether a hidden treat to moral cleanliness creates a psychological desire for cleaning; they observed that copying the immoral story amplified the interest of cleansing products. In their next experiment, the possibility of taking an antiseptic cleansing wipe after remembering a moral or immoral act. Not surprisingly, most of the participants who recalled an immoral act took the disinfectant wipes as a gift. In the last experiment, participants described an immoral act from their past. After that, they either cleansed their hands with an antiseptic wipe or not. They finished a survey regarding with their current emotional state before asking to participants if they would be eager to help for a different research study without pay. Participants, who had preferred to clean their hands, were less willing to be a volunteer to help. The possibility of expressing feeling of guilt, regret, shame or discomfort was eliminated with cleaning. According to the findings; we can conclude that physical cleansing repairs moral self-image. The desire for cleaning is a human coping

mechanism, which has changed to reduce feelings of guilt when we act unethically.

In a different paradigm, to figure out the importance of sense on behaviors Holland, Hendriks, and Aarts (2005) conducted a study. The result of the research demonstrated that scent can have non-conscious influence on both thought and behavior and makes participants more sensitive to moral-related words. In addition, pleasing fragrances activate and expose positive memories, information and moods, which leads to increased ease of access of information, and information processing depth. On the other hand, their study did not clearly address the role of odor in moral judgments and moral cleansing. The research study by Liljenquist, Zhong, and Galinsky (2010) also demonstrated that clean smell both motivates clean behavior and increases moral behaviors such as mutual trust as well as proposing help for charity.

## **Moral Licensing and Moral Cleaning**

Researchers Khan and Dhar (2006) describe the phenomena of moral licensing as an unconscious effect that provides a moral enhancement in oneself self-image. They point out the significance importance of prior choices in activating and improving oneself self-image. It helps us to understand the preference mechanism of human among the set of alternatives. In addition, results of the research demonstrate that a primary altruistic intent enhancing the relevant self-concept can free a person to pick a more indulgent possibility. It is an valuable outcome for understanding the influence of priming on a self-concept for the next choices. According to this research results (Merritt et al., 2010) moral licensing is not only decrease



prosocial enthusiasm, but also less inhibit ethically doubtful behavior. The study conducted by Sachdeva, Ilic, and Medin (2009) also demonstrated compensatory and regulatory behavior of people. It suggests that with high moral self-worth people can behave immorally. Also, people can show opposite behavior in other area of their life because their ample self-image in some way forces them to balance out all that goodness. In other words, we adjust our sense of self-worth by doing moral self-regulation continuously. For example, when we think that we're too moral, we feel that we have the right to be immoral for a moment. On the other hand, if we think that we act immoral, we feel necessity for doing something moral to feel better again about ourselves. This type of reactions can be thought of as moral licensing. Principally, thinking of positive behaviors increases one's self-worth while negative behaviors decrease it. In the experiment, conducted by Sachdeva et al. (2009), participants thought that they took part in a handwriting test. All experimentations involved positive traits and negative traits behaviors condition. By asking participants to think of both positive and negative behaviors connected with them, they manipulated participants' degree of self-worth, and they also were asked if they have a desire for contributing for a charity with money on hand. Participants who had higher self-worth donated low amount of money to charities than participants with lower positive self-image. They observed that priming people with positive and negative deeds strongly affected ethical behavior. Participants, who wrote about their moral behavior, donated the lowest amount, while participants who wrote about immoral behavior donated highest amount. Dissimilarity, participants, who were in the negative condition and wrote about their

immoral story, gave more than those who wrote a unethical story about others. Participants showed a need for the moral-cleansing or moral-licensing only when they wrote about themselves. To put it in a different way, changes in self-concept would take place when participants think about themselves, rather than thinking about another person. In short, talking about themselves activated the occurrence of the moral-cleansing and moral-licensing effects on people. Merritt et al. (2010) claim that “ when individuals have had a chance to establish their kindness, generosity, or compassion, they should worry less about engaging in behaviors that might appear to violate prosocial norms” (p. 346) and “ behaviors that establish one’s morality can disinhibit people to act in morally dubious ways” (p. 354). Sachdeva et al. (2009) said “ If people feel “ too moral” they might not have sufficient incentive to engage in moral action because prosocial behavior is inherently costly to the individual” (p. 524).

The other research study (Jordan, Mullen, and Murnighan, 2009, as cited in Merritt et al., 2010) found similar outcomes using prosocial intentions as a dependent measure. After asking participants to describe their past activity in terms of their ethical, unethical and neutral themes, they indicated the probability of their engagement in each of numerous prosocial activities (i. e., money donations, giving blood, and volunteering). Participants who remembered their ethical act stated less prosocial intentions than the control group, representative of moral licensing while prosocial intentions of participants, who recalled a their unethical act, were higher than the control group. This performance referred as a moral cleansing. In the second

experiment, they asked participants if they would cheat on a math exam. Participants, who recalled a past good action, were most probable to cheat than people who recalled a past immoral action.

Horberg and colleagues (2009), propose that disgust can polarize moral judgments, leading people to judge other people and their behaviors as more morally negative when the behaviors or people are themselves objectively negative, and more morally positive or commendable when the behaviors or people are themselves objectively positive.

## **Hypotheses**

As we discussed in the previously, cleansing has a significant effect on moral judgments in other words, making them less harsh and we make our decision according to these instant emotions. We also know that disgust induced emotions' effect can be carried over to unconnected economic decisions. Economic decisions show differences according to person's moral self-worth need (moral cleansing and moral licensing). Based on this logic, we set hypotheses as following:

“ The first hypothesis stated that participants in the sanitizer condition will be less willing to choice for fair trade product when it compared to those in the movie condition”.

“ The second hypothesis stated that participants in the sanitizer condition will be less willing to pay for fair trade and regular products when it compared to participants in the movie condition”.

“ The third hypothesis stated that participants in the sanitizer condition will be less severe in their moral judgment for moral dilemmas when it compared to participants in the movie condition

In this present research we measure the effect of cleanliness on moral judgments and economic decision by constructing dependent variables: willingness to pay (to what degree that participants willing to pay for fair trade and regular products), product choice questionnaire (to what degree that participants choose fair trade products), moral dilemmas (to what degree that participants moral judgments are affected by cleanliness priming), and chocolate sheet (to what degree that participants choose fair trade chocolate). We defined four dependent variables according to their possible relationship with moral judgments by sourcing former studies.

## **Method**

### **Participants**

In total 149 (71 male, 78 female, M age= 24. 32, SD= 4. 67) undergraduate students, a great majority of them were studying in the University of Bern, participated in the experiment individually. Participants of the study were recruited at the UniS cafeteria at the University of Bern. They were asked if they would like to participate in the short experiment attempting to investigate the consumer behavior. They were also told that they would get 3 Swiss Franc for their participation.

## **Research Design**

The experiment was designed as a combination of between and within subject design. It employed 4 cleanliness (sanitizer, hand wipe, movie and control) x 2 product categories (fair trade and movie) in a mixed factorial design. In the experiment, independent variables (short video, hand cleansing and hand wipe) were manipulated between subjects and dependent variables (product choice and willingness to pay (WTP)) were manipulated within subjects (regular and fair trade products).

By combining different independent variables with each other, we defined four different conditions. These conditions were the video-hand sanitizer condition, the video-hand wipe condition, the video clip condition and the control condition. The control condition was used for manipulation check.

## **Materials**

### **Independent Variables**

A Short Video- Ninety seconds scene from the film Trainspotting that was presented to stimulate in disgust (Schall et al., 2008), was used to show the participants in the related conditions.

Hand sanitizer (branded as Nexcare) - an alcohol-based disinfection gel It works in 30 seconds and 99. 9% protection against bacteria, fungi and viruses.

Hand wipes (branded as Coop Fresh & Clean)- for gentle cleaning and pleasant refreshment.

Product Evaluation Questionnaire- By using a 5-point Likert-type scale from 1 (very bad) to 5 (very good), participants were asked to evaluate the related product which they were given to use (hand sanitizer or hand wipe). The questions asked were: “ How well did the hand sanitizer / hand wipe clean your hands?”, “ How clean do your hands feel after the using hand sanitizer gel/ hand wipe?”, “ How pleasant was the usage of the hand sanitizer gel/ hand wipe?”

## **Dependent Variables**

Willingness to Pay (WTP) Questionnaire- Participants were asked to define their price level for the 8 different regular and the 8 fair trade product types. Products were banana, chocolate, oranges, pineapple, ice cream, coffee, gummy bears and rice. Participants were given 15 different prices with the reference price (market price) in the middle of the price scale. Increment for prices in the scale was +/- 10% of the reference price.

Product Choice Questionnaire- Once finished the part related to willingness to pay, participants were asked to indicate that how often (scaled as 0 to 10 purchases) they would buy the fair trade products. In this part, same 8 product kinds used similarly in the WTP Part.

Moral dilemmas- Directly after completing the product choice part, participants continued with rating five moral dilemmas (Schall, Haidt, Clore & Cordan, 2008). Short stories were used to associate whether disgust related scenarios would be judged more severely than scenarios involving no disgust. Participants indicated their judgments about how wrong each of five

moral dilemmas by using the 9-point Likert-type scales from 0 (perfectly OK) to 9 (extremely wrong). The rating scale label was reversed to simplify the interpretation of results, with higher ratings indicating higher levels of moral disapproval. We assumed that two out of five of these vignettes involved a moral violation with disgust: Dog (a man who ate his dead dog), Plane Crash (starving survivors of a plane crash consider cannibalism). The rest of vignettes involved a moral violation with no disgust: Wallet (finding a wallet and not returning it to its owner), Resume (a person falsifying his resume) and Trolley (preventing the death of five men by killing one man). The instructions told participants to go with their initial intuitions when responding.

Chocolate sheet- It was including 12 different types of chocolate types with pictures (6 regular and 6 fair trade products). Participants were asked to choose 5 chocolates in total without limitation.

## **Control Variable**

Private Body Consciousness Questionnaire- After finished the moral judgment vignettes, participants completed the Private Body Consciousness Questionnaire (Miller et al., 1981), which contained five items. Participants used a 6-point Likert-type scale from 1 (disagree strongly) to 6 (agree strongly). The items used were: " I am sensitive to internal bodily tensions," " I know immediately when my mouth or throat gets dry," " I can often feel my heart beating," " I am quick to sense the hunger contractions of my stomach," and " I am very aware of changes in my body temperature".

## Procedure

When the participant arrived to the PC room, first it was asked to sign a consent form. After participants had signed the form, it was showed to a sit at the computer desk which was isolated from other computer desks with a cabin in order to prevent disturbing the participant by others during the experiment. Before each participant entered to the PC laboratory, the room was ventilated in order to be sure there had been no smell from the sanitizer or the hand wipe as a result of the previous experiment session. First, participants were told to wear the headphone when they were watching the video. In the video-sanitizer condition, participants watched a short video which was previously mentioned in the material section and then they were given a hand cleansing to clean their hand for 30 seconds. The next part of the experiment was framed as product evaluation and participants answered the product evaluation questionnaire which was mentioned in the material section. In the video-hand wipe condition, participants followed same steps like in the video- hand sanitizer condition. However, they were given hand wipe to clean their hand and asked to make the product evaluation based on hand wipe with the same questions.

In the video clip condition, participants watched only the video clip and continued to do the experiment with a willingness to pay part. For the control condition, participants directly started to do the experiment from the willingness to pay part. From the point of willingness to pay questionnaire, all participants of all conditions followed the same path until the end of the experiment. In the first part of the willingness to pay, participants were



asked to define their price over eight different regular products (banana, chocolate, oranges, pineapple, ice cream, coffee, gummy bears and rice). Same procedure was repeated for the fair trade products. Afterwards, participants were asked to indicate that how often (out of 10 purchases) they would buy the fair trade products with product choice part. In the product choice part, the same eight product types were used also in the willingness to pay part. After completing this part participants rated five moral dilemmas. Immediately after the priming task, participants finished the experiment by completing the Private Body Consciousness Questionnaire.

After participants had finished the experiment, they were given a chocolate sheet (including six regular and six fair trade chocolate kinds with pictures) and asked to choose 5 chocolates in total out of 12 different kinds of chocolate. The number of fair trade choice was noted down.

At the end of the experiment, participants were remunerated with 3 Swiss Franc for their participation and asked to sign the receipt of reward to confirm the payment. They also got the chocolates which they chose as a part of the experiment.

## **Results**

### **Choice of Fair Trade Products**

In order to test whether the cleanliness priming had an impact on the choice of fair trade products at the end of the experiment, we analyzed results by independent t- test with the priming (movie vs. sanitizer) as a factor. The result of group statistics indicated the choice of fair trade product in

sanitizing condition ( $M = 4.61$ ,  $SD = 2.21$ ) and the movie condition ( $M = 4.15$ ,  $SD = 1.87$ ). To make a valid conclusion from this result, we looked at the results of t-test for independent samples ( $t(78) = 0.98$ ,  $p = 0.32$ ).

Significance level indicated that there was no statistically significant difference between the choice of fair trade products for sanitizer and movie conditions. By looking at this result, we summarize that cleanliness priming did not show any influence over the fair-trade product choice.

## **WTP for Fair Trade & Regular Products**

In order to investigate the impact of the cleanliness priming (movie and sanitizer) over willingness to pay for fair trade and regular products, results were analyzed by ANOVA. The results were in the same way with hypothesis. WTP for fair trade products was higher in movie condition when it compared to the sanitizer condition. In a 2 (willingness to pay for fair trade and regular products) x 2 (sanitizer and movie conditions) mixed factorial analysis of variance the interaction was significant,  $F(1, 78) = 6.54$ ,  $p = 0.012$ . We can say that there was a significant interaction between willingness to pay and conditions. Also looking at the significance value of WTP in tests of within subject contrasts ( $F(1) = 132.4$ ,  $p = 0.000$ ) shows us that there was a significance difference WTP of fair trade and WTP of regular products. Participants were more willing to pay more for fair trade products when it compared to regular products (Figure 1).

Figure 1- Willingness to pay for fair trade and regular products according to sanitizer and movie conditions.

In order to analyze if there is a real connection between the condition type and the willingness to pay for fair trade and regular products, we carried out independent t-test. According to the result of it, there was no significant difference for willingness to pay for fair trade products between sanitizer (M = 8.57, SD = 1.87) and movie condition (M = 8.67, SD = 1.87);  $t(78) = -0.216$ ,  $p = 0.829$ . We can interpret this as; there was no effect of conditions on participants' willingness to pay for fair trade products.

On the other hand, there was marginally significant difference between sanitizer (M = 6.92, SD = 1.88) and movie condition (M = 7.61, SD = 1.70);  $t(78) = -1.71$ ,  $p = 0.09$  for willingness to pay for regular products. We can only say that conditions had an effect on willingness to pay for regular products. Participants were willing to pay more for regular products in movie condition than the sanitizer condition.

When we look at the effect of the movie and sanitizer conditions on willingness to pay for fair trade and regular products, we see no significant main effect of conditions ( $F(1, 78) = 0.98$ ,  $p = 0.32$ ).

## **Moral Dilemmas**

We calculated the average composite ratings for all moral dilemmas as a first step (Figure 2). We assumed that participants who cleaned their hands after watching the disgusting video would make less severe judgments than participants who did not clean their hands. We used an independent-samples t-test to compare the severity of moral judgments in sanitizer and movie conditions. There was a significant difference in the scores for sanitizer

condition ( $M = 6.80$ ,  $SD = 1.49$ ) and movie condition ( $M = 6.09$ ,  $SD = 1.13$ );  $t(78) = 2.39$ ,  $p = 0.019$ . These results indicated that conditions had an impact on moral judgments. Specifically, sanitizing hands had on the effect about making moral judgments more severe than in the movie condition.

Cronbach's alpha was calculated as 0.31, which indicated a low level of internal consistency with regards to moral dilemmas. This value showed lower bound for reliability, and moral dilemmas were not measuring the same phenomena.

Figure 2- Average composite ratings for moral dilemmas in the experiment for sanitizer and movie condition.

## **Discussion**

The present study examined the role of cleanliness on moral judgments, more specifically on purchase decision and willingness to pay for fair trade products. We used experimental method in order to have evidence for our predictions, but we observed relatively inconsistent support for our hypotheses. We found that there was no significant difference regarding participants' choice of fair trade products in the movie and sanitizer conditions. Consequently, one of our hypotheses about the cleanliness was unsupported. We did not see any influence of cleanliness on moral judgments and more specifically on the choice of fair trade products. On the other hand, it did not mean that our research finding challenges the validity of influence of cleanliness on moral judgments. The concept and identity of fair trade products might have a bias effect on the choice of them. For

example, the price of fair trade products is higher than the regular products. Price can be a powerful influence on the decision of fair trade products' purchase. We did our study mostly with university students who have low purchasing power and.

Second finding of our research was about willingness to pay for fair trade and regular products in terms of two cleanliness conditions (movie and sanitizer). We saw significant interaction between conditions and willingness to pay at first look. When we looked in detail, we saw that there was no effect of condition on willingness to pay in general.

We looked at the results again because at first sight we saw an interaction between conditions and product types. The main aim was to figure out the interaction in individual level both fair trade and regular products. It was obvious that participants were willing to pay more for fair trade products than regular products. We observed that there was no effect of condition on willingness to pay for fair trade products. We assume that there were other influences triggering this effect. As we mentioned before, fair trade products have high in price value and this might have bias effect