

Consumer Behavior and Popular Media: Multimodal Effects of a Documentary “The Men Who Made Us Fat”

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Abstract: Using a dual coding theory, which proposes that verbal and non-verbal information is processed through different mental sub-systems, the authors investigate the effects of cognitive dissonance in cases when the audio-visual media content communicates contradictory symbolic meanings. Although conventional wisdom suggests that a television program which highlights the negative effects of unhealthy foods would decrease consumers' loyalty to harmful products, we argue that the sight of food trumps other information and drives up the consumption. Contradictory effects were tested in a two-group posttest-only randomized experiment involving sixty-six participants and a clip from a popular BBC documentary called *The Men Who Made Us Fat* (MMF). The auditory information in the clip advocates the decrease in consumption of high fructose corn syrup (HFCS) but uses images of unhealthy foods and drinks to illustrate the topic. Results show that viewing the documentary increased the participants' knowledge about the harmful effects of HFCS while at the same failing to change their attitudes and consumption patterns. Further testing showed that audiences with prior affinity for HFCS products were more likely to choose them after exposure to the stimulus. Such results are consistent with predictions of the dual coding theory and highlight the importance of congruency in media's verbal and non-verbal information in promoting healthy habits.

Keywords: dual coding theory, documentary, mass media, food choices, health communication, consumerism, high fructose corn syrup.

I. INTRODUCTION

Global entertainment services, such as Netflix and BBC, have in recent years spurred the intense production of food documentaries which combine popular culture and health communication. Driven initially by independent filmmakers, food documentaries have followed the audience's increased interest in food production-chains and their effects on the overall society (FWF, 2017; Ferder, Ferder, & Inserra, 2010; Wells, 2012). Although much of their appeal stems from the exposure of controversies and shortcomings inherent in the global food system, these documentaries nevertheless highlight important nutrition facts and properties of different foods. Hence, besides entertaining, they potentially influence the psychosocial factors of control, motivation, and self-efficacy and guide audience towards healthier behaviors. However, empirical evidence that food documentaries can successfully lead to behavioral change or improved consumer choices is thin and requires further testing.

This paper addresses the knowledge gap by examining the effects of a BBC documentary called *The Men Who Made Us Fat* (2012) and enquires whether such shows really steer the audience towards healthier choices. The documentary examines the fast food industry while at the same time highlighting the dangers of high-fructose syrup or HFCS. Although commonly used in soft drinks, breakfast cereals, bread and dressing sauces, HFCS has been found more dangerous than table sugar in contributing to obesity, metabolic damage and related diseases (Ferder et al., 2010; Tappy, & Lê, 2010). Yet, despite the ever-growing evidence and production of diverse TV shows which warn of its health risks, HFCS is used in variety of products and its the consumption is on the rise (Bray, Nielsen, & Popkin, 2004; Marriott, Cole, & Lee, 2009).

The investigation presented herein explores the reasons of why health documentaries like *The Men Who Made Us Fat* are ineffective in steering consumers towards healthier choices and explores their harmful side effects. Researchers hypothesize that, despite the beneficial role that food documentaries play in informing the public about most recent health trends, the incongruence of the documentaries' multi-modal information jeopardizes their effectiveness and leads to adverse behaviors. Multi-modality refers to the textual, audio and visual elements of a video material which ought to be aligned in making a coherent message and transmitting the multimedia information (Paivio, 1986). The research hypothesizes that the audio and visual content of the documentary *The Men Who Made Us Fat* communicates contradictory symbolic meanings, hence leading to the cognitive dissonance and reinforcement of harmful consumer behaviors¹. Put simply, the educational influence of the show's audio commentary is compromised by the employment of alluring images of foods and brands, hence leading to the increase in consumption of unhealthy foods rather than decrease.

The reason for this is because, in the case of a visual medium like television, images inevitably dominate all other aspects of a production and are more prominent than the accompanying audio track. The documentary dealing with the fast food industry typically involves big-company logos, enticing food imagery, and archival shots of promotional materials. While such visual presentation is used to better illustrate the documentaries' main points regarding the HFCS' harmfulness, it nevertheless raises concern regarding their unintended consequences.

If the food industry employs comparable images to attract consumers, can their use in a food documentary short-circuit audiences' cognition and lead to a reverse effect, i.e. make the unhealthy product seem more attractive?

II. MULTIMODALITY AND LEARNING FROM DOCUMENTARIES

The documentary genre, as an information-intensive TV format designed to inform and educate, stands out from other formats for commonly covering social concerns and raising awareness of public issues (Corner, 1996; Sevcik, 2018). The exposure to documentaries has been positively linked to variety of issues, such as affective responses, 'issue knowledge gain' and increased self-efficacy (LaMarre & Landreville, 2009; Hekimoglu & Kittrell, 2010). Many documentaries of recent years disseminate relevant health knowledge to the public while encouraging healthier consumer choices and striving to reduce unhealthy habits (Hodgetts & Chamberlain, 1999). In addition to prioritizing the specific issues related to global food systems, food documentaries unravel the trends behind food consumption and pose suggestions on how to engage the viewer as an activist rather than a passive target (Lindenfeld, 2010). Besides from exploring the relationship of food industries and obesity, productions like *The Men Who Made Us Fat* often cover a variety of other health concerns, such as salmonella outbreaks, bovine spongiform encephalopathy or raise awareness of food-borne pathogens (Ibid.).

In addition to presenting information via textual inserts and audio soundtrack, food documentaries rely most heavily on the direct site footage or visual images found in the public domain. The later often takes the form of promotional materials which the food company makes freely available in the hope of attracting consumers and spreading good will for its businesses. Such footage is often colorful and visually captivating which contributes to the overall allure of the food documentary and increases its ratings. On the other hand, as already mentioned, the use of such materials raises the question of the media's effectiveness in altering undesirable health behaviors. The alluring images of food or producer brands can provoke a craving in the audience - regardless of the author's intent or purpose of the overall media message (Drobes et al., 2001; Siep et al., 2012).

According to the dual coding theory, effective communication requires the alignment of verbal and non-verbal information, leading to enhanced information storage and recall in consumers (Broadbent, 1956; Paivio, 1986). Pavio (1986) points that coherently presented information which addresses the bi-sensory modality (i.e. both verbal and non-verbal) acts like a double dose of stimuli and solidifies the knowledge transfer.

Moreover, as visual (non-verbal) and auditory (verbal) information are separately processed in different psychological systems, there is little competition for cognitive resources between them. The verbal system specializes in processing auditory information and language, while the non-verbal system processes information in the form of images, i.e. visual and spatial presentation. On the other hand, as affective responses are nonverbal in nature, the dual coding theory predicts that non-verbal information (processed through non-verbal system) will lead to affective reactions directly (Sadoski, Goetz, & Rodriguez, 2000). This means that while visual information is prioritized, well-aligned multimedia resources are far likelier to achieve positive educational outcomes and boost information recall (Paivio, 1986).

The convention of almost all modern TV genres is to concisely present visual materials by aligning it with verbal, textual (e.g. subtitles) and/or auditory forms. Even though the images are designed to communicate information as part of the whole message, each image has its “local” or symbolic meaning which may be misaligned with the overall connotation of the media message. Of course, as found in many studies, the congruency between the symbolic meanings of different forms of information presentation is preferred in successful communication models (Mattila & Wirtz, 2001; Shen & Chen, 2007). Yet, a high level of message congruency is more difficult to accomplish in food documentaries than other health-related TV genres. While issues like smoking or drug abuse, for example, often uses fear-tactics or employ aversive imagery, food documentaries are dealing with nutrients which are generally safe in moderate doses. Altering the appearance of certain foods to make them more unsavory would not only constitute an inaccurate representation but would potentially open doors to lawsuits. Therefore, while possibly leading to adverse consumer choices, food documentaries’ use of public domain footage or archival imagery cannot be deemed ‘unethical’, per se.

Still, this opens the question if the food documentaries contribute to healthier choices in audiences or exasperate the consumption patterns they are allegedly trying to fix. To test this, the study applies a posttest-only experiment to a group of sixty-six participants using a clip from *The Men Who Made Us Fat*. To illustrate the harmfulness of the HFCS, the clip uses medical evidence and interviews with medical professionals, but at the same time, it employs images of the production and consumption of HFCS-products like soft drinks and ketchup. Specific arguments of why HFCS are harmful, which products contain them, and how they can be avoided are explicitly addressed in the stimulus. Based on the dual coding theory, researchers hypothesize the following consequences:

- H1. Exposure to the stimulus will increase audiences’ knowledge about harmful effects of HFCS on health.
- H2. Exposure to the stimulus will increase the short-term consumption of HFCS.
- H3. Participants with prior liking for HFCS products, will consume them more after the exposure to stimulusⁱⁱ.

III. METHOD

To examine the effects of the documentary on consumer’s knowledge and behavior, the study applied a posttest-only control group design. This means that the experiment group was tested after being exposed to the stimulus, while the attitudes of the control group were tested without a prior exposure. All sixty-six experiment participants were recruited from a large public university and randomly assigned to either the experiment or the control group. While the use of college-age demographics in scientific studies is commonly criticized for students’ dissimilarity from the general public (Hanel and Vione, 2016; Huff and Tingley, 2015), young adults make up the largest proportion of the global documentary audience making this particular sample representative and relevant for the study’s purpose (Statista, Inc., 2018; BFI, 2017; Screen Australia, 2017; GT, 2016).

The initial manipulation check has revealed that one of the participants had previously seen the *The Men Who Made Us Fat* and that three others had completely misidentified the documentary’s main themes. These four were excluded from the study leaving a total of sixty-one participants eligible for the analysisⁱⁱⁱ. Forty-three were female (70.50%) and eighteen were male (29.50%), in an age range from 18 to 32 ($M = 21.43$, $SD = 3.62$). Even though females were overrepresented in the sample, recent media studies indicate that this demographic outnumbers male audience (for documentaries and other cinema genres), hence somewhat exculpating their greater involvement (Borum-Chatoo, 2016; Montpelier, 2017).

To avoid social desirability bias among participants, the true purpose of the experiment was initially concealed: the control group, who were not exposed to any stimulus, was informed that the study aimed to learn about college students’ health beliefs and lifestyles. The experiment group, on the other hand, was informed that the experiment aimed to measure

audiences' comprehension, enjoyment and assessment of the BBC documentaries' quality. To match this claim, several post-stimulus survey questions inquired about the documentary's quality and the audiences' enjoyment levels. Generally, however, the survey asked seven key questions about HFCS which were prominent in the stimulus. Questions such as "What is High-Fructose Corn Syrup?"; "Does High-fructose corn syrup increase the risk of obesity?"; "What is Leptin?" and "Please tick the elements where you think High-fructose corn syrup can be found," were included in the survey. In calculating their knowledge score, one correct answer merited one point, while the wrong ones were assigned zero points. For questions with multiple right answers, researchers tallied the number of right answers with one right answer counting for one point. By adding up the points for each question, we arrived at a final knowledge score.

The stimulus presented to the experiment group consisted of a 10-minute video clip from the BBC documentary *The Men Who Made Us Fat*, which focused on the harmful effects of a processed sweetener (HFCS) and the products associated with it, like soft drinks, bread products, snacks, and dressing sauces. The stimulus also emphasized that the increased consumption of HFCS leads to obesity, heart attack, diabetes and high blood pressure, as well as the disruption of a hormone that regulates food intake (Leptin).

After watching the clip and filling out the survey, participants were asked to leave the laboratory and get ready for debriefing inside the waiting area. During this "break", they were offered three refreshment options: a soft drink, fresh water or nothing^{iv}. Their drink choices were discretely noted by the researchers and compared against subjects' survey responses. Similarly, as the experiment group, the control group also filled out the survey and had the same drink choices. At the end of their sessions, both groups were briefed about the experiment's true purpose and given a chance to give their feedback.

In addition to collecting data about the effects of the stimulus, the survey measured other relevant factors, such as knowledge gain, prior liking for soft drinks, and various control variables. The control variables, in this study, refer to issues which may affect the outcome of the survey independently from the stimulus. For example, the prior history of food related diseases, body-weight attitudes, and dietary habits, can influence the participants' knowledge about HFCS and effect related behaviors independently from the stimulus. One of the researchers' challenges was to control these factors and to guarantee that the difference between the two groups - if any, came from the exposure to the video clip.

Since female subjects are more likely to be affected by the media messages regarding the weight issues, gender was included as one of the control variables (Murray, Touyz, & Beumont, 1996; Franzoi & Herzog, 1986). Likewise, the increased self-perception of weight issues was considered to be a relevant regardless of the participants' gender (Kristeller, Wolever, & Sheets, 2014; Harnack et al., 2009). Individuals who perceive themselves as overweight tend to pay more attention to the food intake, hence the survey asked participants to indicate whether they consider themselves to be "overweight," "normal," or "underweight." The family history of food-related diseases, such as food allergies or diabetes, as factors that may predispose participants towards increased awareness of food and health issues, were also tracked.

The last two control variables were dietary habits and beliefs regarding certain foods. What the consumer thinks about particular food types can be an important factor in guiding their behavior and attitudes regardless of the stimuli. Likewise, their habits can predict food choices or guide predisposition towards certain products or product categories. In order to regulate these variables, the participants were asked to answer supplemental questions such as: "How often do you buy food or drink only because it is healthy?"; "How often do you buy food or drink only because it tastes good?"; "How often do you check nutrition facts on food labels?"; and "On average, how many cans of soft drinks do you consume per week?"

IV. RESULTS

The elimination of four ineligible participants did not significantly differentiate the experimental from the control group, $\chi^2(1, N = 61) = .80, p = .37$ or compromise the end data. In fact, the comparison of variables between their food intake and health outcomes revealed no major differences between the two groups. They were also similar in terms of the distribution of gender, $\chi^2(1, N = 61) = .30, p = .59, V^* = .07$; self-perception of weight, $\chi^2(2, N = 61) = 1.52, p = .47, V^* = .16$; allergy history, $\chi^2(1, N = 61) = .16, p = .69, V^* = .05$ and familiarity with diabetes, $\chi^2(1, N = 61) = .46, p = .50, V^* = .09$. 10% of participants self-identified as underweight, 71.70% as average and 18.30% described themselves as overweight. Ten participants had food allergies but none of them had experience with diabetes. In addition, the two

groups did not differ significantly in consumption of soft drinks, $\chi^2(3, N = 61) = 4.34, p = .23, V^* = .27$; the habit of checking food labels, $\chi^2(3, N = 61) = 1.59, p = .66, V^* = .16$; attention to the health consequences of foods, $\chi^2(3, N = 61) = 2.45, p = .49, V^* = .20$ or the taste as the main factor in choosing foods, $\chi^2(3, N = 61) = 2.00, p = .57, V^* = .18$.

In terms of the participants' purchasing habits, 25% never check food labels, 50% check sometimes, 18.30% check often, and 6.70% check on a regular basis. This indicates that the sample represents a group of people in a relatively healthy state with moderate food-related health concerns and coincides with the researchers' prediction that liking, rather than health benefit, is the key force influencing their food choices. The comparison between the two groups indicates that the random assignment had successfully controlled the individual differences regarding the food-related knowledge and behaviors.

The researchers first hypothesized that watching the clip from the BBC documentary *The Men Who Made Us Fat* will increase the audiences' knowledge about HFCS. Independent-samples t-test showed that the knowledge score of the experimental group ($M = 11.81, SD = 2.09$) was indeed higher than that of the control group ($M = 7.29, SD = 2.36$), $t(59) = 7.82, p < .001$, one-tailed, Cohen's $d = 2.03$, thus supporting the H1 that exposure to the documentary will increase the participants' knowledge regarding the harmful effects of HFCS. The experiment group answered the multiple-choice questions accurately and were predictably more familiar with the specialized terms discussed in the documentary. They also showed a keen awareness regarding a variety of dietary issues and were knowledgeable about specific foods' controversial effects. They were also more accurate in listing the products that contain HFCS.

In assessing the H2, which inferred that exposure to the stimulus would lead the experiment group towards the higher consumption of HFCS drinks, the investigators employed a Chi-square test. In line with the dual coding theory, we predicted that prevalence of alluring imagery that highlights beverages would override the documentary's audio data (which warned of their health risks), and provoke a craving in the subjects. The comparison between the experimental group and the control group found no difference in their consumption of HFCS drinks, hence leading to rejection of the H2: $\chi^2(1, N = 61) = 2.95, p = .86, V^* = .22$.

H3 stipulated that participants with a predisposed affinity towards HFCS products like soft drinks, are likely to consume them more after the exposure to stimulus. To test this, researchers performed another Chi-square test with the choice of drink as a dependent variable and the propensity towards soft drinks and group allocation (experiment vs. control), as independent variables. Survey results indicated that 36.70% of the participants did not drink soft drinks at all, 58.30% drank one to three cans per week, and only 4% drank more than four cans per week. The behavioral results revealed that those with low predisposition towards HFCS drinks, were not affected by the stimulus, $\chi^2(1, n = 36) = .09, p = .76$, Cramer's $V = .05$. However, those with existing inclination towards such drinks, were led to a higher consumption after the stimulus, $\chi^2(1, n = 24) = 5.37, p < .05$, Cramer's $V = .47$. Specifically, as shown in Table 1, the stimulus brought about higher consumption for subjects with a strong inclination for HFCS drinks. 1 out of 11 (9.09%) participants in the control group chose a HFCS drink, whereas the same was true for 7 out of 13 (53.85%) participants in the experiment group. H3 was therefore supported by the data.

Table 1: Number of Participants Who Chose Coke under Each Condition

	Experiment Condition	Control Condition
Like	7 (out of 13)	1 (out of 11)
Do Not Like	2 (out of 14)	4 (out of 22)

These findings show that the food documentary like *The Men Who Made Us Fat* can play an important role in informing the public about relevant health trends and that it can steer audiences to make better informed choices. By the same token, it also indicates that these kinds of messages and media interventions are the least effective on the consumers who benefit from them the most - those with the highest predisposition towards unhealthy consumption patterns. While the exposure to the documentary has increased their knowledge and awareness of HFCS-related issues, this did not lead to an observable behavioral change. Quite the opposite, rather than reversing, viewing the documentary has increased their cravings and aggravated unhealthy behaviors.

V. DISCUSSION

This study aims to investigate the effects of health-promoting messages applied in multiple modalities. As suggested by the dual coding theory (Paivio, 1986), visual (non-verbal) and auditory (verbal) information is separately processed via different processing systems with little competition for cognitive resources between them, so that the multimedia presentation ought to enhance the educational potential of a television program. By the same token, the incongruence of the verbal and non-verbal information may lead to divergent cognitive effects and encourage impulsive behavior in viewers.

As found in this study, a documentary designed for educating the public and reducing unhealthy behaviors, paradoxically exacerbated unhealthy habits in audiences that needed the change the most. Such a finding provides only a partial support for Pavio's dual coding theory: participants in the experiment group showed an increase in knowledge following the exposure to the stimulus and were generally not tempted with alluring images of HFCS drinks. However, consumers with prior liking for such beverages displayed a higher inclination towards them at the end of the experiment.

The evident divergence between the cognitive and behavioral outcomes of the stimulus on consumers with unhealthy habits, has practical implications on the design of TV programs that aim to promote healthier habits. For example, when the verbal and non-verbal information in a media message carries contradicting symbolic meanings, the application of multimedia becomes counterproductive. In other words, when the documentary's audio message warns of health risks associated with certain foods, it should not do so while utilizing images that food producers might use in their promotional materials. Such images may have a priming effect and increase the cognitive accessibility of the soft drink construct (Murphy & Zajonc, 1993), hence driving viewers with predisposition for unhealthy foods, to pursue them even more. Although it is hard for food related TV programs to avoid using readily available images of food they're covering, show's producers may consider using less attractive images or opt for alternatives, such as cartoon imagery or animation.

VI. LIMITATIONS AND FUTURE DIRECTIONS

Although researchers argued that verbal information and non-verbal information operated separately, the experiment used the stimulus that combined the two. Thus, the individual effects of each modality and their strength in influencing participants' knowledge and behaviors are difficult to discern from the research approach presented herein. A future experiment design might separate the employment of audio data and visual stimuli or devise a way to test the effects of different modes. This practice ought to provide a more nuanced understanding of documentaries' divergent effects in promotion of healthy consumer behaviors. Second, this study offered specific drinks to consumers and treated their choice as the primary indication of a wider behavioral change. It should be noted that the drink option used in the experiment, i.e. soft drink and water, are somewhat arbitrary. The subjects might have chosen water or refrained from drinks not because of health concerns or their aversion towards soft drinks, but simply because a particular brand offered did not appeal to them. However, as the random assignment negotiated the impact of individual preferences in each group, investigators believe that findings do suggest a real difference in the behavioral inclination for soft drinks. Third, the participants watched the documentary in an experimental setting, where they were likely to pay more attention than a natural setting. The increase in knowledge about HFCS and the changes in drink choice behaviors might be due to the unusually high involvement due to experiment's circumstances rather than the participants' usual inclinations.

Lastly, this study focused on the immediate influence of the health promoting messages on a relatively small sample of a distinct social group. Questions of whether the knowledge gain and behavioral change may last and for how long, as well as consequences of the accumulative effect of receiving such messages, are still open. Future studies might consider these questions or employ a large-scale random sampling to test the hypotheses among wider demographics.

VII. CONCLUSION

In conclusion, the present study found that media messages presented through different modalities have different effect on the audiences' cognition and impulsive behavior. Specifically, it indicates that the documentary's verbal messages impact a wider audience's cognition and learning, but that visual incongruence can interfere with the learning process for individuals who struggle with unhealthy habits the most. Watching a clip from the documentary *The Man Who Made Us Fat*, which emphasized the negative effects of consuming food containing HFCS, increased the overall knowledge about healthy dieting but paradoxically led to the increase in the consumption of unhealthy drinks among the primary target audience.

The study presented herein offers limited evidence that popular food documentaries can be utilized as one of the effective tools in reaching wider audiences and contribute in the promotion of healthy behaviors – especially among individuals who already show some inclination towards healthy lifestyles. At the same time, the gathered results warn of the special challenges in altering unhealthy eating habits. Namely, they indicate that the presentation of multimedia information requires a high degree of congruence between the audio-visual information or risk causing adverse effects. In the case of the documentary *The Man Who Made Us Fat*, the study showed that viewers who enjoyed HFCS-rich products were not impressed by the documentary's commentary as much as they were by the alluring imagery of their favorite brands, which provoked greater cravings for the unhealthy product.

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APPENDIX – SURVEY INSTRUMENT

1. Have you ever watched this BBC documentary before?
 I have never heard of it before today
 I have heard about it but never watched it before today
 I have watched it partially before today
 I watched it entirely before today

2. According to the BBC documentary you just watched, what is the biggest binge in the US after Thanksgiving?
 Christmas
 Super bowl
 Memorial Day
 Independence Day
 None of the above

3. Do you agree that contents in the BBC documentary were clearly presented?
 Do not agree at all
 Somewhat agree
 Agree
 Completely agree

4. Based on the clip you just watched, would you be interested in watching the entire documentary?
 Yes
 No
 I do not have an opinion

5. Would you say that the subtitles were useful for your understanding of the content?
 Not useful at all
 Somewhat useful
 Useful
 Very useful
 I do not have an opinion

6. What was the main topic of the clip you just watched?
 Food habits and food industry
 Reproductive health of mammals
 Online Dating
 None of the above

7. What, in your opinion, is the major cause of obesity? (Please select ONE option that best describes your answer)
 Sugar
 Fat
 Sedentary life
 Stress

- Food industry lobby
- None of the above
- Others _____ (please indicate)

8. As far as you know, what is High Fructose Corn Syrup? (Please select ONE option that best describes your answer)

- Processed sweetener used in food industry
- Type of sugar made from syrup
- A product used for production of glue
- Juice made from corn
- None of the above
- I do not know

9. In the following list, tick the elements where you think High Fructose Corn Syrup can be found. (You can choose MORE THAN ONE answer)

- Potato
- Bread products
- Dressing sauces (e.g. ketchup, barbeque sauce, salad dressing)
- Soft drinks
- Snacks
- Breakfast cereals
- Cleaning products
- Carrot
- None of the above
- I do not know

10. As far as you know, does High Fructose Corn Syrup increase the risk of obesity?

- Yes
- No
- I do not know

11. Below is a list of diseases that people may get. For each type of disease check if it is related to the increased sugar intake.

	Yes	No	I don't know
Diabetes			
Heart attack			
Ulcers			
Parkinson			
Osteoporosis			
High blood pressure			

12. What is Leptin?

- A hormone regulating food intake
- Food additive

- Social network
- Energy drink
- None of the above
- I do not know

13. As far as you know, what is the largest source of calories in the American diet? (Please select ONE option that best describes your answer)

- Soft drinks
- Snacks
- Meat
- French-fries
- None of the above
- I do not know

14. What is one of the major reasons why High Fructose Corn Syrup is used? (Please select ONE option that best describes your answer)

- Decreased costs of production
- Improved quality of the product
- Decreased environmental impact
- None of the above
- I do not know

15. Do you suffer from any food allergies?

- Yes
- No

16. Do you suffer from diabetes?

- Yes
- No

17. Does anybody close to you suffer from food allergies?

- Yes
- No

18. Does anybody close to you suffer from diabetes?

- Yes
- No

19. On average how many cans of soft drinks do you drink per week?

- None
- 1-3
- 4-6
- 7 or above

20. How often do you check nutrition facts on food labels?
- Never
- Sometimes
- Often
- Always
21. Would you say the media coverage of food safety issues in your city is:
- Scarce
- Sufficient
- More than enough
- I do not have an opinion
22. Where do you usually get information about food safety? (Please choose the TWO most relevant for you)
- Television
- Internet
- Newspaper
- Food labels
- Friends and acquaintances
- Other _____ (please indicate which one)
23. How much do you like the taste of Coca Cola?
- Not at all
- Somewhat
- A lot
- I do not have an opinion
24. Would you say, you are:
- Underweight
- Average weight
- Overweight
25. How often do you buy food or drink only because it is healthy?
- Never
- Sometimes
- Often
- Always
26. How often do you buy food or drink only because it is cheap?
- Never
- Sometimes
- Often
- Always

27. How often do you buy food or drink only because it tastes good?

- Never
- Sometimes
- Often
- Always

28. What is your gender?

- Male
- Female
- Other

29. How old are you?

30. Where are you from?

NOTES

ⁱ Cognitive dissonance is the state of having inconsistent thoughts, beliefs, or attitudes, especially as relating to behavioral decisions and attitude change.

ⁱⁱ The strength of the association between soft drinks containing HFCS and positive affect may differ between consumers who like the products vs. those who do not. For those with a prior liking, exposure to images of soft drinks is expected to elicit a stronger positive affective reaction, hence leading to a stronger intention compared to those with lower liking.

ⁱⁱⁱ As a part of the manipulation check, participants in the experiment group were asked 2) "What was the main topic of the clip you just watched?" Participants could choose one answer, such as, "Food habits and food industry," "Reproductive health of mammals," "Online Dating" and "None of the above." Only those who had never watched the documentary before and who identified the theme of the documentary correctly (i.e. "Food habits and food industry") were included in the final analysis.

^{iv} To eliminate the risk of social influence from other participants, only one subject at a time could enter the room with drinks.