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# Effects on Viewer Experience: Pairing Digital Video Content with Thematically Relevant In-Stream Advertising

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## Introduction

If you are an Internet user, chances are that you've encountered advertising of some sort while browsing the world wide web. Advertising is an excellent way for companies to spread awareness about their products and increase their sales, and advertising is also one of the best sources of revenue for media companies, enabling them to pay the salaries of their employees and develop new media products for their audiences. The problem, of course, is that most advertising content on the Internet, be it banner ads, pop-ups, pre-rolls, contextual advertising, or sponsored articles, is unappealing and unwelcome for the user – a concept that academics conducting research on advertising call 'intrusiveness'.

Why are ads annoying? Which cognitive processes influence viewers to resist advertising and how do these processes function and interact? How can digital media companies decrease advertising intrusiveness while also generating enough advertising revenue to survive? Our research is **relevant** to the economic survival of media companies in the age of the Internet.

While research in the practical elements of intrusiveness is ongoing in advertising academia, our primary research interest is to understand the reasons why intrusiveness occurs on a cognitive level. It may seem like an obvious statement to say that people are bothered by advertising, but this instinctive and intuitive reaction should not turn us away from attempting to gain a scientific understanding of the phenomenon. If, through our scientific investigations, we are able to understand how and why people cognitively experience intrusiveness, then we may be able to develop and test a theoretical approach to minimizing intrusiveness, thereby facilitating a more engaging experience for Internet users, increasing the effectiveness of advertiser campaigns, and generating more revenue for Internet media while maintaining user loyalty. The main goal of our research is to address the ongoing 'crisis' in journalism and identify possible methods for media companies to find their way out of the uncertain situation.

Much of the problem lies in the nature of the Internet itself. On the one hand, the Internet has given media organizations new ways of distributing content to a wider audience, but, on the other, it has also given rise to a major financial problem. The Pew Research Center estimates that for every dollar gained in digital advertising, 7 dollars in print revenue are lost.[1] Journalism is facing its 'greatest crisis in decades'[2] and it's not entirely clear how quality journalism should be funded. Consumers of news and information are increasingly moving online and the solution to the journalism business model crisis will undoubtedly be found on the Internet. However, as we mentioned, finding a lucrative source of funding can not come at the expense of the users. In other words, our research explores how to maximize advertising revenue while providing users with an optimal experience. As advertising forms the core of digital revenues, we wish to explore how advertising can be made more effective for advertisers, more lucrative for media companies, and less annoying and 'intrusive' for users.

The **structure** of our work begins by reviewing the theoretical nature of 'intrusiveness' and all associated theoretical elements, including 'reactance,' 'reciprocity,' and 'relevance' as discussed in academic literature. Next, we will discuss the current technical and practical elements of modern day digital media as well as some of their theoretical underpinnings. Our paper will highlight the growth of 'audience-centered' advertising, the rise of 'native' advertising, and how these ideas are implemented by modern media companies. We then explore literature which analyzes the role of audience 'attitudes' toward advertising. Potential viewers 'browsing' for video content on digital media websites form expectations of the content they will view based on available 'metadata,' such as the thumbnail picture, title, description, and/or other data which the user encounters in the process of browsing for content.

1 Rosenstiel, T., Jurkowitz, M. (2012). The search for a new business model: An in-depth look at how newspapers are faring trying to build digital revenue. Pew Research Center. Washington D.C. P. 1

2 Cowan, Geoffrey, and David Westphal. (2010). Public policy and funding the news. *USC Annenberg School for Communication & Journalism Center on Communication Leadership & Policy*. Vol 3. P. 1

We propose the concept that users 'signal' their interests when they select any given video for viewing. Our research proposes the idea that intrusiveness can be minimized by using information gathered from these 'signals' in order to 'match' video material with advertising from a similar 'category.' We argue that video content and video advertising, which are commonly shown together in a single stream of video, can be analyzed together as 'assemblage' units of a single stream of video because of the format in which they are presented.

Whether we realize it or not, advertising forms a significant part of modern digital content. We believe that, in order to understand how and why the phenomenon of intrusiveness comes about, research must conceptualize a way to recreate and imitate real-world conditions during which users are exposed to advertising content as much as possible. However, measuring effectiveness or user engagement to advertising which is laid out among text, such as banner ads, creates many problems, both for researchers and corporations[3], especially for those corporations which pay for placement of their advertising content. Our main research interest lies in investigating user experience while encountering advertising content on digital media websites, so our aim is to be as precise in our definitions and measurements as possible.

Despite the wide range of content available on- and offline, we have chosen to focus on examining user experience while viewing *video* content and to research the factors behind intrusiveness identified in our work using a video-centered methodology. Solely analyzing the combination of video content and video advertising allows us to avoid many measurement problems and presents researchers with some interesting opportunities, such as:

- Controlling experimental conditions for video viewing, including strictly defining length of content, creating identical and consistent metrics to

3 Ghosh, H., Bhatnagar, A. (2013). On measuring and increasing the effectiveness of banner advertising. *MIS Review.* Vol. 19 (1). P. 26.

determine viewing statistics, and ensuring complete viewing of advertising content through 'player' technology.

- The growing importance and even prominence of video as a digital communication method. Video is set to compose up to 82.5 percent of all internet traffic by 2020[4] and video ads are the most lucrative of all Internet display advertising options for digital media[5].
- The vast amount of easily accessible advertising and non-advertising video available as well as thorough metadata information which will facilitate our 'relevance matching' methodology.

The **empirical base** from which we will draw evidence for our hypotheses attempts to recreate the 'normal' conditions of viewing Internet video, allowing users to browse for video content via a user interface designed specifically for our research and to select videos of their own choosing at a time of their own choosing. Our subjects will be forced to view video advertising during their participation in our experiment – a concept which advertising academics term 'forced exposure' – in a fashion which is designed to be as similar as possible to forced exposure techniques utilized by existing digital media companies. The experiment will then ask each user to answer a series of questions about their experience and engagement with the videos and 'pre-rolls' they consumed. A 'pre-roll' is a short video advertisement which user must watch prior to consuming any video content which they desire to view on a digital media website.[6]

Based on our theoretical framework, we propose two different techniques to minimize intrusiveness: display of a 'notice' designed to alter user expectations

4 Cisco Visual Networking Index: Forecast and Methodology 2015-2020. (2016). http://www.cisco.com/c/dam/en/us/solutions/collateral/service-provider/visual-networking-index-vni/complete-white-paper-c11-481360.pdf (P. 3)

5 MonetizePros. What are average CPM Rates in 2015? https://monetizepros.com/display-advertising/average-cpm-rates/

6 Krishnan, S. S., Sitaraman, R. K. (2013). Understanding the effectiveness of video ads: a measurement study."*Proceedings of the 2013 conference on Internet measurement conference*. ACM. P. 1

before the user is forcefully exposed to advertising and showing advertising which is 'relevant' to the main content that the user chooses to consume.

We designed a experiment to test for the effects of these factors by creating a research website hosted on the Internet. Users were randomly assigned to one of four research groups upon visiting the site, asked to select and view 3 videos from predetermined categories, and were forcefully exposed to 'pre-roll' video advertising. Viewer reactions to the advertising were measured by asking the test subjects to complete a short questionnaire after every view. Our results confirmed show that the presence of an 'ad notice' and 'relevant' video ads increased (decreased) advertising recall and engagement by a statistically significant margin.

The **object** of our research is the perception of relative intrusiveness of video advertising in the context of user-focused media products. In order to bring evidence for or against our hypotheses, we used the scientific **instrument** of user ratings of the concent which they viewed.

The **purpose** of our study is to identify the principles of effective interaction between users of digital media and advertising content in the process of video consumption on the Internet – the principles which influence the 'intrusiveness' of advertising. We aim to formulate a study which will provide empirical evidence for these principles and use the data we gather from our research to make an argument for or against these principles. In the end, we wish to develop practical steps for digital media websites to implement these principles to improve user experience on their websites.

In accordance with our research purpose, we define the following **tasks**:

- to determine the theoretical factors effecting perception and acceptance of advertising content in Internet-based visual communications;
- to recover principles from theory which can then be used to optimize user experience during consumption of pre-rolls and main video content online;

- to develop an empirical research method able to confirm these principles and measure user perceptions in different experimental conditions;
- to suggest a practical roadmap for digital media companies to improve user experience while viewing advertising content online

Our **positions** put forth for defense include:

- The fundamental theoretical factors underpinning the concept of intrusiveness include reactance, reciprocity, and relevance
- Digital media companies can minimize intrusiveness and increase effectiveness of advertising by matching advertising to editorial content on the basis of relevance according to category
- Data willingly provided by users during the 'browsing' period can be utilized by digital media companies to achieve relevance
- Users select content to view on the basis of metadata provided by the digital media company. Accurate descriptions of content from metadata also decrease advertising intrusiveness indicators and increase effectiveness

## Chapter 1: 'Intrusiveness' as a Theoretical Concept

### §1 *The Psychological Components of 'Intrusiveness'*

#### 1.1 Theoretical Background of Intrusiveness

Advertising is a natural consequence of commerce and use of advertising can be traced back to the earliest of human civilizations. Records of early forms of advertising date back to rock paintings around four millenia before the common era in what is today India.[7] The practice of advertising developed in sync with the evolution of technology, products, competition, and commerce itself.

For most of its history, advertising could mostly be ignored and its influence on average people was trivial. Even advertisements placed in print media do not force the reader to divert their attention from the text in order to be consumed, with up to 35% of readers ignoring print ads altogether.[8] Newspaper readers have the ability to ignore print advertisements if they choose and advertisers can never be sure that their costly campaign was given the attention that they believed they had purchased. Although print ads attempt to seduce the reader's attention away from the text, the readers are by no means *forced* to do so.

However, this condition began to change with the advent of radio. Advertising content began to elbow its way to the front, demanding attention from listeners of radio stations right after the end of World War I. The first commercial radio advertisement was aired on the WEAF New York radio station (now WFAN) for the Queensboro Corporation on August 28, 1922.[9] Due to the unique format of radio transmissions, radio advertisements force the listener to consume a message made on behalf of a corporation before they are able to continue consuming the

7 Bhatia, T. (2000). Advertising in rural India: language, marketing communication, and consumerism. Tokyo. P. 62

8 Goo Technologies, Consumer Impact and Engagement Survey, Jan 2014

9 Author Unknown (1956). 'And now a word from our sponsor'. *Broadcasting – Telecasting.* Oct. 15, 1956. P. 110

content that they desire to hear. Of course, if listeners didn't wish to consume the advertising, they could simply switch to another station or turn the radio off, but individual commercial radio station forced its listeners to consume advertising before they could continue to listen to normal content broadcast by the station.

Ironically, the emergence of new forms of information gave rise to new and more intrusive forms of advertising. Newspaper readers were still able to consume information provided by their chosen paper while ignoring the advertisements they encountered, but radio listeners were no longer afforded that ability and were forced to switch stations if they wished to avoid radio ads. Television viewers still had the ability to switch channels, but advertisements placed in the middle of TV programs force the viewer to risk missing the continuation of their desired content if they actually did change the channel. Many digital media companies offering video force their viewers to consume video advertising 'pre-rolls' before the viewer is able to access their chosen content at all.

Advertisements are one of the key sources of revenue for modern media companies and advertisers understandably want to ensure that they are receiving their money's worth when they purchase ads, but intrusiveness of advertising can cause negative reactions by viewers, reactions which can have negative consequences for media companies and for the advertisers themselves. It is in the interest of advertisers and media companies to understand intrusiveness and to minimize it when possible.

Edwards, Li, and Lee discuss theoretical and practical reasons for 'perceived' intrusiveness of advertising content displayed by method of 'forced exposure.' Forced exposure of advertising means that viewers are interrupted from consuming their desired content and forced to consume advertising before being permitted to proceed to their desired content or to continue viewing content which they have already started viewing.[10] According to the researchers, intrusiveness is 'a

10 Edwards, S. M., Li, H., & Lee, J.-H. (2002). Forced exposure and psychological reactance: Antecedents and consequences of the perceived intrusiveness of pop-up ads. *Journal of Advertising, 31*(3), P. 85

psychological process that occurs when an audience member's cognitive processes are interrupted,' that intrusiveness 'may result in the avoidance of advertising,' and that it is directly linked to interruptions of viewing desired content through forced exposure methods.[11]

Referencing previous studies on reactance theory from psychology, Edwards, Li, and Lee claim that 'attempts to intrude on a person's freedom' through force or persuasion cause 'an equal and opposite reaction' by that person in an attempt to 'restore their freedom of choice'.[12] They infer that users of the internet have specific cognitive goals when browsing, such as obtaining new information or shopping online, and define perceived intrusiveness as the degree to which a person 'deems the presentation of information as contrary to his or her goals (either functional or hedonic)'.[13] 'The perception of coercion is met with equal but opposite influence' – the greater the level of intrusion from the advertisement as perceived by the user, the greater the level of resistance exhibited by the user.[14]

The researchers claim that 'annoyance and irritation' are the leading consequences of intrusiveness and become the main factors leading to ad avoidance.[15] While these feelings may in fact occur in viewers when they encounter advertising content, and more than likely often do occur, the researchers do not specify reasons why the advertising may 'intrude on a person's freedom' or act 'contrary to his or her goals.'[16] Further, the researchers do not specifically identify how the psychological concept of reactance connects with user goals apart from the moment of interruption.

McCoy, Everard, Pollack, and Galletta also researched the phenomenon of intrusiveness and defined it as an 'unwelcome distraction or diversion from the

11 Edwards, S. M., Li, H., and Lee, J. H. (2002). Forced exposure and psychological reactance: Antecedents and consequences of the perceived intrusiveness of pop-up ads. *Journal of Advertising, 31*(3), P. 86

12 Ibid P. 85

13 Ibid P. 85

14 Ibid P. 85

15 Ibid P. 84

16 Ibid P. 84

user's task at hand'.[17] According to the research that McCoy et al reviewed, intrusiveness 'describes the advertisement (as perceived by the user)' and causes irritation as a reaction to those ads.[18] Irritation in turn causes users to 'avoid the ads as much as possible' by any means available at their disposal, including 'leaving the room […] participating in another activity, or ignoring the ads altogether'.[19]

More importantly, irritation and annoyance lead to longer term consequences both for the advertised brand and for the website which shows the intrusive ad to their audience. The 'temporary state of discomfort' caused by irritation leads users to 'develop negative attitudes toward the advertisement' as well as 'negative attitudes toward the site itself,' which influence 'intentions to return to the site' in the future.[20] Even 'brand perceptions can be harmed by ad intrusiveness.'[21]

Groene, von Wangenheim, and Schumann examine two other factors in their work on intrusiveness – the psychological force of 'reciprocity' and the 'relevance' of the advertising to the target consumer. The researchers test whether or not the psychological force of 'reciprocity' has a 'motivational effect' on a given user who is surfing the Internet and who is exposed to advertising by analyzing user reactions to a 'cue' aimed to alter user attitudes toward the website positively.[22] We will explore how the 'motivational factor' of reciprocity may cause users to negatively view advertising. Further, the researchers studied the factor of 'relevance' of the advertisement to the user, or a 'targeting' of the advertisement to the needs of the recipient.[23]

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17 McCoy, S., Everard, A., Polak, P. and Galetta, D. (2008). An experimental study of antecedents and consequences of online ad intrusiveness. *Journal of human computer interaction*, *24* (*7*), P. 673

18 Ibid. P. 674

19 Ibid. P. 674

20 Ibid. P. 673

21 Ibid. P. 673

22 Groene, N., v. Wangenheim, F., Schumann, J. H. (2012). Interest-Based Internet Advertising and Privacy Concerns: How to Increase the Acceptance of a Rising Marketing Phenomenon. *Marketing Theory and Applications.* P. 6

23 Ibid P. 3

## 1.2 The Psychological Force of Reactance

Jack W. Brehm outlines his idea behind reactance theory in his 1966 work *A Theory of Psychological Reactance*. Brehm defines reactance as 'a motivational state toward the reestablishment of a threatened or eliminated freedom.'[24] Any person who faces elimination of any activity which that person perceives to be free will enter a motivational state which causes the person to act in such a way as to recover access to that activity.

Our research focus is on digital media companies, so we looked at user attitudes toward Internet use and Internet-based content. It should come as no surprise that the overarching perception among consumers of digital media is that content should be free. The Reuters Institute for the Study of Journalism, a research center and think tank at the University of Oxford, found that most visitors to media websites are 'still reluctant to pay,' and only about 9% of Internet users actually do pay for online content.[25] These findings lend credibility to the overall belief that people continue to perceive the Internet as a source of free content.

According to reactance theory, users will resist attempts by digital media companies attempts to generate income for something which they previously considered 'free,' such as Internet content, but which is no longer free. So, if a digital media company forces users to be exposed to advertising pre-rolls prior to viewing desired video content, the user will react in ways described earlier, namely that the user will ignore the ad, turn away, or even navigate away from the digital media hosting the content entirely.[26]

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24 Brehm, J. W. (1966). A theory of psychological reactance. New York. Academic Press. P. 15

25 Newman, N., Fletcher, R., Levy, D., A., L., Nielson, R., K. Reuters Institute Digital News Report 2016. Reuters Institute for the Study of Journalism. Oxford University 2016. http://reutersinstitute.politics.ox.ac.uk/sites/default/files/Digital-News-Report-2016.pdf P. 7

26 Edwards, S. M., Li, H., & Lee, J.-H. (2002). Forced exposure and psychological reactance: Antecedents and consequences of the perceived intrusiveness of pop-up ads. *Journal of Advertising, 31*(3), P. 86

## 1.3 The Psychological Force of Reciprocity

Reciprocity is the desire to 'reciprocate' positive or negative action or intention with behavior of the same kind.[27] In other words, reciprocity is the desire to return good to good and bad to bad. The psychological force of reciprocity may play a major role alongside reactance in explaining intrusiveness. Viewers subjected to forced exposure may be deemed to show psychological reactance when their freedom to view their desired content is suppressed, but they may also also exhibit reciprocity when they feel that the digital media company they are visiting has attempted to unfairly take advantage of them and earn revenue at their expense by showing them video advertising. In essence, viewers may feel the need to 'reciprocate' the 'unfair' behavior of forced video advertising exposure with avoidance actions.

The theory of reciprocity is quite simple in its nature – the theory posits that humans have a natural desire to right wrongs and to reward positive behavior. Civilizations have codified reciprocity in their law throughout the ages. However, reciprocity is closely connected to the subjective perception of morality and ethics, which are in turn formed through the process of development of social norms and accepted ethical positions. According to Gintis, Bowles, Boyd, and Fehr, 'strong reciprocity' is the 'predisposition to cooperate with others, and to punish (at personal cost, if necessary) those who violate the norms of cooperation, even when it is implausible to expect that these costs will be recovered at a later date.'[28]

Neuroscientists Cooper, Krebs, Wiebe, Pirkl, and Knutson organized a scientific and quantitative research project analyzing how the brain represents intentions of others with their outcomes. Their study focused on researching the idea that not only economic benefits but also intentions of others in the condition

27 Gouldner, A. W. (1960). The norm of reciprocity: a preliminary statement. American Sociological Review. Vol 25. Washington University. St. Louis. P. 163

28 Gintis, H., Bowles, S., Boyd, R., Fehr, E. (2005). Moral Sentiments and Material Interests: The Foundation of Cooperation in Economic Life. Cambridge and London. MIT Press. P. 8

of economic cooperation play a vital role in people's decision-making process with regard to the economic cooperation in question. According to the researchers, 'people generally care about outcomes, such as how much money is at stake or how much each party earns, but also about intentions, such as whether the seller is honest or the employer is negotiating fairly,' – 'participants in economic games, for example, will sacrifice their own monetary payoffs to punish selfish players or reward generous players,' and 'people prefer rewards for others with helpful intentions and punishments for others with harmful intentions.'[29]

Recognizing intentions is a key element of communication. People on the receiving end of a communication engage in 'a process of inferential recognition of the communicator's intention.'[30] Viewers may infer, or perceive, advertiser intentions in different ways and may often infer or perceive inaccurately. However, in order to discuss how and why viewers of video advertisers wish to reciprocate forced exposure, it is necessary for us to examine the social norms behind consuming content on the Internet.

Many different studies have been conducted on consumer attitudes toward advertising. Nielson, an industry leader in measuring advertising effectiveness, performs yearly studies on several factors contributing to consumer perception of advertising. In their 2013 study, Nielson states that 48% of people trust online advertising and that this number has risen dramatically from 2007.[31] Nielson do not explicitly state why people may be inclined not to trust advertising, but we can hypothesize some reasons. People in the Western world are exposed to the knowledge that advertisers commonly use psychological techniques to make their advertising more persuasive. In his essay titled *The Morality (?) of Advertising*,

29 Cooper, J. C., Kreps, T. A., Wiebe, T., Pirkl, T., Knutson, B. When Giving Is Good: Ventromedial Prefrontal Cortex Activation for Others' Intentions. *Neuron*, Volume 67, Issue 3. P. 514

30 Sperber, D., Wilson, D. (1996). Relevance, Communication, and Cognition (2nd Edition). Oxford and Cambridge. Blackwell Publishers, Inc. P. 9

31 Nieslon Corporation. (2013) Global Trust in Advertising and Brand Messages: September 2013. http://www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2013%20Reports/Nielsen-Global-Trust-in-Advertising-Report-September-2013.pdf

Theodore Levitt repeats the charge that 'advertising deceives us' by 'creating illusions, symbols, and implications that promise more than simple functionality.'[32] One of the most often cited scientific studies conducted on consumer attitudes toward television advertising by Linda Alwitt and Paul Prabhaker found that consumers 'could not completely trust the way that products were depicted.'[33]

If people believe that advertisers intend to trick them and to use psychological techniques which are beyond their knowledge to induce them to buy products which they do not need, they may react according to the norm of reciprocity. This belief then causes viewers exposed to advertising to reciprocate the negative intentions of the advertisers with negative actions, such as ignoring an advertisement, closing it early, or even closing the site altogether. Accordingly, psychological reciprocity makes up some of the theoretical basis for the viewer experience of intrusiveness.

The psychological concepts of reactance and reciprocity form some of the most basic theoretical elements of intrusiveness and even share some common features. Reactance comes into effect because users believe that online content, which users frequently believe should be free of cost, is a freedom which has been taken away without their consent through forced exposure. This idea stems from the notion that content on the Internet is or should be inherently free, that the producers of content do not have a right to recoup their costs, and, according to the structure of capitalist societies, reap financial benefit for distributing informative or entertaining content. Reciprocity in intrusiveness literature also seems to stem from user beliefs about advertiser intentions and beliefs about the nature of advertising in general. Both of these psychological reactions stem from user beliefs and attitudes toward advertising and toward the Internet as a whole and, but what do users believe about the content itself and how do they form those beliefs?

32 Levitt, T. (1970). The morality (?) of advertising. *Harvard Business Review*, Vol. 48.1970, 4. P. 85

33 Alwitt, L. F., & Prabhakar, P. R. (1992). Functional and Belief Dimensions of Attitudes to Television Advertising. *Journal of Advertising Research*, 32(5). P. 30

## §2 *Studying The Relationship Between Audience and Content*

### 2.1 The Role of Audience Attitudes To Advertising

As we have demonstrated, beliefs, attitudes, and expectations formed or held prior to any willing exchange of information may play a major role in determining what dictates or defines an interruption to receiving the information. Hence, identifying and analyzing user expectations is vital to understanding the concept of intrusiveness. We wish to explore the development of attitudes in the period which occurs before the consumption of desired content and hypothesize about ways to measure the effect that these attitudes have on intrusiveness. As mentioned earlier, we assume that attitudes form part of the criteria by which a user determines whether or not he or she has been interrupted. We will examine how expectations and assumptions lead to the experience of intrusiveness from advertising through the context of Ajzen and Fishbein's theory of planned behavior from sociology and present our first research question at the end of this section.

The Theory of Planned Behavior posits that a person's attitude toward a behavior, their subjective normative beliefs about the behavior, and their perceived behavioral control contribute to form the strength of their intention to perform the behavior.[34] According to Ajzen and Fishbein, intention relates the person in question 'between himself and some action' – behavioral intention refers to a person's 'subjective probability that he will perform some behavior.'[35] Fishbein and Ajzen list the four elements of behavioral intention – the behavior itself, the target of the behavior, the situation in which the behavior is to be performed, and the time when the behavior will be performed – all relate to the specificity of action.[36]

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34 Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50, P. 182

35 Fishbein, M., & Ajzen, I. (1975). Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research. Reading, MA: Addison-Wesley. P. 288

36 Ibid. P. 292

In terms of the behavior of video viewing, we will assume that the target is always a video, the situation is always one that does not require immediate action or attention and often one that requires little physical movement, and the time is irrelevant. Regarding the attitude toward the behavior and the perception of social norms, we would like to point once again to research findings by Cisco, the world's largest networking hardware manufacturer. According to Cisco, nearly 1 million minutes of video data will be transferred every second across the world by 2020.[37] The sheer size of the video data being transferred shows that people are willing to engage in video viewing and the prognosis suggests that attitudes toward the behavior will continue to be positive or neutral. However, our interest is in analyzing the reactions toward forced exposure of advertising pre-roll clips during this process.

As reviewed earlier, Internet users tend to believe that online content should be free (except for the 9% of Internet users which regularly pay for content in the form of subscriptions or other paywalls).[38] We have also brought forth evidence suggesting that Internet users have a negative attitude toward advertising and advertiser intentions, which causes the viewer to experience the desire to reciprocate those perceived negative intentions. If our assumptions are correct, these attitudes make a significant contribution to the one other factor mentioned in Ajzen and Fishein's theory – the perception of behavioral control.

Perception of behavioral control is related to actual behavioral control, which Ajzen defines as 'the set of opportunities and abilities available to a person' at any given time.[39] However, the perception of behavioral control differs from

37 Cisco Visual Networking Index: Forecast and Methodology 2015-2020. (2016). http://www.cisco.com/c/dam/en/us/solutions/collateral/service-provider/visual-networking-index-vni/complete-white-paper-c11-481360.pdf (P. 3)

38 Newman, N., Fletcher, R., Levy, D., A., L., Nielson, R., K. Reuters Institute Digital News Report 2016. Reuters Institute for the Study of Journalism. Oxford University 2016. http://reutersinstitute.politics.ox.ac.uk/sites/default/files/Digital-News-Report-2016.pdf P. 7

39 Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*. Vol. 50. P. 183

actual behavioral control in that it refers to the 'perception of the ease or difficulty of performing the behavior in question.'[40] In short, perceived behavioral control is a person's 'confidence in their ability to perform.'

Existing intrusiveness mitigation techniques focus on creating practical solutions to the psychological problems posited by the theoretical framework of reactance and reciprocity. Since users 'lose control' over their viewing choices while surfing the Internet by being bombarded with unwelcome advertising, they are given some ability to regain control and restore some 'freedom of choice' by being given the option to shorten or close advertisements shown by forced exposure. In the practice of the video advertising industry, this is accomplished by adding an option to 'skip' a video ad, which stops and closes the ad prematurely, or by showing the time remaining before the ad ends. McCoy et al hypothesize that 'providing the ability to close the ad would certainly provide users with a way to minimize the interruption' when the ads 'obscure the page content.'[41] A screenshot of a YouTube forced exposure pre-roll video complete with an option to skip the advertising circled in red can be found in Figure 1 of our Appendix.

When an Internet user decides to view a video, we assume that he or she perceives a certain level of behavioral control over viewing the video. Most intrusiveness minimization measures which focus on addressing the issue of reactance and reciprocity, such as the option to 'skip' advertising, also address the issue of recovery of actual behavioral control by giving users the ability to skip or close ads. However, this approach focuses on targeting behavioral control, reactance, and reciprocity *after* the process of forced exposure has already started to take place.

Our research aims to measure the effects on user experience when a website attempts to alter a user's perception of behavioral control by altering their attitudes

40 Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*. Vol. 50. P. 183

41 McCoy, S., Everard, A., Polak, P. and Galetta, D. (2008). An experimental study of antecedents and consequences of online ad intrusiveness. *Journal of human computer interaction*, 24 (7), P. 678

toward an action *before* they engage in the action and before they are forcefully exposed to the advertising. Thus, we wish to see if we can alter user perceptions of behavioral control, judgment of interruption, and overall willingness to consume advertising. Practically speaking, we wish to show users a 'notice' which informs users that they will be exposed to advertising and the reasons why. As mentioned earlier, this approach was taken by Groene et al in measuring the effects of reciprocity with the aim of creating 'a desire to reward the website.'[42]

The general aim of providing the notice is first and foremost to warn users that they will be forcefully exposed to pre-roll advertising in the course of their participation in our experiment. Secondary aims include calling user attention to the costs of producing video content, the other costs of the content producer, reminding users of the benefits that the producer brings them, and appealing to emotion in the hopes of causing the user to be more willing to consume forced exposure ads. More technical details about the notice will be provided in our methodology section and a copy of the notice which we displayed to our test subjects is provided in our Appendix.

Taken together, reactance, reciprocity, and attitudes in the context of the Theory of Planned Behavior form much of the theoretical backbone that works to explain intrusiveness. We believe that we will be able to address these factors and their role in the form of a 'notice,' which is displayed to the user before they view any content or advertising, similar to the technique used by Groene et al in their research on the effects of intrusiveness. Part of our research is conducted with the aim of testing this hypothesis. After the consideration of these theoretical concepts and their practical implications, we now feel prepared to introduce our first research question.

42 Groene, N., v. Wangenheim, F., Schumann, J. H. (2012). Interest-Based Internet Advertising and Privacy Concerns: How to Increase the Acceptance of a Rising Marketing Phenomenon. *Marketing Theory and Applications.* P. 5

*Research Question 1:*

- If Internet users intending to view videos online are exposed to a 'notice' which informs the users that they will be forcefully exposed to pre-roll video advertising and identifies the reasons why forced exposure will take place (revenue needed to pay staff, continued delivery of high quality content), will the user be more willing to consume the pre-roll advertising and exhibit a higher level of engagement with the advertising?

This research question addresses several factors which we believe underlie some of the cognitive drivers of the phenomenon known as intrusiveness. We aim to measure the impact of addressing these factors by supplying users with a 'notice' prior to their forced exposure to advertising and aim to measure these factors using a questionnaire which asks users to rate their experience and engagement with the advertising. Of particular interest to us are user ratings of advertising and the ability of users to 'recall' the name of the brand being advertised.

One of the main goals in advertising is to attempt to increase 'brand awareness' in consumers by 'raising the salience of a brand, and then forming at least some tentative attitudes toward it' in order to encourage 'purchase intention and behavior.'[43] Although brand awareness 'does not always require identification of the brand name,'[44] we aim to test whether presence or absence of a notice has any effect on the ability of the viewer to remember the name of the brand after they have been forcefully exposed to advertising for the brand in question. We will clarify how we intend to measure this and what methods we have used to carry out our measurements in our Methodology section.

43 Percy, L., Rossiter, J. (1992). "A model of brand awareness and brand attitude advertising strategies". *Psychology & Marketing*. 9 (4). P. 263

44 Ibid. P. 264

## 2.2 'Targeted' Advertisements and 'Native' Advertising

One of the main tasks of advertising is to convince consumers to purchase products or services from the advertiser.[45] Major international companies provide huge annual budgets to advertising departments for the purpose of disseminating their strategic communications to their potential customers. John Wanamaker, a successful American merchant operating in the late 19th century, is credited with coining the phrase "half the money I spend on advertising is wasted; the trouble is that I don't know which half."[46] This statement may seem redundant given today's modern digital marketing toolkit, which allows marketers to 'target' individual customers, but the problems of wasted advertising persist.

According to Groene et al, 'relevant' advertising allows advertisers to 'target' specific products and services to users in order to increase 'effectiveness' by 'selectively displaying advertisements to users with specific interests.'[47] By extension, advertising which does not match with the 'specific interests' of the viewer will have a low 'appeal' and thus low 'effectiveness.' When viewers are shown 'irrelevant' advertising, or advertising of products or services which do not address a viewer's particular need or interest, it becomes unappealing and even intrusive.

In fact, utilizing data provided by users to determine their interests and preferences is one of the most important activities for modern digital media companies. According to digital media researchers Kapanipathi, Jain Venkataramani, and Sheth, 'content personalization […] is gaining increasing

45 Percy, L., Rossiter, J. (1992). "A model of brand awareness and brand attitude advertising strategies". *Psychology & Marketing*. 9 (4). P. 263

46 Chait, G. (2015). "Half the money I spend on advertising is wasted; the trouble is I don't know which half." B2B Marketing. https://www.b2bmarketing.net/en-gb/resources/blog/half-money-i-spend-advertising-wasted-trouble-i-dont-know-which-half

47 Groene, N., v. Wangenheim, F., Schumann, J. H. (2012). Interest-Based Internet Advertising and Privacy Concerns: How to Increase the Acceptance of a Rising Marketing Phenomenon. *Marketing Theory and Applications.* P. 1

traction with web companies day by day' for modern Internet media.[48] Digital media companies are increasingly gathering, storing, and using data provided by users during the 'current browsing session' of the user, such as 'click behavior, collaborative filtering, and cookies,' in order to 'provide personalization' of content deemed to match the user's interests.[49]

Advertisers also want to 'target a specific audience that is more likely to engage with their campaign,' but, despite knowing their audience 'fairly accurately,' many advertising campaigns are not able to 'explicitly specify the characteristics of the users that they wish to target.'[50] This inability exists not because the desire to specifically target does not exist, as researchers claim that the ability to 'directly specify user interests' is 'extremely powerful.'[51] Social media networks, such as Facebook, allow advertisers to select their target audience for their campaigns based on 'expressed interests,'[52] which Facebook users voluntarily provide to the company. Tools which allow advertisers to 'directly specify' user interests in their campaigns form 'part of the appeal' of advertising on social media companies.[53] As mentioned previously, relevant advertising is more appealing to users, thus more effective.

However, other digital media companies often do not have such an 'extremely powerful' advertising tool. In fact, many digital media companies often struggle to deliver even remotely relevant advertising to their users. Although it may seem superfluous at first, we wish to reveal one of the driving factors behind our research through a personal anecdote and to tie the conclusions of the experience back to the concept of relevance and intrusiveness.

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48 Kapanipathi, P., Jain, P., Venkataramani, C., Sheth, A. (2014). "User interests identification on twitter using a hierarchical knowledge base." *European Semantic Web Conference*. P. 100

49 Ibid.

50 Fuxman, A., Kannan, A., Li, Z., & Tsaparas, P. (2012). Enabling direct interest-aware audience selection. In *Proceedings of the 21st ACM international conference on Information and knowledge management.* P 575

51 Ibid.

52 Ibid

53 Ibid.

A user 'logged-in' to YouTube through his or her social media account allows the parent company Google to track all of his or her viewing activity on the platform.[54] Google also has other tools to track activity across a range of Google products and services through social media.[55] Despite these powerful tools of tracking, which give the tech giant the ability to cater advertising to individual clients, some advertising is still completely off the mark. The author of this research paper, a male user of YouTube and Gmail, was exposed to video advertising of female personal hygiene products while viewing videos on YouTube. Needless to say, the money spent by the company advertising those female hygiene products was certainly wasted.

We return once more to Alwitt and Prabhaker's 1992 findings to point to another major factor which those surveyed listed as having an impact in the formulation of negative attitudes toward advertising, namely, that 'much of the advertising was not relevant to their needs or self-images.'[56] Advertisers have developed many tools and tactics to expose the right product to the right consumer at the right time. However, advertisers are not always successful in exposing *relevant* products to consumers in relevant ways or situations. This mismatch occurs despite the thorough research supporting the launch of advertising campaigns, including a clear identification of the 'target consumer' and other analyses and tactics.[57] The key to advertising is to create a match between the product and the interests or needs of the consumer, which will form part of our definition of the idea of 'relevant' advertising.

In the context of our research, we wish to understand how advertisers use digital media platforms to attempt to expose consumers to their products and how this process can be improved. Even though companies like Google provide a range

54 YouTube Terms of Service. https://www.youtube.com/static?template=terms

55 Gmail Terms of Use. https://www.google.com/mail/help/terms_of_use.html

56 Alwitt, L. F., & Prabhakar, P. R. (1992). Functional and Belief Dimensions of Attitudes to Television Advertising. *Journal of Advertising Research*, 32(5). P. 30

57 Lhotakova, M., Klosova, A. (2009). Identification of a target consumer in process of positioning – theoretical and practical aspects. *Acta Oekonomica Pragensia*. 3 (1). P. 3

of services to help advertisers and digital media companies identify users browsing their sites, including via information obtained by referencing particular IP addresses,[58] these techniques still do not guarantee advertisements which are relevant to the user.

TV advertising aimed to 'cast a wide net' – advertisers knew that their target demographic was most likely watching TV at some point and invested big money into showing their ads on TV because it was the medium of choice for video viewing before the Internet. TV was the first format to unify video advertising and main content into a single viewing experience, but advertisers had no way to deliver an individual experience at that time and were forced to create ads which would be relevant to as many different population segments as possible. As Google and DoubleClick note in their report on new digital advertising technologies, 'casting a wide net' can contribute to 'viewer burnout' and can be characterized as a 'guessing game' in many ways.[59]

New digital advertising technologies making use of user information provided via IP addresses and social media accounts have helped to transform the relationships between the user, ad content, and main content for unified viewing experiences on digital video platforms. These technologies attempt to create situations in which the advertising video has some relation to the individual viewer based on data about the viewer provided by third parties. However, the ad content often still has little to no connection to the main video content.

Technology continues to provide for new ways to deliver advertising to users, including 'programmatic' technology, which automates the buying and selling of digital advertising,[60] but this technology focuses more on speeding up the practice of increasing the amount of advertising through automation rather than

58 Targeting Your Ads: AdWords Help. https://support.google.com/adwords/answer/1704368?hl=en

59 Google and DoubleClick. Addressable Advertising: Creating a Better, More Personal TV & Video Experience. *The Evolution of TV.* https://storage.googleapis.com/doubleclick-prod/documents/Evolution_of_TV-_Part_6_Addressable_Advertising.pdf P. 4

60 Gonzalez, J. C., Mochon, F. (2016). Operating an advertising programmatic buying platform: A case study. *International Journal of Interactive Media and Artificial Intelligence.* Vol 3 (6) P. 6-15.

making it more relevant. However, another form of advertising has gained popularity which does exactly the opposite. 'Native' advertising is 'seamlessly integrated into editorial content'[61] and often 'produced by the news organizations themselves on behalf of advertisers.'[62] While native advertising continues to push the ethical boundaries of journalism – some researchers even claim that native advertising 'harms' readers[63] – this discussion is beyond the scope of our research. Instead, we wanted to focus on a particular element of native advertising that is important both to the topic of advertising relevance and to our research: native advertising has a direct connection to the actual content which the user wishes to consume of their own free will.

Native advertising matches the 'tone, content, and functionality' of normal articles written by digital media companies, which makes native advertising 'more appealing' to consumers.[64] While the concepts of 'tone' and 'functionality' are beyond the scope of our research, we would like to draw attention to the idea that advertising which matches the editorial 'content' of digital media is more 'appealing' because it is more relevant, and thus more effective, for users.

The problem of how digital media companies can provide the conditions for advertisers to create relevant ad campaigns persists. However, what if creating conditions for relevance is possible using data from 'current browsing sessions'? We will explore this idea at length in our Operationalization section, but first, we would like to clarify ways that digital media companies may be able to demonstrate 'relevance' of advertising content to the main content which the user desires to consume.

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61 Levi, Lili. (2015) "A faustian pact: native advertising and the future of the press." *Arizona Law Review.* Vol 57. P. 649.

62 Ibid. P. 650

63 Bakshi, A. (2015). Why and how to regulate native advertising in online news publications. *UB Journal of Media Law and Ethics*. Vol 4, P. 16.

64 Ibid. P. 7

## 2.3 Identifying 'Relevance' of Advertising to Main Content

In their landmark text on relevance theory, Dan Sperber and Deirdre Wilson eloquently preface their work by saying that 'to communicate is to claim someone's attention: hence to communicate is to imply that the information communicated is relevant.'[65] Relevance theory plays an important role in explaining the internal argument by which a person persuades him or herself to engage in any communicative behavior. According to Sperber and Wilson, relevance is the 'single property' which 'makes information worth processing for human beings.'[66] In other words, humans engage in communication with the aim of seeking information which is relevant for them. It follows that users on the Internet seek information which is relevant in some way to their own needs or desires.

Previous research on intrusiveness emphasized the 'goal-oriented' nature of Internet use for viewers and that advertising is intrusive because it 'interrupts' the goals of the user.[67] Although the researchers do not explicitly say so, it is abundantly clear that the goal of the user is to find and consume content which is relevant to their interests. We will support this view with a utilitarian argument in a forthcoming section.

We discussed the increased 'appeal' of the fusion of advertising with editorial content in the 'native' format because this fact reveals information about relevance and intrusion minimization. Native advertising is more appealing because it resembles content that users already expect and content which users actively seek. Our research will attempt to reconstruct the process of how users filter through content offered by digital media companies in order to identify content which the user determines is 'relevant' to them. How do users browse for relevant content on

65 Sperber, D., Wilson, D. (1996). Relevance, Communication, and Cognition (2nd Edition). Oxford and Cambridge. Blackwell Publishers, Inc. P. VII

66 Ibid. P. 46

67 Edwards, S. M., Li, H., & Lee, J.-H. (2002). Forced exposure and psychological reactance: Antecedents and consequences of the perceived intrusiveness of pop-up ads. *Journal of Advertising, 31*(3), P. 85

digital media websites? What tools and information sources do users reference when they make a decision to consume one piece of content over others?

Sperber and Wilson refer to the 'set of premises used in interpreting an utterance' (or any other sort of communication) as a 'context' and define a context as a psychological cognitive construct which is the 'subset of the hearer's assumptions about the world' rather than the 'actual state of the world.'[68] A context is 'not limited to information about the immediate physical environment or the immediately preceding utterances,' the context is far more vast – 'expectations of the future, scientific hypotheses or religious beliefs, anecdotal memories, general cultural assumptions' and many other assumptions all integrate into a context that the receiver of the communication uses to interpret meaning from the communication.[69]

People interpret different streams of communication in different ways, but 'a speaker who intends an utterance to be interpreted in a particular way must supply a context which allows that interpretation to be recovered.'[70] A 'mismatch' between the intended context from the sender and the actual context used by the receiver may result in a 'misunderstanding.'[71] How do digital media companies provide a 'context' for users to filter content in order to avoid 'misunderstanding'?

Our research attempts to link the questions of how users filter content and how digital media companies provide the 'context' which enables and facilitates the filtering process. In the case of YouTube, users are able to choose from videos offered by the website without actually viewing the content of each individual video. Users form 'expectations' of the actual content of video by using the 'context' provided by YouTube. 'Metadata,' or 'data about data,'[72] acts as the context provided by the digital media company to their viewers with the express aim of

68 Sperber, D., Wilson, D. (1996). Relevance, Communication, and Cognition (2nd Edition). Oxford and Cambridge. Blackwell Publishers, Inc. P. 15

69 Ibid. P. 15

70 Ibid. P. 16

71 Sperber, D., Wilson, D. (1996). Relevance, Communication, and Cognition (2nd Edition). Oxford and Cambridge. Blackwell Publishers, Inc. P. 16

informing them about the content on offer. Viewers make their decision to consume any given video because the user ultimately decides that the video is relevant to his or her interests based on the information about the video provided in the metadata.

The behavior of watching a video can be divided into at least two separate processes: the user's search for their desired video content and the actual viewing of the content. These two processes are divided by one action: clicking on the play button inside the video player. Digital media companies which offer videos, such as YouTube, most commonly provide an interface which displays 'metadata' to potential viewers. Metadata shows descriptive information about each video on offer meant to inform the potential viewer about the content of each video before they watch it. When the user is searching for content he or she wishes to consume, a process which we will refer to as 'browsing,' the user builds expectations about each video and makes the final decision to view any given video based on the metadata. We make this assertion because no other 'context' is supplied by digital media companies by which any sort of viewing decision can be made.

Figure 2 in our Appendix shows metadata information as provided by YouTube, which contains the thumbnail image of the video, the duration in minutes and seconds, the title, the author, the amount of views, and the amount of time since the video was first uploaded. All of this information seen by the user is shown by design to persuade the user to watch that particular video. Viewing this metadata information also sets expectations for the viewer about the type and duration of content that they will see.

We will repeat once more that user Internet activity is seen as 'goal-oriented' behavior.[73] In other words, Internet users have a concrete task, whether it is information gathering, entertainment, or just killing time, that they wish to

72 Riley, J. (2017). Understanding metadata: What is metadata and what is it for? National Information Standards Organization, Baltimore. P. 1

73 Edwards, S. M., Li, H., & Lee, J.-H. (2002). Forced exposure and psychological reactance: Antecedents and consequences of the perceived intrusiveness of pop-up ads. *Journal of Advertising, 31*(3), P. 85

accomplish while using the Internet. Metadata facilitates the process of performing a desired task on the Internet by providing the users with information about the contents of the website which they are visiting. Referencing metadata allows users to find their desired content more quickly. We will assume that perception of behavioral control over the act of viewing any given video is directly connected with user review of metadata in the browsing process, especially in the formation of content expectations derived from metadata review. In other words, the user expects content in any given video to match the metadata.

Search engines like Google offer excellent insight into how users reference metadata to find content which is relevant to them on the Internet, and how Google monetizes this metadata to show advertising which is relevant to the search query. Google uses complex algorithms to determine 'relevant' results to any user query[74] and then Google AdWords advertising clients can create campaigns to deliver relevant advertising by 'matching ads to the user's query.'[75]

Metadata, such as the results shown for Google queries, allows users to gage the level that any given content on offer meets their own interests, needs, or desires, allowing users to choose content which is most 'relevant' to the user. We assume that users actually do choose the result which most relevant for them. In application to our research, users presented with a given choice of video offerings and with an intention to view videos, any Internet user will choose to watch the video which most aligns with his or her interests, something that the user determines by reviewing the metadata.

In other words, metadata causes an Internet user to build expectations about content and is the main factor in the ultimate decision to watch any certain video because it indicates how closely the video will align with their own interests. This concept forms the backbone for our second research question.

74 Google (2007). Marketing and advertising using Google: Targeting your advertising to the right audience. Google, Inc. P. 11

75 Ibid. P. 16

*Research Question 2:*

- Will the perceived difference or similarity of actual content to expectations of content (as rated subjectively by the user) have an impact on user engagement with advertising, including brand recall and perceived quality of the ad?

We asked users to identify how closely the content they chose to view aligned with their expectations of the content which they formed before viewing and tested whether or not this factor had a correlation with advertising engagement. Our operationalization of this factor and the practical steps we took to measure it can be found in our Methodology section.

If an Internet user browsing for videos on a digital media website is reviewing metadata descriptions of videos, they will form expectations about the content of the videos in the process. Once they select the video they would like to watch and play the video, they have certain expectations about the way that the video content will play out. We have already outlined that the forced exposure of advertising causes the psychological phenomenon of intrusiveness through the psychological force of reactance and the norm of reciprocity. However, we intend to explore the idea that this feeling of intrusiveness can be minimized if the advertising content is 'relevant' to the main content in the same way that Google AdWords advertising is relevant to Google search queries.

Due to the nature of video viewing and the previously mentioned methods employed by video networks to minimize intrusiveness, the viewer is left with very few options once they have been forcefully exposed to advertising. The viewer may either prematurely close a video ad, which removes a much needed revenue opportunity from the network, they may look away from the advertisement, which lowers credibility, utility, and value of placing video ads for advertisers, thereby lowering the price that digital media companies can ask for the advertisement, or

they may simply close the video or even leave the page, which is a negative outcome for digital media companies.

Existing methods to reduce advertising intrusiveness aim to provide viewers with an ability to react against unwelcome force, as provided by reactance reciprocity. However, we are interested in exploring the idea that digital media companies have the opportunity to minimize intrusiveness by increasing the relevance of advertising content to the main video content chosen by the user.

As the case of Google AdWords shows, information willingly provided by the user about the content which they determine to be interesting to them at any given moment can also be used by advertisers to understand the interests of a given consumer at that moment. In other words, we will make the assumption that consumers reveal their own interests at the moment when they willingly choose to view video content. Our third research question will be formulated around the idea that advertising which is 'thematically' relevant to the main content of the viewer's choosing will cause the viewer to exhibit a reduced level of intrusiveness while viewing, thereby leading to a more fluid and natural viewing experience, and will also match the interests of the user at a particular moment, increasing advertising effectiveness and generating more revenue for digital media platforms.

In a practical example, if a user chooses to view a video about cooking, they have revealed that they are interested in the act of cooking or food at that given moment. The digital media company and their advertising partners know with certainty that the user has selected this video when the user clicks on the play button. Our hypothesis will center on the idea that advertisement of products 'thematically' linked to cooking, such as stoves, fast food, ovens, or even kitchen cleaning chemicals, will be more willingly consumed by the viewer because they are relevant to the main video featuring cooking. However, we first need a practical definition of relevance to replace the abstract notion of 'thematic pairing', and, second, we need a practical method of arranging for relevance between pre-roll advertising and main video content.

## Chapter 2: Research Methodology and Results

### §1 *Operationalization Proposals and Theoretical Justification*

#### 1.1 Proposal to Determine User Interest by Using Clicks as 'Signals'

We have identified the factors which are identified in the academic literature as being responsible for the phenomenon of intrusiveness: reactance to a perceived elimination of a freedom, reciprocity to negative intentions from advertisers, and non-relevance of advertising content to the needs or desires of the user. A research method to test for the first two factors has already been operationalized – we aim to use a similar tactic to test for the same factors and will provide more details in our Methodology section. However, the issue of relevance has not been solved. Our goal in our Operationalization section is to identify a logical framework for relevance grounded in theory. We shall begin this task by formulating a method to determine user interests at any given time. Any given user chooses an option from any given list because they believe the chosen option will be most relevant to them. Rational Choice Theory will provide the theoretical framework for this idea.

Rational choice theory, or the idea that people behave in ways that bring them the highest value or happiness, has been expressed in different forms across many different philosophical traditions, dating back to at least the times of the ancient Greek philosophers. 'Utilitarianism' as articulated by John Stuart Mill in his work of the same title holds that 'actions are right in proportion as they tend to promote happiness.'[76] Vilfredo Pareto, one of the fathers of quantitative economics, wrote about the 'fundamental principle of hedonistic calculus' in 1892, saying that 'every man continues the transformation of economic goods in his possession until he obtains maximum total utility from them.'[77]

76 Mill, J. S. (1863). Utilitarianism. P. 10

77 Pareto, V. (1892–1893), 'Considerazioni sui principi fondamentali dell'economia pura', Giornale degli Economisti, 4: P. 405

In essence, the principle of utilitarian philosophy is that people are motivated to make choices from a list of constrained options by the idea that their choice will bring them the most benefit, or utility. Many offshoots and criticisms of utilitarianism have since been expressed, but the hedonistic principle of utilitarianism, expressed by Pareto, is the principle underpinning modern microeconomic thought. We believe that this is the guiding principle by which Internet users make decisions to watch any given video when browsing through metadata.

Users evaluate the video offering and make a decision to view the video which they believe will bring them the most 'utility,' or subjectively defined benefit, whether that benefit is information, laughter, awe, appreciation, or whatever other perceived benefit a person may deem worthy of pursuit. It is precisely this idea which we will use to argue for our 'connotative' principle of relevance determination which we now feel is appropriate to articulate.

Following from the hedonistic principle, an Internet user reveals his or her own interests at a given moment by performing the conscious act of choosing to engage in the process of viewing any given video by clicking on the link to that certain video from a constrained list of options. With their choice, users reveal that their perception of the content which they expect the video to contain, expectations which users develop by reviewing metadata, brings them some utility at that given moment. Users also reveal that they expect their choice of video to bring them more utility than any of the other videos on offer, a choice which users make at the end of their browsing period. Our idea is that this choice presents an opportunity for advertisers to more effectively market relevant products because users have *signaled* their interests at that particular moment in time.

Signaling theory in economics, as first articulated by Michael Spence in 1973, explores conditions when actors 'face investment decisions under uncertainty' and thus turn to the task of 'interpreting signals' to facilitate their

decisions.[78] The situation of browsing and viewing video content can also be considered as falling under the context of facing investment decisions under uncertainty. An individual who has decided to invest time into viewing video content and wishes to view content that would maximize his or her own utility arrives to any one of many video viewing platforms to find a plethora of viewing options. The viewer faces an uncertainty as to whether or not the content contained in any one of the the videos on offer will actually help the viewer achieve his or her viewing goals, let alone bring them any benefit at all. In this case, the video platform creates signals in the form of metadata, signals which the viewer then interprets and uses as the basis for making their decision to invest time into watching any given video on offer. Seen in this context, the case for browsing as a process of viewers interpreting metadata signals to make time investment decisions should be clear, but an alternate and more sophisticated signal transfer is occurring at the same time.

Advertisers aiming to spread awareness of products and increase sales are also making an investment under uncertainty. We will recall the quote credited to Mr. Wanamaker mentioned earlier to reinforce our point. Advertisers wish to make sure that the money they invest into campaigns reaches an audience which is both capable of buying the advertised product and potentially interested in acquiring it. Thus, advertisers facing the uncertain investment decision of how to most effectively invest their funds are forced to look for signals which could help them determine relevant audiences and achieve actual sales goals.

We make the assumption that viewers browsing through metadata interpret signals intentionally left by video platforms in order to find content that matches their viewing goals, and, by extension, their own interests. Our argument is that their choice, the ultimate culmination of which is represented by a click or a tap on the content that the viewer ultimately chooses, constitutes a valuable signal,

78 Michael Spence (2002). "Signaling in Retrospect and the Informational Structure of Markets". *American Economic Review*. 92 (3): P. 355.

willing or unwilling, intentional or not, of the viewer's interests at that point in time. It is our belief that effective interpretation of this signal will allow advertisers to identify targeted groups of people who are interested in a given unit of media content which may have some relevant connection to an advertising product.

Furthermore, the act of clicking on a video often provides advertisers with a probability that certain demographic information about the viewer is true. For example, if a viewer chooses to view a video on the topic of pension funds or retirement homes, chances are high that the viewer in question is a senior citizen. If a viewer chooses to view a video about a cosmetic tutorial or a finger nail style guide, chances are high that the viewer in question is a female. Our goal is to be able to extract information about the viewer contained in the act of choosing a video and to use this information to display what we believe will be relevant advertisements capable of decreasing intrusiveness, increasing engagement and brand recall, increasing loyalty to online media companies, and generally improving user experience on the Internet. However, the issue of matching content to demographics increases the complexity of matching algorithms, and we have chosen not to analyze these particular signals in our study. We will reflect on this choice and the implications in our Limitations section.

The principle which we will use to link advertising with main content is based on the idea that interest signals in a given unit of media content at a particular moment in time, established at the moment that any given user clicks on a video, should be met with an advertisement which has a *connotative* connection to the topic of the video. In other words, the product being advertised should in some way be connected to the performance or enjoyment of the main object or subject of the video.

For example, if the user chooses to view a video about cooking or food, the advertisement to which the user is forcefully exposed should be related to the performance of eating, such as an advertisement for a particular edible product, a

restaurant, or even a good used in the preparation of food, such as a stove or a frying pan.

In essence, the idea of 'connotative relevance' is built upon a semiotic foundation. Connotative relevance rests on the idea that the theme of a video *connotates* certain actions or things. In other words, the main topic of the video 'suggests […] a reasonable inference' to other actions, tools, objects, or people which connect to the topic of the video inferentially.[79] Umberto Eco gives the example of the presence of smoke connotating the presence of fire, saying that 'metonymic relationships of effect to cause' help to form this connotative relationship.[80] In our case, we are interested in looking at a different sort of relationship. If we take the example of a video featuring an item of food, we suggest that the connotative relationship begins with the act of eating and extends to all tools, actions, people, or events directly related by that same 'metonymic relationship of effect to cause' described by Umberto. Continuing with our food example, food connotates the act of eating, which by extension connotates preparation of food or enjoyment of food at restaurants and other eateries. By logical conclusion, videos about food can also connotate tools used in the preparation of food or brands of restaurants or eateries in which a person can enjoy the act of eating. We will use this logic to make our case for the connotative relationships between video themes and certain types of advertising.

Perhaps other principles of relevance connecting two discrete pieces of content can be conceptualized, such as an 'associative' connection in which the theme of the media content chosen for view and certain products have a relationship to each other through a shared association to some abstract concept, such as power, but this idea is beyond the scope of our work. We have chosen to focus on what we term the connotative principle because it appears the most straightforward.

79 Umberto, E. (1986). Semiotics and the philosophy of language. Bloomington. Indiana University Press. P. 32

80 Ibid.

Until now, we have neglected to formulate a clear definition of “browsing” for the purposes of our research because we lacked the theoretical elements to do so. However, we now wish to weave together key takeaways from our reviews of metadata, relevance, and signaling into a single definition for browsing. When we refer to the 'browsing' period, we are referring to the period of time after any given person decides to perform a task on the Internet but before the actual performance. The action of 'browsing' is characterized by reviewing metadata pertaining to a future selection decision from a constrained set of options, metadata which is intended to signal information about the performance of the desired task. Reviewing this data allows the user to compare the relevance of each of the reviewed options to his or her interests and goals, to then organize the options according to order of most to least relevant, and then ultimately to make the decision to perform the option that the person deems to be most relevant to accomplish the desired task.

We now feel confident that all elements are in place to introduce our third and fourth research questions.

*Research Question 3:*

- Will users which are forcefully exposed to video advertising exhibit greater brand recall and engagement when the advertising shows a product which is connected to the performance or enjoyment of the object or subject of the video that the user has chosen to watch after the browsing period compared to users who are forcefully exposed to non-relevant advertising?

*Research Question 4:*

- Does the age or gender of users have an effect on the experiment? Will age or gender affect brand recall or ad quality perceptions?

The 'connotative' principle of relevance and the determination of user interests through signaling perceived utility captured by the act of clicking on any of a constrained set of options gives us a method by which to determine relevance. However, as seen in Figure 2, metadata about video content and, as we shall soon see, metadata about advertising content, is quite limited. How can we create a practical and simple framework which provides for matching on the basis of the connotative principle using the metadata which we have available? In order to operationalize this question, we turn to an exploration of content *categories*.

## 1.2 Using 'Categories' as Practical Means for Achieving Relevance

If we have already determined that one discrete piece of content is relevant to a given user via the user's own decision and willingness to view that content, a conclusion which is confirmed by the user willfully clicking on a video of his or her choice, then we have also determined at least some of the user's interests at that given moment in time. Although the question is certainly interesting as a topic of further research, we will not focus our investigation on the reason why any given person is interested in any given content, we will simply take this as fact.

Our next task is to lay out a framework to determine the relevance between one discrete piece of content and another. Content which is automatically 'added' on to other content, perhaps even without warning the user, as in the case of forced exposure pre-roll advertising, still has a relation to the content originally chosen by the user, a relationship which ultimately leads back to the interests of the user. It is this relationship we wish to examine. Our aim is to create a functional and practical definition of relevance among and between different discrete units of content which will form the principles by which we can conduct a theoretically sound experiment. We will attempt to show how this linkage may be achieved with *categories*.

One of the purposes of categorization of content for online media companies is to 'reduce the complexity of the web.'[81] 'Categories' are used by modern digital media companies to 'group' similar content together in order to facilitate navigation through large lists of content offerings. However, categories are also used by advertisers to arrange sort their own products and campaigns. As we will soon see, categories feature prominently on the Internet and are already ubiquitous in online experiences. We wish to examine if categories can also be used to facilitate the process of matching advertising with main content according the principle of connotative relevance outlined earlier. However, we shall begin this exploration by analyzing the nature of categories and why they may be valuable to our research.

William James wrote one of the most famous articulations of the puzzle of cognition and categorization when he said that a baby's view of the world is one 'blooming, buzzing confusion.'[82] Humans are able to automatically recognize and isolate contours in our field of vision and to identify those contours as belonging to a certain category. Neuroscientist Steven Harnad believes that categorization is 'all that cognition is for, and about.'[83] In his work on categorization theory, Harnad lays out the practical purposes of categorization in terms of biological survival: 'all of our categories consist in ways we behave differently to different *kinds* of things – things we do or don't eat, mate-with, or flee-from.'[84]

Viewed in this light, one may make the claim that the ability to categorize is of vital importance to humans and plays a fundamental role in our survival. According to Harnad, categorization is 'any systematic differential interaction between an autonomous, adaptive sensorimotor system and its world.'[85] Categories themselves are 'kinds' and categorization occurs when 'the same output occurs with

81 Ihlstrom, C., Lundberg, J. (2004). A genre perspective on online newspaper design. *Journal of Web Engineering.* Vol. 3, No. 1 (2004), P. 54.

82 James, W. (1890). Principles of Psychology. P. 462

83 Harnad, S. (2005). To Cognize is to Categorize: Cognition is Categorization. *Handbook of Categorization in Cognitive Science*. New York: Elsevier Press. P. 1

84 Ibid.

85 Ibid. P. 2

the same kind of input, rather than the exact same input.'[86] Categorization can be rather specific, with an incredibly detailed list of concrete and discrete specifications that determine inclusion or exclusion into a category, such as taxonomy specifications. However, we have chosen to research video categories, and the task of specification that lies before us is far more challenging.

We will begin our daunting task by analyzing the types of categories already used by digital media companies. Research on categorization of content by media companies shows the great level of difficulty in assigning a category to a news story. In fact, even the concept of 'hard' news versus 'soft' news, however simple and concrete it may sound, has proven to be a constant headache for researchers.

Rienemann, Stanyer, Scherr, and Legnante write that, despite the fact that 'most scholars seem to have an intuitive understanding of the concept and despite its ubiquity in the literature,' scholars are 'far from reaching a consensus about how hard and soft news is to be defined.'[87] Part of the problem lies in the fact that media categories, including the basic news categories of hard and soft news, are 'often not clearly defined or not even defined at all.'[88] The academic process of defining categories which seem so clear cut and intuitive, such as hard and soft news, has proven to be a continuous challenge in the field of media research, and empirical studies which attempt to give evidence to one or another definition are plagued with issues such as inter-coder reliability and ambiguity of terms and definitions. In short, media studies is not taxonomy.

Dividing any sort of content into categories, whether it be species of plants, sizes of jeans, or topic of content, is *useful*. Viewers are able to reference categories in order to more quickly discover content that they want or need. Media organizations can use categories to set up a more efficient workflow or to better

86 Harnad, S. (2005). To Cognize is to Categorize: Cognition is Categorization. *Handbook of Categorization in Cognitive Science*. New York: Elsevier Press. P. 3

87 Reinemann, C., Stanyer, J., Scherr, S. and Legnante, G. (2011). Hard and Soft news: A review of concepts, operationalizations and key findings. *Journalism.* Vol 13, Issue 2, P. 222

88 Ibid. P. 223

organize and manage their own content. However, what makes categorization in media studies different from categorization in more 'precise' sciences is that no single formula exists for organizations to lump content into this or that category. In fact, not even the categories themselves are the same.

In order to better understand the problem of categorization, we found it expedient to examine how content is already being classified by online media companies in practice. Figure 3 of our Appendix shows a screenshot of the top of the New York Times website home page, complete with advertising content. The bottom of the image shows the navigation bar of categories which the user can click to navigate to a page showing all articles belonging to the chosen category.

As the reader can see, the New York Times editorial staff has decided to group their articles into the following categories: World, US, Politics, NY, Business, Opinion, Tech, Science, Health, Sports, Arts, Style, Food, Travel, Magazine, T Magazine, and Real Estate. Although this may seem like a natural and intuitive way for any digital media company to organize content at first glance (with the exception of NY, Magazine, and T Magazine), this is far from true. Other media companies organize their content in a wide range of different ways. We have decided to review content categories in use today.

We performed a brief analysis of content categories in use by online digital media using the same methodology as Magnus Ljung in his work analyzing news genres and comparing news categories for the New York Times and The Times.[89] Our analysis focused on the top 10 English-language news websites as compiled by online business website eBizMBA,[90] which include CNN,[91] New York Times,[92]

89 Ljung, M. (2000) Newspaper genres and newspaper english. *English Media Texts-Past And Present. Language And Textual Structure.* P. 132

90 Top 15 Most Popular News Websites March 2017. eBizMBA. www.ebizmba.com/articles/news-websites

91 Harnad, S. (2005). To Cognize is to Categorize: Cognition is Categorization. *Handbook of Categorization in Cognitive Science*. New York: Elsevier Press.

92 New York Times Homepage. www.nytimes.com

Huffington Post,[93] Guardian,[94] Google News,[95] Yahoo! News,[96] Fox News,[97] BBC,[98] Reuters,[99] and the Wall Street Journal.[100] Figure 4 of our Appendix shows a complete list of all the categories on the main page of each website and charts the frequency of each category on the sites listed.

If the data about categories used by various online news media companies is any indication, it should come as no surprise that video categorization falls prey to many of the same sort of difficulties and arbitrariness. In fact, the situation is even more complex because video sites tend to specialize in offering different sorts of content, so their categories are often not remotely similar. eBizMBA also compiled a list of the top 15 video websites in the world by monthly unique users and we will reference this list[101] to give an example of what we mean. The list contains sites such as YouTube,[102] Netflix,[103] Vimeo,[104] Hulu,[105] LiveLeak,[106] and Break,[107] organizations which appeal to vastly different audiences and which offer much different types of content. Although YouTube is a general video network, Netflix and Hulu focus on entertainment content such as shows and movies, Vimeo focuses on serving as a repository for professional video content producers such as music artists, filmmakers, and video journalists, Break is a destination for comedy

93 Huffington Post Homepage. www.huffpost.com

94 Guardian Homepage. http://www.theguardian.co.uk

95 Google News. news.google.com

96 Yahoo! News Homepage. www.yahoo.com/news/

97 Fox News Homepage. www.foxnews.com

98 BBC News Homepage. www.bbc.co.uk

99 Thomson Reuters Homepage. www.reuters.com

100 Wall Street Journal Homepage. https://www.wsj.com/

101 Top 15 Most Popular Video Websites March 2017. eBizMBA. www.ebizmba.com/articles/video-websites

102 YouTube Homepage. www.youtube.com

103 Netflix Homepage. https://www.netflix.com/

104 Vimeo Homepage. www.vimeo.com

105 Hulu Homepage. www.hulu.com

106 LiveLeak Homepage. www.liveleak.com

107 Break Homepage. www.break.com

and viral videos, while LiveLeak collects gore, CCTV footage, and war videos. The categories offered on each website correspond to their content offering.

For the purpose of obtaining a frame of reference, we will examine the way that YouTube categorizes its content. As the largest video portal in the world and with over 1 billion monthly unique visitors, YouTube has the largest amount of video content on offer. The Google company has plenty of funding and academic expertise on hand to create a well-functioning and effective video categorization system. An overview of all YouTube video categories is found in Figure 5 in our Appendix.

YouTube arranges content by 'channel' categories.[108] A YouTube channel is a YouTube account owned by one account holder, which can be a person, a group, or an organization. A discussion of the reasons why YouTube arranges content on its platform this way must involve corporate policy, business considerations, advertiser preferences, and such a conversation is beyond the scope of our research. We are interested primarily in the display of metadata, content expectations which arise from that metadata, and a method or principle by which to establish relevance of advertising content to the main content. YouTube divides channels up in the following nine categories: Music, Comedy, Film & Entertainment, Gaming, Beauty and Fashion, Sports, Tech, Cooking & Health, and News & Politics.

Our exploration of practical industry examples of categorization is also meant to fulfill another purpose – to show just how subjective the process of categorizing media content is in practice. The high amount of variation between categories among top level industry players shows that the results of categorization, whether based on painstaking research or intuition, vary widely from company to company. Although we have demonstrated noticeable similarities, no single formula exists to group content together in a way that is repeatable for media companies in any meaningful form. Further, unique methods

108 YouTube Channels. http://www.youtube.com/channels

of categorization may also serve as a way for media companies to express their own uniqueness and difference to other brands, but this hypothesis is again beyond the scope of our research.

Despite these caveats, breaking down media content categories in this fashion will prove useful in our experiment design. The other piece of the puzzle in creating a framework for matching advertising content with pre-roll content on the basis of categories is the advertising side. We would now like to explore and identify advertising product categories.

The Interactive Advertising Bureau maintains a constantly updated list of advertising product categories on their website.[109] IAB breaks down the product categories into Tier 1 and Tier 2, in which Tier 1 is a main category and Tier 2 are subcategories contained within one of the Tier 1 categories. Figures 6 and 7 of our Appendix contain parts 1 and 2 of the list of the IAB Tier 1 and Tier 2 advertising product categories.

IAB's list has been 'composed over a long period of working with advertisers, academics, and regulation professionals.'[110] The process of categorizing this set of values is surely interesting in itself, but IAB does not give specific insight into the methodology behind the formation of these categories. Nevertheless, we are confident in the practical value of IAB's advertising product categorization and, in the absence of a better system from a source equally as credible, we will use this list in combination with the video categories from YouTube and categories developed by other digital media companies for the purpose of our research. Our intention in exploring these 'real-world' categorizations is to provide a practical base for our research in the absence of any any concrete or unifying theory.

The aim of categorization of media content appears to be the same as the primary function of categorization in cognition – to facilitate processing of large

109 Interactive Advertising Bureau Tech Lab Context Taxonomy. Tier 1 and Tier 2 Advertising Product Category List. https://support.aerserv.com/hc/en-us/articles/207148516-List-of-IAB-Categories

110 Ibid.

quantities of information in a way which helps to achieve practical goals. Apart from providing viewers with a faster method of accessing desired content, digital media companies may also categorize to improve internal workflow and content management processes. However, we would like to focus on the assumption that categories provide a quicker method of allow users to find videos *relevant* to their own viewing goals.

Before we proceed to lay out our methodology on how we propose to test for the factors outlined in our four research questions, we must first identify how and why our proposed concept of connotative relevance relates two separate videos together. We will argue that we can treat two videos as unit 'assemblages' composing one unified and single video if they are played 'back-to-back,' or one right after the other, just like the way that advertising videos are shown on digital media companies such as YouTube. This treatment of videos will allow us to clearly show a relationship between any given ad pre-roll and a main video as well as to finalize the theoretical justification for our framework by which we will match pre-rolls and main videos.

### 1.3 Proposal to Treat Pre-Rolls and Main Video Content as 'Assemblages'

As implied in their name, pre-rolls play out *before* the user has access to their content. Pre-rolls refer to a class of advertising video, but specific pre-rolls appear before specific videos. The presence of a specific pre-roll before a specific main video necessarily creates a special relationship between them. We hope to identify the particular characteristics of this special relationship by analyzing the pre-roll and the main video as two units of a single whole through the lens of assemblage theory.

Assemblage theory as a concept was first articulated in an unorthodox text called “A Thousand Plateaus: Capitalism and Schizophrenia” written by French

philosopher Gilles Deleuze and French psychoanalyst Felix Guattari. Deleuze and Guattari developed a unique way of explaining the idea that complex systems do not work in a linear fashion. In their work, they use the self-styled term 'rhizome' to refer to any individual, 'unique' component of a complex system.[111] They claim that complex systems, from plants to politics, are all composed of individual 'assemblages,' which they call 'rhizomes,' that are all 'interconnected' with each other.[112] This view of complex systems often provides a deeper understanding of reality than hierarchical and linear models.

Since its rather obscure introduction, the 'assemblage theory' has been adopted by researchers in various disciplines, including political science, media research, and linguistics and has been applied in the study of a range of different research questions and analyses. Media researchers Andrew Chadwick, James Dennis, and Amy P. Smith write a very useful summary of assemblage theory in their work on hybrid media systems:

> "Assemblage theory, which originates in the social theory of Gilles Deleuze and Félix Guattari (1980), suggests that there are permeable boundaries between different modular units of a collective endeavor, and the meaning and force of any individual modular unit – whether it is a person, a group, a technology, a frame, even a building, and so on – can only be understood in terms of its interactive and interdependent relations with other modular units."[113]

111 Deleuze, G., Guattari, F. (1980). A Thousand Plateaus: Capitalism and Schizophrenia. Minneapolis. University of Minnesota Press. P. 6

112 Ibid. P. 7

113 Chadwick, A., Dennis, J., Smith A. P. (2016). Politics in the Age of Hybrid Media: Power, Systems, and Media Logics. *The Routledge Companion to Social Media and Politics*. P. 7

Assemblage theory has become a useful tool for analyzing different complex systems. Princeton University academic Manuel Delanda became one of the first researchers to apply concepts from assemblage theory to linguistics. His work *Assemblage Theory* dedicates an entire chapter to analysis of linguistic systems through their assemblages. We shall borrow some of the concepts DeLanda outlines for the purposes of our own research.

DeLanda begins his chapter on analysis of linguistics in the light of assemblage theory by making note of how difficult the venture is because of different and overlapping 'levels of scale' which operate simultaneously.[114] Any given utterance has multiple levels of assemblages 'exhibiting the characteristic part-to-whole relation: sounds and letters interact to form words, with irreducible semantic properties of their own, and words interact to form larger wholes, sentences, with their own semantic and syntactic properties.'[115] All of these individual assemblages are interacting with all other assemblages simultaneously, including those assemblages of larger and smaller scale as well as to the whole, in any given utterance.

Video communication features many similarities to the problems of levels of scale – each frame can be analyzed relative to a shot, each shot relative to a scene, each item in the visible field relative to each other item, and so forth. However, this approach is characterized by some potential problems identified by Soviet psychologist Lev Vygotsky.

Vygotsky spoke about some pitfalls of certain types of analysis in the 1930s, problems which directly concerned assemblage theory nearly a half century before it was even articulated by Deleuze and Guattari. 'Analysis that begins with decomposition of the complex whole into its elements' will never succeed in explaining the characteristics of the whole because 'elements lack the characteristics inherent in the whole and they possess properties which it did not

114 DeLanda, M. (2016). Assemblage Theory. Edinburgh. Edinburgh University Press. P. 51

115 Ibid

possess' – 'when the whole is analyzed into its elements, these characteristics disappear.'[116] Vygotsky brings up the example of separating water into hydrogen and oxygen and claims that this sort of analysis will not bring one to an understanding of the properties of water but will further one's knowledge of the properties of hydrogen and oxygen, which are quite different from those of water and even quite different from the properties of one from the other. In fact, Vygotsky called this approach 'the antithesis of true analysis' which leads to 'profound delusion.'[117]

Instead, it is our intention to develop a threshold for the process of 'subtract[ing] the unique from the multiplicity' as described by Deleuze and Guattari after which further subtraction and reduction results in only marginal value for analysis.[118] In addition to articulating the problem over 50 years before assemblage theory was even developed, Vygotsky also developed a framework to address this glaring issue in assemblage analysis. He suggests 'partitioning complex wholes into 'units,' where 'units' stand in contrast to 'elements' because a 'unit' 'possesses all the basic characteristics of the whole.'[119] He continues with his example of analysis of water by saying that 'the key to explanation of the characteristics of water lies not in investigation of its chemical formula, but in the investigation of its molecule and molecular movements.'[120]

For our research, we aim to identify pre-roll and main content video as assemblage parts which will give us the ability to analyze the advertising content separately and as part of a whole. Our intention is to analyze how 'units' of a single stream of video communication interact among themselves and with the whole in the course of the stream. We propose to analyze advertising as a 'unit' within the overall video and as an integral but unique piece of the entire communication. In

116 Vygotsky, L. S. (1934). Thinking and Speech. Moscow. P. 43

117 Ibid.

118 Deleuze, G., Guattari, F. (1980). A Thousand Plateaus: Capitalism and Schizophrenia. Minneapolis. University of Minnesota Press. P. 6

119 Vygotsky, L. S. (1934). Thinking and Speech. Moscow. P. 44

120 Ibid.

order to create a functioning model in which this can be done, we shall look at advertising pre-rolls of video communication as 'assemblages' of a larger video and attempt to describe their functions and relationships not only between themselves, to the main video content, and to the communication as a whole.

The reason behind our decision to treat advertising video and main video content as two assemblage units of a whole is because forced exposure entails that these videos are typically consumed together one right after the other. Even though video advertising is most often clearly marked as such and has a slightly different character, users of video platforms such YouTube or Netflix consume video advertising in the same *format* as the main content they wish to view. By format, we mean that video advertising and main video content are typically both played back in the same *video player*, a technology which allows for distribution and streaming of video content. In practice, this means that both the ad and the main video appear in the same frame, feature the same or similar interactive buttons and indicators, such as a pause button and a video completion graphic, as well as similar technical indicators, such as framerate and resolution.

When we say we will treat advertising video as an assemblage unit of the 'whole' video communication stream, we are referring to the viewing activity which takes place from the moment that the user decides to play the content in the video player until the moment that the user decides to stop viewing the content. In other words, we mean that we intend to analyze the viewing of a pre-roll advertising video followed by the main content video as a single and unified viewing activity. In the same way, viewing of advertisements and main content on television can also be considered a single, unified viewing experience. However, we wish to add that our approach in analyzing pre-rolls as an assemblage aims to show a different connection of the video advertising to the user than the TV viewing experience.

The relationship of the relevance of pre-roll to main video content only in the eyes of the viewer consuming them exists only in the specific instance of

viewing the pre-roll right before the main video. Pre-rolls which are shown separately may have some theoretical relevance relationship to main video content, but this relationship only affects the user and has an effect on intrusiveness when the content is shown together in the 'back-to-back' format. Assemblage theory gives us the justification to determine this relationship at the time of viewing.

Our idea of connotative relevance is intended to address this issue by proposing a way to increase the relevance of the advertising video to the user. We will propose the establishment of a framework to increase the relevance of advertising videos to the viewer by way of the main content, because, as mentioned earlier, the viewer signals interest in a given category of content when they choose a video to view by clicking on it. We have visualized this model in Figure 8 of our Appendix.

Assemblage theory constitutes the final theoretical element in our concept of connotative relevance and provides us with the confidence to move from theory to practice. Our modern digital media systems are evolving rapidly and considerations of user experience can become lost in the need to find ways to generate revenue. Media researchers, however, are free from such considerations, and we are in a position to identify ways to improve digital media systems for all concerned parties. We will now proceed to propose our methodology for testing our research questions followed by our hypotheses for what we expect our data to show.

## §2 *Research Methodology*

Before we begin laying out our proposed methodology, we wish to clarify some of the aims behind our research effort. We aimed to produce a methodology which facilitates an experiment that replicates real-life Internet video viewing conditions as closely as possible. Further, we aimed to hold as many factors constant as is scientifically feasible in order to reduce the potential influence of those factors on our data and results. We aimed to make a detailed record available of all actions which took place in our experiment, including subject responses, design, and even the code for the site itself. Lastly, we aimed to design an experiment which any scientist or research from any part of the world will be able to repeat for him or herself, despite the difficulties that this entails, which we will discuss in our Limitations section.

We began designing the research experiment by making a choice to work with categories. According to our theoretical background, time spent choosing the desired video while browsing plays an important role in signaling interests, so we chose to work with a system of categories by which the user can select content which matches his or her own viewing interests. Our categories were formed by mapping out connotative relevance relationships between IAB's Tier 1 advertising categories and a mix of YouTube and other digital media outlet content categories. Categories from other digital media companies were taken from the list of top 10 English-language media websites mentioned earlier. We only took categories used by at least half of the sites we studied.

Our list of content categories combines all YouTube content categories and all content categories that appeared 5 or more times on our review of content categories on digital media websites. The advertising list is composed exclusively of all IAB Tier 1 advertising categories. We must note that we see many potential problems with our categories, but we justify the list with the fact that our categories are in practical use by some of the world's top digital media companies.

While company methodology for creating their own categories, if such a methodology even exists, was not readily available to us, we are confident in the validity of our approach because millions of people use these categories to browse through content every day.

Of this list, we chose to include categories in our experiment which we determined, admittedly subjectively, had a direct connotative connection to at least one category in IAB's Tier 1 Advertising Categories. We have provided a detailed description of our reasons for each functional relevance connection found in Figure 8 in Article II of our Appendix. The 8 video content categories which we concluded to share connotative connections with IAB Tier 1 categories and ultimately included in our experiment are: Travel, Style, Culture, Sport, Business, Tech, Food, and Health. An image of the way the categories were displayed on the actual web page can be found in the “Website” section of our Appendix.

Test subjects were able to choose from each category, and then choose from one of 4 videos in each category which we selected and downloaded ourselves for the purpose of our experiment. Each video was selected and downloaded exclusively from YouTube according to pre-determined criteria. Our aim was to find popular videos so that users were motivated to watch the content and videos which were short enough so that our users would not get annoyed with performing the research. We accomplished this by entering keywords from each category (such as searching for 'vacation' to find content for the 'Travel' category) into YouTube's search page, selecting the filter 'Under 4 Minutes,' and choosing the option to display the content according to total number of views. In order to choose the best fitting content, we decided to set a minimum threshold for content at 100,000 views and a duration of between 120 and 180 seconds. Some videos which we included in the project did not meet this threshold because we were unable to find fitting content, so we lowered our standard. Further, we downloaded all the videos and pre-rolls in the highest quality possible – nearly all videos are 720p resolution,

with several exceptions. We believe this uniformity of resolution and duration will increase the validity of our experiment.

We also downloaded 3 advertising pre-roll videos from each IAB Tier 1 category determined to exhibit connotative relevance to a content category. The methodology used to download pre-roll videos was identical to that used to download main content, except that pre-rolls were 10-20 seconds long and were not subject to a minimum view amount. A full list of downloaded videos and pre-rolls, their origin, attributed categories, and other relevant metadata can be found under the sections titled “Main Videos” and “Pre-Rolls” found in our Appendix.

## 2.1 Design of Research Website

Once we had a full list of videos, we started on the design. In order to conform to our methodology principle of controlling for as many factors as possible, we chose to use a minimalist style when designing our research site. No extra features or colors were present, the background was always white, and the navigation was as simple and intuitive as possible. All screens from the website are available to view in our Appendix under the section titled “Website” and “Questionnaire” (which will be discussed shortly), complete with a full translation of all Russian text. The website can be visited at www.videogo.ru for a full archive of our research. We will speak first about our methodology for designing the actual screens and content of the website before we discuss programming and the many other technical hurdles.

We would like to briefly explain why we chose to use name “VideoGo” and why we decided that the VideoGo logo should appear on all pages of the research site. First of all, VideoGo is a fictional company which does not exist in any similar form on the Internet. Second, users which browse the Internet and view videos online are always subjected to the logo of the site or media company for the

entire viewing experience. One of our main objectives was to simulate real-world conditions as closely as possible. The domain www.videogo.ru was already registered to us and we developed the logo ourselves, so we decided that this would be the best way to imitate real-world conditions without running into any legal trouble.

The first screen that our subjects saw welcomed them to the study while the second and third screen asked users to identify their gender and their age group respectively in order to help us address our third research question. Gender was an option between male and female, while users had a choice between the following 6 age groups:

- >18
- 18-24
- 25-34
- 35-44
- 45-60
- 60+

The age is broken down in this way in order to determine people under the legal age, by decade until 45, because we are mostly interested in younger generation responses. After providing this data, subjects were taken to the main category screen, where they were able to browse and select from the 8 categories we outlined earlier. Each category contained 4 videos selected to fit into the category. Users could return to the category screen if they did not find a video which they liked.

This was done in order to imitate the natural browsing process which occurs when users search for videos on the Internet in real life. The video selection screen featured only a thumbnail of the video, which was screen copied directly from

YouTube, and the title of the video. Videos had diverse title formats, including use of all-caps, uploader captions, and words in other languages. We decided that all titles needed to be standardized so that they appear in the same format to the subject in order to control for that variable. All of the changes that we made to video titles can be found in the "Main Videos" section of our Appendix.

One the user clicked on a video, they were taken to a screen with the video player. Videos did not play automatically, the subject was compelled to click on a play button. After clicking play, the subject was forcefully exposed to a pre-roll before being able to view their chosen content. The fast-forward or rewind function as well as the fullscreen function were disabled in order to ensure that all subjects had the same experience. However, users were still able to pause and play the video as well as control the sounds levels.

## 2.2 Formulation of Questionnaire

The subjects were taken to another page automatically after their video finished and asked to answering six questions about their viewing experience. Subjects were asked to rate their viewing experience by clicking on some selected fields. Clicking on an option would take the user to the next question. Question five asked the subject to recall the name of the brand in the advertising. The questions, translated from Russian into English, were asked in the following order and were given the following answer options:

1. How did you like the video?

Not at all | I didn't like it | Neutral | I liked it | I liked it a lot

2. Did the video meet your expectations?

Not at all | No | Neutral | Yes | It met expectations perfectly

3. How did you like the advertising?

Not at all | I didn't like it | Neutral | I liked it | I liked it a lot

4. How much did the advertising annoy you?

Not at all | Not really | Neutral | Yes | It annoyed me a lot

The fifth question was programmed to be connected to the pre-roll shown before the main content. Each pre-roll promoted one given brand and this brand was identified in the code. Every time that the user was shown any given pre-roll, the fifth question would ask them to name the brand in the ad video. The user was given four options. One of the options was the correct brand name. Two of the options were the other brands from the other pre-roll videos in the same category. The final option was a brand which was not shown at all but was from the same industry. A full list of the brand questions can be found in the "Questionnaire" section of our Appendix.

6. How fitting was the advertising to you?

Not at all | Not fitting | Neutral | Fitting | It fit perfectly

After the subject finished the last question, they were taken back to the the main category screen in order to choose another video to view. The video which they had already viewed was disabled. The subjects then went through the same process two more times after selecting a new video with the same restrictions – being forcefully exposed to a pre-roll, viewing their chosen video, and answering the same questions. After the subject answered the last question at the end of the third round, they were taken to a screen thanking them for their participation.

## 2.3 Research Website Programming Specifications

The research website was programmed by a student at the Applied Mathematics Faculty of SPbU. HTML and CSS were used for publishing the front end. PHP was used to process server requests, save results, and send data. JS was used to make inquiries to the video server and based on the user and play back the proper video. As we outlined in our theoretical background, we are interested in identifying the effects of two separate factors on viewer experience: display or non-display of notice of advertising intent and absence or presence of advertising pre-rolls which are connotatively relevance to the main content.

As a consequence, our test subjects were separated out into the following four research groups:

- Group 1: Notice shown, non-relevant pre-rolls
- Group 2: Notice shown, relevant pre-rolls
- Group 3: No notice, relevant pre-rolls
- Group 4: No notice, non-relevant pre-rolls

Our research site was programmed to automatically assign one of these four research groups to each user and deliver a pre-programmed experience to each user based on their assigned group. Users which were shown the notice received a 'pop-up' window on the main category screen, right after they provided their age data, on their first round of video selection only. The notice contained the following text:

“VideoGo shows video advertising in order to pay the salaries of our hard-working staff and to continue to deliver the best online videos to our viewers.”

This text was chosen because it aims to convince the test subject to be prepared to view advertising, which they would then realize that they would be

forced to watch, and to change their calculus about consuming advertising in general by attempting to force them to consider the reasons publishers may show advertising. A number 5 appeared in the lower right hand corner of the pop-up notice and counted down to 0, after which a red “X” appeared in the corner, allowing the subject to close the window and proceed selecting from the 8 categories on the main screen. Users in Groups 2 and 4 were not shown a pop-up notice and navigated directly to the main category selection screen after providing their age data.

Users which received 'relevant' video advertising were shown one of three pre-rolls only from the advertising category which was determined to be connotatively relevant to the category to which the video which they selected to view belonged. For example, subjects in Groups 2 and 3 which chose to view any of 4 videos from the “Technology” category would only be shown 1 of 3 of the pre-roll videos in the “Technology” advertising category. Relevant videos were shown for all three rounds to subjects in Groups 2 and 3. However, subjects from Groups 1 and 4 were shown only pre-rolls from non-matching categories. These users could have been shown a pre-roll from any category, so long as it was a non-matching category.

We chose not create or study our research questions on a mobile platform. Subjects wishing to participate in the study from their mobile phones were shown a message that the study is only available for desktop or laptop. We did this because proceeding with a mobile phone study would greatly increase the workload for design and programming and also create difficulties in measuring the data. However, we realized that mobile is some of the fastest growing segments of the Internet and that more and more viewers are consuming video content on their mobile phones. Due to the time constraints of the study and the impossibility of meeting deadlines given the workload requirements, we regretfully chose to purposefully ignore this segment. We do understand that studying video and pre-

roll consumption on mobile phones presents an interesting and promising study opportunity for the future.

If any researcher wishes to emulate our experiment, we are happy to provide an archive of the complete website, including all the code, free of charge. We would be happy to receive any such requests via email at o@videogo.ru.

## 2.4 Method of Gathering Data and Target Audience

The research site was programmed to gather all the subject data in the form of a Microsoft Excel document and send this document to an email address, where all the research data was collected. Each document contained the IP address of the subject, the date of their completion of the research, their research group (automatically determined by the program), the age and gender information that they provided, the combination of 3 videos and pre-rolls that they viewed, and a complete list of all the answers to the previously listed questions that the subject provided. A sample of one of these subject data documents is provided in the "Data" section of our Appendix.

Our experiment interface, which was developed especially for this research, was intended to allow us to gather data without introducing any bias into our interpretation. Inevitably, some of our close friends or associates participated in the research. Although each subject did willingly provide information about his or her gender and age group, we did not ask subjects to give us their names. In order to keep track of subjects, we named their data files after their IP addresses. This also allowed us to check if any IP address had concluded the experiment twice, allowing us to prevent the same subject from submitting data twice.

Our research design asked participants to perform the same procedure three times. Participants viewing a pre-roll, video, and then answering the questions from our questionnaire for the second and third times would already know and anticipate both the questions and the order of pre-roll and video. For this reason,

we chose to weigh the second and third round of responses less than the first round. Out of a total of 100% for all 3 rounds, the first round was weighted 40% and the second and third round were each weighted 30% to account for accumulation bias

The research website was tested over a period of 4 days by the thesis facilitator Alexander Yakunin and other research associates. During testing, problems with format, email delivery, data collection, and hosting were identified and solved.

We first informed potential subjects about our research study by posting the information to social media, including personal Facebook and VK accounts as well as group social media accounts belonging to professional and academic institutions. Naturally, we asked our close friends, research associates, coworkers, and family to participate in the study and to ask their own contacts to participate in the study. Further, we approached different organizations and universities in Saint Petersburg and Moscow to encourage their students and faculty to participate in the experiment. We also asked our colleagues, friends and relatives to share our study link with their network in order to widen our potential net of participants. Unfortunately, these promotion tactics essentially guaranteed that our study would fall prey to the notorious problem of self-selection, something which we will discuss further in our Limitations section.

Our target population was all Russian-speaking Internet users who watch video in the Russian language on a desktop or laptop computer and who are forcefully exposed to Russian language pre-roll advertising. We hope to extrapolate results from our data which will be applicable to this entire population. However, due to our sampling methodology, we recognize that our data will not be representative of this entire target population. We will explore the problems with our sampling in our Limitations section.

## 2.5 Presentation of Hypotheses

Our research questions call for a quantitative approach to measuring intrusiveness by analyzing user engagement and user recall of advertising. Based on our theoretical framework, we hypothesize that subjects exposed to a notice of advertising and 'connotatively relevant' advertising will be most engaged with pre-rolls and will have the highest recall of pre-roll brands among all research groups in the study. Engagement will be measured by subjective user responses to questions 3, 4, and 6 from the Questionnaire. Brand recall will be measured by right or wrong answers to question 5, which tests if subjects can remember the brand in the pre-roll video.

However, besides the two factors discussed above, we also intend to analyze several other factors and how they effect the data. We wish to compare responses across age groups, by gender, by category of video watched, by degree to which user enjoyed the video, and by the degree that the video matched user expectations. Below is a list of our expectations about what we will find through our experiment.

*Hypothesis 1:Pre-roll Engagement*

- Group 2 will exhibit the highest level of engagement with pre-rolls, as measured by Questions 3, 4, and 6 in the Questionnaire, followed by Group 3 and Group 1. We expect Group 4 to have the lowest level.

*Hypothesis 2: Brand Recall*

- Group 2 will score highest for brand and content recall, as measured by correct responses to Question 5 in the Questionnaire, followed by Group 3 and Group 1. We expect Group 4 will have the lowest score.

*Hypothesis 3: Engagement by Age*

- We expect that the age groups 18-24 and 25-34 will have the highest level of engagement with advertising and brand recall compared to other age groups and groups 45-60 and 60+ to have the lowest level.

*Hypothesis 4: Engagement by Gender*

- We expect female participants to have a slightly higher rate of engagement and brand recall compared to male participants.

*Hypothesis 5: Engagement by Video Category*

- We expect that engagement and brand recall for the Culture, Sports, and Travel categories to be highest overall because those categories appear to us to have the clearest connotative link to the advertising categories. We also expect these categories to have the highest user engagement and brand recall among videos shown to research Groups 2 and 3.

*Hypothesis 6: Engagement by User Rating of Video*

- We expect that videos which users rated highly in Question 1 (How much did you like the video?) will lead to high engagement and brand recall scores and videos which were rated low will lead to low engagement and brand recall scores

*Hypothesis 7: Engagement by Matched Expectations*

- We expect that videos which users rated highly in Question 2 (To what degree did the video meet your expectations?) will lead to high engagement and brand recall scores and videos which were rated low will lead to low engagement and brand recall scores

## 2.6 Limitations of Research

Hardly any research study cam be considered to be without flaws, and ours is certainly no exception. Although our experiment covers several different research questions and aims to replicate real conditions as much as possible, it is plagued by numerous theoretical and practical problems which no doubt had an effect on the user, the research, and the data itself. We will attempt to list as many of these problems and discuss how they may have affected our experiment.

Our Limitations sections gives us an opportunity to identify some of the most glaring issues in our research and hypothesize how they could have affected the data that we received from our experiment. We will raise and address issues with sampling and self-selection bias, video and pre-roll quality, problems with 'connotative' matching, presence of external factors during the experiment, technical problems, and issues with our questionnaire.

### *Sample and Self-Selection*

Perhaps our single most problematic issue was our sampling methodology and the introduction of self-selection bias into our data. Although we did ask our university colleagues to assist us in promoting the campaign, most of the participants in our research project came from our own sources and network. Although we had a participants from many different age groups and locations, the sample was neither random nor a probability sample. Most of the potential participants in our target population had no idea about our research study and the probability of them participating in the research study was essentially zero. To make matters worse, all of the participants 'self-selected' to participate, which no doubt had an added effect on the data.

Our study is characteristic of a 'sample of convenience,' because the participants in our study are the most likely to respond, including people who work

in the video industry and people with personal or academic connections to the author.[121] These respondents are most likely to answer in a way which corresponds with their industry knowledge, knowledge that th e population as a whole does not possess, or to answer in a way which they believe is desired by the study organizers, hence ensuring that the responses are not representative of the target population.[122] We attempted to correct for this problem by ensuring that personal identifying information would neither be asked for in the study nor be provided in the data sheets. We did receive respondents from university sources and other places, so our sample still has some robust explaining power and we will still be able to offer suggestions to digital media companies based on our data.

Due to constraints of time and finances, we were not able to generate a sample which could be truly representative of our target population. However, we believe that our research design, apart from the sampling and several other factors which we will discuss at a later point in this section, is valid and will allow us to obtain results representative of the population if the study could be given increased funding and other resources as well as allowed to run over a longer period of time.

*Video Quality Issues*

Although we attempted to control for the quality of the pre-rolls and videos which we chose for our experiment as much as theoretically possible, the videos and pre-rolls invariably have different levels of quality. We did use a methodology for selection of all video content, which we outlined earlier, but this methodology did not ensure that quality issues would not enter into our experiment. To reiterate, we attempted to ensure that all pre-rolls were between 10 and 20 second, that all main videos were between 2 and 3 minutes and had over 100,000 views, and that all content was 720p resolution. Due to the realities of actual content available, we

121 Lohr, S. (2010). Sampling: Design and Analysis. Second Edition. Arizona State University. Australia, Brazil, UK, US. P. 5

122 Ibid.

were not able to ensure that 100% of content met our standards – some material was under or over our target for length or views. However, these were not the only issues with quality.

We attempted to ensure that all content in the study was uploaded in the last 3 years, and even more recent for categories such as Technology and Business. An even bigger emphasis was placed on finding recent pre-roll content dated to no more than one year old. However, this was simply not possible in many cases and we were forced to settle for older content, especially for difficult categories like Culture.

Videos such as s3 and tr4 (see Appendix for details) seemed to have considerably lower quality than others. However, we justify this because the videos were selected according to a very specific methodology designed to simulate actual viewing conditions.

*'Connotative' Matching*

Our idea to create a methodology for matching advertising to main video on the basis of category creates interesting study opportunities but also creates certain problems. As mentioned earlier, advertising is often planned to attract a particular target audience, and a member of this target audience is often represented visually in the advertisement itself. Pre-rolls in the Fashion category depicted only women while pre-rolls for the Business category featured mostly men. Advertising categories which contained pre-rolls catered both toward men and women still could be shown to a member of the 'wrong' gender because our algorithm did not assign a gender parameter to the pre-rolls. This problem presents an opportunity for a future research study which could aim to measure how members of different genders respond to advertising featuring members of their own gender or the opposite gender, but this is a problem in our study nonetheless which may have had an effect on the data.

Further, our methodology to match advertising categories with content categories only attempted to demonstrate a direct 'connotative' match between categories. We did not attempt to identify indirect connotative matches, yet we are quite certain they exist and this factor could also have affected our data. To be precise, Groups 2 and 3 of our experiment were forcefully exposed to 'non-relevant' pre-rolls, or advertising which we determined with the help of our methodology to have no *direct* connotative match to the content that the participant had selected to view. However, some *indirect* connotative matches may have been even stronger than the direct matches. For example, some of the pre-rolls from the Sports or Food category definitely have an indirect connotative match to the Health content category. The s1 video could be paired with a pre-roll from the Travel category. Pre-rolls s-pre1 and s-pre2 could arguably also be paired with the Fashion content category. However, we chose not to include these types of 'indirect' connotative matches in our research project because doing so would significantly complicated the methodology, programming, and implementation of the project.

Indirect connotative connections between advertising and main content, as well as other types of theoretical connections, such as the 'associative' connection we hypothesized earlier present an interesting direction for further research.

*External Factors*

Our research aimed to simulate real Internet viewing conditions as closely as possible, and participants in the study were asked to find time for the study themselves. Invariably, this sort of research design introduces the possibility that the viewers would be distracted by external factors when performing the research. External factors, such as a baby crying, a phone call, or even a microwave bell, could have distracted participants from the study and caused them to input data

which was not solely the result of the research. However, as this study aims to replicate real viewing conditions, this type of information is also valuable.

*Technical Issues*

Our study experienced two main technical problems: our data hosting plan was too small in the first hours of the study and our decision to exclude mobile phone viewing and data caused us to lose many potential participants. We did also have several smaller technical problems which we will outline later.

Many participants reported technical problems with our research website in the few hours after we first announced the study on social media. Problems included videos buffering for long periods of time, general load times, and, finally, inability to open the site. Our programmer determined that our data hosting plan was insufficient to handle even the modest traffic that we had attracted and we were forced to upgrade our hosting plan. This only affected participants in the first few hours, and we were forced to discard that data. Every participant after the hosting plan upgrade received a uniform streaming experience.

Our decision to exclude mobile participation from the study data caused issues with sampling for us. We did this because we feared that participants viewing content on their mobile phones would pay less attention to the study and thus deliver us much less valid responses than their counterparts taking part in the study via laptop or desktop because mobile participants could have performed the study while in a much more distracting environment. Although we feel that our decisions are justified for the reasons listed previously, many potential participants complained that they were not able to access the study via their mobile phone and many chose not to participate at all because of the inability to participate via mobile. Originally, our study was intended to test the difference between mobile and desktop/laptop participants, but we decided that mobile data would have far

outweighed laptop and desktop data, which would have lowered our study validity and skewed our data.

A mobile-centered of this study is perhaps the most interesting research opportunity for a follow up project and would help to put the data obtained in this study into a much more relevant context.

Other technical factors that may have affected our research data which we could not control included software and hardware used by the participants, as browser types, outdated codecs or software, outdated hardware, such as a graphics card or processor, and other similar technical factors which may affect video playback on any device. Of course, the participant is likely to experience issues related to video playback stemming from these technical causes if they choose to view video from the same devices from which they accessed our study.

*Questionnaire Issues*

The scientific practice of creating questions to test research questions is dependent on the clarity of the questions and the ability of the respondents to understand the questions and answer them in a meaningful and honest way. Our research study aimed to provide participants with a list of questions which was as short as possible while still identifying all the factors which we hoped to understand. Further, we hoped to make the questions easy to understand and simple to answer. However, our questionnaire does exhibit several noticeable problems, including subjective responses and questionable validity.

The study aimed to find how the target population reacted to pre-roll advertising and experienced the phenomenon known as intrusiveness. Invariably, discovering people's reactions means asking them how they feel about something. When our study participants rate the level of the effects of the study in Questions 1, 2, 3, 4, and 6, they were asked to choose one option from a scale consisting of 5 units in order to measure participant engagement with videos and pre-rolls.

Although we avoided many of the classical errors of questionnaire formation, such as 'double-barreled' or 'leading' questions,[123] the potential answers to our questions may not have only been defined by the content which the participant watched. If the participant was having a bad day or some external factor caused the participant to have a negative attitude, this could have spilled over into their responses.

While Question 6 measures the perceived match of an advertisement to a participant's wants or needs, the measurement system we chose to use could be problematic. It may lower our validity to give options such as “It did not fit at all with my needs” or “It fit perfectly with my needs” to our participants, as this may not apply to reality. However, we wanted to give our participants the opportunity to express extreme pleasure or displeasure with how they perceived the advertising to apply to them.

123 Lohr, S. (2010). Sampling: Design and Analysis. Second Edition. Arizona State University. Australia, Brazil, UK, US. P. 15

§3 *Presentation of Results*

The research website www.videogo.ru was launched at approximately 6 PM Moscow time on Tuesday, April 25, 2017 and we stopped incorporating data received after approximately 6 PM on Tuesday, May 2, 2017. In total, we received 65 data sheets from participants in the study. We were forced to exclude 9 of the responses because they came from identical IP addresses as previous responses which we received. In the case of results from previously encountered IP addresses, we took only the first result.

Of the remaining 56 data entries, we received 4 entries with problematic data (marked in red in the Data section of our Appendices) and an additional 3 entries with potentially problematic data (marked in yellow in the Data section of our Appendices). Red entries were missing data in certain fields, representing technical errors in website, while two yellow entries had identical responses for all fields and the other yellow entry had all 3 brand identity questions incorrectly, placing into doubt the validity of the responses. For validity's sake, we chose to discount these entries from our final data calculations. After discounting those entries from our results, we were left with 49 total responses.

After weighing all 49 entries, we calculated the average rating of each of our participants for each question as well as the total number of correct answers to brand recall questions in order to obtain a point of comparison. This is how our participants responded

- Weighted Average: Q1: 3.5 | Q2: 3.46 | Q3: 3.04 | Q4: 2.61 | Q6: 2.98
- Brand Recall: 136 correct answers out of 147 possible (92.52%)
- Weighted Standard Deviation:
  - Q1: 1.12 | Q2: 1.1 | Q3: 1.04 | Q4: 1.06 | Q6: 1.1

We will further divide our participant data in the proceeding sections.

3.1 Hypothesis 1 – Pre-Roll Engagement

- **Group 1**: Notice, Non-relevant – 10 entries (20.4%)
  - Weighted Average: Q1: 3.25 | Q2: 2.97 | Q3: 2.76 | Q4: 2.90 | Q6: 2.36
- **Group 2**: Notice, Relevant – 17 entries (34.7%)
  - Weighted Average: Q1: 3.42 | Q2: 3.59 | Q3: 3.13 | Q4: 2.45 | Q6: 3.41
- **Group 3**: No notice, Relevant – 10 entries (20.4%)
  - Weighted Average: Q1: 3.51 | Q2: 3.56 | Q3: 3.33 | Q4: 2.44 | Q6: 3.39
- **Group 4**: No notice, Non-relevant – 12 entries (24.5%)
  - Weighted Average: Q1: 3.56 | Q2: 3.63 | Q3: 2.97 | Q4: 2.77 | Q6: 2.58

Our first hypothesis is that Group 2 would have the overall highest engagement with the advertising (as measured by responses to Q3, Q4, and Q6), followed by Groups 3, 1, and 4. In reality, we measured that, in responses for Q3, with high scores as favorable to advertising, Group 3 ranked the highest, followed by Groups 2, 4, and 1. For Q4, with low scores as least annoyance, Group 3 again was the best performing, followed by Groups 2, 4, and 1. Q6 measured how fitting the advertising was to the participant, with high scores indicating high fit, and Group 2 rated the advertising as most fitting, followed by Groups 3, 4, and 1. Both Group 3 and Group 2 were above the average for all three advertisement engagement questions. We note that all data was within 1 standard deviation of the mean, so is by definition not statistically significant, although the differences that we note is significant for our research.

Group 3 performed the best in two of three categories, so this combination of factors proved to be the least intrusive according to our measurements, contrary to our prediction of Group 2. However, Group 2 showed the second best results. Our results indicate that both groups forcefully exposed to relevant advertising rated their experience higher than both groups forcefully exposed to non-relevant advertising. On average, participants in Groups 2 and 3 rated their advertising

12.7% more favorably, were 13.8% less annoyed by their advertising, and reported a 37.7% better fit of advertising to their own needs than their counterparts in Groups 1 and 4. In absolute terms, the best performing group for Q3, Group 3, rated their advertisements 20.7% more favorably than the worst performing group, Group 1. Group 3 was 15.9% less annoyed by their advertisements than the most annoyed group, Group 4. Group 2, the group which considered their advertisements to be the most fitting, rated the fit of their advertisements as 44.5% better than Group 1.

The most surprising finding is that our participants seemed to rate their experience lowest when they received a notice and non-relevant advertising, even preferring to receive non-relevant advertising and to not receive a notice. The notice which we showed to our participants seemed to contribute to intrusiveness instead of lowering it.

Our hypothesis was not confirmed by the data.

### 3.2 Hypothesis 2 – Brand Recall

- **Group 1**: 28 / 30 brands correctly identified (93.3%)
- **Group 2**: 47 / 51 brands correctly identified (92.2%)
- **Group 3**: 28 / 30 brands correctly identified (93.3%)
- **Group 4**: 33 / 36 brands correctly identified (91.7%)

Brand recall proved surprisingly to be not statistically significant across Groups. Our data showed that our participants were able to recall even unfamiliar brands with a high degree of accuracy regardless of the study group to which they were randomly assigned.

Our hypothesis was not confirmed the data. Perhaps our brand recall question was too simple to capture any data of significance.

3.3 Hypothesis 3 – Engagement by Age

- **>18**: 0 participants (0%) 0 / 0 Brands Correct (0%)
- **18 – 24**: 14 participants (28.6%) 39 / 42 Brands Correct (**92.9%**)
  - Weighted Average: Q1: 3.48 | Q2: 3.51 | Q3: **3.04** | Q4: **2.54** | Q6: **3.14**
- **25 – 34**: 26 participants (53.1%) 76 / 78 Brands Correct (**97.4%**)
  - Weighted Average: Q1: 3.45 | Q2: 3.43 | Q3: **2.98** | Q4: **2.70** | Q6: **2.93**
- **35 – 44**: 5 participants (10.2%) 13 / 15 Brands Correct (**86.7%**)
  - Weighted Average: Q1: 3.76 | Q2: 3.42 | Q3: **3.32** | Q4: **2.40** | Q6: **3.06**
- **45 – 60**: 4 participants (8.2%) 8 / 12 Brands Correct (**75.0%**)
  - Weighted Average: Q1: 3.75 | Q2: 3.58 | Q3: **3.03** | Q4: **2.78** | Q6: **2.65**
- **60+**: 0 participants (0%) 0 / 0 Brands Correct (0%)

Our data shows that the age distribution among our study participants was very skewed towards younger people. Over 80 percent of the respondents were under 35 years old. This means that we do not have enough data to adequately compare the separate populations because of the small amount of respondents in the latter two categories. However, based on the data we were able to gather, we can draw the conclusion that participants aged 18 to 24 generally view advertising more positively, as less annoying, and as more fitting than participants aged 25 to 34. However, participants aged 25 to 34 had a higher brand recall. We find it important to note that brand recall decreased in older age groups.

The difference between the two groups for which we obtained data is statistically insignificant. Data obtained through our experiment is generally not statically significant when broken down by age. Perhaps our sample size or sampling techniques provided us with data which does not adequately portray the true differences in advertising engagement when broken down by age demographics, but we deem our data to be inconclusive about age. Our hypothesis was not confirmed by the data.

3.4 Hypothesis 4 – Engagement by Gender

- **Female**: 31 participants (63.3%) 39 / 42 Brands Correct (**93.6%**)
  - Weighted Average: Q1: 3.55 | Q2: 3.54 | Q3: **3.17** | Q4: **2.46** | Q6: **3.17**
- **Male**: 18 participants (36.7%) 76 / 78 Brands Correct (**90.7%**)
  - Weighted Average: Q1: 3.47 | Q2: 3.49 | Q3: **2.86** | Q4: **2.87** | Q6: **2.71**

Although results for female and male breakdown of our data seem to confirm our hypothesis that females would exhibit both higher engagement with advertising and brand recall, our data is very lopsided and cannot be used to make this conclusion. 100% of participants for Group 3, the group with the highest rating for advertisement favorability and the lowest rating for advertising annoyance, identified themselves as female, while 75% of participants for Group 4 and 60% of participants for Group 1, the two groups with the lowest overall scores, identified themselves as male. Based on this skewed data, we may neither confirm nor deny our hypothesis.

3.5 Hypothesis 5 – Engagement by Category

Our 49 participants watched 147 videos total, or 3 videos for each participant. We analyzed the videos while also taking into account the weight system we developed to account for accumulation bias. However, we would also like to present the total breakdown of all categories chosen by our participants.

- **Business**: 10 views (6.8%) 10 /10 Brands Correct (**100%**)
  - Weighted Average: Q1: 3.66 | Q2: 3.66 | Q3: **3.13** | Q4: **3.06** | Q6: **2.87**
- **Culture**: 26 views (17.7%) 24 / 26 Brands Correct (**92.3%**)
  - Weighted Average: Q1: 3.46 | Q2: 3.49 | Q3: **3.14** | Q4: **2.46** | Q6: **2.79**

- **Fashion**: 22 views (15.0%) 21 / 22 Brands Correct (**95.5%**)
  - Weighted Average: Q1: 3.68 | Q2: 3.77 | Q3: **3.53** | Q4: **2.22** | Q6: **3.23**
- **Food**: 17 views (11.6%) 17 / 17 Brands Correct (**100%**)
  - Weighted Average: Q1: 3.53 | Q2: 3.35 | Q3**: 3.16** | Q4**: 2.80** | Q6**: 3.48**
- **Health**: 14 views (9.5%) 10 / 14 Brands Correct (**71.4%**)
  - Weighted Average: Q1: 3.98 | Q2: 3.87 | Q3: **3.09** | Q4: **2.97** | Q6: **2.76**
- **Sports**: 9 views (6.1%) 8 / 9 Brands Correct (**88.9%**)
  - Weighted Average: Q1: 3.54 | Q2: 3.23 | Q3**: 3.37** | Q4**: 2.37** | Q6**: 3.46**
- **Tech**: 16 views (10.9%) 16 / 16 Brands Correct (**100%**)
  - Weighted Average: Q1: 3.64 | Q2: 3.52 | Q3: **3.31** | Q4: **2.49** | Q6: **3.00**
- **Travel**: 33 views (22.4%) 30 / 33 Brands Correct (**90.9%**)
  - Weighted Average: Q1: 3.10 | Q2: 2.98 | Q3**: 2.82** | Q4**: 2.59** | Q6**: 3.21**

The top three video categories for advertisement engagement were Fashion, Sports and Tech and the bottom three were Travel, Health and Business. Only one of three predictions in our fifth hypothesis pertaining to the relationship between categories and advertising engagement was in the top three, while another one of our predictions actually ended up being the very bottom category rated by engagement. However, as we discussed in our limitations, many other factors, including video quality and pre-roll quality, could have affected this data. This is why we consider it valuable to analyze this data from a different perspective.

Our data shows that relevance is the most important factor among those we studied which influences the perception of intrusiveness among our participants. We compared advertising engagement and brand recall by video category across relevant and non-relevant groups in order to test if relevance played a role in this regard. Views for groups exposed to relevant advertising (Groups 2 and 3) totaled 81 (55.1%) while views for 'non-relevant' advertising totaled 66 (44.9%).

Relevant Video Views by Category

- **Business**: 1 view (1.2%) 1 /1 Brands Correct (**100%**)
  - Weighted Average: Q1: 3.00 | Q2: 4.00 | Q3: **3.00** | Q4: **3.00** | Q6: **2.00**
- **Culture**: 11 views (13.6%) 10 / 11 Brands Correct (**90.9%**)
  - Weighted Average: Q1: 3.36 | Q2: 3.72 | Q3: **3.44** | Q4: **1.78** | Q6: **3.20**
- **Fashion**: 15 views (18.5%) 14 / 15 Brands Correct (**93.3%**)
  - Weighted Average: Q1: 3.87 | Q2: 4.08 | Q3: **3.33** | Q4: **2.13** | Q6: **3.62**
- **Food**: 13 views (16.0%) 13 / 13 Brands Correct (**100%**)
  - Weighted Average: Q1: 3.69 | Q2: 3.60 | Q3**: 3.69** | Q4**: 2.67** | Q6**: 3.67**
- **Health**: 9 views (11.1%) 7 / 9 Brands Correct (77**.8%**)
  - Weighted Average: Q1: 4.06 | Q2: 3.98 | Q3: **3.30** | Q4: **2.90** | Q6: **2.94**
- **Sports**: 2 views (2.4%) 2 / 2 Brands Correct (**100%**)
  - Weighted Average: Q1: 2.00 | Q2: 1.00 | Q3**: 4.00** | Q4**: 2.00** | Q6**: 3.50**
- **Tech**: 9 views (11.1%) 9 / 9 Brands Correct (**100%**)
  - Weighted Average: Q1: 4.25 | Q2: 3.92 | Q3: **3.37** | Q4: **2.26** | Q6: **3.83**
- **Travel**: 21 views (25.9%) 19 / 21 Brands Correct (**90.5%**)
  - Weighted Average: Q1: 3.13 | Q2: 3.00 | Q3**: 3.00** | Q4**: 2.43** | Q6**: 3.73**

Non-Relevant Video Views by Category

- **Business**: 9 views (13.6%) 9 /9 Brands Correct (**100%**)
  - Weighted Average: Q1: 3.70 | Q2: 3.63 | Q3: **3.13** | Q4: **3.03** | Q6: **2.48**
- **Culture**: 15 views (22.7%) 14 / 15 Brands Correct (**93.3%**)
  - Weighted Average: Q1: 3.64 | Q2: 3.36 | Q3: **2.84** | Q4: **3.08** | Q6: **2.40**
- **Fashion**: 7 views (10.6%) 7 / 7 Brands Correct (**100%**)
  - Weighted Average: Q1: 3.44 | Q2: 3.20 | Q3: **3.52** | Q4: **2.48** | Q6: **2.76**
- **Food**: 4 views (6.0%) 4 / 4 Brands Correct (**100%**)

    - Weighted Average: Q1: 3.75 | Q2: 4.00 | Q3**: 2.75** | Q4**: 3.25** | Q6**: 2.75**
- **Health**: 5 views (7.6%) 3 / 5 Brands Correct (**60%**)
    - Weighted Average: Q1: 3.70 | Q2: 3.45 | Q3: **2.45** | Q4: **3.75** | Q6: **2.75**
- **Sports**: 7 views (10.6%) 6 / 7 Brands Correct (**85.7%**)
    - Weighted Average: Q1: 3.88 | Q2: 4.10 | Q3**: 3.10** | Q4**: 2.60** | Q6**: 3.30**
- **Tech**: 7 views (10.6%) 7 / 7 Brands Correct (**100%**)
    - Weighted Average: Q1: 3.33 | Q2: 3.17 | Q3: **3.13** | Q4: **2.72** | Q6: **1.98**
- **Travel**: 12 views (18.1%) 11 / 12 Brands Correct (**91.7%**)
    - Weighted Average: Q1: 3.13 | Q2: 3.00 | Q3**: 2.53** | Q4**: 3.20** | Q6**: 2.45**

Although our data is quite limited to draw conclusions from the Business and Sports categories, we can still obtain very valuable information by analyzing the difference between advertising engagement across identical categories in the presence and absence of relevant advertising. The data below shows the difference between the two groups (relevant subtracted by non-relevant) and the percentage difference. Negative values for question 4 represent superior engagement because they indicate how much less annoying participants rated advertising.

- **Business**: **(Not enough data to be significant)**
- **Culture**: Q3: +0.60 (**+17.4%**) | Q4: -1.30 (**-42.2%**) | Q6: +0.80 **(+25%)**
- **Fashion**: Q3: -0.19 (**-5.4%**) | Q4: -0.35 (**-14.1%**) | Q6: +0.86 (**+23.8%**)
- **Food**: Q3: +0.94 **(+25.5%)** | Q4: -0.58 **(-17.8%)** | Q6: +0.92 (+**25.1%)**
- **Health**: Q3: +0.85 (+**25.8%)** | Q4: -0.85 **(-22.7%)** | Q6: +0.19 (+**6.5%)**
- **Sports**: **(Not enough data to be significant)**
- **Tech**: Q3: +0.24 (+7**.1%)** | Q4: -0.46 **(-16.9%)** | Q6: +1.85 **(+48.3%)**
- **Travel**: Q3: +0.47 **(+15.7%)** | Q4: -0.77 **(-24.1%)** | Q6: +1.28 **(+34.3%)**

The only spread between relevant and non-relevant experiences compared by category which did not result in higher engagement with advertising was the participant rating of advertising favorability in the Fashion category, which showed a drop of 5.4% (as we mentioned in our Limitations section, this result could be attributed to a number of factors beyond our control or beyond the scope of our research). However, every single other value showed an increase in advertisement engagement, and every other value except for two showed a double digit percentage increase.

According to the data we gathered, the presence of relevant advertising increased user favorability of advertising by an average of 14.4% and up to a maximum of 25.8% in the case of the Health category when user experience is compared for relevance across identical categories. Annoyance of advertising dropped by an average of 23.0% when relevant advertising was shown and dropped by a maximum of 42.2% in the case of the culture category. User perception of the 'fit' of the advertising to their own needs or desires rose by an average of 27.2% when the advertising shown was relevant to the main video selected by the user, and rose by a maximum of 48.3% in the case of the Tech category. Analyzing the difference between forceful exposure of relevant versus non-relevant advertising across identical categories clearly shows that relevant advertising provides a significantly better experience.

### 3.6 Hypothesis 6 – Engagement by User Rating of Video

We hypothesized that high user rating of the content they choose to view will lead to higher engagement with advertising and higher brand recall. Our next data set attempts to analyze this hypothesis – we compare how high user rating of content corresponds to engagement with advertising and calculate the Pearson correlation coefficient for evidence.

Engagement by Rating of Content (Responses to Question 1)

- **5 of 5**: 28 ratings (19.0%) 27 / 28 Brands Correct (**96.4%**)
  - Weighted Average: Q2: 4.43 | Q3: 3.63 | Q4: 2.32 | Q6: 3.54
- **4 of 5**: 56 ratings (38.1%) 51 / 56 Brands Correct (**91.1%**)
  - Weighted Average: Q2: 3.89 | Q3: 2.87 | Q4: 2.72 | Q6: 2.82
- **3 of 5**: 35 ratings (23.8%) 31 / 35 Brands Correct (**88.6%**)
  - Weighted Average: Q2: 3.04 | Q3: 2.99 | Q4: 2.55 | Q6: 3.00
- **2 of 5**: 19 ratings (10.6%) 18 / 19 Brands Correct (**94.7%**)
  - Weighted Average: Q2: 2.26 | Q3: 2.68 | Q4: 2.99 | Q6: 2.59
- **1 of 5**: 9 ratings (6.1%) 9 / 9 Brands Correct (**100%**)
  - Weighted Average: Q2: 2.13 | Q3: 3.07 | Q4: 2.47 | Q6: 2.90

Pearson Correlation Coefficient

- Q1 to Q2: 0.98
- Q1 to Q3: 0.58
- Q1 to Q4: -0.35
- Q1 to Q6: 0.68

The only clear correlation is that high participant rating of content correlates almost perfectly with a high participant rating of how closely the content matched the participant's expectations. Although participants who rated their chosen content with the highest score also rated their experience with the highest scores, the second highest favorability rating and the second lowest annoyance rating came from participants who rated their content with the lowest score. Low content scores were associated with a middle rating for advertising fit. Those who rated the content they were served in the middle also rated their engagement with the

advertising and their annoyance factor in the middle while their advertising fit score was the second highest. Participants rating their content with the second lowest score did rate the advertising they were exposed to with the lowest favorability score, the highest annoyance score, and the lowest fit score. Pearson's coefficient does indicate a relatively weak correlation between Q1 and Q6.

Brand recall shows no clear correlation with favorability scores. Despite the high advertising engagement of those rated their content highest, we could not detemine a clear correlation between content rating and advertising engagement – the data does not support our hypothesis.

### 3.7 Hypothesis 7 – Engagement by Matched Expectations

We hypothesized that a better match between the content consumed and the user's expectations about the content will correlate with higher engagement with advertising and brand recall. Our analysis again turned to the Pearson coefficient.

Engagement by Content Match to Expectations (Responses to Question 2)

- **5 of 5**: 21 ratings (14.3%) 20 / 21 Brands Correct (**95.2%**)
  - Weighted Average: Q1: 4.67 | Q3: 3.60 | Q4: 2.37 | Q6: 3.47
- **4 of 5**: 74 ratings (50.3%) 69 / 74 Brands Correct (**93.2%**)
  - Weighted Average: Q1: 3.85 | Q3: 3.14 | Q4: 2.49 | Q6: 3.07
- **3 of 5**: 17 ratings (11.6%) 14 / 17 Brands Correct (**82.4%**)
  - Weighted Average: Q1: 3.12 | Q3: 2.50 | Q4: 2.74 | Q6: 2.17
- **2 of 5**: 27 ratings (18.4%) 25 / 27 Brands Correct (**92.6%**)
  - Weighted Average: Q1: 2.45 | Q3: 2.88 | Q4: 2.75 | Q6: 2.77
- **1 of 5**: 8 ratings (5.4%) 8 / 8 Brands Correct (**100%**)
  - Weighted Average: Q1: 1.85 | Q3: 2.70 | Q4: 3.25 | Q6: 2.70

Pearson Correlation Coefficient

- Q2 to Q1: 0.99
- Q2 to Q3: 0.76
- Q2 to Q4: -0.94
- Q2 to Q6: 0.61

Although over half of the data is gathered in only one of the five groups, analyzing the data according to how the participants rated the match of the content they viewed to their expectations shows a much clearer correlation to advertising engagement than analysis by user rating of the content itself. As previously observed, participant rating of content match correlates nearly perfectly with participant rating of expectation matching, but the correlation between expectation matching and perception of advertisement annoyance is also nearly perfectly negatively correlated. The correlation between expectation match rating and advertisement favorability rating is also quite strong. Correlation between expectation match rating and advertising fit is relatively weak, but still noticeable and worthy of consideration, especially in the context of the other strong correlations.

Based on the strong correlation of participant rating of the match between content expectations and actual content and the other factors which we studied, we can say that our data confirms our hypothesis for this relationship. Hypothesis 7 was the only hypothesis that was definitively confirmed by the data which we gathered.

## 3.8 Practical Methods to Minimize Intrusiveness

Now that we have gathered the data and tested our hypotheses, we can make practical suggestions on how digital media companies can utilize this data to further their relationships with both advertisers and clients. We shall proceed laying out our practical suggestions on the practical steps that digital media companies can take to minimize perceived intrusiveness among their users and maximize advertising effectiveness for their advertising partners.

Our first hypothesis aimed to provide empirical evidence for the effects of both a 'cue' or 'notice' and 'relevant' advertising on user experience, advertising engagement, and brand recall. Testing our fifth hypothesis clearly showed an increase in engagement metrics when advertising relevant to category was shown compared to when it was not shown. The most important takeaway from our results is that relevant advertising matched with content in a 'connotative' way produces noticeable decreases in minimization indicators. Digital media companies wishing to implement relevant advertising on their platform may also take a category approach to selling advertising. Sales staff could sell and place advertising according to a content category offered by the media company. For example, could offer travel advertisers guarantees that their advertisements would only be placed in a 'Travel' section of the website and could implement measures to ensure that advertising which is not related to travel would not appear in the same section. This practice could create entirely new relationships with advertisers and a whole new pricing mechanism for ad placement.

Relevant advertising could also be automated with the help of programmatic software if the industry can agree to improve best practices for metadata. If advertisers can be convinced to add category metadata to their advertising based on the IAB standard, companies offering programmatic sales of advertising could use category metadata typically provided by media companies to create an automated match.

We find it ironic that, in a study which focuses on minimizing intrusiveness, our data shows that we in fact increased it by providing our 'notice' to Groups 1 and 2. Academic literature appeared to agree on the theoretical and psychological principles behind the notice, but our participants rated the experience without a notice and with non-relevant advertising (Group 4) higher in most indicators than receiving a notice and non-relevant advertising. These findings bring up two important issues: a lack of research into the design of the notice and whether or not a better design will impact perceived intrusiveness.

Addressing the factors of reciprocity and reactance in the browsing period by targeting user expectations and changing user perceptions about advertising itself may still be able to decrease perceived intrusiveness. Perhaps the most intrusive element of our notice was that it covered up our category selection screen and that users had to wait a small period of time before being able to access their desired content. A research experiment focusing on testing the effects of different types of notices will shed more light on this problem. Will shorter wait times in the notice decrease perceived intrusiveness? Is it more effective to post a notice which does not interrupt the user's task, such as a banner, but which will receive less attention? Even if we discover a minimally intrusive notice design, will it have an effect which minimizes perceived user intrusiveness? These questions present excellent research opportunities for advertising academia for the future.

Unfortunately, our research experiment was not adequately designed to measure how the factors of age and gender effect intrusiveness – our data was inconclusive. However, we would like to conceptualize a future experiment which would be able to measure these factors and deliver data capable of showing how these factors work. Researchers could gather video and advertising with clear age and gender characteristics, determined by the people shown in the video or advertising and the topics themselves. For example, videos about homework or school would be clearly connected to younger age groups, videos about women's fashion accessories clearly connected to women, and videos showing older people

clearly connected to older age groups. As we discussed earlier, users signal their interest in a particular subject or context when they willingly choose to engage in the process of consuming that content. We can add metadata which describes the most likely age and gender connection of each main content video and use this metadata to create a methodology which matches advertising content with the same age and gender characteristics. We can use a similar interface to give study participants the ability to chose their own content and measure the effects of these factors using the same methodology to gather data.

Although the relationship of text content, video content, and advertising content was beyond the scope of our research, we wish to briefly note some recent trends and conceive of additional studies. 'Hover' technology allows video players to remain on screen even if users continue to scroll through content on a page. Further research needs to be done to test the best placement of video and text and to measure how users rate this interaction.

Our sixth hypothesis aimed to study the link between user rating of content and user engagement with advertising. Although we were not able to show a definitive correlation, we deem it important to note once more that our study participants which rated content highest also rated their engagement with advertising highest. This may seem redundant, but this finding reiterates the necessity to make content which users like, as our data shows that advertising paired with highly rated content is more effective and less intrusive.

The last hypothesis examining the relationship between how closely users determined the main content matched their expectations and how highly they rated their experience with advertising did show a clear correlation. This finding is significant because it underscores the importance to digital media companies of creating metadata and information which most accurately describes the content on offer. Users create their content expectations in the browsing period by reviewing metadata and make their decisions to view content based on how closely they perceive any given content to match their own interests. This means that digital

media companies need to spend more resources to determine best practices on how to show metadata about their content offerings to users in order to maximize the user's perception of how closely the content which they choose to view actually correlates with their expectations of the content which they form in the browsing period.

As we mentioned earlier, research is lacking into how users form their content expectations and what role the given metadata plays in this formation. The main elements of metadata about video content which is shown to the user include the title, the thumbnail, and the layout of the metadata on the interface. Research which determines the optimal combination of metadata that maximizes the perception of content meeting expectations could help lay out a practical way to establish metadata standards.

In general, digital media companies should realize that metadata is a crucial element of user experience and actually carries with it many opportunities to more effectively monetize content. Identifying ways to provide valuable data to advertising through metadata, including effective and accurate categorization, will provide digital media companies with more tools and arguments to work more effectively with advertisers. Digital media companies should also encourage their advertising partners to consider updating their metadata practices so metadata from the advertising is better suited to 'match' with editorial content.

## Conclusion

Our research began with an academic overview of the concept of intrusiveness and an identification of the variables which underpin this phenomenon. Academic literature indicated that the most important theoretical forces underlying intrusiveness include the psychological forces of reactance and reciprocity as well as the relevance of the advertising to the user. We formed our research questions on the basis of this information and designed and implemented a research website which we believed would be able to adequately test these factors. The research website provided us with a large amount of data through which we were able to make several important findings about how intrusiveness works in practice.

Research groups exposed to 'relevant' advertising rated their advertisements an average of 12.7% more favorably, were 13.8% less annoyed by their advertisements on average, and reported a better fit of the advertising to their own needs and desires by an average of 37.7% than groups which were exposed to non-relevant advertising. The research groups shown relevant advertising rated the advertising they were shown 14.4% higher, were on average 23.0% less annoyed by advertising, and rated the advertising as fitting their needs an average of 27.2% higher than groups shown non-relevant advertising when these indicators were compared across categories. In some instances, participants exposed to relevant advertising rated their advertising up to 25.8% higher, reported being 42.2% less annoyed by advertising, and rated advertising as fitting their needs up to 48.3% better across identical categories than participants exposed to non-relevant advertising. These findings indicate that digital media companies can improve user experience and work more effectively and lucratively with advertising partners by creating a workflow to feature advertising relevant to their editorial content.

Our findings showed a strong correlation between high participant ratings of the how closely the content matched their expectations and participant favorability

of the content itself, participant favorability of the advertising to which they were exposed, participant rating of annoyance of advertising, and participant rating of the perceived fit of advertising to their own needs and desires. This strong correlation between matched expectations and engagement with advertising content should inspire digital media companies to take their metadata more seriously and devise ways to improve the matched expectations indicator.

The 'crisis' of journalism brought about by Internet is also bringing different sorts of opportunities to digital media companies due to the technical possibilities of digital content. Demonstrating increased effectiveness of advertising can give digital media companies the ability to raise prices for advertising while taking measures to decrease the perception of intrusiveness among their users can increase user loyalty and even win over new audiences. This may even lead to a positive feedback loop for media companies which implement our suggestions, enabling these companies to earn more revenue, retain their audience, and gain new audiences, perhaps even creating a sustainable financial model which can replace traditional models.

In the end, this research is for the Internet user. Our goal was to suggest theoretically and empirically grounded methods to improve the experience of the average news junkie while he or she is browsing their favorite news and entertainment websites. It is our hope that our findings will enable digital media companies to find ways to make the Internet better for all of us.

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## <u>Appendix 1:</u> Figures, Tables, and Graphs


**Figure 1** – A 'pre-roll' on YouTube with a 'Skip Ad' button outlined in red

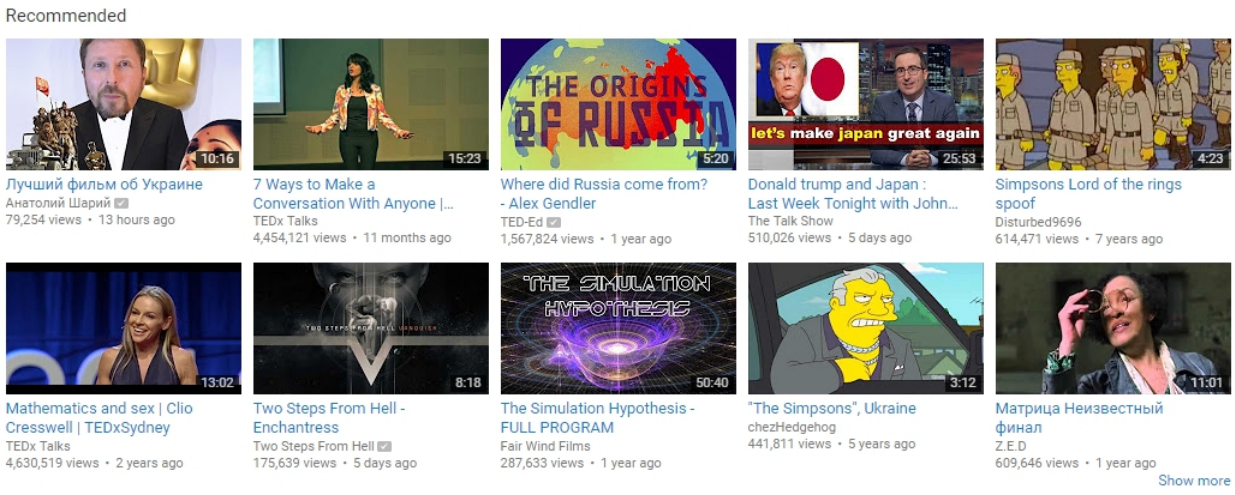



**Figure 2** – Thumbnail, title,author, views, duration, upload date (YouTube)


**Figure 3** – Category navigation bar at top of New York Times homepage

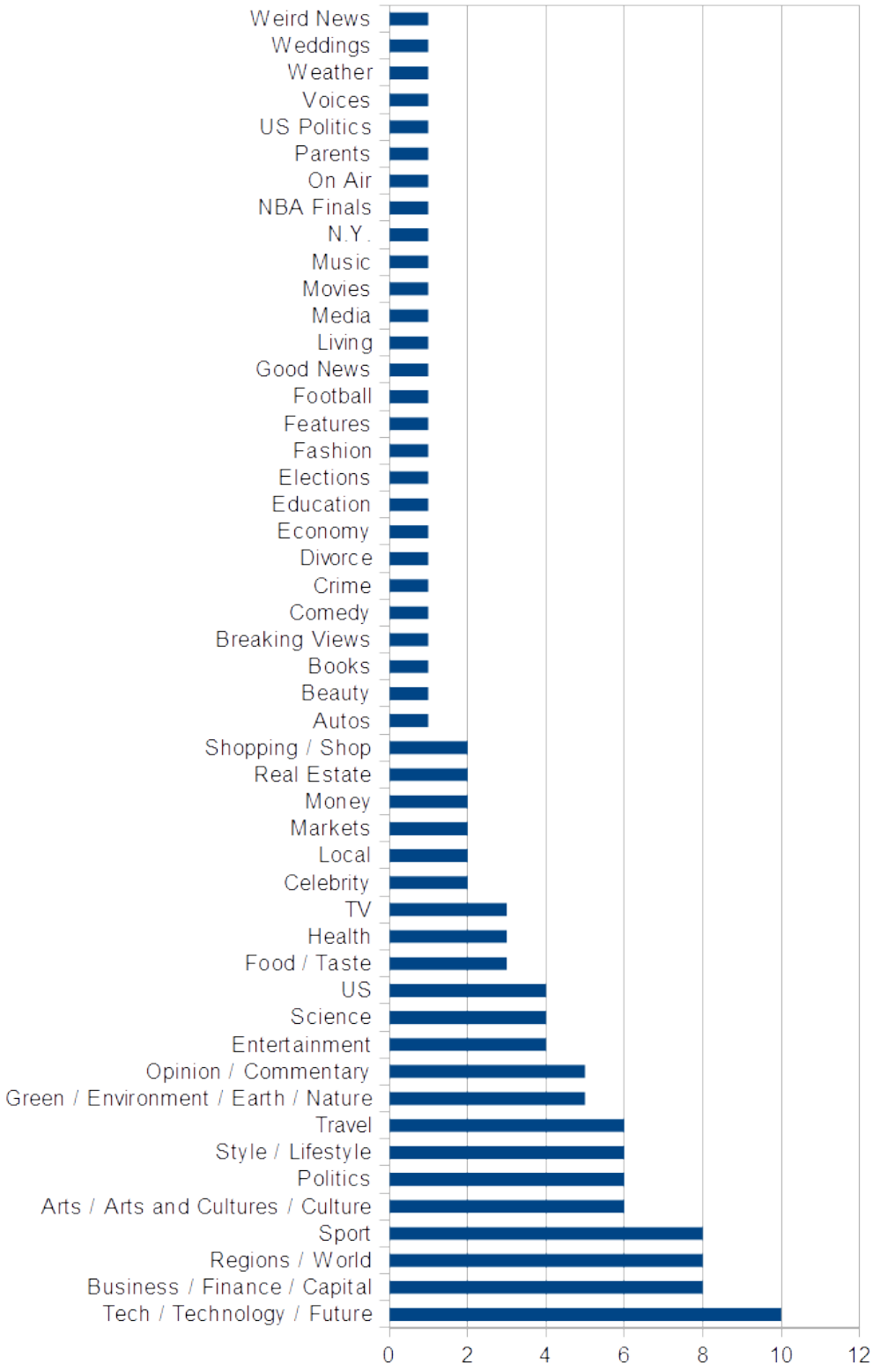



**Figure 4** – Category frequency on top English-language news websites

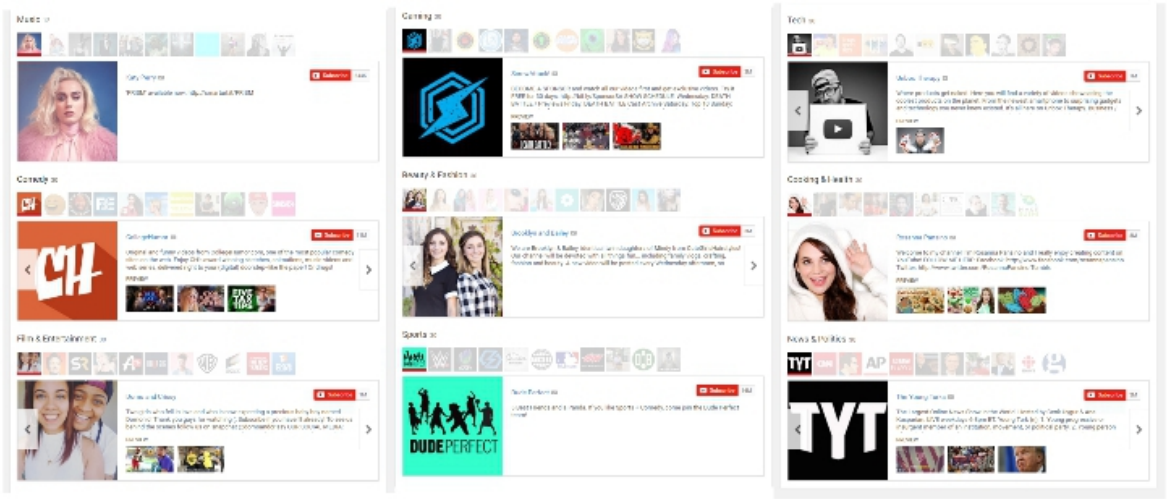


**Figure 5** – YouTube "Channel" categorization (YouTube)

= Tier 1 Categories = Tier 2 Categories

| Arts & Entertainment | Automotive | | Business | Careers | Education | Family & Parenting |
|---|---|---|---|---|---|---|
| Books & Literature | Auto Parts | Hybrid | Advertising | Career Planning | 7-12 Education | Adoption |
| Celebrity Fan/Gossip | Auto Repair | Luxury | Agriculture | College | Adult Education | Babies & Toddlers |
| Fine Art | Buying/Selling Cars | MiniVan | Biotech/Biomedical | Financial Aid | Art History | Daycare/Pre School |
| Humor | Car Culture | Motorcycles | Business Software | Job Fairs | College Administration | Family Internet |
| Movies | Certified Pre-Owned | Off-Road Vehicles | Construction | Job Search | College Life | Parenting - K-6 Kids |
| Music | Convertible | Performance Vehicles | Forestry | Resume Writing/Advice | Distance Learning | Parenting Teens |
| Television | Coupe | Pickup | Government | Nursing | English as a 2nd Language | Pregnancy |
| | Crossover | Road-Side Assistance | Green Solutions | Scholarships | Language Learning | Special Needs Kids |
| | Diesel | Sedan | Human Resources | Telecommuting | Graduate School | Eldercare |
| | Electric Vehicle | Trucks & Accessories | Logistics | U.S. Military | Homeschooling | |
| | Hatchback | Vintage Cars | Marketing | Career Advice | Homework/Study Tips | |
| | | Wagon | Metals | | K-6 Educators | |
| | | | | | Private School | |
| | | | | | Special Education | |
| | | | | | Studying Business | |

| Health & Fitness | | Food & Drink | Hobbies & Interests | Home & Garden | Law, Gov't & Politics | News |
|---|---|---|---|---|---|---|
| Exercise | Herbs for Health | American Cuisine | Art/Technology | Appliances | Immigration | International News |
| A.D.D. | Holistic Healing | Barbecues & Grilling | Arts & Crafts | Entertaining | Legal Issues | National News |
| AIDS/HIV | IBS/Crohn's Disease | Cajun/Creole | Beadwork | Environmental Safety | U.S. Government Resources | Local News |
| Allergies | Incest/Abuse Support | Chinese Cuisine | Birdwatching | Gardening | Politics | |
| Alternative Medicine | Incontinence | Cocktails/Beer | Board Games/Puzzles | Home Repair | Commentary | |
| Arthritis | Infertility | Coffee/Tea | Candle & Soap Making | Home Theater | | |
| Asthma | Men's Health | Cuisine-Specific | Card Games | Interior Decorating | | |
| Autism/PDD | Nutrition | Desserts & Baking | Chess | Landscaping | | |
| Bipolar Disorder | Orthopedics | Dining Out | Cigars | Remodeling & Construction | | |
| Brain Tumor | Panic/Anxiety | Food Allergies | Collecting | | | |
| Cancer | Disorders | French Cuisine | Comic Books | | | |
| Cholesterol | Pediatrics | Health/LowFat Cooking | Drawing/Sketching | | | |
| Chronic Fatigue | Physical Therapy | Italian Cuisine | Freelance Writing | | | |
| Syndrome | Psychology/Psychiatry | Japanese Cuisine | Genealogy | | | |
| Chronic Pain | Senior Health | Mexican Cuisine | Getting Published | | | |
| Cold & Flu | Sexuality | Vegan | Guitar | | | |
| Deafness | Sleep Disorders | Vegetarian | Home Recording | | | |
| Dental Care | Smoking Cessation | Wine | Investors & Patents | | | |
| Depression | Substance Abuse | | Jewelry Making | | | |
| Dermatology | Thyroid Disease | | Magic & Illusion | | | |
| Diabetes | Weight Loss | | Needlework | | | |
| Epilepsy | Women's Health | | Painting | | | |
| GERD/Acid Reflux | | | Photography | | | |
| Headaches/Migraines | | | Radio | | | |
| Heart Disease | | | Roleplaying Games | | | |
| | | | Sci-Fi & Fantasy | | | |
| | | | Scrapbooking | | | |
| | | | Screenwriting | | | |
| | | | Stamps & Coins | | | |
| | | | Video & Computer Games | | | |
| | | | Woodworking | | | |

**Figure 6** – IAB Tier 1 and Tier 2 Advertising Categories (IAB – Part 1)

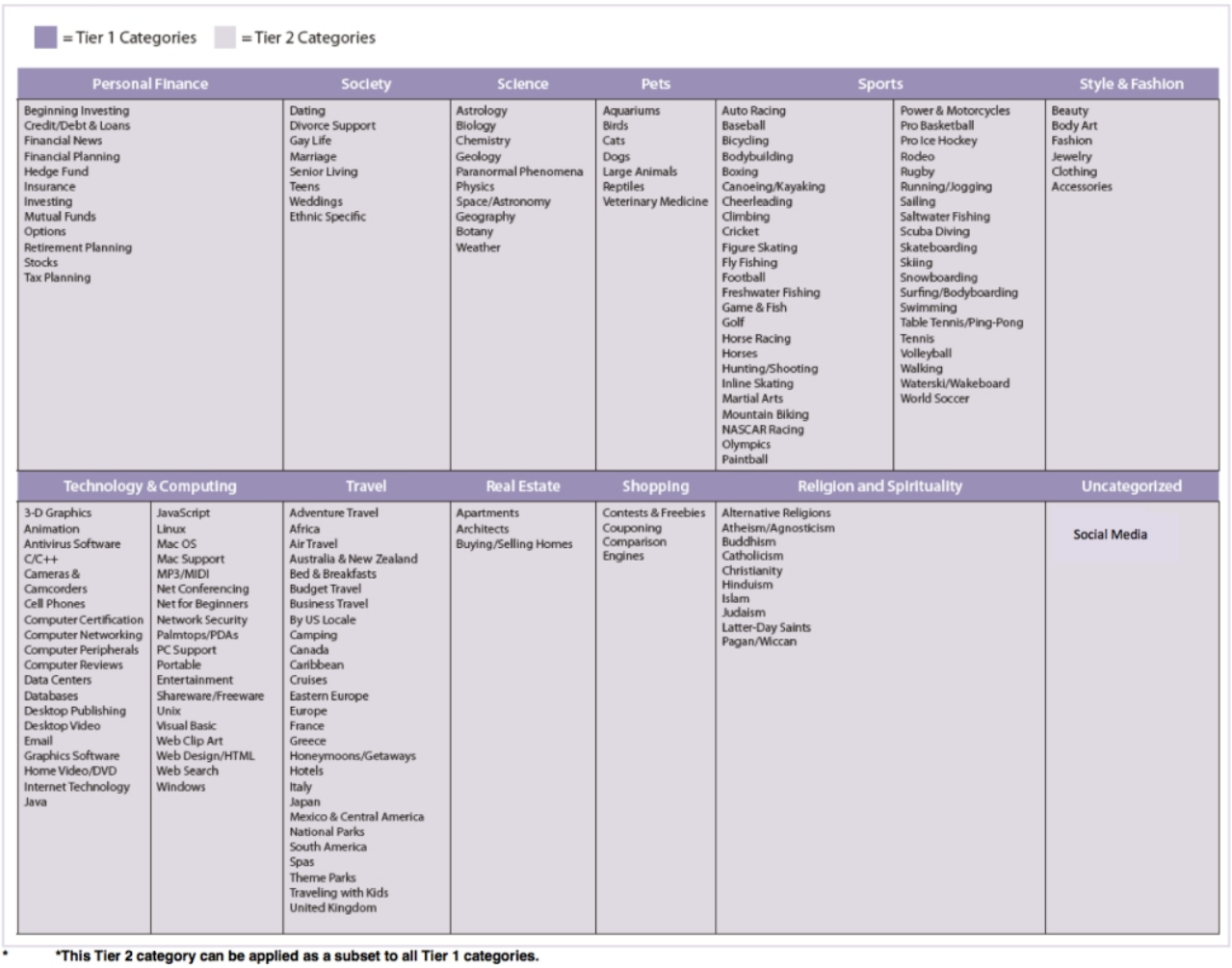



**Figure 7** – IAB Tier 1 and Tier 2 Advertising Product Categories (IAB – Part 2)

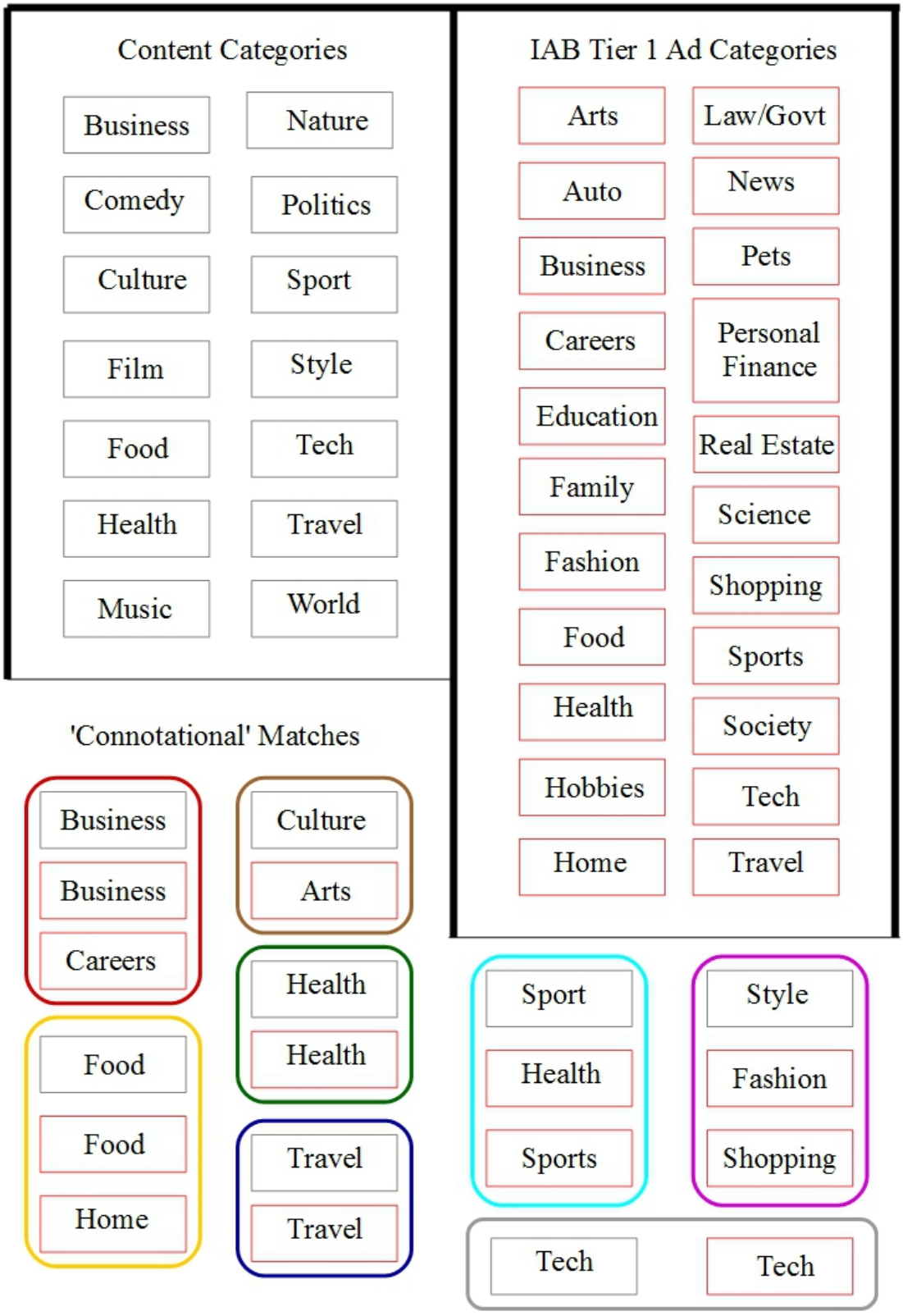



**Figure 8** – Video content categories (gray) matched with IAB Tier 1 Categories (red)

## **Appendix 2:** Main Videos and Associated Metadata

Business

b1


Retrieval Link: http://www.youtube.com/watch?v=OMp4os3m2xI
Original Title: 5 ЛАЙФХАКОВ С ТЕЛЕФОНОМ ДЛЯ ЗАРАБОТКА
Altered Title: 5 лайфхаков с телефоном для заработка (Made lowercase)
Translation: 5 Lifehacks to earn money with your smartphone
Duration: 164 seconds
Upload Date: 19/07/2016
Views at Time of Download: 371,853

b2


Retrieval Link: http://www.youtube.com/watch?v=rSIDvUOiO6s
Original Title: 10 ЦЕННЫХ ФАКТОВ О BITCOIN
Altered Title: 10 ценных фактов о Bitcoin (Made lowercase)
Translation: 10 valuable facts about Bitcoin
Duration: 192 seconds
Upload Date: 07/12/2015
Views at Time of Download: 428,520

b3


Retrieval Link: http://www.youtube.com/watch?v=2doINqgTmp0
Original Title: Стивен Вольфрам: Как я создал свой бизнес
Altered Title: Стивен Вольфрам: Как я создал свой бизнес (No changes)
Translation: Steven Wolfram: How I started my own business
Duration: 176 seconds
Upload Date: 31/10/2013
Views at Time of Download: 179,888

b4


Retrieval Link: http://www.youtube.com/watch?v=vdgdoMQ9Drk
Original Title: РЕЙТИНГ ТОП 5 - РОССИЙСКИЕ БАНКИ
Altered Title: Рейтинг топ 5 - российские банки
Translation: Rating of Top 5 Russian Banks
Duration: 175 seconds
Upload Date: 25/03/2017
Views at Time of Download: 83,233

**Culture**

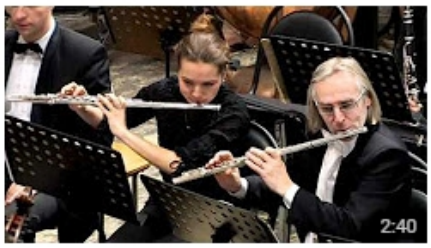
c1


Retrieval Link: http://www.youtube.com/watch?v=4kcab5Hg-7Q
Original Title: Ирландские танцы. Riverdance with Padraic Moyles (отрывок)
Altered Title: Ирландские танцы «Riverdance» с Padraic Moyles (Removed period, put “Riverdance” in quotes, translated “with” into Russian, removed ending work in parentheses)
Translation: Irish dances “Riverdance” with Padraic Moyles
Duration: 157 seconds
Upload Date: 10/01/2012
Views at Time of Download: 212,847

c2


Retrieval Link: http://www.youtube.com/watch?v=IdJJX08IQbQ
Original Title: Анна Нетребко_Кальман Выходная ария Сильвы
Altered Title: Анна Нетребко. Кальман, выходная ария Сильвы
(Replaced underscore with period to separate name of singer and composer)
Translation: Anna Netrebko. Kalman, concluding aria of Silva
Duration: 154 seconds
Upload Date: 25/03/2013
Views at Time of Download: 94,503

c3




Retrieval Link: http://www.youtube.com/watch?v=gvAspXhmxbk
Original Title: Хачатурян: Танец с саблями
Altered Title: Хачатурян: Танец с саблями (No changes)
Translation: Khachaturan: Dance with sables
Duration: 159 seconds
Upload Date: 12/07/2011
Views at Time of Download: 364,630

c4


Retrieval Link: http://www.youtube.com/watch?v=sIEoQg8UaiY
Original Title: "Мак" Олег Буйко. Масляная живопись. Oil painting. **油畫油絵**
Altered Title: "Мак" Олег Буйко. Масляная живопись (Removed English and Chinese script)
Translation: Khachaturan: “Mack” Oleg Buiko. Oil painting
Duration: 164 seconds
Upload Date: 20/02/2014
Views at Time of Download: 134,169

**Fashion**

fa1


Retrieval Link: http://www.youtube.com/watch?v=Lj4kmkLWfMg
Original Title: ТРЕНД: МЕТАЛЛИЧЕСКИЙ МАНИКЮР|ЗЕРКАЛЬНАЯ ПУДРА ДЛЯ ИДЕАЛЬНОГО ХРОМА|MIRROR POWDER NAILS
Altered Title: Тренд: металлический маникюр. Зеркальная пудра для идеального хрома (Lowercase, replaced "|" with a period, removed English)
Translation: Trend: Metallic manicure. Mirror powder for the ideal chrome
Duration: 166 seconds
Upload Date: 19/08/2016
Views at Time of Download: 660,981

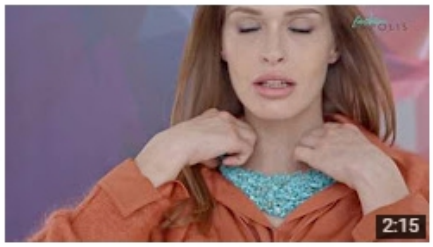
fa2


Retrieval Link: http://www.youtube.com/watch?v=Kz1Elf6gTC8
Original Title: Тренды мужских стрижек и укладок 2017 - All Things Hair
Altered Title: Тренды мужских стрижек и укладок 2017 (Removed Username)
Translation: Men's haircut and styling trends 2017
Duration: 169 seconds
Upload Date: 17/02/2017
Views at Time of Download: 242,524

fa3


Retrieval Link: http://www.youtube.com/watch?v=89qFIb8syiQ
Original Title: Мой стиль 4 наряда | Тренды весна-лето
Altered Title: Мой стиль 4 наряда. Тренды весна-лето (Changed "|" to period)
Translation: My style 4 outfits. Spring-summer trends.
Duration: 131 seconds
Upload Date: 17/02/2017
Views at Time of Download: 200,599

fa4




Retrieval Link: http://www.youtube.com/watch?v=8ldsxMjkmwQ
Original Title: Как носить и с чем сочетать замшевую юбку
Altered Title: Как носить и с чем сочетать замшевую юбку (No changes)
Translation: How to wear and what to match with a suede skirt
Duration: 134 seconds
Upload Date: 01/09/2016
Views at Time of Download: 69,584

**Food**

fo1


Retrieval Link: http://www.youtube.com/watch?v=q93nmWLP8gE
Original Title: ШОКИРУЮЩАЯ ЕДА ИЗ МАКДОНАЛЬДСА!
Altered Title: Шокирующая еда из Макдональдса (Made lowercase and removed exclamation)
Translation: Shocking food from McDonald's
Duration: 153 seconds
Upload Date: 30/11/2014
Views at Time of Download: 154,185

fo2


Retrieval Link: http://www.youtube.com/watch?v=qQQwtdLQr74
Original Title: Необычная подача еды к Новогоднему столу [Идеи для жизни]
Altered Title: Необычная подача еды к новогоднему столу (Removed text in parentheses)
Translation: Unusual way to serve food for New Years
Duration: 117 seconds
Upload Date: 22/12/2014
Views at Time of Download: 71,424

fo3


Retrieval Link: http://www.youtube.com/watch?v=js0RLxP9Zaw
Original Title: Рецепт Тирамису [Рецепты Bon Appetit]
Altered Title: Рецепт тирамису (Removed text in parentheses)
Translation: Tiramisu Recipe
Duration: 131 seconds
Upload Date: 15/01/2014
Views at Time of Download: 365,569

fo4


Retrieval Link: http://www.youtube.com/watch?v=dnxi2_XqcA8
Original Title: Как готовят настоящую пиццу!!!
Altered Title: Как готовят настоящую пиццу (Removed exclamation marks at end)
Translation: How to make a real pizza
Duration: 170 seconds
Upload Date: 19/07/2013
Views at Time of Download: 330,549

**Health**

h1


Retrieval Link: http://www.youtube.com/watch?v=zqgKas_pKBM
Original Title: Влияние секса на здоровье. Топ-6 фактов [120 на 80]
Altered Title: Влияние секса на здоровье. Топ-6 фактов (Removed Username)
Translation: How sex influences health. Top 6 facts
Duration: 138 seconds
Upload Date: 27/11/2016
Views at Time of Download: 223,201

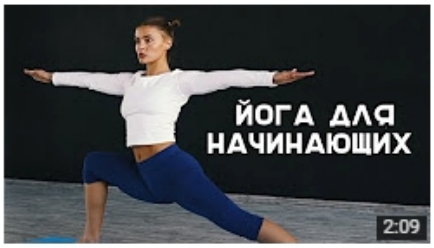
h2


Retrieval Link: http://www.youtube.com/watch?v=9QaD-sjHvQ8
Original Title: Шейный остеохондроз. Лечение шейного остеохондроза за 1 минуту своими руками.
Altered Title: Лечение шейного остеохондроза за 1 минуту своими руками (Removed repeating information)
Translation: How to treat neck osteochondrosis in minute with your own hands
Duration: 178 seconds
Upload Date: 15/09/2014
Views at Time of Download: 383,911

h3


Retrieval Link: http://www.youtube.com/watch?v=JYezu4RVjRM
Original Title: Курение при беременности
Altered Title: Курение при беременности (No changes)
Translation: Smoking while pregnant
Duration: 158 seconds
Upload Date: 25/08/2011
Views at Time of Download: 174,341

h4




Retrieval Link: http://www.youtube.com/watch?v=rGtXqrIxdYY
Original Title: Йога для начинающих [Workout | Будь в форме]
Altered Title: Йога для начинающих (Removed Username)
Translation: Yoga for beginners
Duration: 128 seconds
Upload Date: 02/11/2015
Views at Time of Download: 91,060

**Sports**

s1


Retrieval Link: http://www.youtube.com/watch?v=uo3XxPE5nzA
Original Title: Snowboarding. Как я училась кататься на сноуборде. Winter 2014.
Altered Title: Как я училась кататься на сноуборде (Removed English words)
Translation: How I learned to ride a snowboard
Duration: 160 seconds
Upload Date: 18/02/2014
Views at Time of Download: 207,713

s2


Retrieval Link: http://www.youtube.com/watch?v=GaAh6QF3qPo
Original Title: Как сделать дроп на BMX (How To Drop BMX)
Altered Title: Как сделать дроп на BMX (Removed English words)
Translation: How to do a drop on a BMX
Duration: 175 seconds
Upload Date: 25/04/2013
Views at Time of Download: 643,323

s3


Retrieval Link: http://www.youtube.com/watch?v=AOVVphnmHnA
Original Title: Гимнастика. Ожидание и реальность.
Altered Title: Гимнастика. Ожидание и реальность (No changes)
Translation: Gymnastics. Expectation vs reality
Duration: 145 seconds
Upload Date: 08/07/2015
Views at Time of Download: 2,008,241

s4


Retrieval Link: http://www.youtube.com/watch?v=AOVVphnmHnA
Original Title: САМЫЕ НЕВЕРОЯТНЫЕ ПЕНАЛЬТИ В ФУТБОЛЕ
Altered Title: Самые невероятные пенальти в футболе (Made lowercase)
Translation: Gymnastics. Expectation vs reality
Duration: 179 seconds
Upload Date: 22/05/2016
Views at Time of Download: 2,082,901

**Technology**

te1


Retrieval Link: http://www.youtube.com/watch?v=AOVVphnmHnA
Original Title: ВОТ это БЕСПИЛОТНИК
Altered Title: Вот это беспилотник (Made lowercase)
Translation: Now this is a drone
Duration: 175 seconds
Upload Date: 11/04/2016
Views at Time of Download: 267,923

te2


Retrieval Link: http://www.youtube.com/watch?v=Qkf5gEz68IA
Original Title: ТОП 10 ЛУЧШИХ БЕСПЛАТНЫХ ПРОГРАММ ДЛЯ МОНТАЖА ВИДЕО НА ТЕЛЕФОН ДЛЯ IOS и ANDROID || ДЛЯ ВИДЕОМОНТАЖА
Altered Title: Топ 10 лучших бесплатных программ для монтажа видео на телефон для iOS и Android (Made lowercase and removed repeat)
Translation: Top 10 free apps for editing video on your phone for iOS and Android
Duration: 149 seconds
Upload Date: 18/07/2016
Views at Time of Download: 152,386

te3

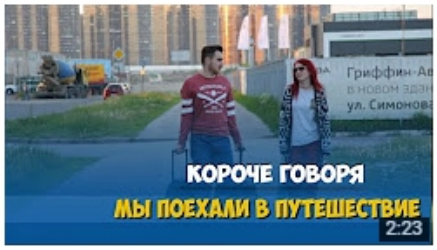

Retrieval Link: https://www.youtube.com/watch?v=EeBUznHOuhA
Original Title: Как превратить обычный телевизор в SMART TV
Altered Title: Как превратить обычный телевизор в SMART TV (No changes)
Translation: How to change a regular television into a SMART TV
Duration: 144 seconds
Upload Date: 23/02/2016
Views at Time of Download: 265,459

te4


Retrieval Link: http://www.youtube.com/watch?v=L8Zi51XTok4
Original Title: Китайская компания Winsun напечатала первую пятиэтажку на 3D принтере
Altered Title: Китайская компания Winsun напечатала первую пятиэтажку на 3D принтере (No changes)
Translation: Chinese company Winsun printed the first 5 story building with a 3D printer
Duration: 120 seconds
Upload Date: 25/01/2015
Views at Time of Download: 176,888

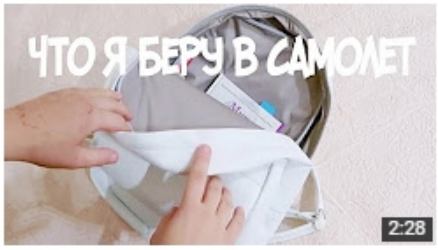
**Travel**

tr1




Retrieval Link: http://www.youtube.com/watch?v=ZQdcS6ojJ5c
Original Title: Короче говоря, мы поехали в путешествие
Altered Title: Короче говоря, мы поехали в путешествие (No changes)
Translation: Cutting to the chase, we went traveling
Duration: 142 seconds
Upload Date: 29/07/2016
Views at Time of Download: 2,633,157

tr2




Retrieval Link: http://www.youtube.com/watch?v=b38vJ9Bb_-c
Original Title: ЧТО Я БЕРУ С СОБОЙ В САМОЛЕТ
Altered Title: Что я беру с собой в самолет (Made lowercase)
Translation: What I bring with me on the plane
Duration: 147 seconds
Upload Date: 04/10/2016
Views at Time of Download: 359,288

tr3


Retrieval Link: http://www.youtube.com/watch?v=ofk-R9EwuRo
Original Title: САМЫЕ СУМАСШЕДШИЕ ОТЕЛИ ВО ВСЕМ МИРЕ
Altered Title: Самые сумасшедшие отели во всем мире (Made lowercase)
Translation: Craziest hotels in the world
Duration: 180 seconds
Upload Date: 15/10/2015
Views at Time of Download: 45,105

tr4


Retrieval Link: http://www.youtube.com/watch?v=zVokrxurkFM
Original Title: Тайланд. Пи Пи Лей. Пляж без Ди Каприо | Provolod & Leeloo
Altered Title: Тайланд. Пи Пи Лей. Пляж без Ди Каприо (Removed Username)
Translation: Thailand. Phi Phi Lei. Beach without Di Caprio
Duration: 138 seconds
Upload Date: 23/12/2010
Views at Time of Download: 182,989

## Appendix 3: Pre-Rolls and Associated Metadata

### Business

b-pre1

Retrieval Link: http://www.youtube.com/watch?v=S-a0ZvW6_RQ
Original Title: Реклама BlauStein на Первом Канале
Translation: Ad for Blaustein on Channel 1
Company: Blaustein (business lawyers)
Duration: 10 seconds
Upload Date: 05/12/2013
Views at Time of Download: 813

b-pre2

Retrieval Link: http://www.youtube.com/watch?v=G8t_uWHb3sc
Original Title: Серия ТВ-роликов для HeadHunter, ролик 1
Translation: TV advertising for HeadHunter, clip 1
Company: HeadHunter (career search)
Duration: 15 seconds
Upload Date: 01/02/2017
Views at Time of Download: 755

b-pre3

Retrieval Link: http://www.youtube.com/watch?v=5QgbVU6X2LU
Original Title: Тинькофф Бизнес: открой счет и зарабатывай
Translation: Tinkoff Business: open your account and earn
Company: Tinkoff (business banking)
Duration: 20 seconds
Upload Date: 14/02/2017
Views at Time of Download: 28

**Culture**

c-pre1

Retrieval Link: http://www.youtube.com/watch?v=NaaKwfB00ys
Original Title: Реклама спектакля Александринского театра. "Гамлет".
Translation: Ad for the play “Hamlet” at the Aleksandrinskoe Theater
Company: Aleksandrinskoe Theater
Duration: 15 seconds
Upload Date: 26/05/2012
Views at Time of Download: 1,497

c-pre2

Retrieval Link: http://www.youtube.com/watch?v=TED3aAq-Gh8
Original Title: Эффект воздействия: Чёрный супрематический квадрат (1)
Translation: Effects of exposure. Supreme black square (ad clip)
Company: Tretyakovskaya Gallereya
Duration: 15 seconds
Upload Date: 22/08/2016
Views at Time of Download: 128,541

c-pre3

Retrieval Link: http://www.youtube.com/watch?v=M9bqK1c_xk0
Original Title: Художник и театр. Фонд художника Михаила Шемякина (рекламный ролик)
Translation: The artist and the theater. Fund of the artist Mikhail Shemyakin (ad clip)
Company: Radishevskiy Museum
Duration: 11 seconds
Upload Date: 22/03/2015
Views at Time of Download: 245

**Fashion**

fa-pre1

Retrieval Link: http://www.youtube.com/watch?v=HGcSVZPgIm4
Original Title: Реклама духов La Rive
Translation: Ad for fragrances from La Rive
Company: La Rive (Retail)
Duration: 15 seconds
Upload Date: 13/11/2015
Views at Time of Download: 33,194

fa-pre2

Retrieval Link: http://www.youtube.com/watch?v=0JudLODEM-Y
Original Title: Temnikova x Calzedonia 2017
Translation: Not necessary
Company: Calzedonia (women's clothing)
Duration: 20 seconds
Upload Date: 20/12/2016
Views at Time of Download: 23,700

fa-pre3

Retrieval Link: http://www.youtube.com/watch?v=ZDsMFHrJU7Y
Original Title: Реклама H&M Лето 2016
Translation: Ad for H&M Summer 2016
Company: H&M (clothing)
Duration: 14 seconds
Upload Date: 05/05/2016
Views at Time of Download: 4,790

**Food**

fo-pre1

Retrieval Link: http://www.youtube.com/watch?v=Yi5C0iTJOA8
Original Title: Tefal представляет: универсальная посуда Ingenio
Translation: Tefal presents: universal cookware Ingenio
Company: Tefal (Cookware)
Duration: 17 seconds
Upload Date: 03/11/2016
Views at Time of Download: 5,060,386

fo-pre2

Retrieval Link: http://www.youtube.com/watch?v=c4q8R0oMkug
Original Title: Милка реклама шоколад Milka TUC и Milka LU
Translation: Milka ad chocolate Milka TUC and Milka LU
Company: Milka (Chocolate)
Duration: 19 seconds
Upload Date: 15/02/2016
Views at Time of Download: 58,929

fo-pre3

Retrieval Link: https://www.youtube.com/watch?v=rctMmOpX9RI
Original Title: Реклама Хлопья Фитнес 2016
Translation: Ad for Fitness Oats 2016
Company: Nestle (Food)
Duration: 14 seconds
Upload Date: 24/01/2016
Views at Time of Download: 7,159

**Health**

h-pre1

Retrieval Link: http://www.youtube.com/watch?v=LYcWNIRjjd4
Original Title: Реклама Юнивит Энерджи 2016
Translation: Ad for Univit Energy 2016
Company: OTC Pharm (Pharma)
Duration: 19 seconds
Upload Date: 17/01/2016
Views at Time of Download: 22,697

h-pre2

Retrieval Link: https://www.youtube.com/watch?v=zov5oXCtOkU
Original Title: Добро пожаловать в клинику детской стоматологии!
Translation: Welcome to the children's dentist clinic
Company: Medi Clinics (Dentistry)
Duration: 20 seconds
Upload Date: 07/05/2015
Views at Time of Download: 11,072

h-pre3

Retrieval Link: https://www.youtube.com/watch?v=xbzURoP122c
Original Title: Реклама Кагоцел - "Работает даже при запоздалом лечении"
Translation: Ad for Kagocel - “It works even with delayed treatment”
Company: NearMedic (Pharma)
Duration: 19 seconds
Upload Date: 06/02/2016
Views at Time of Download: 2,978

**Sports**

s-pre1

Retrieval Link: https://www.youtube.com/watch?v=y4hpj7GSJbM
Original Title: Александр Овечкин реклама Nike (альтернативная версия)
Translation: Aleksander Ovechkin ad for Nike (alternate version)
Company: Nike (Clothing)
Duration: 20 seconds
Upload Date: 29/07/2013
Views at Time of Download: 9,237

s-pre2

Retrieval Link: https://www.youtube.com/watch?v=GASFDLw_hoo
Original Title: Новая реклама adidas с Месут Озилом
Translation: New Adidas ad with Mesut Ozil
Company: Adidas (Clothing)
Duration: 17 seconds
Upload Date: 09/02/2016
Views at Time of Download: 637

s-pre3

Retrieval Link: https://www.youtube.com/watch?v=Yd2u8s1gj5U
Original Title: Спортмастер – спорт начинается с семьи!
Translation: Sportmaster – sport begins with the family!
Company: Sportmaster (Retail)
Duration: 15 seconds
Upload Date: 20/11/2014
Views at Time of Download: 3,057

**Technology**

te-pre1

Retrieval Link: https://www.youtube.com/watch?v=GvqDpPBO_Rg
Original Title: Снято на iPhone. Автор: Поло Свелсен.
Translation: Taken with an iPhone. Author: Polo Svensen
Company: Apple (Electronics)
Duration: 15 seconds
Upload Date: 21/06/2016
Views at Time of Download: 38,857

te-pre2

Retrieval Link: https://www.youtube.com/watch?v=afIT2PJ-vnM
Original Title: Реклама Евросеть (Sony Xperia E5)
Translation: Euroset ad (Sony Xperia E5)
Company: Euroset (Retail)
Duration: 15 seconds
Upload Date: 06/08/2016
Views at Time of Download: 20,320

te-pre3

Retrieval Link: https://www.youtube.com/watch?v=EpbWEr7HNO4
Original Title: Реклама МегаФон "Все включено" - В поезде
Translation: Megafon ad “everything included” in the train
Company: Megafon (Telecom)
Duration: 14 seconds
Upload Date: 02/08/2016
Views at Time of Download: 6,754

**Travel**

tr-pre1

Retrieval Link: https://www.youtube.com/watch?v=_7zet_RZX7A
Original Title: Реклама TravelTipz - Отель с видом на город - TravelTipz TV-spot - Hotel with the city view
Translation: Included in title
Company: TravelTipz (Trip booking)
Duration: 20 seconds
Upload Date: 14/04/2015
Views at Time of Download: 1,308

tr-pre2

Retrieval Link: https://www.youtube.com/watch?v=oVa-U3dFZRE
Original Title: реклама Аэрофлот
Translation: Aeroflot ad
Company: Aeroflot (Flights)
Duration: 11 seconds
Upload Date: 03/08/2012
Views at Time of Download: 6,313

tr-pre3

Retrieval Link: https://www.youtube.com/watch?v=o53NINNLS9Q
Original Title: Aviasales: С нами, с усами! (10 сек.)
Translation: Aviasales: with us, with a moustache!
Company: Aviasales (Trip booking)
Duration: 10 seconds
Upload Date: 19/05/2014
Views at Time of Download: 25,341

**<u>Appendix 4:</u> Screens of Research Website and Translation**

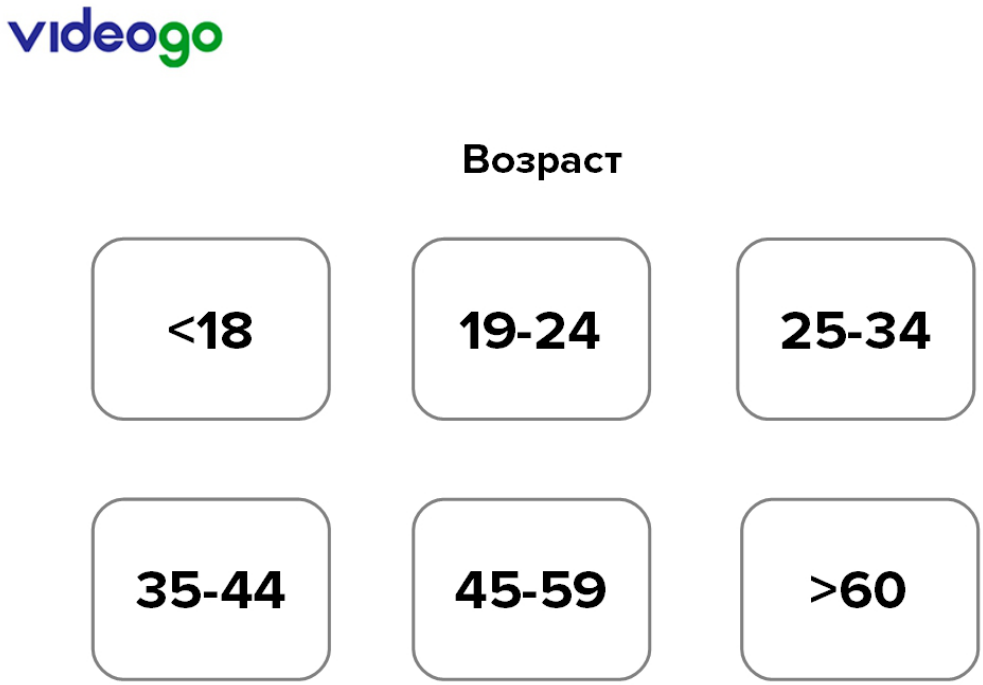
Start Page


**Спасибо за интерес к нашему исследованию! Вам будет предложено выбрать 3 видео из 8 категорий, каждая из которых содержит по 4 видео. После просмотра каждого видео, пожалуйста, ответьте на короткие вопросы. Участие в исследовании займет не более 30 минут.**

Translation: “Thank you for your interest in our research! You will be asked to choose 3 videos from 8 categories, each of which contains 4 videos. After you are finished viewing each video, please answer the short questions. Your participation in the research project should not take more than 30 minutes.”

Pick Gender


Pick Age



Category Screen

Advertising Notice


Translation: “VideoGo shows video advertising in order to pay the salaries of our hard-working staff and to continue to deliver the best online videos to our viewers.”

(Number in bottom right corner counts down from 5 to 0, and then a red X appears in the circle, allowing the user to close the notice and continue with the experiment)

Video Screens

Business


Culture

Fashion

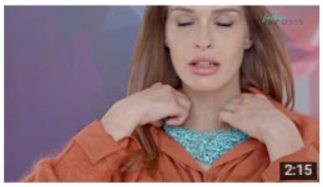
videogo

## Мода


Тренд: металлический маникюр. Зеркальная пудра для идеального хрома


Тренды мужских стрижек и укладок 2017


Мой стиль 4 наряда. Тренды весна-лето




Как носить и с чем сочетать замшевую юбку

Food

videogo

## Еда


Шокирующая еда из Макдональдса


Необычная подача еды к новогоднему столу


Рецепт тирамису


Как готовят настоящую пиццу

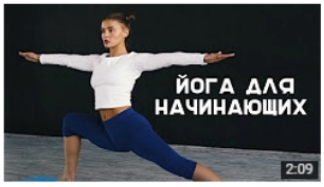
Health

videogo

## Здоровье


Влияние секса на здоровье. Топ-6 фактов


Курение при беременности




Йога для начинающих


Шейный остеохондроз. Лечение шейного остеохондроза за 1 минуту своими руками

Sports

videogo

## Спорт


Как я училась кататься на сноуборде


Как сделать дроп на BMX


Гимнастика. Ожидание и реальность


Самые невероятные пенальти в футболе

Technology

videogo **Технологии**


Вот это беспилотник

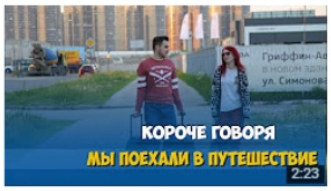

10 лайфхаков с телефоном


Китайская компания Winsun напечатала первую пятиэтажку на 3D принтере


Как превратить обычный телевизор в SMART TV

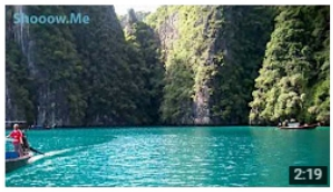
Travel

videogo **Путешествия**

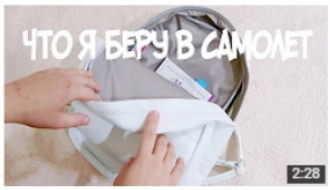



Короче говоря, мы поехали в путешествие


Самые сумасшедшие отели во всем мире




Тайланд. Пи Пи Лей. Пляж без Ди Каприо




Что я беру с собой в самолет

**<u>Appendix 5:</u> Questionnaire Content and Translation**

First Question


Translation: How did you like the video?
From left to right:
Not at all
I didn't like it
Neutral
I liked it
I liked it a lot

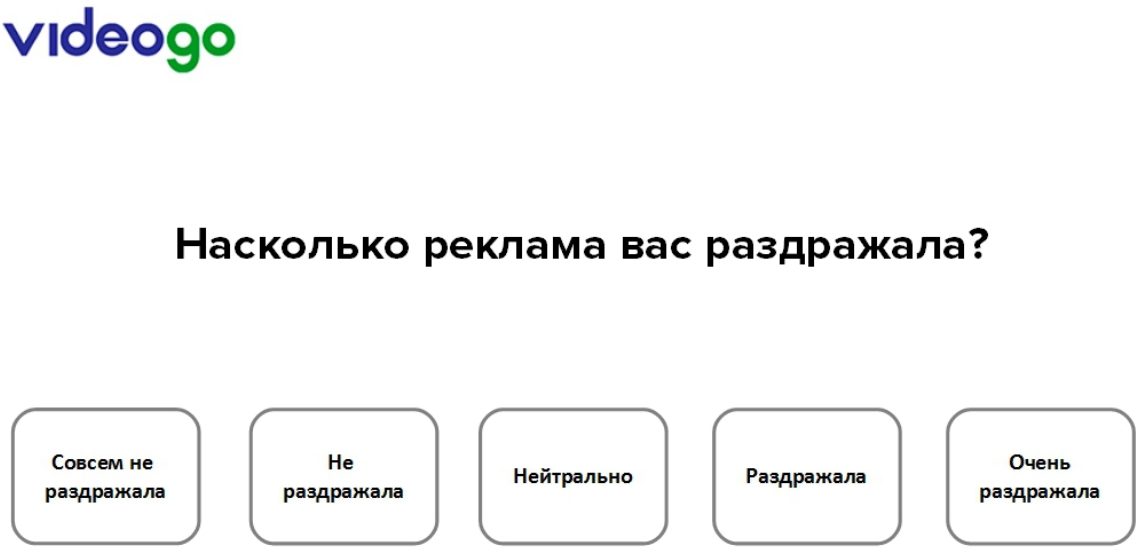
Second Question


Translation: Did the video meet your expectations?
From left to right:
Not at all
No
Neutral
Yes
It met my expectations perfectly

Third Question


Translation: How did you like the advertising?
From left to right:
Not at all
I didn't like it
Neutral
I liked it
I liked it a lot

Fourth Question

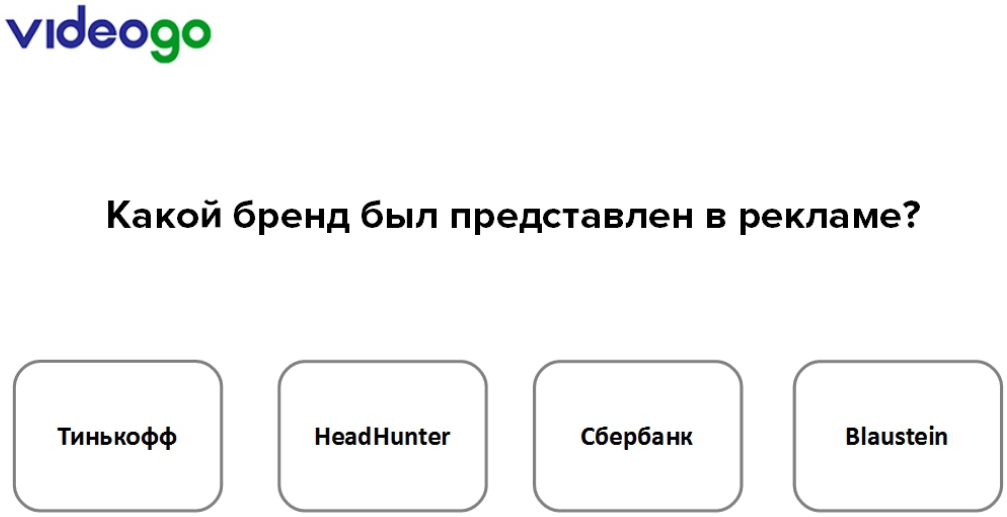



Translation: To what level did the advertising annoy you?
From left to right:
Not at all
It didn't annoy me
Neutral
It annoyed me
It annoyed me a lot

Fifth Question (Brand Recall)

The fifth question was programmed to be connected to the advertising clip. Each ad clip promoted one given brand and this brand was identified in the code. Every time that the user was shown any given advertising, the fifth question would ask them to name the brand in the ad video. The user was given four options. One of the options was the correct brand name. Two of the options were the other brands from the other pre-roll videos in the same category. The final option was a brand which was not shown at all but was from the same industry.

Business

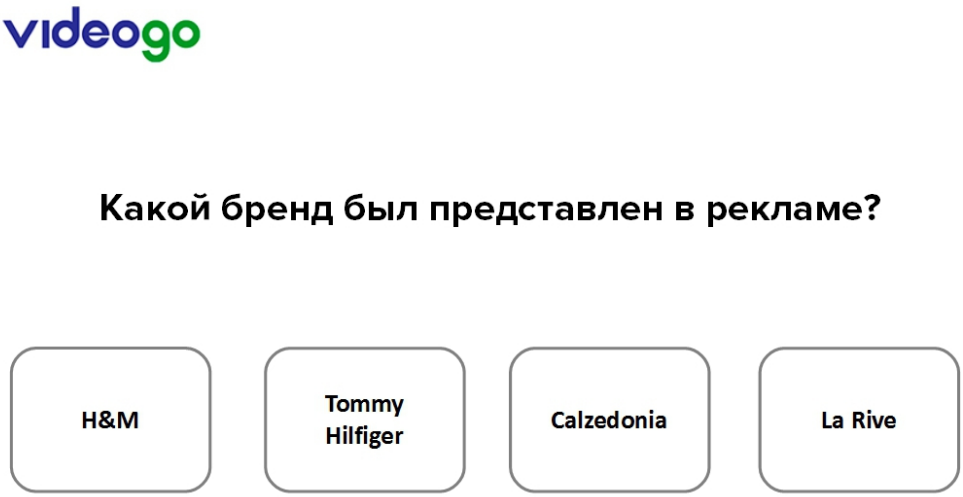



Options: Tinkoff, HeadHunter, Sberbank, Blaustein

Culture


Options: Aleksandrinskiy Theater, Kunstkamera, Tretyakovskaya Gallery, Radishevskiy Museum

Fashion




Options: H&M, Tommy Hilfiger, Calzedonia, La Rive

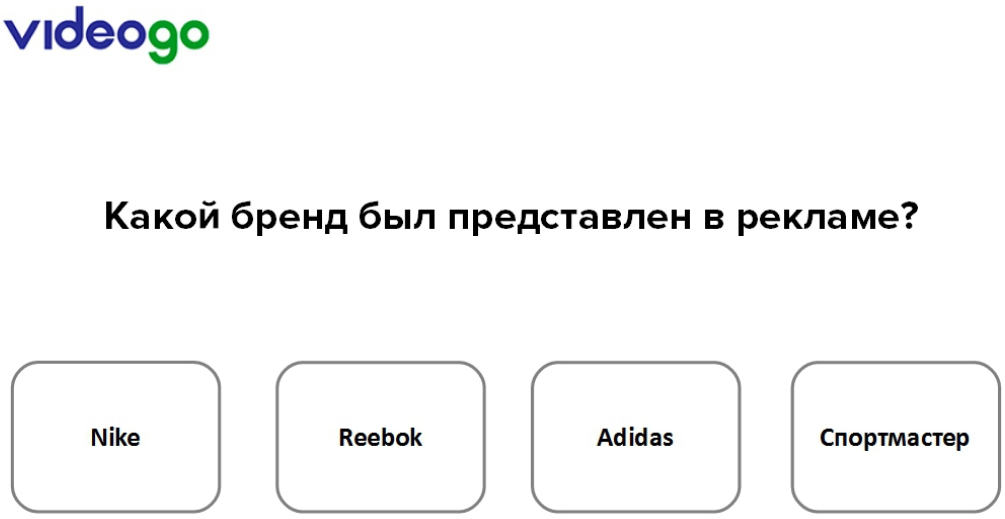
Food


Options: Tefal, Milka, McDonald's, Fitness Oats

Health


Options: Yunivit Energy, Fitness House, Medi Dentists, Kagolets

Sports

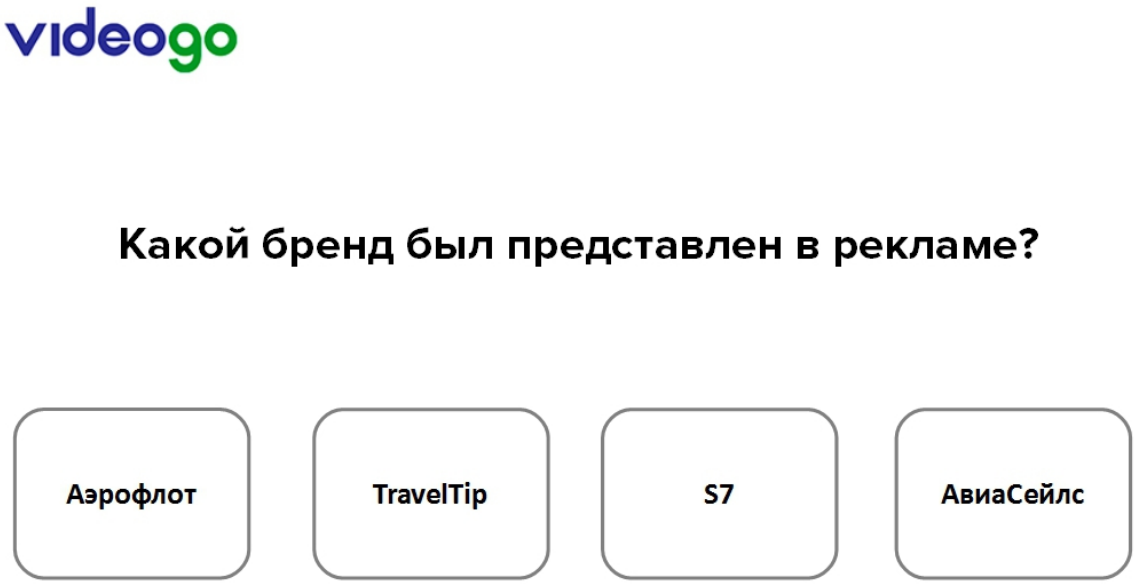



Options: Nike, Reebok, Adidas, Sportsmaster

Technology

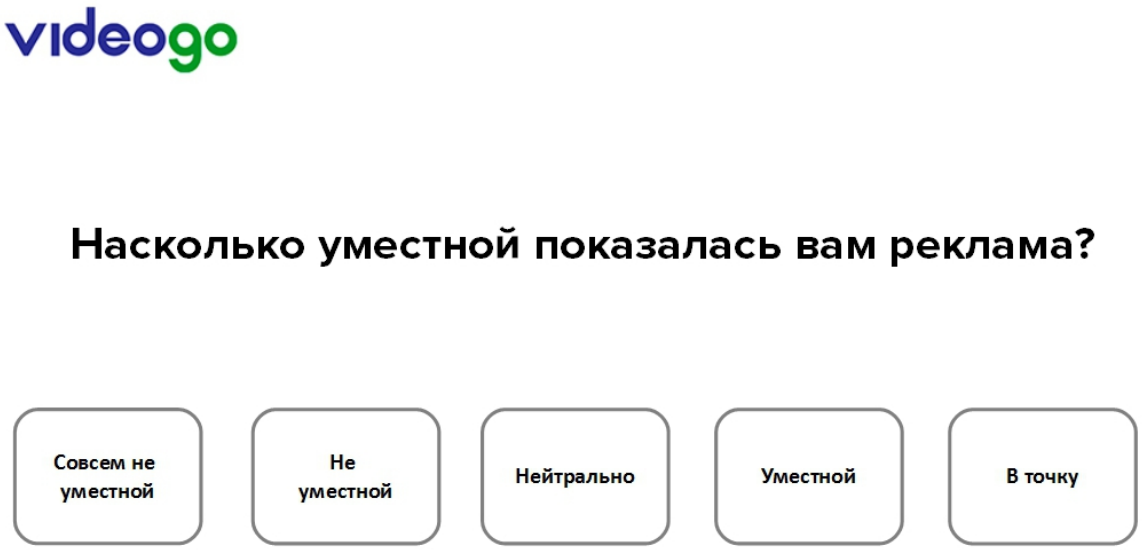

Options: Lenovo, Apple, Megafon, Euroset

Travel




Options: Aeroflot, TravelTipz, S7, AviaSales

Sixth and Final Question

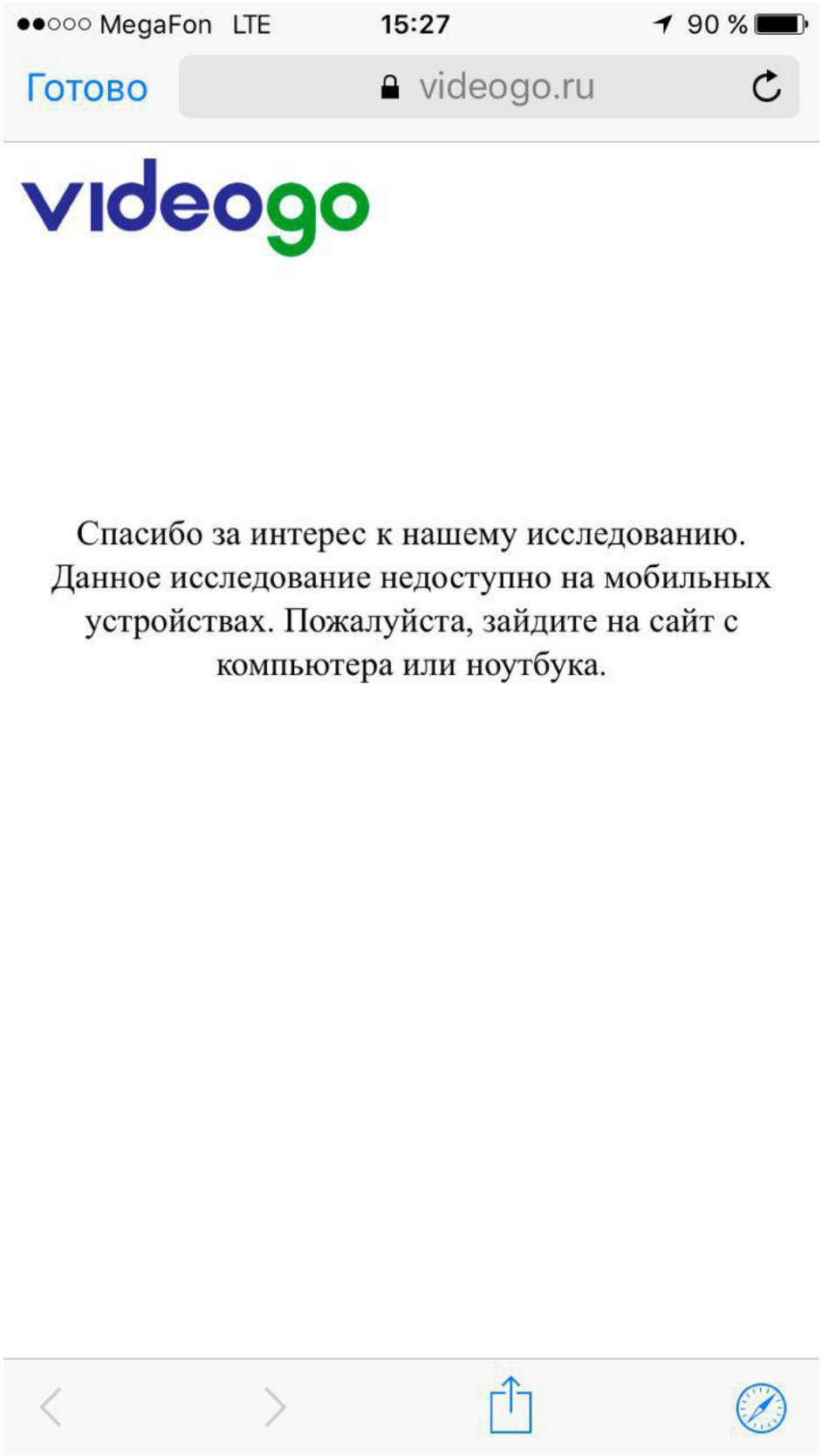



Translation: How fitting was the advertising to you?
From left to right:
Not at all
Not fitting
Neutral
Fitting
It fit my needs perfectly

End Screen


**Спасибо за участие в нашем исследовании,
ваше мнение ценно для нас!**

Translation: “Thank you for your participation in our research, your opinion is valuable to us!”




Screen shown for website on all mobile devices. Translation: “Thank you for your interest in our research. This research is unavailable for mobile devices. Please visit our site from your computer or notebook.”

# **Appendix 6**: Complete List of the Experiment Data

## Individual Data Sample

| | |
|---|---|
| Address (IP) / Date | 188.187.49.67 / 25-04-2017 |
| Notice | No |
| Relevant | No |
| Gender | 1 |
| Age | 3 |
| | |
| Video category | Культура |
| Video title | Ирландские танцы «Riverdance» с Padraic Moyles |
| Adv category | Мода |
| Adv number | 2 |
| Насколько вам понравилось это видео? | 5 |
| Видео совпало с вашими ожиданиями? | 5 |
| Насколько вам понравилась реклама? | 4 |
| Насколько реклама вас раздражала? | 1 |
| Какой бренд был представлен в рекламе? | Calzedonia |
| Adv right answer | Calzedonia |
| Насколько уместной показалась вам реклама? | 3 |
| | |
| Video category | Культура |
| Video title | Анна Нетребко. Кальман, выходная ария Сильвы |
| Adv category | Еда |
| Adv number | 2 |
| Насколько вам понравилось это видео? | 5 |
| Видео совпало с вашими ожиданиями? | 5 |
| Насколько вам понравилась реклама? | 3 |
| Насколько реклама вас раздражала? | 3 |
| Какой бренд был представлен в рекламе? | Милка |
| Adv right answer | Милка |
| Насколько уместной показалась вам реклама? | 3 |
| | |
| Video category | Культура |
| Video title | Хачатурян: Танец с саблями |
| Adv category | Спорт |
| Adv number | 3 |
| Насколько вам понравилось это видео? | 4 |
| Видео совпало с вашими ожиданиями? | 4 |
| Насколько вам понравилась реклама? | 4 |
| Насколько реклама вас раздражала? | 2 |
| Какой бренд был представлен в рекламе? | Спортмастер |
| Adv right answer | Спортмастер |
| Насколько уместной показалась вам реклама? | 2 |

# Data Decode Document

**Group**: 1 = Notice, Non-Relevant; 2 = Notice, Relevant; 3 = No Notice, Relevant; 4 = No Notice, Non-Relevant
**Gender**: 1 = Male; 2 = Female Age: 1 = >18 years old; 2 = 18-24; 3 = 25-34; 4 = 35-44; 5 = 45-60; 6 = 60+

**Category**: **b** = business; **c** = culture; **fa** = fashion; **fo** = food; **h** = health; **s** = sports; **te** = technology; **tr** = travel
Vid ID (Video ID) and Ad ID (Advertising ID) are referenced in Appendices 3 and 4 respectively

Q1: 1 = Not at all; 2 = I didn't like it; 3 = Neutral; 4 = I liked it; 5 = I liked it a lot
Q2: 1 = Not at all; 2 = No; 3 = Neutral; 4 = Yes; 5 = It met my expectations perfectly
Q3: 1 = Not at all; 2 = I didn't like it; 3 = Neutral; 4 = I liked it; 5 = I liked it a lot
Q4: 1 = Not at all; 2 = Not really; 3 = Neutral; 4 = Sort of; 5 = It annoyed me a lot

Brand (Tested whether or not the subject remembered the brand shown in the pre-roll): 1 = Yes; 2 = No

Q6: 1 = Not at all; 2 = Not fitting; 3 = Neutral; 4 = Fitting; 5 = It fit perfectly

Weighing formula: Video1score(0,4) + Video2score(0,3) + Video3score(0,3)

Each participant has 3 rows of data because each viewed three videos and therefore completed three questionnaires

All values are rounded to the second decimal place

# Group 1 Data (Part 1)

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.18.135.37 / 26-04-2017 | 1 | 1 | 3 | h2 | Fa-pre3 | 3 | 4 | 4 | 2 | 2 | 3 |
| | | | | | te1 | C-pre2 | 4 | 4 | 4 | 2 | 2 | 3 |
| | | | | | fo3 | S-pre2 | 5 | 5 | 3 | 2 | 2 | 3 |
| 2 | 5.18.205.10 / 26-04-2017 | 1 | 2 | 2 | c1 | Te-pre2 | 4 | 3 | 4 | 2 | 1 | 3 |
| | | | | | tr2 | Te-pre1 | 1 | 3 | 4 | 1 | 1 | 3 |
| | | | | | fa1 | Te-pre3 | 4 | 4 | 4 | 1 | 1 | 3 |
| | **Weighted scores** | | | | | | 2,9 | 3,3 | 4 | 1,4 | | 3 |
| 3 | 31.28.11.46 / 26-04-2017 | 1 | 1 | 3 | fa2 | C-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | | | | b2 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | | | | h3 | Tr-pre1 | 2 | 3 | 2 | 3 | 1 | 2 |
| | **Weighted scores** | | | | | | 3,4 | 3,7 | 2,7 | 3 | | 2 |
| 4 | 46.62.74.125 / 26-04-2017 | 1 | 1 | 4 | c1 | B-pre1 | 5 | 2 | 2 | 4 | 1 | 2 |
| | | | | | c2 | Tr-pre2 | 3 | 2 | 2 | 4 | 1 | 3 |
| | | | | | c3 | B-pre2 | 5 | 4 | 4 | 3 | 1 | 2 |
| | **Weighted scores** | | | | | | 4,4 | 2,6 | 2,6 | 3,7 | | 2,3 |
| 5 | 76.22.60.22 / 26-04-2017 | 1 | 2 | 3 | s1 | Tr-pre2 | 5 | 5 | 5 | 1 | 1 | 4 |
| | | | | | | Tr-pre2 | 1 | 1 | 1 | 1 | 1 | 4 |
| | | | | | fa3 | S-pre1 | 5 | 5 | 4 | 1 | 1 | 4 |
| 6 | 81.89.181.69 / 26-04-2017 | 1 | 2 | 2 | c3 | S-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | | | | tr2 | H-pre2 | 3 | 1 | 3 | 3 | 1 | 2 |
| | | | | | fa4 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| | **Weighted scores** | | | | | | 3,7 | 2,9 | 3 | 3 | | 2,3 |
| 7 | 87.77.238.152 / 25-04-2017 | 1 | 1 | 3 | te3 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| | | | | | fo2 | C-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| | | | | | te1 | Tr-pre3 | 5 | 4 | 3 | 2 | 1 | 3 |
| | **Weighted scores** | | | | | | 3,5 | 3,2 | 2,7 | 3 | | 2,7 |
| 8 | 95.27.46.54 / 27-04-2017 | 1 | 2 | 5 | h2 | Fa-pre1 | 4 | 3 | 2 | 3 | 2 | 2 |
| | | | | | fo2 | Te-pre1 | 4 | 4 | 3 | 2 | 1 | 3 |
| | | | | | te3 | C-pre3 | 5 | 4 | 3 | 2 | 1 | 2 |
| | **Weighted scores** | | | | | | 4,3 | 3,6 | 2,6 | 2,4 | | 2,3 |
| 9 | 109.172.15.1 / 25-04-2017 | 1 | 1 | 3 | h1 | C-pre1 | 2 | 2 | 2 | 2 | 1 | 2 |
| | | | | | s2 | B-pre1 | 3 | 2 | 4 | 3 | 2 | 2 |
| | | | | | fo4 | Tr-pre2 | 3 | 3 | 3 | 3 | | 3 |
| 10 | 185.29.130.2 / 26-04-2017 | 1 | 1 | 3 | c1 | H-pre2 | 1 | 1 | 1 | 4 | 1 | 2 |
| | | | | | tr2 | S-pre1 | 4 | 4 | 4 | 2 | 1 | 4 |
| | | | | | fa1 | S-pre2 | 2 | 1 | 2 | 5 | 1 | 1 |
| | **Weighted scores** | | | | | | 2,2 | 1,9 | 2,2 | 3,7 | | 2,3 |
| 11 | 188.134.19.146 / 27-04-2017 | 1 | 1 | 3 | te3 | S-pre1 | 2 | 2 | 2 | 3 | 1 | 1 |
| | | | | | tr4 | H-pre2 | 4 | 4 | 1 | 5 | 1 | 1 |
| | | | | | b3 | S-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| | **Weighted scores** | | | | | | 3,2 | 3,2 | 1,9 | 3,3 | | 1,4 |

# Group 1 Data (Part 2)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 195.19.228.138 / 27-04-2017 | 1 | 1 | 2 | c1 | Fo-pre1 | 1 | 1 | 1 | 4 | 1 | 2 |
| | | | | | tr3 | Te-pre3 | 1 | 2 | 4 | 2 | 1 | 2 |
| | | | | | s2 | Te-pre1 | 3 | 4 | 4 | 3 | 2 | 5 |
| **Weighted scores** | | | | | | | 1,5 | 2,2 | 2,9 | 3,1 | | 2,9 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 195.19.247.9 / 26-04-2017 | 1 | 2 | 3 | c1 | Fa-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | b4 | Tr-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| | | | | | s4 | Tr-pre1 | 4 | 3 | 3 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,4 | 3,1 | 3 | 2,4 | | 2,4 |

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 2,9 | 3,3 | 4 | 1,4 | 3 |
| | 3,4 | 3,7 | 2,7 | 3 | 2 |
| | 4,4 | 2,6 | 2,6 | 3,7 | 2,3 |
| | 3,7 | 2,9 | 3 | 3 | 2,3 |
| | 3,5 | 3,2 | 2,7 | 3 | 2,7 |
| | 4,3 | 3,6 | 2,6 | 2,4 | 2,3 |
| | 2,2 | 1,9 | 2,2 | 3,7 | 2,3 |
| | 3,2 | 3,2 | 1,9 | 3,3 | 1,4 |
| | 1,5 | 2,2 | 2,9 | 3,1 | 2,9 |
| | 3,4 | 3,1 | 3 | 2,4 | 2,4 |
| **Weighted Average** | 3,25 | 2,97 | 2,76 | 2,9 | 2,36 |

| | | |
|---|---|---|
| **Brand Recall** | 28 / 30 | 93,30% |

# Group 2 Data (Part 1)

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 91.151.203.82 / 27-04-2017 | 2 | 1 | 2 | s4 | S-pre2 | 3 | 4 | 2 | 3 | 1 | 4 |
| | | | | | te3 | Te-pre2 | 1 | 4 | 1 | 5 | 1 | 1 |
| | | | | | | Te-pre2 | 1 | 1 | 1 | 1 | 1 | 1 |
| 2 | 178.67.123.217 / 27-04-2017 | 2 | 2 | 2 | c4 | C-pre3 | 3 | 4 | 4 | 1 | 1 | 3 |
| | | | | | b2 | B-pre3 | 3 | 4 | 3 | 3 | 1 | 2 |
| | | | | | fo3 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 3 |
| | **Weighted scores** | | | | | | 2,7 | 3,4 | 3,4 | 1,9 | | 2,7 |
| 3 | 82.144.57.58 / 28-04-2017 | 2 | 2 | 3 | tr4 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| | | | | | fa3 | Fa-pre1 | 3 | 4 | 2 | 4 | 1 | 3 |
| | | | | | c4 | C-pre1 | 5 | 5 | 4 | 1 | 1 | 4 |
| | **Weighted scores** | | | | | | 3,2 | 3,5 | 3 | 3,4 | | 3,3 |
| 4 | 207.14.29.3 / 01-05-2017 | 2 | 1 | 2 | fa1 | Fa-pre3 | 4 | 4 | 4 | 2 | 1 | 4 |
| | | | | | h1 | H-pre2 | 4 | 4 | 3 | 2 | 2 | 4 |
| | | | | | te1 | Te-pre1 | 3 | 4 | 4 | 2 | 1 | 3 |
| | **Weighted scores** | | | | | | 3,7 | 4 | 3,7 | 2 | | 3,7 |
| 5 | 213.21.41.192 / 01-05-2017 | 2 | 2 | 3 | fo3 | Fo-pre1 | 3 | 2 | 3 | 3 | 1 | 4 |
| | | | | | fa1 | Fa-pre3 | 3 | 4 | 4 | 2 | 1 | 3 |
| | | | | | tr3 | Tr-pre2 | 5 | 5 | 3 | 1 | 1 | 4 |
| | **Weighted scores** | | | | | | 3,6 | 3,5 | 3,3 | 2,3 | | 3,7 |
| 6 | 95.91.211.241 / 01-05-2017 | 2 | 2 | 3 | s3 | S-pre2 | 3 | 1 | 4 | 2 | 1 | 4 |
| | | | | | fo4 | Fo-pre3 | 3 | 3 | 1 | 4 | 1 | 2 |
| | | | | | fa1 | Fa-pre1 | 4 | 4 | 1 | 4 | 1 | 3 |
| | **Weighted scores** | | | | | | 3,3 | 2,5 | 2,2 | 3,2 | | 3,1 |
| 7 | 24.19.87.95 / 01-05-2017 | 2 | 2 | 4 | h2 | H-pre2 | 5 | 5 | 5 | 3 | 2 | 4 |
| | | | | | fa4 | Fa-pre2 | 5 | 5 | 5 | 2 | 1 | 4 |
| | | | | | fo2 | Fo-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | **Weighted scores** | | | | | | 4,7 | 4,7 | 4,4 | 2,7 | | 3,4 |
| 8 | 178.24.238.227 / 01-05-2017 | 2 | 2 | 2 | c4 | C-pre3 | 4 | 4 | 1 | 3 | 1 | 2 |
| | | | | | te3 | Te-pre2 | 3 | 4 | 3 | 2 | 1 | 3 |
| | | | | | fo3 | Fo-pre3 | 5 | 4 | 3 | 2 | 1 | 4 |
| | **Weighted scores** | | | | | | 4 | 4 | 2,2 | 2,4 | | 2,9 |
| 9 | 67.183.118.81 / 01-05-2017 | 2 | 1 | 3 | te3 | Te-pre3 | 5 | 4 | 4 | 2 | 1 | 4 |
| | | | | | fo1 | Fo-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| | | | | | fa3 | Fa-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| | **Weighted scores** | | | | | | 4,7 | 4 | 4 | 2 | | 4 |
| 10 | 91.64.51.144 / 01-05-2017 | 2 | 1 | 3 | c3 | C-pre3 | 3 | 3 | 2 | 3 | 2 | 3 |
| | | | | | te3 | Te-pre1 | 4 | 4 | 2 | 3 | 1 | 2 |
| | | | | | tr2 | Tr-pre1 | 2 | 2 | 2 | 3 | 1 | 4 |
| | **Weighted scores** | | | | | | 3 | 3 | 2 | 3 | | 3 |
| 11 | 73.157.106.199 / 02-05-2017 | 2 | 2 | 4 | tr1 | Tr-pre3 | 3 | 3 | 3 | 2 | 1 | 2 |
| | | | | | fa3 | Fa-pre2 | 4 | 4 | 4 | 1 | 2 | 5 |
| | | | | | c1 | C-pre1 | 3 | 4 | 5 | 1 | 1 | 4 |
| | **Weighted scores** | | | | | | 3,3 | 3,6 | 3,9 | 1,4 | | 3,5 |
| 12 | 216.243.54.46 / 02-05-2017 | 2 | 2 | 3 | tr1 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| | | | | | tr2 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 4 |
| | | | | | tr3 | Tr-ptr3 | 2 | 2 | 3 | 2 | 1 | 4 |
| | **Weighted scores** | | | | | | 2,8 | 2,8 | 3 | 2,7 | | 4 |

# Group 2 Data (Part 2)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 73.151.210.77 / 02-05-2017 | 2 | 2 | 3 | h2 | H-pre1 | 5 | 4 | 4 | 2 | 1 | 4 |
| | | | | | tr3 | Tr-pre1 | 5 | 5 | 4 | 3 | 1 | 5 |
| | | | | | fo2 | Fo-pre3 | 5 | 5 | 4 | 2 | 1 | 5 |
| **Weighted scores** | | | | | | | 5 | 4,7 | 4 | 2,3 | | 4,6 |
| 14 | 188.254.126.0 / 02-05-2017 | 2 | 1 | 4 | tr1 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| | | | | | | Tr-pre2 | 1 | 1 | 1 | 1 | 1 | 4 |
| | | | | | tr2 | Tr-ptr1 | 2 | 2 | 4 | 3 | 1 | 4 |
| 15 | 172.58.44.132 / 03-05-2017 | 2 | 1 | 2 | te1 | Te-pre2 | 5 | 4 | 3 | 2 | 1 | 4 |
| | | | | | te4 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 5 |
| | | | | | te3 | Te-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,7 | 4,3 | 3 | 2,6 | | 4,3 |
| 16 | 172.56.42.123 / 03-05-2017 | 2 | 2 | 4 | h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | fa2 | Fa-pre2 | 4 | 3 | 1 | 2 | 1 | 1 |
| | | | | | tr4 | Tr-pre3 | 3 | 2 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,7 | 3,1 | 2,7 | 2,1 | | 2,7 |
| 17 | 47.42.29.29 / 03-05-2017 | 2 | 2 | 3 | tr4 | Tr-pre1 | 3 | 2 | 2 | 2 | 1 | 3 |
| | | | | | c4 | C-pre1 | 4 | 3 | 4 | 2 | 1 | 1 |
| | | | | | fa4 | Fa-pre1 | 3 | 4 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,3 | 2,9 | 2,9 | 2 | | 2,7 |
| 18 | 5.164.72.62 / 02-05-2017 | 2 | 2 | 3 | c3 | C-pre3 | 3 | 4 | 3 | 2 | 1 | 3 |
| | | | | | tr2 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| | | | | | tr3 | Tr-pre3 | 3 | 4 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,3 | 4 | 3 | 2,3 | | 3,6 |
| 19 | 77.179.9.203 / 02-05-2017 | 2 | 2 | 2 | tr1 | Tr-pre2 | 4 | 3 | 1 | 4 | 1 | 3 |
| | | | | | c3 | C-pre3 | 2 | 4 | 4 | 2 | 1 | 4 |
| | | | | | h1 | H-pre2 | 2 | 2 | 3 | 4 | 1 | 1 |
| **Weighted scores** | | | | | | | 2,8 | 3 | 2,5 | 3,4 | | 2,7 |

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 2,7 | 3,4 | 3,4 | 1,9 | 2,7 |
| | 3,2 | 3,5 | 3 | 3,4 | 3,3 |
| | 3,7 | 4 | 3,7 | 2 | 3,7 |
| | 3,6 | 3,5 | 3,3 | 2,3 | 3,7 |
| | 3,3 | 2,5 | 2,2 | 3,2 | 3,1 |
| | 4,7 | 4,7 | 4,4 | 2,7 | 3,4 |
| | 4 | 4 | 2,2 | 2,4 | 2,9 |
| | 4,7 | 4 | 4 | 2 | 4 |
| | 3 | 3 | 2 | 3 | 3 |
| | 3,3 | 3,6 | 3,9 | 1,4 | 3,5 |
| | 2,8 | 2,8 | 3 | 2,7 | 4 |
| | 5 | 4,7 | 4 | 2,3 | 4,6 |
| | 4,7 | 4,3 | 3 | 2,6 | 4,3 |
| | 3,7 | 3,1 | 2,7 | 2,1 | 2,7 |
| | 3,3 | 2,9 | 2,9 | 2 | 2,7 |
| | 3,3 | 4 | 3 | 2,3 | 3,6 |
| | 2,8 | 3 | 2,5 | 3,4 | 2,7 |
| **Weighted Average** | 3,42 | 3,59 | 3,13 | 2,45 | 3,41 |

| | | |
|---|---|---|
| **Brand Recall** | 47 / 51 | 92,20% |

# Group 3 Data (Part 1)

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 75.172.121.249 / 27-04-2017 | 3 | 2 | 6 | c1 | C-pre2 | 5 | 5 | 5 | 1 | 1 | 5 |
| | | | | | fa3 | Fa-pre3 | 5 | 5 | 5 | 1 | 1 | 1 |
| | | | | | fo4 | Fo-pre1 | 5 | 5 | 5 | 1 | 1 | 5 |
| 2 | 79.143.230.59 / 27-04-2017 | 3 | 2 | 4 | tr2 | Tr-pre3 | 3 | 1 | 3 | 3 | 1 | 4 |
| | | | | | fa3 | Fa-pre2 | 1 | 5 | 4 | 1 | 1 | 4 |
| | | | | | fo4 | Fo-pre2 | 4 | 4 | 2 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 2,7 | 3,1 | 3 | 2,1 | | 3,4 |
| 3 | 79.143.230.60 / 27-04-2017 | 3 | 2 | 5 | tr3 | Tr-pre3 | 4 | 4 | 4 | 1 | 2 | 4 |
| | | | | | fa2 | Fa-pre2 | 5 | 5 | 5 | 1 | 1 | 3 |
| | | | | | h4 | H-pre2 | 4 | 5 | 4 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,3 | 4,6 | 4,3 | 1,3 | | 3,7 |
| 4 | 95.221.93.186 / 26-04-2017 | 3 | 2 | 2 | tr1 | Tr-pre2 | 3 | 4 | 2 | 1 | 1 | 1 |
| | | | | | c2 | C-pre1 | 4 | 4 | 3 | 1 | 1 | 5 |
| | | | | | fa1 | Fa-pre3 | 5 | 4 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,9 | 4 | 2,9 | 1 | | 3,1 |
| 5 | 109.205.248.178 / 25-05-2017 | 3 | 2 | 2 | tr1 | Tr-pre1 | 3 | 2 | 4 | 2 | 2 | 4 |
| | | | | | s3 | S-pre2 | 1 | 1 | 4 | 2 | 1 | 3 |
| | | | | | fa3 | Fa-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,1 | 2,3 | 3,4 | 3 | | 3,1 |
| 6 | 176.194.72.222 / 25-04-2017 | 3 | 2 | 2 | tr3 | Tr-pre3 | 4 | 4 | 3 | 4 | 1 | 2 |
| | | | | | fa3 | Fa-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| | | | | | h1 | H-pre1 | 4 | 4 | 2 | 4 | 1 | 1 |
| **Weighted scores** | | | | | | | 4 | 4 | 2,4 | 4 | | 1,7 |
| 7 | 213.87.144.8 / 26-04-2017 | 3 | 2 | 3 | h4 | H-pre3 | 5 | 4 | 3 | 3 | 1 | 4 |
| | | | | | fo1 | Fo-pre2 | 1 | 4 | 5 | 1 | 1 | 5 |
| | | | | | te1 | Te-pre1 | 5 | 5 | 5 | 1 | 1 | 5 |
| **Weighted scores** | | | | | | | 3,8 | 4,3 | 4,2 | 1,8 | | 4,6 |
| 8 | 5.18.204.12 / 28-04-2017 | 3 | 2 | 2 | fo2 | Fo-pre1 | 4 | 4 | 4 | 3 | 1 | 4 |
| | | | | | fo1 | Fo-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| | | | | | fo3 | Fo-pre2 | 5 | 5 | 4 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,6 | 4,6 | 3,7 | 3 | | 4 |
| 9 | 178.8.88.23 / 01-05-2017 | 3 | 2 | 2 | c2 | C-pre3 | 4 | 4 | 3 | 2 | 1 | 4 |
| | | | | | fa1 | Fa-pre2 | 4 | 4 | 4 | 1 | 1 | 5 |
| | | | | | tr1 | Tr-pre2 | 2 | 2 | 3 | 2 | 1 | 5 |
| **Weighted scores** | | | | | | | 3,4 | 3,4 | 3,3 | 1,7 | | 4,6 |
| 10 | 93.100.211.107 / 01-05-2017 | 3 | 2 | 3 | tr1 | Tr-pre3 | 2 | 2 | 2 | 4 | 1 | 2 |
| | | | | | fo3 | Fo-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,2 | 3,2 | 2,4 | 3,4 | | 2,3 |
| 11 | 46.228.10.9 / 01-05-2017 | 3 | 2 | 3 | tr1 | Tr-pre3 | 3 | 3 | 4 | 4 | 1 | 4 |
| | | | | | c2 | C-pre2 | 2 | 2 | 4 | 2 | 1 | 2 |
| | | | | | te3 | T-pre1 | 1 | 1 | 3 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 2,1 | 2,1 | 3,7 | 3,1 | | 3,4 |

Group 3 Data (Part 2)

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 2,7 | 3,1 | 3 | 2,1 | 3,4 |
| | 4,3 | 4,6 | 4,3 | 1,3 | 3,7 |
| | 3,9 | 4 | 2,9 | 1 | 3,1 |
| | 3,1 | 2,3 | 3,4 | 3 | 3,1 |
| | 4 | 4 | 2,4 | 4 | 1,7 |
| | 3,8 | 4,3 | 4,2 | 1,8 | 4,6 |
| | 4,6 | 4,6 | 3,7 | 3 | 4 |
| | 3,4 | 3,4 | 3,3 | 1,7 | 4,6 |
| | 3,2 | 3,2 | 2,4 | 3,4 | 2,3 |
| | 2,1 | 2,1 | 3,7 | 3,1 | 3,4 |
| **Weighted Average** | 3,51 | 3,56 | 3,33 | 2,44 | 3,39 |

| | | |
|---|---|---|
| **Brand Recall** | 28 / 30 | 93,30% |

# Group 4 Data (Part 1)

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 77.73.139.219 / 26-04-2017 | 4 | 1 | 3 | te4 | C-pre2 | 3 | 4 | 5 | 2 | 1 | 3 |
| | | | | | b3 | H-pre1 | 5 | 5 | 3 | 4 | 1 | 2 |
| | | | | | b4 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,3 | 3,7 | 3,4 | 3 | | 2,4 |
| 2 | 77.239.201.85 / 27-04-2017 | 4 | 1 | 3 | c1 | Tr-pre2 | 1 | 2 | 3 | 3 | 1 | 2 |
| | | | | | tr1 | Te-pre2 | 4 | 4 | 2 | 2 | 1 | 3 |
| | | | | | fa4 | Tr-pre3 | 5 | 4 | 4 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,1 | 3,2 | 3 | 2,4 | | 2,6 |
| 3 | 79.197.178.2 / 26-04-2017 | 4 | 1 | 3 | tr4 | B-pre3 | 3 | 2 | 3 | 2 | 1 | 3 |
| | | | | | fo1 | B-pre1 | 3 | 4 | 1 | 4 | 1 | 1 |
| | | | | | s4 | B-pre2 | 5 | 5 | 4 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,6 | 3,5 | 2,7 | 2,6 | | 2,7 |
| 4 | 87.144.118.143 / 25-04-2017 | 4 | 2 | 2 | c2 | Fa-pre2 | 4 | 5 | 1 | 4 | 1 | 2 |
| | | | | | tr4 | S-pre2 | 3 | 2 | 3 | 2 | 1 | 4 |
| | | | | | s4 | B-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,7 | 3,8 | 2,2 | 3,1 | | 2,9 |
| 5 | 131.191.24.93 / 27-04-2017 | 4 | 1 | 3 | b2 | Te-pre2 | 4 | 4 | 3 | 4 | 1 | 3 |
| | | | | | b4 | S-pre2 | 4 | 4 | 5 | 1 | 1 | 4 |
| | | | | | h1 | Te-pre1 | 4 | 5 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 4 | 4,3 | 3,9 | 2,2 | | 3,6 |
| 6 | 131.191.106.2 / 26-04-2017 | 4 | 2 | 5 | tr4 | B-pre3 | 4 | 4 | 3 | 3 | 2 | 3 |
| | | | | | fa3 | Tr-pre3 | 2 | 2 | 3 | 3 | 1 | 3 |
| | | | | | fo4 | S-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,4 | 3,4 | 3 | 3 | | 3 |
| 7 | 178.140.231.10 / 27-04-2017 | 4 | 1 | 3 | c1 | B-pre2 | 2 | 3 | 1 | 4 | 2 | 3 |
| | | | | | te3 | H-pre1 | 2 | 4 | 4 | 3 | 1 | 1 |
| | | | | | s4 | Tr-pre1 | 3 | 4 | 1 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 2,3 | 3,6 | 1,9 | 3,1 | | 2,4 |
| 8 | 188.122.20.104 / 26-04-2017 | 4 | 1 | 3 | tr3 | B-pre3 | 4 | 3 | 1 | 4 | 1 | 1 |
| | | | | | b2 | C-pre2 | 3 | 2 | 3 | 2 | 1 | 2 |
| | | | | | te1 | C-pre3 | 4 | 2 | 2 | 4 | 1 | 1 |
| **Weighted scores** | | | | | | | 3,7 | 2,4 | 1,9 | 3,4 | | 1,3 |
| 9 | 188.187.49.67 / 25-04-2017 | 4 | 1 | 3 | c1 | Fa-pre2 | 5 | 5 | 4 | 1 | 1 | 3 |
| | | | | | c1 | Fo-pre2 | 5 | 5 | 3 | 3 | 1 | 3 |
| | | | | | c3 | S-pre3 | 4 | 4 | 4 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 4,7 | 4,7 | 3,7 | 1,9 | | 2,7 |
| 10 | 46.39.230.147 / 28-04-2017 | 4 | 2 | 3 | s4 | H-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | s1 | Tr-pre1 | 5 | 5 | 4 | 2 | 1 | 4 |
| | | | | | tr4 | B-pre1 | 3 | 4 | 2 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 4 | 4,3 | 3 | 2,7 | | 3,3 |
| 11 | 46.22.251.90 / 28-04-2017 | 4 | 2 | 2 | fa1 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | tr4 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | fo4 | Te-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |

# Group 4 Data (Part 2)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 172.58.43.243 / 28-04-2017 | 4 | 2 | 3 | fa2 | Tr-pre2 | 3 | 3 | 5 | 1 | 1 | 4 |
| | | | | | h3 | C-pre1 | 5 | 5 | 2 | 4 | 1 | 1 |
| | | | | | b2 | Fo-pre3 | 4 | 4 | 4 | 1 | 1 | 1 |
| **Weighted scores** | | | | | | | 3,9 | 3,9 | 3,8 | 1,9 | | 2,2 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 93.100.93.95 / 29-04-2017 | 4 | 1 | 5 | tr4 | S-pre1 | 3 | 3 | 1 | 5 | 1 | 1 |
| | | | | | h1 | Tr-pre1 | 3 | 2 | 3 | 5 | 2 | 2 |
| | | | | | c2 | Fa-pre3 | 3 | 3 | 3 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 3 | 2,7 | 2,2 | 4,4 | | 1,6 |

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 3,3 | 3,7 | 3,4 | 3 | 2,4 |
| | 3,1 | 3,2 | 3 | 2,4 | 2,6 |
| | 3,6 | 3,5 | 2,7 | 2,6 | 2,7 |
| | 3,7 | 3,8 | 2,2 | 3,1 | 2,9 |
| | 4 | 4,3 | 3,9 | 2,2 | 3,6 |
| | 3,4 | 3,4 | 3 | 3 | 3 |
| | 2,3 | 3,6 | 1,9 | 3,1 | 2,4 |
| | 3,7 | 2,4 | 1,9 | 3,4 | 1,3 |
| | 4,7 | 4,7 | 3,7 | 1,9 | 2,7 |
| | 4 | 4,3 | 3,9 | 2,2 | 3,6 |
| | 3,9 | 3,9 | 3,8 | 1,9 | 2,2 |
| | 3 | 2,7 | 2,2 | 4,4 | 1,6 |
| **Weighted Average** | 3,56 | 3,63 | 2,97 | 2,77 | 2,58 |

| | | |
|---|---|---|
| **Brand Recall** | 33 / 36 | 91,70% |

# Female Data (Part 1)

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.18.205.10 / 26-04-2017 | 1 | 2 | 2 | c1 | Te-pre2 | 4 | 3 | 4 | 2 | 1 | 3 |
| | | | | | tr2 | Te-pre1 | 1 | 3 | 4 | 1 | 1 | 3 |
| | | | | | fa1 | Te-pre3 | 4 | 4 | 4 | 1 | 1 | 3 |
| **Weighted scores** | | | | | | | 2,9 | 3,3 | 4 | 1,4 | | 3 |
| 2 | 81.89.181.69 / 26-04-2017 | 1 | 2 | 2 | c3 | S-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | | | | tr2 | H-pre2 | 3 | 1 | 3 | 3 | 1 | 2 |
| | | | | | fa4 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,7 | 2,9 | 3 | 3 | | 2,3 |
| 3 | 95.27.46.54 / 27-04-2017 | 1 | 2 | 5 | h2 | Fa-pre1 | 4 | 3 | 2 | 3 | 2 | 2 |
| | | | | | fo2 | Te-pre1 | 4 | 4 | 3 | 2 | 1 | 3 |
| | | | | | te3 | C-pre3 | 5 | 4 | 3 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 4,3 | 3,6 | 2,6 | 2,4 | | 2,3 |
| 4 | 195.19.247.9 / 26-04-2017 | 1 | 2 | 3 | c1 | Fa-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | b4 | Tr-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| | | | | | s4 | Tr-pre1 | 4 | 3 | 3 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,4 | 3,1 | 3 | 2,4 | | 2,4 |
| 5 | 178.67.123.217 / 27-04-2017 | 2 | 2 | 2 | c4 | C-pre3 | 3 | 4 | 4 | 1 | 1 | 3 |
| | | | | | b2 | B-pre3 | 3 | 4 | 3 | 3 | 1 | 2 |
| | | | | | fo3 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 2,7 | 3,4 | 3,4 | 1,9 | | 2,7 |
| 6 | 82.144.57.58 / 28-04-2017 | 2 | 2 | 3 | tr4 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| | | | | | fa3 | Fa-pre1 | 3 | 4 | 2 | 4 | 1 | 3 |
| | | | | | c4 | C-pre1 | 5 | 5 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,2 | 3,5 | 3 | 3,4 | | 3,3 |
| 7 | 213.21.41.192 / 01-05-2017 | 2 | 2 | 3 | fo3 | Fo-pre1 | 3 | 2 | 3 | 3 | 1 | 4 |
| | | | | | fa1 | Fa-pre3 | 3 | 4 | 4 | 2 | 1 | 3 |
| | | | | | tr3 | Tr-pre2 | 5 | 5 | 3 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,6 | 3,5 | 3,3 | 2,3 | | 3,7 |
| 8 | 95.91.211.241 / 01-05-2017 | 2 | 2 | 3 | s3 | S-pre2 | 3 | 1 | 4 | 2 | 1 | 4 |
| | | | | | fo4 | Fo-pre3 | 3 | 3 | 1 | 4 | 1 | 2 |
| | | | | | fa1 | Fa-pre1 | 4 | 4 | 1 | 4 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,3 | 2,5 | 2,2 | 3,2 | | 3,1 |
| 9 | 24.19.87.95 / 01-05-2017 | 2 | 2 | 4 | h2 | H-pre2 | 5 | 5 | 5 | 3 | 2 | 4 |
| | | | | | fa4 | Fa-pre2 | 5 | 5 | 5 | 2 | 1 | 4 |
| | | | | | fo2 | Fo-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 4,7 | 4,7 | 4,4 | 2,7 | | 3,4 |
| 10 | 178.24.238.227 / 01-05-2017 | 2 | 2 | 2 | c4 | C-pre3 | 4 | 4 | 1 | 3 | 1 | 2 |
| | | | | | te3 | Te-pre2 | 3 | 4 | 3 | 2 | 1 | 3 |
| | | | | | fo3 | Fo-pre3 | 5 | 4 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 4 | 4 | 2,2 | 2,4 | | 2,9 |
| 11 | 73.157.106.199 / 02-05-2017 | 2 | 2 | 4 | tr1 | Tr-pre3 | 3 | 3 | 3 | 2 | 1 | 2 |
| | | | | | fa3 | Fa-pre2 | 4 | 4 | 4 | 1 | 2 | 5 |
| | | | | | c1 | C-pre1 | 3 | 4 | 5 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,3 | 3,6 | 3,9 | 1,4 | | 3,5 |

# Female Data (Part 2)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 216.243.54.46 / 02-05-2017 | 2 | 2 | 3 | tr1 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| | | | | | tr2 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 4 |
| | | | | | tr3 | Tr-ptr3 | 2 | 2 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 2,8 | 2,8 | 3 | 2,7 | | 4 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 73.151.210.77 / 02-05-2017 | 2 | 2 | 3 | h2 | H-pre1 | 5 | 4 | 4 | 2 | 1 | 4 |
| | | | | | tr3 | Tr-pre1 | 5 | 5 | 4 | 3 | 1 | 5 |
| | | | | | fo2 | Fo-pre3 | 5 | 5 | 4 | 2 | 1 | 5 |
| **Weighted scores** | | | | | | | 5 | 4,7 | 4 | 2,3 | | 4,6 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 172.56.42.123 / 03-05-2017 | 2 | 2 | 4 | h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | fa2 | Fa-pre2 | 4 | 3 | 1 | 2 | 1 | 1 |
| | | | | | tr4 | Tr-pre3 | 3 | 2 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,7 | 3,1 | 2,7 | 2,1 | | 2,7 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 47.42.29.29 / 03-05-2017 | 2 | 2 | 3 | tr4 | Tr-pre1 | 3 | 2 | 2 | 2 | 1 | 3 |
| | | | | | c4 | C-pre1 | 4 | 3 | 4 | 2 | 1 | 1 |
| | | | | | fa4 | Fa-pre1 | 3 | 4 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,3 | 2,9 | 2,9 | 2 | | 2,7 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 5.164.72.62 / 02-05-2017 | 2 | 2 | 3 | c3 | C-pre3 | 3 | 4 | 3 | 2 | 1 | 3 |
| | | | | | tr2 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| | | | | | tr3 | Tr-pre3 | 3 | 4 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,3 | 4 | 3 | 2,3 | | 3,6 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 77.179.9.203 / 02-05-2017 | 2 | 2 | 2 | tr1 | Tr-pre2 | 4 | 3 | 1 | 4 | 1 | 3 |
| | | | | | c3 | C-pre3 | 2 | 4 | 4 | 2 | 1 | 4 |
| | | | | | h1 | H-pre2 | 2 | 2 | 3 | 4 | 1 | 1 |
| **Weighted scores** | | | | | | | 2,8 | 3 | 2,5 | 3,4 | | 2,7 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 79.143.230.59 / 27-04-2017 | 3 | 2 | 4 | tr2 | Tr-pre3 | 3 | 1 | 3 | 3 | 1 | 4 |
| | | | | | fa3 | Fa-pre2 | 1 | 5 | 4 | 1 | 1 | 4 |
| | | | | | fo4 | Fo-pre2 | 4 | 4 | 2 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 2,7 | 3,1 | 3 | 2,1 | | 3,4 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | 79.143.230.60 / 27-04-2017 | 3 | 2 | 5 | tr3 | Tr-pre3 | 4 | 4 | 4 | 1 | 2 | 4 |
| | | | | | fa2 | Fa-pre2 | 5 | 5 | 5 | 1 | 1 | 3 |
| | | | | | h4 | H-pre2 | 4 | 5 | 4 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,3 | 4,6 | 4,3 | 1,3 | | 3,7 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 95.221.93.186 / 26-04-2017 | 3 | 2 | 2 | tr1 | Tr-pre2 | 3 | 4 | 2 | 1 | 1 | 1 |
| | | | | | c2 | C-pre1 | 4 | 4 | 3 | 1 | 1 | 5 |
| | | | | | fa1 | Fa-pre3 | 5 | 4 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,9 | 4 | 2,9 | 1 | | 3,1 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 109.205.248.178 / 25-05-2017 | 3 | 2 | 2 | tr1 | Tr-pre1 | 3 | 2 | 4 | 2 | 2 | 4 |
| | | | | | s3 | S-pre2 | 1 | 1 | 4 | 2 | 1 | 3 |
| | | | | | fa3 | Fa-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,1 | 2,3 | 3,4 | 3 | | 3,1 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 22 | 176.194.72.222 / 25-04-2017 | 3 | 2 | 2 | tr3 | Tr-pre3 | 4 | 4 | 3 | 4 | 1 | 2 |
| | | | | | fa3 | Fa-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| | | | | | h1 | H-pre1 | 4 | 4 | 2 | 4 | 1 | 1 |
| **Weighted scores** | | | | | | | 4 | 4 | 2,4 | 4 | | 1,7 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 | 213.87.144.8 / 26-04-2017 | 3 | 2 | 3 | h4 | H-pre3 | 5 | 4 | 3 | 3 | 1 | 4 |
| | | | | | fo1 | Fo-pre2 | 1 | 4 | 5 | 1 | 1 | 5 |
| | | | | | te1 | Te-pre1 | 5 | 5 | 5 | 1 | 1 | 5 |
| **Weighted scores** | | | | | | | 3,8 | 4,3 | 4,2 | 1,8 | | 4,6 |

# Female Data (Part 3)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 5.18.204.12 / 28-04-2017 | 3 | 2 | 2 | fo2 | Fo-pre1 | 4 | 4 | 4 | 3 | 1 | 4 |
| | | | | | fo1 | Fo-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| | | | | | fo3 | Fo-pre2 | 5 | 5 | 4 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,6 | 4,6 | 3,7 | 3 | | 4 |
| 25 | 178.8.88.23 / 01-05-2017 | 3 | 2 | 2 | c2 | C-pre3 | 4 | 4 | 3 | 2 | 1 | 4 |
| | | | | | fa1 | Fa-pre2 | 4 | 4 | 4 | 1 | 1 | 5 |
| | | | | | tr1 | Tr-pre2 | 2 | 2 | 3 | 2 | 1 | 5 |
| **Weighted scores** | | | | | | | 3,4 | 3,4 | 3,3 | 1,7 | | 4,6 |
| 26 | 93.100.211.107 / 01-05-2017 | 3 | 2 | 3 | tr1 | Tr-pre3 | 2 | 2 | 2 | 4 | 1 | 2 |
| | | | | | fo3 | Fo-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,2 | 3,2 | 2,4 | 3,4 | | 2,3 |
| 27 | 46.228.10.9 / 01-05-2017 | 3 | 2 | 3 | tr1 | Tr-pre3 | 3 | 3 | 4 | 4 | 1 | 4 |
| | | | | | c2 | C-pre2 | 2 | 2 | 4 | 2 | 1 | 2 |
| | | | | | te3 | T-pre1 | 1 | 1 | 3 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 2,1 | 2,1 | 3,7 | 3,1 | | 3,4 |
| 28 | 87.144.118.143 / 25-04-2017 | 4 | 2 | 2 | c2 | Fa-pre2 | 4 | 5 | 1 | 4 | 1 | 2 |
| | | | | | tr4 | S-pre2 | 3 | 2 | 3 | 2 | 1 | 4 |
| | | | | | s4 | B-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,7 | 3,8 | 2,2 | 3,1 | | 2,9 |
| 29 | 131.191.106.2 / 26-04-2017 | 4 | 2 | 5 | tr4 | B-pre3 | 4 | 4 | 3 | 3 | 2 | 3 |
| | | | | | fa3 | Tr-pre3 | 2 | 2 | 3 | 3 | 1 | 3 |
| | | | | | fo4 | S-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,4 | 3,4 | 3 | 3 | | 3 |
| 30 | 46.39.230.147 / 28-04-2017 | 4 | 2 | 3 | s4 | H-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | s1 | Tr-pre1 | 5 | 5 | 4 | 2 | 1 | 4 |
| | | | | | tr4 | B-pre1 | 3 | 4 | 2 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 4 | 4,3 | 3 | 2,7 | | 3,3 |
| 31 | 172.58.43.243 / 28-04-2017 | 4 | 2 | 3 | fa2 | Tr-pre2 | 3 | 3 | 5 | 1 | 1 | 4 |
| | | | | | h3 | C-pre1 | 5 | 5 | 2 | 4 | 1 | 1 |
| | | | | | b2 | Fo-pre3 | 4 | 4 | 4 | 1 | 1 | 1 |
| **Weighted scores** | | | | | | | 3,9 | 3,9 | 3,8 | 1,9 | | 2,2 |

Female Data (Part 4)

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 2,9 | 3,3 | 4 | 1,4 | 3 |
| | 3,7 | 2,9 | 3 | 3 | 2,3 |
| | 4,3 | 3,6 | 2,6 | 2,4 | 2,3 |
| | 3,4 | 3,1 | 3 | 2,4 | 2,4 |
| | 2,7 | 3,4 | 3,4 | 1,9 | 2,7 |
| | 3,2 | 3,5 | 3 | 3,4 | 3,3 |
| | 3,6 | 3,5 | 3,3 | 2,3 | 3,7 |
| | 3,3 | 2,5 | 2,2 | 3,2 | 3,1 |
| | 4,7 | 4,7 | 4,4 | 2,7 | 3,4 |
| | 4 | 4 | 2,2 | 2,4 | 2,9 |
| | 3,3 | 3,6 | 3,9 | 1,4 | 3,5 |
| | 2,8 | 2,8 | 3 | 2,7 | 4 |
| | 5 | 4,7 | 4 | 2,3 | 4,6 |
| | 3,7 | 3,1 | 2,7 | 2,1 | 2,7 |
| | 3,3 | 2,9 | 2,9 | 2 | 2,7 |
| | 3,3 | 4 | 3 | 2,3 | 3,6 |
| | 2,8 | 3 | 2,5 | 3,4 | 2,7 |
| | 2,7 | 3,1 | 3 | 2,1 | 3,4 |
| | 4,3 | 4,6 | 4,3 | 1,3 | 3,7 |
| | 3,9 | 4 | 2,9 | 1 | 3,1 |
| | 3,1 | 2,3 | 3,4 | 3 | 3,1 |
| | 4 | 4 | 2,4 | 4 | 1,7 |
| | 3,8 | 4,3 | 4,2 | 1,8 | 4,6 |
| | 4,6 | 4,6 | 3,7 | 3 | 4 |
| | 3,4 | 3,4 | 3,3 | 1,7 | 4,6 |
| | 3,2 | 3,2 | 2,4 | 3,4 | 2,3 |
| | 2,1 | 2,1 | 3,7 | 3,1 | 3,4 |
| | 3,7 | 3,8 | 2,2 | 3,1 | 2,9 |
| | 3,4 | 3,4 | 3 | 3 | 3 |
| | 4 | 4,3 | 3 | 2,7 | 3,3 |
| | 3,9 | 3,9 | 3,8 | 1,9 | 2,2 |
| **Weighted Average** | 3,55 | 3,54 | 3,17 | 2,46 | 3,17 |

| | | |
|---|---|---|
| **Brand Recall** | 136 / 147 | 93,55% |

# Male Data (Part 1)

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31.28.11.46 / 26-04-2017 | 1 | 1 | 3 | fa2 | C-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | | | | b2 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | | | | h3 | Tr-pre1 | 2 | 3 | 2 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,4 | 3,7 | 2,7 | 3 | | 2 |
| 2 | 46.62.74.125 / 26-04-2017 | 1 | 1 | 4 | c1 | B-pre1 | 5 | 2 | 2 | 4 | 1 | 2 |
| | | | | | c2 | Tr-pre2 | 3 | 2 | 2 | 4 | 1 | 3 |
| | | | | | c3 | B-pre2 | 5 | 4 | 4 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 4,4 | 2,6 | 2,6 | 3,7 | | 2,3 |
| 3 | 87.77.238.152 / 25-04-2017 | 1 | 1 | 3 | te3 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| | | | | | fo2 | C-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| | | | | | te1 | Tr-pre3 | 5 | 4 | 3 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,5 | 3,2 | 2,7 | 3 | | 2,7 |
| 4 | 185.29.130.2 / 26-04-2017 | 1 | 1 | 3 | c1 | H-pre2 | 1 | 1 | 1 | 4 | 1 | 2 |
| | | | | | tr2 | S-pre1 | 4 | 4 | 4 | 2 | 1 | 4 |
| | | | | | fa1 | S-pre2 | 2 | 1 | 2 | 5 | 1 | 1 |
| **Weighted scores** | | | | | | | 2,2 | 1,9 | 2,2 | 3,7 | | 2,3 |
| 5 | 188.134.19.146 / 27-04-2017 | 1 | 1 | 3 | te3 | S-pre1 | 2 | 2 | 2 | 3 | 1 | 1 |
| | | | | | tr4 | H-pre2 | 4 | 4 | 1 | 5 | 1 | 1 |
| | | | | | b3 | S-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,2 | 3,2 | 1,9 | 3,3 | | 1,4 |
| 6 | 195.19.228.138 / 27-04-2017 | 1 | 1 | 2 | c1 | Fo-pre1 | 1 | 1 | 1 | 4 | 1 | 2 |
| | | | | | tr3 | Te-pre3 | 1 | 2 | 4 | 2 | 1 | 2 |
| | | | | | s2 | Te-pre1 | 3 | 4 | 4 | 3 | 2 | 5 |
| **Weighted scores** | | | | | | | 1,5 | 2,2 | 2,9 | 3,1 | | 2,9 |
| 7 | 207.14.29.3 / 01-05-2017 | 2 | 1 | 2 | fa1 | Fa-pre3 | 4 | 4 | 4 | 2 | 1 | 4 |
| | | | | | h1 | H-pre2 | 4 | 4 | 3 | 2 | 2 | 4 |
| | | | | | te1 | Te-pre1 | 3 | 4 | 4 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,7 | 4 | 3,7 | 2 | | 3,7 |
| 8 | 67.183.118.81 / 01-05-2017 | 2 | 1 | 3 | te3 | Te-pre3 | 5 | 4 | 4 | 2 | 1 | 4 |
| | | | | | fo1 | Fo-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| | | | | | fa3 | Fa-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,7 | 4 | 4 | 2 | | 4 |
| 9 | 91.64.51.144 / 01-05-2017 | 2 | 1 | 3 | c3 | C-pre3 | 3 | 3 | 2 | 3 | 2 | 3 |
| | | | | | te3 | Te-pre1 | 4 | 4 | 2 | 3 | 1 | 2 |
| | | | | | tr2 | Tr-pre1 | 2 | 2 | 2 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 3 | 3 | 2 | 3 | | 3 |
| 10 | 172.58.44.132 / 03-05-2017 | 2 | 1 | 2 | te1 | Te-pre2 | 5 | 4 | 3 | 2 | 1 | 4 |
| | | | | | te4 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 5 |
| | | | | | te3 | Te-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,7 | 4,3 | 3 | 2,6 | | 4,3 |
| 11 | 77.73.139.219 / 26-04-2017 | 4 | 1 | 3 | te4 | C-pre2 | 3 | 4 | 5 | 2 | 1 | 3 |
| | | | | | b3 | H-pre1 | 5 | 5 | 3 | 4 | 1 | 2 |
| | | | | | b4 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,3 | 3,7 | 3,4 | 3 | | 2,4 |

# Male Data (Part 2)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 77.239.201.85 / 27-04-2017 | 4 | 1 | 3 | c1 | Tr-pre2 | 1 | 2 | 3 | 3 | 1 | 2 |
| | | | | | tr1 | Te-pre2 | 4 | 4 | 2 | 2 | 1 | 3 |
| | | | | | fa4 | Tr-pre3 | 5 | 4 | 4 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,1 | 3,2 | 3 | 2,4 | | 2,6 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 79.197.178.2 / 26-04-2017 | 4 | 1 | 3 | tr4 | B-pre3 | 3 | 2 | 3 | 2 | 1 | 3 |
| | | | | | fo1 | B-pre1 | 3 | 4 | 1 | 4 | 1 | 1 |
| | | | | | s4 | B-pre2 | 5 | 5 | 4 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,6 | 3,5 | 2,7 | 2,6 | | 2,7 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 131.191.24.93 / 27-04-2017 | 4 | 1 | 3 | b2 | Te-pre2 | 4 | 4 | 3 | 4 | 1 | 3 |
| | | | | | b4 | S-pre2 | 4 | 4 | 5 | 1 | 1 | 4 |
| | | | | | h1 | Te-pre1 | 4 | 5 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 4 | 4,3 | 3,9 | 2,2 | | 3,6 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 178.140.231.10 / 27-04-2017 | 4 | 1 | 3 | c1 | B-pre2 | 2 | 3 | 1 | 4 | 2 | 3 |
| | | | | | te3 | H-pre1 | 2 | 4 | 4 | 3 | 1 | 1 |
| | | | | | s4 | Tr-pre1 | 3 | 4 | 1 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 2,3 | 3,6 | 1,9 | 3,1 | | 2,4 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 188.122.20.104 / 26-04-2017 | 4 | 1 | 3 | tr3 | B-pre3 | 4 | 3 | 1 | 4 | 1 | 1 |
| | | | | | b2 | C-pre2 | 3 | 2 | 3 | 2 | 1 | 2 |
| | | | | | te1 | C-pre3 | 4 | 2 | 2 | 4 | 1 | 1 |
| **Weighted scores** | | | | | | | 3,7 | 2,4 | 1,9 | 3,4 | | 1,3 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 188.187.49.67 / 25-04-2017 | 4 | 1 | 3 | c1 | Fa-pre2 | 5 | 5 | 4 | 1 | 1 | 3 |
| | | | | | c1 | Fo-pre2 | 5 | 5 | 3 | 3 | 1 | 3 |
| | | | | | c3 | S-pre3 | 4 | 4 | 4 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 4,7 | 4,7 | 3,7 | 1,9 | | 2,7 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 93.100.93.95 / 29-04-2017 | 4 | 1 | 5 | tr4 | S-pre1 | 3 | 3 | 1 | 5 | 1 | 1 |
| | | | | | h1 | Tr-pre1 | 3 | 2 | 3 | 5 | 2 | 2 |
| | | | | | c2 | Fa-pre3 | 3 | 3 | 3 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 3 | 2,7 | 2,2 | 4,4 | | 1,6 |

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 3,4 | 3,7 | 2,7 | 3 | 2 |
| | 4,4 | 2,6 | 2,6 | 3,7 | 2,3 |
| | 3,5 | 3,2 | 2,7 | 3 | 2,7 |
| | 2,2 | 1,9 | 2,2 | 3,7 | 2,3 |
| | 3,2 | 3,2 | 1,9 | 3,3 | 1,4 |
| | 1,5 | 2,2 | 2,9 | 3,1 | 2,9 |
| | 3,7 | 4 | 3,7 | 2 | 3,7 |
| | 4,7 | 4 | 4 | 2 | 4 |
| | 3 | 3 | 2 | 3 | 3 |
| | 4,7 | 4,3 | 3 | 2,6 | 4,3 |
| | 3,3 | 3,7 | 3,4 | 3 | 2,4 |
| | 3,1 | 3,2 | 3 | 2,4 | 2,6 |
| | 3,6 | 3,5 | 2,7 | 2,6 | 2,7 |
| | 4 | 4,3 | 3,9 | 2,2 | 3,6 |
| | 4 | 4,3 | 3,9 | 2,2 | 3,6 |
| | 2,3 | 3,6 | 1,9 | 3,1 | 2,4 |
| | 3,7 | 2,4 | 1,9 | 3,4 | 1,3 |
| | 4,7 | 4,7 | 3,7 | 1,9 | 2,7 |
| | 3 | 2,7 | 2,2 | 4,4 | 1,6 |
| **Weighted Average** | 3,47 | 3,39 | 2,86 | 2,87 | 2,71 |

| | | |
|---|---|---|
| **Brand Recall** | 49 / 54 | 90,74% |

# 18 – 24 Data (Part 1)

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.18.205.10 / 26-04-2017 | 1 | 2 | 2 | c1 | Te-pre2 | 4 | 3 | 4 | 2 | 1 | 3 |
| | | | | | tr2 | Te-pre1 | 1 | 3 | 4 | 1 | 1 | 3 |
| | | | | | fa1 | Te-pre3 | 4 | 4 | 4 | 1 | 1 | 3 |
| **Weighted scores** | | | | | | | 2,9 | 3,3 | 4 | 1,4 | | 3 |
| 2 | 81.89.181.69 / 26-04-2017 | 1 | 2 | 2 | c3 | S-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | | | | tr2 | H-pre2 | 3 | 1 | 3 | 3 | 1 | 2 |
| | | | | | fa4 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,7 | 2,9 | 3 | 3 | | 2,3 |
| 3 | 195.19.228.138 / 27-04-2017 | 1 | 1 | 2 | c1 | Fo-pre1 | 1 | 1 | 1 | 4 | 1 | 2 |
| | | | | | tr3 | Te-pre3 | 1 | 2 | 4 | 2 | 1 | 2 |
| | | | | | s2 | Te-pre1 | 3 | 4 | 4 | 3 | 2 | 5 |
| **Weighted scores** | | | | | | | 1,5 | 2,2 | 2,9 | 3,1 | | 2,9 |
| 4 | 178.67.123.217 / 27-04-2017 | 2 | 2 | 2 | c4 | C-pre3 | 3 | 4 | 4 | 1 | 1 | 3 |
| | | | | | b2 | B-pre3 | 3 | 4 | 3 | 3 | 1 | 2 |
| | | | | | fo3 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 2,7 | 3,4 | 3,4 | 1,9 | | 2,7 |
| 5 | 207.14.29.3 / 01-05-2017 | 2 | 1 | 2 | fa1 | Fa-pre3 | 4 | 4 | 4 | 2 | 1 | 4 |
| | | | | | h1 | H-pre2 | 4 | 4 | 3 | 2 | 2 | 4 |
| | | | | | te1 | Te-pre1 | 3 | 4 | 4 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,7 | 4 | 3,7 | 2 | | 3,7 |
| 6 | 178.24.238.227 / 01-05-2017 | 2 | 2 | 2 | c4 | C-pre3 | 4 | 4 | 1 | 3 | 1 | 2 |
| | | | | | te3 | Te-pre2 | 3 | 4 | 3 | 2 | 1 | 3 |
| | | | | | fo3 | Fo-pre3 | 5 | 4 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 4 | 4 | 2,2 | 2,4 | | 2,9 |
| 7 | 172.58.44.132 / 03-05-2017 | 2 | 1 | 2 | te1 | Te-pre2 | 5 | 4 | 3 | 2 | 1 | 4 |
| | | | | | te4 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 5 |
| | | | | | te3 | Te-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,7 | 4,3 | 3 | 2,6 | | 4,3 |
| 8 | 77.179.9.203 / 02-05-2017 | 2 | 2 | 2 | tr1 | Tr-pre2 | 4 | 3 | 1 | 4 | 1 | 3 |
| | | | | | c3 | C-pre3 | 2 | 4 | 4 | 2 | 1 | 4 |
| | | | | | h1 | H-pre2 | 2 | 2 | 3 | 4 | 1 | 1 |
| **Weighted scores** | | | | | | | 2,8 | 3 | 2,5 | 3,4 | | 2,7 |
| 9 | 95.221.93.186 / 26-04-2017 | 3 | 2 | 2 | tr1 | Tr-pre2 | 3 | 4 | 2 | 1 | 1 | 1 |
| | | | | | c2 | C-pre1 | 4 | 4 | 3 | 1 | 1 | 5 |
| | | | | | fa1 | Fa-pre3 | 5 | 4 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,9 | 4 | 2,9 | 1 | | 3,1 |
| 10 | 109.205.248.178 / 25-05-2017 | 3 | 2 | 2 | tr1 | Tr-pre1 | 3 | 2 | 4 | 2 | 2 | 4 |
| | | | | | s3 | S-pre2 | 1 | 1 | 4 | 2 | 1 | 3 |
| | | | | | fa3 | Fa-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,1 | 2,3 | 3,4 | 3 | | 3,1 |
| 11 | 176.194.72.222 / 25-04-2017 | 3 | 2 | 2 | tr3 | Tr-pre3 | 4 | 4 | 3 | 4 | 1 | 2 |
| | | | | | fa3 | Fa-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| | | | | | h1 | H-pre1 | 4 | 4 | 2 | 4 | 1 | 1 |
| **Weighted scores** | | | | | | | 4 | 4 | 2,4 | 4 | | 1,7 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 5.18.204.12 / 28-04-2017 | 3 | 2 | 2 | fo2 | Fo-pre1 | 4 | 4 | 4 | 3 | 1 | 4 |
| | | | | | fo1 | Fo-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| | | | | | fo3 | Fo-pre2 | 5 | 5 | 4 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,6 | 4,6 | 3,7 | 3 | | 4 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 178.8.88.23 / 01-05-2017 | 3 | 2 | 2 | c2 | C-pre3 | 4 | 4 | 3 | 2 | 1 | 4 |
| | | | | | fa1 | Fa-pre2 | 4 | 4 | 4 | 1 | 1 | 5 |
| | | | | | tr1 | Tr-pre2 | 2 | 2 | 3 | 2 | 1 | 5 |
| **Weighted scores** | | | | | | | 3,4 | 3,4 | 3,3 | 1,7 | | 4,6 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 87.144.118.143 / 25-04-2017 | 4 | 2 | 2 | c2 | Fa-pre2 | 4 | 5 | 1 | 4 | 1 | 2 |
| | | | | | tr4 | S-pre2 | 3 | 2 | 3 | 2 | 1 | 4 |
| | | | | | s4 | B-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,7 | 3,8 | 2,2 | 3,1 | | 2,9 |

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 2,9 | 3,3 | 4 | 1,4 | 3 |
| | 3,7 | 2,9 | 3 | 3 | 2,3 |
| | 1,5 | 2,2 | 2,9 | 3,1 | 2,9 |
| | 2,7 | 3,4 | 3,4 | 1,9 | 2,7 |
| | 3,7 | 4 | 3,7 | 2 | 3,7 |
| | 4 | 4 | 2,2 | 2,4 | 2,9 |
| | 4,7 | 4,3 | 3 | 2,6 | 4,3 |
| | 2,8 | 3 | 2,5 | 3,4 | 2,7 |
| | 3,9 | 4 | 2,9 | 1 | 3,1 |
| | 3,1 | 2,3 | 3,4 | 3 | 3,1 |
| | 4 | 4 | 2,4 | 4 | 1,7 |
| | 4,6 | 4,6 | 3,7 | 3 | 4 |
| | 3,4 | 3,4 | 3,3 | 1,7 | 4,6 |
| | 3,7 | 3,8 | 2,2 | 3,1 | 2,9 |
| **Weighted Average** | 3,48 | 3,51 | 3,04 | 2,54 | 3,14 |

| | | |
|---|---|---|
| **Brand Recall** | 39 / 42 | 92,90% |

# 25 – 34 Data (Part 1)

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31.28.11.46 / 26-04-2017 | 1 | 1 | 3 | fa2 | C-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | | | | b2 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | | | | h3 | Tr-pre1 | 2 | 3 | 2 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,4 | 3,7 | 2,7 | 3 | | 2 |
| 2 | 87.77.238.152 / 25-04-2017 | 1 | 1 | 3 | te3 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| | | | | | fo2 | C-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| | | | | | te1 | Tr-pre3 | 5 | 4 | 3 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,5 | 3,2 | 2,7 | 3 | | 2,7 |
| 3 | 185.29.130.2 / 26-04-2017 | 1 | 1 | 3 | c1 | H-pre2 | 1 | 1 | 1 | 4 | 1 | 2 |
| | | | | | tr2 | S-pre1 | 4 | 4 | 4 | 2 | 1 | 4 |
| | | | | | fa1 | S-pre2 | 2 | 1 | 2 | 5 | 1 | 1 |
| **Weighted scores** | | | | | | | 2,2 | 1,9 | 2,2 | 3,7 | | 2,3 |
| 4 | 188.134.19.146 / 27-04-2017 | 1 | 1 | 3 | te3 | S-pre1 | 2 | 2 | 2 | 3 | 1 | 1 |
| | | | | | tr4 | H-pre2 | 4 | 4 | 1 | 5 | 1 | 1 |
| | | | | | b3 | S-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,2 | 3,2 | 1,9 | 3,3 | | 1,4 |
| 5 | 195.19.247.9 / 26-04-2017 | 1 | 2 | 3 | c1 | Fa-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | b4 | Tr-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| | | | | | s4 | Tr-pre1 | 4 | 3 | 3 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,4 | 3,1 | 3 | 2,4 | | 2,4 |
| 6 | 82.144.57.58 / 28-04-2017 | 2 | 2 | 3 | tr4 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| | | | | | fa3 | Fa-pre1 | 3 | 4 | 2 | 4 | 1 | 3 |
| | | | | | c4 | C-pre1 | 5 | 5 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,2 | 3,5 | 3 | 3,4 | | 3,3 |
| 7 | 213.21.41.192 / 01-05-2017 | 2 | 2 | 3 | fo3 | Fo-pre1 | 3 | 2 | 3 | 3 | 1 | 4 |
| | | | | | fa1 | Fa-pre3 | 3 | 4 | 4 | 2 | 1 | 3 |
| | | | | | tr3 | Tr-pre2 | 5 | 5 | 3 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,6 | 3,5 | 3,3 | 2,3 | | 3,7 |
| 8 | 95.91.211.241 / 01-05-2017 | 2 | 2 | 3 | s3 | S-pre2 | 3 | 1 | 4 | 2 | 1 | 4 |
| | | | | | fo4 | Fo-pre3 | 3 | 3 | 1 | 4 | 1 | 2 |
| | | | | | fa1 | Fa-pre1 | 4 | 4 | 1 | 4 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,3 | 2,5 | 2,2 | 3,2 | | 3,1 |
| 9 | 67.183.118.81 / 01-05-2017 | 2 | 1 | 3 | te3 | Te-pre3 | 5 | 4 | 4 | 2 | 1 | 4 |
| | | | | | fo1 | Fo-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| | | | | | fa3 | Fa-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,7 | 4 | 4 | 2 | | 4 |
| 10 | 91.64.51.144 / 01-05-2017 | 2 | 1 | 3 | c3 | C-pre3 | 3 | 3 | 2 | 3 | 2 | 3 |
| | | | | | te3 | Te-pre1 | 4 | 4 | 2 | 3 | 1 | 2 |
| | | | | | tr2 | Tr-pre1 | 2 | 2 | 2 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 3 | 3 | 2 | 3 | | 3 |
| 11 | 216.243.54.46 / 02-05-2017 | 2 | 2 | 3 | tr1 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| | | | | | tr2 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 4 |
| | | | | | tr3 | Tr-ptr3 | 2 | 2 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 2,8 | 2,8 | 3 | 2,7 | | 4 |

# 25 – 34 Data (Part 2)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 73.151.210.77 / 02-05-2017 | 2 | 2 | 3 | h2 | H-pre1 | 5 | 4 | 4 | 2 | 1 | 4 |
| | | | | | tr3 | Tr-pre1 | 5 | 5 | 4 | 3 | 1 | 5 |
| | | | | | fo2 | Fo-pre3 | 5 | 5 | 4 | 2 | 1 | 5 |
| **Weighted scores** | | | | | | | 5 | 4,7 | 4 | 2,3 | | 4,6 |
| 13 | 47.42.29.29 / 03-05-2017 | 2 | 2 | 3 | tr4 | Tr-pre1 | 3 | 2 | 2 | 2 | 1 | 3 |
| | | | | | c4 | C-pre1 | 4 | 3 | 4 | 2 | 1 | 1 |
| | | | | | fa4 | Fa-pre1 | 3 | 4 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,3 | 2,9 | 2,9 | 2 | | 2,7 |
| 14 | 5.164.72.62 / 02-05-2017 | 2 | 2 | 3 | c3 | C-pre3 | 3 | 4 | 3 | 2 | 1 | 3 |
| | | | | | tr2 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| | | | | | tr3 | Tr-pre3 | 3 | 4 | 3 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,3 | 4 | 3 | 2,3 | | 3,6 |
| 15 | 213.87.144.8 / 26-04-2017 | 3 | 2 | 3 | h4 | H-pre3 | 5 | 4 | 3 | 3 | 1 | 4 |
| | | | | | fo1 | Fo-pre2 | 1 | 4 | 5 | 1 | 1 | 5 |
| | | | | | te1 | Te-pre1 | 5 | 5 | 5 | 1 | 1 | 5 |
| **Weighted scores** | | | | | | | 3,8 | 4,3 | 4,2 | 1,8 | | 4,6 |
| 16 | 93.100.211.107 / 01-05-2017 | 3 | 2 | 3 | tr1 | Tr-pre3 | 2 | 2 | 2 | 4 | 1 | 2 |
| | | | | | fo3 | Fo-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,2 | 3,2 | 2,4 | 3,4 | | 2,3 |
| 17 | 46.228.10.9 / 01-05-2017 | 3 | 2 | 3 | tr1 | Tr-pre3 | 3 | 3 | 4 | 4 | 1 | 4 |
| | | | | | c2 | C-pre2 | 2 | 2 | 4 | 2 | 1 | 2 |
| | | | | | te3 | T-pre1 | 1 | 1 | 3 | 3 | 1 | 4 |
| **Weighted scores** | | | | | | | 2,1 | 2,1 | 3,7 | 3,1 | | 3,4 |
| 18 | 77.73.139.219 / 26-04-2017 | 4 | 1 | 3 | te4 | C-pre2 | 3 | 4 | 5 | 2 | 1 | 3 |
| | | | | | b3 | H-pre1 | 5 | 5 | 3 | 4 | 1 | 2 |
| | | | | | b4 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 3,3 | 3,7 | 3,4 | 3 | | 2,4 |
| 19 | 77.239.201.85 / 27-04-2017 | 4 | 1 | 3 | c1 | Tr-pre2 | 1 | 2 | 3 | 3 | 1 | 2 |
| | | | | | tr1 | Te-pre2 | 4 | 4 | 2 | 2 | 1 | 3 |
| | | | | | fa4 | Tr-pre3 | 5 | 4 | 4 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,1 | 3,2 | 3 | 2,4 | | 2,6 |
| 20 | 79.197.178.2 / 26-04-2017 | 4 | 1 | 3 | tr4 | B-pre3 | 3 | 2 | 3 | 2 | 1 | 3 |
| | | | | | fo1 | B-pre1 | 3 | 4 | 1 | 4 | 1 | 1 |
| | | | | | s4 | B-pre2 | 5 | 5 | 4 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 3,6 | 3,5 | 2,7 | 2,6 | | 2,7 |
| 21 | 178.140.231.10 / 27-04-2017 | 4 | 1 | 3 | c1 | B-pre2 | 2 | 3 | 1 | 4 | 2 | 3 |
| | | | | | te3 | H-pre1 | 2 | 4 | 4 | 3 | 1 | 1 |
| | | | | | s4 | Tr-pre1 | 3 | 4 | 1 | 2 | 1 | 3 |
| **Weighted scores** | | | | | | | 2,3 | 3,6 | 1,9 | 3,1 | | 2,4 |
| 22 | 188.122.20.104 / 26-04-2017 | 4 | 1 | 3 | tr3 | B-pre3 | 4 | 3 | 1 | 4 | 1 | 1 |
| | | | | | b2 | C-pre2 | 3 | 2 | 3 | 2 | 1 | 2 |
| | | | | | te1 | C-pre3 | 4 | 2 | 2 | 4 | 1 | 1 |
| **Weighted scores** | | | | | | | 3,7 | 2,4 | 1,9 | 3,4 | | 1,3 |
| 23 | 188.187.49.67 / 25-04-2017 | 4 | 1 | 3 | c1 | Fa-pre2 | 5 | 5 | 4 | 1 | 1 | 3 |
| | | | | | c1 | Fo-pre2 | 5 | 5 | 3 | 3 | 1 | 3 |
| | | | | | c3 | S-pre3 | 4 | 4 | 4 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 4,7 | 4,7 | 3,7 | 1,9 | | 2,7 |

# 25 – 34 Data (Part 3)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 24 | 46.39.230.147 / 28-04-2017 | 4 | 2 | 3 | s4 | H-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | s1 | Tr-pre1 | 5 | 5 | 4 | 2 | 1 | 4 |
| | | | | | tr4 | B-pre1 | 3 | 4 | 2 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 4 | 4,3 | 3 | 2,7 | | 3,3 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 131.191.24.93 / 27-04-2017 | 4 | 1 | 3 | b2 | Te-pre2 | 4 | 4 | 3 | 4 | 1 | 3 |
| | | | | | b4 | S-pre2 | 4 | 4 | 5 | 1 | 1 | 4 |
| | | | | | h1 | Te-pre1 | 4 | 5 | 4 | 1 | 1 | 4 |
| **Weighted scores** | | | | | | | 4 | 4,3 | 3,9 | 2,2 | | 3,6 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | 172.58.43.243 / 28-04-2017 | 4 | 2 | 3 | fa2 | Tr-pre2 | 3 | 3 | 5 | 1 | 1 | 4 |
| | | | | | h3 | C-pre1 | 5 | 5 | 2 | 4 | 1 | 1 |
| | | | | | b2 | Fo-pre3 | 4 | 4 | 4 | 1 | 1 | 1 |
| **Weighted scores** | | | | | | | 3,9 | 3,9 | 3,8 | 1,9 | | 2,2 |

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 3,4 | 3,7 | 2,7 | 3 | 2 |
| | 3,5 | 3,2 | 2,7 | 3 | 2,7 |
| | 2,2 | 1,9 | 2,2 | 3,7 | 2,3 |
| | 3,2 | 3,2 | 1,9 | 3,3 | 1,4 |
| | 3,4 | 3,1 | 3 | 2,4 | 2,4 |
| | 3,2 | 3,5 | 3 | 3,4 | 3,3 |
| | 3,6 | 3,5 | 3,3 | 2,3 | 3,7 |
| | 3,3 | 2,5 | 2,2 | 3,2 | 3,1 |
| | 4,7 | 4 | 4 | 2 | 4 |
| | 3 | 3 | 2 | 3 | 3 |
| | 2,8 | 2,8 | 3 | 2,7 | 4 |
| | 5 | 4,7 | 4 | 2,3 | 4,6 |
| | 3,3 | 2,9 | 2,9 | 2 | 2,7 |
| | 3,3 | 4 | 3 | 2,3 | 3,6 |
| | 3,8 | 4,3 | 4,2 | 1,8 | 4,6 |
| | 3,2 | 3,2 | 2,4 | 3,4 | 2,3 |
| | 2,1 | 2,1 | 3,7 | 3,1 | 3,4 |
| | 3,3 | 3,7 | 3,4 | 3 | 2,4 |
| | 3,1 | 3,2 | 3 | 2,4 | 2,6 |
| | 3,6 | 3,5 | 2,7 | 2,6 | 2,7 |
| | 2,3 | 3,6 | 1,9 | 3,1 | 2,4 |
| | 3,7 | 2,4 | 1,9 | 3,4 | 1,3 |
| | 4,7 | 4,7 | 3,7 | 1,9 | 2,7 |
| | 4 | 4,3 | 3 | 2,7 | 3,3 |
| | 4 | 4,3 | 3,9 | 2,2 | 3,6 |
| | 3,9 | 3,9 | 3,8 | 1,9 | 2,2 |
| **Weighted Average** | 3,45 | 3,43 | 2,98 | 2,7 | 2,93 |

| | | |
|---|---|---|
| **Brand Recall** | 76 / 78 | 97.44% |

35 – 44 Data

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 46.62.74.125 / 26-04-2017 | 1 | 1 | 4 | c1 | B-pre1 | 5 | 2 | 2 | 4 | 1 | 2 |
| | | | | | c2 | Tr-pre2 | 3 | 2 | 2 | 4 | 1 | 3 |
| | | | | | c3 | B-pre2 | 5 | 4 | 4 | 3 | 1 | 2 |
| | | **Weighted scores** | | | | | 4,4 | 2,6 | 2,6 | 3,7 | | 2,3 |
| 2 | 24.19.87.95 / 01-05-2017 | 2 | 2 | 4 | h2 | H-pre2 | 5 | 5 | 5 | 3 | 2 | 4 |
| | | | | | fa4 | Fa-pre2 | 5 | 5 | 5 | 2 | 1 | 4 |
| | | | | | fo2 | Fo-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| | | **Weighted scores** | | | | | 4,7 | 4,7 | 4,4 | 2,7 | | 3,4 |
| 3 | 79.143.230.59 / 27-04-2017 | 3 | 2 | 4 | tr2 | Tr-pre3 | 3 | 1 | 3 | 3 | 1 | 4 |
| | | | | | fa3 | Fa-pre2 | 1 | 5 | 4 | 1 | 1 | 4 |
| | | | | | fo4 | Fo-pre2 | 4 | 4 | 2 | 2 | 1 | 2 |
| | | **Weighted scores** | | | | | 2,7 | 3,1 | 3 | 2,1 | | 3,4 |
| 4 | 73.157.106.199 / 02-05-2017 | 2 | 2 | 4 | tr1 | Tr-pre3 | 3 | 3 | 3 | 2 | 1 | 2 |
| | | | | | fa3 | Fa-pre2 | 4 | 4 | 4 | 1 | 2 | 5 |
| | | | | | c1 | C-pre1 | 3 | 4 | 5 | 1 | 1 | 4 |
| | | **Weighted scores** | | | | | 3,3 | 3,6 | 3,9 | 1,4 | | 3,5 |
| 5 | 172.56.42.123 / 03-05-2017 | 2 | 2 | 4 | h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| | | | | | fa2 | Fa-pre2 | 4 | 3 | 1 | 2 | 1 | 1 |
| | | | | | tr4 | Tr-pre3 | 3 | 2 | 4 | 1 | 1 | 4 |
| | | **Weighted scores** | | | | | 3,7 | 3,1 | 2,7 | 2,1 | | 2,7 |

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 4,4 | 2,6 | 2,6 | 3,7 | 2,3 |
| | 4,7 | 4,7 | 4,4 | 2,7 | 3,4 |
| | 2,7 | 3,1 | 3 | 2,1 | 3,4 |
| | 3,3 | 3,6 | 3,9 | 1,4 | 3,5 |
| | 3,7 | 3,1 | 2,7 | 2,1 | 2,7 |
| **Weigthed Average** | 3,76 | 3,42 | 3,32 | 2,4 | 3,06 |

**Brand Recall** 13 / 15 86,67%%

45 – 60 Data

| # | IP Address / Date | Group | Gender | Age | Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 95.27.46.54 / 27-04-2017 | 1 | 2 | 5 | h2 | Fa-pre1 | 4 | 3 | 2 | 3 | 2 | 2 |
| | | | | | fo2 | Te-pre1 | 4 | 4 | 3 | 2 | 1 | 3 |
| | | | | | te3 | C-pre3 | 5 | 4 | 3 | 2 | 1 | 2 |
| **Weighted scores** | | | | | | | 4,3 | 3,6 | 2,6 | 2,4 | | 2,3 |
| 2 | 79.143.230.60 / 27-04-2017 | 3 | 2 | 5 | tr3 | Tr-pre3 | 4 | 4 | 4 | 1 | 2 | 4 |
| | | | | | fa2 | Fa-pre2 | 5 | 5 | 5 | 1 | 1 | 3 |
| | | | | | h4 | H-pre2 | 4 | 5 | 4 | 2 | 1 | 4 |
| **Weighted scores** | | | | | | | 4,3 | 4,6 | 4,3 | 1,3 | | 3,7 |
| 3 | 131.191.106.2 / 26-04-2017 | 4 | 2 | 5 | tr4 | B-pre3 | 4 | 4 | 3 | 3 | 2 | 3 |
| | | | | | fa3 | Tr-pre3 | 2 | 2 | 3 | 3 | 1 | 3 |
| | | | | | fo4 | S-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Weighted scores** | | | | | | | 3,4 | 3,4 | 3 | 3 | | 3 |
| 4 | 93.100.93.95 / 29-04-2017 | 4 | 1 | 5 | tr4 | S-pre1 | 3 | 3 | 1 | 5 | 1 | 1 |
| | | | | | h1 | Tr-pre1 | 3 | 2 | 3 | 5 | 2 | 2 |
| | | | | | c2 | Fa-pre3 | 3 | 3 | 3 | 3 | 1 | 2 |
| **Weighted scores** | | | | | | | 3 | 2,7 | 2,2 | 4,4 | | 1,6 |

| | | | | | |
|---|---|---|---|---|---|
| **Weighted Scores** | 4,3 | 3,6 | 2,6 | 2,4 | 2,3 |
| | 4,3 | 4,6 | 4,3 | 1,3 | 3,7 |
| | 3,4 | 3,4 | 3 | 3 | 3 |
| | 3 | 2,7 | 2,2 | 4,4 | 1,6 |
| **Weigthed Average** | 3,75 | 3,58 | 3,03 | 2,78 | 2,65 |

**Brand Recall** 8 / 12 75,00%%

Video Category Data – First Video View (Part 1)

| Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|
| b2 | Te-pre2 | 4 | 4 | 3 | 4 | 1 | 3 |
| **Average** | | 4 | 4 | 3 | 4 | | 4 |
| c1 | Te-pre2 | 4 | 3 | 4 | 2 | 1 | 3 |
| c1 | B-pre1 | 5 | 2 | 2 | 4 | 1 | 2 |
| c1 | H-pre2 | 1 | 1 | 1 | 4 | 1 | 2 |
| c1 | Fo-pre1 | 1 | 1 | 1 | 4 | 1 | 2 |
| c1 | Fa-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| c1 | Tr-pre2 | 1 | 2 | 3 | 3 | 1 | 2 |
| c1 | B-pre2 | 2 | 3 | 1 | 4 | 2 | 3 |
| c1 | Fa-pre2 | 5 | 5 | 4 | 1 | 1 | 3 |
| c2 | C-pre3 | 4 | 4 | 3 | 2 | 1 | 4 |
| c2 | Fa-pre2 | 4 | 5 | 1 | 4 | 1 | 2 |
| c3 | S-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| c3 | C-pre3 | 3 | 3 | 2 | 3 | 2 | 3 |
| c3 | C-pre3 | 3 | 4 | 3 | 2 | 1 | 3 |
| c4 | C-pre3 | 3 | 4 | 4 | 1 | 1 | 3 |
| c4 | C-pre3 | 4 | 4 | 1 | 3 | 1 | 2 |
| **Average** | | 3,2 | 3,27 | 2,4 | 2,87 | | 2,6 |
| fa1 | Fa-pre3 | 4 | 4 | 4 | 2 | 1 | 4 |
| fa2 | C-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| fa2 | Tr-pre2 | 3 | 3 | 5 | 1 | 1 | 4 |
| **Average** | | 3,67 | 3,67 | 4 | 2 | | 3,33 |
| fo2 | Fo-pre1 | 4 | 4 | 4 | 3 | 1 | 4 |
| fo3 | Fo-pre1 | 3 | 2 | 3 | 3 | 1 | 4 |
| **Average** | | 3,5 | 3 | 3,5 | 3 | | 4 |
| h2 | Fa-pre1 | 4 | 3 | 2 | 3 | 2 | 2 |
| h2 | H-pre2 | 5 | 5 | 5 | 3 | 2 | 4 |
| h2 | H-pre1 | 5 | 4 | 4 | 2 | 1 | 4 |
| h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| h4 | H-pre3 | 5 | 4 | 3 | 3 | 1 | 4 |
| **Average** | | 4,6 | 4 | 3,4 | 2,8 | | 3,4 |
| s3 | S-pre2 | 3 | 1 | 4 | 2 | 1 | 4 |
| s4 | H-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Average** | | 3,5 | 2,5 | 3,5 | 2,5 | | 3,5 |

Video Category Data – First Video View (Part 2)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| te1 | Te-pre2 | 5 | 4 | 3 | 2 | 1 | 4 |
| te3 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| te3 | S-pre1 | 2 | 2 | 2 | 3 | 1 | 1 |
| te3 | Te-pre3 | 5 | 4 | 4 | 2 | 1 | 4 |
| te4 | C-pre2 | 3 | 4 | 5 | 2 | 1 | 3 |
| **Average** | | 3,4 | 3,2 | 3,4 | 2,4 | | 3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| tr1 | Tr-pre3 | 3 | 3 | 3 | 2 | 1 | 2 |
| tr1 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| tr1 | Tr-pre2 | 4 | 3 | 1 | 4 | 1 | 3 |
| tr1 | Tr-pre2 | 3 | 4 | 2 | 1 | 1 | 1 |
| tr1 | Tr-pre1 | 3 | 2 | 4 | 2 | 2 | 4 |
| tr1 | Tr-pre3 | 2 | 2 | 2 | 4 | 1 | 2 |
| tr1 | Tr-pre3 | 3 | 3 | 4 | 4 | 1 | 4 |
| tr2 | Tr-pre3 | 3 | 1 | 3 | 3 | 1 | 4 |
| tr3 | Tr-pre3 | 4 | 4 | 4 | 1 | 2 | 4 |
| tr3 | Tr-pre3 | 4 | 4 | 3 | 4 | 1 | 2 |
| tr3 | B-pre3 | 4 | 3 | 1 | 4 | 1 | 1 |
| tr4 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| tr4 | Tr-pre1 | 3 | 2 | 2 | 2 | 1 | 3 |
| tr4 | B-pre3 | 3 | 2 | 3 | 2 | 1 | 3 |
| tr4 | B-pre3 | 4 | 4 | 3 | 3 | 2 | 3 |
| tr4 | S-pre1 | 3 | 3 | 1 | 5 | 1 | 1 |
| **Average** | | 3,25 | 2,86 | 2,63 | 2,94 | | 2,75 |

Video Category Data – Second and Third Video Views (Part 1)

| Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|
| b2 | Fo-pre3 | 4 | 4 | 4 | 1 | 1 | 1 |
| b2 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| b2 | B-pre3 | 3 | 4 | 3 | 3 | 1 | 2 |
| b2 | C-pre2 | 3 | 2 | 3 | 2 | 1 | 2 |
| b3 | S-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| b3 | H-pre1 | 5 | 5 | 3 | 4 | 1 | 2 |
| b4 | Tr-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| b4 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| b4 | S-pre2 | 4 | 4 | 5 | 1 | 1 | 4 |
| **Average** | | 3,44 | 3,44 | 3,22 | 2,44 | | 2,11 |
| c1 | Fo-pre2 | 5 | 5 | 3 | 3 | 1 | 3 |
| c1 | C-pre1 | 3 | 4 | 5 | 1 | 1 | 4 |
| c2 | C-pre2 | 2 | 2 | 4 | 2 | 1 | 2 |
| c2 | Fa-pre3 | 3 | 3 | 3 | 3 | 1 | 2 |
| c2 | Tr-pre2 | 3 | 2 | 2 | 4 | 1 | 3 |
| c2 | C-pre1 | 4 | 4 | 3 | 1 | 1 | 5 |
| c3 | B-pre2 | 5 | 4 | 4 | 3 | 1 | 2 |
| c3 | S-pre3 | 4 | 4 | 4 | 2 | 1 | 2 |
| c3 | C-pre3 | 2 | 4 | 4 | 2 | 1 | 4 |
| c4 | C-pre1 | 4 | 3 | 4 | 2 | 1 | 1 |
| c4 | C-pre1 | 5 | 5 | 4 | 1 | 1 | 4 |
| **Average** | | 3,64 | 3,64 | 3,64 | 2,18 | | 2,91 |
| fa1 | S-pre2 | 2 | 1 | 2 | 5 | 1 | 1 |
| fa1 | Te-pre3 | 4 | 4 | 4 | 1 | 1 | 3 |
| fa1 | Fa-pre3 | 3 | 4 | 4 | 2 | 1 | 3 |
| fa1 | Fa-pre1 | 4 | 4 | 1 | 4 | 1 | 3 |
| fa1 | Fa-pre3 | 5 | 4 | 4 | 1 | 1 | 4 |
| fa1 | Fa-pre2 | 4 | 4 | 4 | 1 | 1 | 5 |
| fa2 | Fa-pre2 | 4 | 3 | 1 | 2 | 1 | 1 |
| fa2 | Fa-pre2 | 5 | 5 | 5 | 1 | 1 | 3 |
| fa3 | Fa-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| fa3 | Fa-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| fa3 | Fa-pre1 | 3 | 4 | 2 | 4 | 1 | 3 |
| fa3 | Tr-pre3 | 2 | 2 | 3 | 3 | 1 | 3 |
| fa3 | Fa-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| fa3 | Fa-pre2 | 1 | 5 | 4 | 1 | 1 | 4 |
| fa3 | Fa-pre2 | 4 | 4 | 4 | 1 | 2 | 5 |
| fa4 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| fa4 | Tr-pre3 | 5 | 4 | 4 | 2 | 1 | 3 |
| fa4 | Fa-pre2 | 5 | 5 | 5 | 2 | 1 | 4 |
| fa4 | Fa-pre1 | 3 | 4 | 3 | 2 | 1 | 4 |
| **Average** | | 3,68 | 3,84 | 3,21 | 2,37 | | 3,16 |

## Video Category Data – Second and Third Video Views (Part 2)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| fo1 | B-pre1 | 3 | 4 | 1 | 4 | 1 | 1 |
| fo1 | Fo-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| fo1 | Fo-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| fo1 | Fo-pre2 | 1 | 4 | 5 | 1 | 1 | 5 |
| fo2 | C-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| fo2 | Fo-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| fo2 | Te-pre1 | 4 | 4 | 3 | 2 | 1 | 3 |
| fo2 | Fo-pre3 | 5 | 5 | 4 | 2 | 1 | 5 |
| fo3 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 3 |
| fo3 | Fo-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| fo3 | Fo-pre3 | 5 | 4 | 3 | 2 | 1 | 4 |
| fo3 | Fo-pre2 | 5 | 5 | 4 | 3 | 1 | 4 |
| fo4 | Fo-pre3 | 3 | 3 | 1 | 4 | 1 | 2 |
| fo4 | Fo-pre2 | 4 | 4 | 2 | 2 | 1 | 2 |
| fo4 | S-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Average** | | 3,8 | 4 | 2,93 | 2,67 | | 3,13 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| h1 | H-pre2 | 2 | 2 | 3 | 4 | 1 | 1 |
| h1 | H-pre1 | 4 | 4 | 2 | 4 | 1 | 1 |
| h1 | Tr-pre1 | 3 | 2 | 3 | 5 | 2 | 2 |
| h1 | H-pre2 | 4 | 4 | 3 | 2 | 2 | 4 |
| h1 | Te-pre1 | 4 | 5 | 4 | 1 | 1 | 4 |
| h3 | C-pre1 | 5 | 5 | 2 | 4 | 1 | 1 |
| h3 | Tr-pre1 | 2 | 3 | 2 | 3 | 1 | 2 |
| h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| h4 | H-pre2 | 4 | 5 | 4 | 2 | 1 | 4 |
| **Average** | | 3,56 | 3,78 | 2,89 | 3,11 | | 2,33 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| s1 | Tr-pre1 | 5 | 5 | 4 | 2 | 1 | 4 |
| s2 | Te-pre1 | 3 | 4 | 4 | 3 | 2 | 5 |
| s3 | S-pre2 | 1 | 1 | 4 | 2 | 1 | 3 |
| s4 | Tr-pre1 | 4 | 3 | 3 | 2 | 1 | 2 |
| s4 | B-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| s4 | Tr-pre1 | 3 | 4 | 1 | 2 | 1 | 3 |
| s4 | B-pre2 | 5 | 5 | 4 | 2 | 1 | 4 |
| **Average** | | 3,57 | 3,71 | 3,29 | 2,29 | | 3,43 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| te1 | C-pre3 | 4 | 2 | 2 | 4 | 1 | 1 |
| te1 | Tr-pre3 | 5 | 4 | 3 | 2 | 1 | 3 |
| te1 | Te-pre1 | 3 | 4 | 4 | 2 | 1 | 3 |
| te1 | Te-pre1 | 5 | 5 | 5 | 1 | 1 | 5 |
| te3 | H-pre1 | 2 | 4 | 4 | 3 | 1 | 1 |
| te3 | C-pre3 | 5 | 4 | 3 | 2 | 1 | 2 |
| te3 | Te-pre1 | 4 | 4 | 2 | 3 | 1 | 2 |
| te3 | Te-pre2 | 3 | 4 | 3 | 2 | 1 | 3 |
| te3 | Te-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| te3 | T-pre1 | 1 | 1 | 3 | 3 | 1 | 4 |
| te4 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 5 |
| **Average** | | 3,73 | 3,73 | 3,18 | 2,55 | | 3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| tr1 | Te-pre2 | 4 | 4 | 2 | 2 | 1 | 3 |
| tr1 | Tr-pre2 | 2 | 2 | 3 | 2 | 1 | 5 |
| tr2 | H-pre2 | 3 | 1 | 3 | 3 | 1 | 2 |
| tr2 | Te-pre1 | 1 | 3 | 4 | 1 | 1 | 3 |
| tr2 | S-pre1 | 4 | 4 | 4 | 2 | 1 | 4 |
| tr2 | Tr-pre1 | 2 | 2 | 2 | 3 | 1 | 4 |
| tr2 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 4 |
| tr2 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| tr3 | Te-pre3 | 1 | 2 | 4 | 2 | 1 | 2 |
| tr3 | Tr-pre2 | 5 | 5 | 3 | 1 | 1 | 4 |
| tr3 | Tr-ptr3 | 2 | 2 | 3 | 2 | 1 | 4 |
| tr3 | Tr-pre3 | 3 | 4 | 3 | 2 | 1 | 4 |
| tr3 | Tr-pre1 | 5 | 5 | 4 | 3 | 1 | 5 |
| tr4 | H-pre2 | 4 | 4 | 1 | 5 | 1 | 1 |
| tr4 | Tr-pre3 | 3 | 2 | 4 | 1 | 1 | 4 |
| tr4 | S-pre2 | 3 | 2 | 3 | 2 | 1 | 4 |
| tr4 | B-pre1 | 3 | 4 | 2 | 3 | 1 | 3 |
| **Average** | | 3 | 3,06 | 3 | 2,35 | | 3,51 |

Video Category Weighted Average

| Category | Q1 | Q2 | Q3 | Q4 | Brand | Q5 | |
|---|---|---|---|---|---|---|---|
| **Business** | | | | | | | |
| View 1 | 4 | 4 | 3 | 4 | | 4 | (x0,4) |
| Views 2+3 | 3,44 | 3,44 | 3,22 | 2,44 | | 2,11 | (x0,6) |
| **Weighted Average** | 3,66 | 3,66 | 3,13 | 3,06 | | 2,87 | |
| **Culture** | | | | | | | |
| View 1 | 3,2 | 3,27 | 2,4 | 2,87 | | 2,6 | (x0,4) |
| Views 2+3 | 3,64 | 3,64 | 3,64 | 2,18 | | 2,91 | (x0,6) |
| **Weighted Average** | 3,46 | 3,49 | 3,144 | 2,46 | | 2,79 | |
| **Fashion** | | | | | | | |
| View 1 | 3,67 | 3,67 | 4 | 2 | | 3,33 | (x0,4) |
| Views 2+3 | 3,68 | 3,84 | 3,21 | 2,37 | | 3,16 | (x0,6) |
| **Weighted Average** | 3,68 | 3,77 | 3,53 | 2,22 | | 3,23 | |
| **Food** | | | | | | | |
| View 1 | 3,5 | 3 | 3,5 | 3 | | 4 | (x0,4) |
| Views 2+3 | 3,55 | 3,58 | 2,93 | 2,67 | | 3,13 | (x0,6) |
| **Weighted Average** | 3,53 | 3,35 | 3,16 | 2,8 | | 3,48 | |
| **Health** | | | | | | | |
| View 1 | 4,6 | 4 | 3,4 | 2,8 | | 3,4 | (x0,4) |
| Views 2+3 | 3,56 | 3,78 | 2,89 | 3,11 | | 2,33 | (x0,6) |
| **Weighted Average** | 3,98 | 3,87 | 3,09 | 2,97 | | 2,76 | |
| **Sports** | | | | | | | |
| View 1 | 3,5 | 2,5 | 3,5 | 2,5 | | 3,5 | (x0,4) |
| Views 2+3 | 3,57 | 3,71 | 3,29 | 2,29 | | 3,43 | (x0,6) |
| **Weighted Average** | 3,54 | 3,23 | 3,37 | 2,37 | | 3,46 | |
| **Tech** | | | | | | | |
| View 1 | 3,4 | 3,2 | 3,4 | 2,4 | | 3 | (x0,4) |
| Views 2+3 | 3,73 | 3,73 | 3,18 | 2,55 | | 3 | (x0,6) |
| **Weighted Average** | 3,64 | 3,52 | 3,31 | 2,49 | | 3 | |
| **Travel** | | | | | | | |
| View 1 | 3,25 | 2,86 | 2,63 | 2,94 | | 2,75 | (x0,4) |
| Views 2+3 | 3 | 3,06 | 3 | 2,35 | | 3,51 | (x0,6) |
| **Weighted Average** | 3,1 | 2,98 | 2,82 | 2,59 | | 3,21 | |

Video Category Relevant Data – First View

| Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|
| c2 | C-pre3 | 4 | 4 | 3 | 2 | 1 | 4 |
| c3 | C-pre3 | 3 | 3 | 2 | 3 | 2 | 3 |
| c3 | C-pre3 | 3 | 4 | 3 | 2 | 1 | 3 |
| c4 | C-pre3 | 3 | 4 | 4 | 1 | 1 | 3 |
| c4 | C-pre3 | 4 | 4 | 1 | 3 | 1 | 2 |
| **Average** | | 3,4 | 3,8 | 2,6 | 2,2 | | 3 |
| fa1 | Fa-pre3 | 4 | 4 | 4 | 2 | 1 | 4 |
| fo2 | Fo-pre1 | 4 | 4 | 4 | 3 | 1 | 4 |
| fo3 | Fo-pre1 | 3 | 2 | 3 | 3 | 1 | 4 |
| **Average** | | 3,5 | 3 | 3,5 | 3 | | 4 |
| h2 | H-pre2 | 5 | 5 | 5 | 3 | 2 | 4 |
| h2 | H-pre1 | 5 | 4 | 4 | 2 | 1 | 4 |
| h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| h4 | H-pre3 | 5 | 4 | 3 | 3 | 1 | 4 |
| **Average** | | 4,75 | 4,25 | 3,75 | 2,75 | | 3,75 |
| s3 | S-pre2 | 3 | 1 | 4 | 2 | 1 | 4 |
| te1 | Te-pre2 | 5 | 4 | 3 | 2 | 1 | 4 |
| te3 | Te-pre3 | 5 | 4 | 4 | 2 | 1 | 4 |
| **Average** | | 5 | 4 | 3,5 | 2 | | 4 |
| tr1 | Tr-pre3 | 3 | 3 | 3 | 2 | 1 | 2 |
| tr1 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| tr1 | Tr-pre2 | 4 | 3 | 1 | 4 | 1 | 3 |
| tr1 | Tr-pre2 | 3 | 4 | 2 | 1 | 1 | 1 |
| tr1 | Tr-pre1 | 3 | 2 | 4 | 2 | 2 | 4 |
| tr1 | Tr-pre3 | 2 | 2 | 2 | 4 | 1 | 2 |
| tr1 | Tr-pre3 | 3 | 3 | 4 | 4 | 1 | 4 |
| tr2 | Tr-pre3 | 3 | 1 | 3 | 3 | 1 | 4 |
| tr3 | Tr-pre3 | 4 | 4 | 4 | 1 | 2 | 4 |
| tr3 | Tr-pre3 | 4 | 4 | 3 | 4 | 1 | 2 |
| tr4 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| tr4 | Tr-pre1 | 3 | 2 | 2 | 2 | 1 | 3 |
| **Average** | | 3,17 | 2,83 | 2,83 | 2,75 | | 3 |

Video Category Relevant Data – Second and Third Views (Part 1)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b2 | B-pre3 | 3 | 4 | 3 | 3 | 1 | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c1 | C-pre1 | 3 | 4 | 5 | 1 | 1 | 4 |
| c2 | C-pre1 | 4 | 4 | 3 | 1 | 1 | 5 |
| c2 | C-pre2 | 2 | 2 | 4 | 2 | 1 | 2 |
| c3 | C-pre3 | 2 | 4 | 4 | 2 | 1 | 4 |
| c4 | C-pre1 | 5 | 5 | 4 | 1 | 1 | 4 |
| c4 | C-pre1 | 4 | 3 | 4 | 2 | 1 | 1 |
| **Average** | | 3,33 | 3,67 | 4 | 1,5 | | 3,33 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| fa1 | Fa-pre3 | 3 | 4 | 4 | 2 | 1 | 3 |
| fa1 | Fa-pre1 | 4 | 4 | 1 | 4 | 1 | 3 |
| fa1 | Fa-pre3 | 5 | 4 | 4 | 1 | 1 | 4 |
| fa1 | Fa-pre2 | 4 | 4 | 4 | 1 | 1 | 5 |
| fa2 | Fa-pre2 | 4 | 3 | 1 | 2 | 1 | 1 |
| fa2 | Fa-pre2 | 5 | 5 | 5 | 1 | 1 | 3 |
| fa3 | Fa-pre1 | 3 | 4 | 2 | 4 | 1 | 3 |
| fa3 | Fa-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| fa3 | Fa-pre2 | 4 | 4 | 4 | 1 | 2 | 5 |
| fa3 | Fa-pre2 | 1 | 5 | 4 | 1 | 1 | 4 |
| fa3 | Fa-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| fa3 | Fa-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| fa4 | Fa-pre2 | 5 | 5 | 5 | 2 | 1 | 4 |
| fa4 | Fa-pre1 | 3 | 4 | 3 | 2 | 1 | 4 |
| **Average** | | 3,79 | 4,14 | 3,21 | 2,21 | | 3,36 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| fo1 | Fo-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| fo1 | Fo-pre2 | 1 | 4 | 5 | 1 | 1 | 5 |
| fo1 | Fo-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| fo2 | Fo-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| fo2 | Fo-pre3 | 5 | 5 | 4 | 2 | 1 | 5 |
| fo3 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 3 |
| fo3 | Fo-pre3 | 5 | 4 | 3 | 2 | 1 | 4 |
| fo3 | Fo-pre2 | 5 | 5 | 4 | 3 | 1 | 4 |
| fo3 | Fo-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| fo4 | Fo-pre3 | 3 | 3 | 1 | 4 | 1 | 2 |
| fo4 | Fo-pre2 | 4 | 4 | 2 | 2 | 1 | 2 |
| **Average** | | 3,82 | 4 | 3,82 | 2,45 | | 3,45 |

Video Category Relevant Data – Second and Third Views (Part 2)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| h1 | H-pre2 | 4 | 4 | 3 | 2 | 2 | 4 |
| h1 | H-pre2 | 2 | 2 | 3 | 4 | 1 | 1 |
| h1 | H-pre1 | 4 | 4 | 2 | 4 | 1 | 1 |
| h4 | H-pre2 | 4 | 5 | 4 | 2 | 1 | 4 |
| h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| **Average** | | 3,6 | 3,8 | 3 | 3 | | 2,4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| s3 | S-pre2 | 1 | 1 | 4 | 2 | 1 | 3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| te1 | Te-pre1 | 3 | 4 | 4 | 2 | 1 | 3 |
| te1 | Te-pre1 | 5 | 5 | 5 | 1 | 1 | 5 |
| te3 | Te-pre2 | 3 | 4 | 3 | 2 | 1 | 3 |
| te3 | Te-pre1 | 4 | 4 | 2 | 3 | 1 | 2 |
| te3 | Te-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| te3 | T-pre1 | 1 | 1 | 3 | 3 | 1 | 4 |
| te4 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 5 |
| **Average** | | 3,57 | 3,86 | 3,29 | 2,43 | | 3,71 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| tr1 | Tr-pre2 | 2 | 2 | 3 | 2 | 1 | 5 |
| tr2 | Tr-pre1 | 2 | 2 | 2 | 3 | 1 | 4 |
| tr2 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 4 |
| tr2 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| tr3 | Tr-pre2 | 5 | 5 | 3 | 1 | 1 | 4 |
| tr3 | Tr-ptr3 | 2 | 2 | 3 | 2 | 1 | 4 |
| tr3 | Tr-pre1 | 5 | 5 | 4 | 3 | 1 | 5 |
| tr3 | Tr-pre3 | 3 | 4 | 3 | 2 | 1 | 4 |
| tr4 | Tr-pre3 | 3 | 2 | 4 | 1 | 1 | 4 |
| **Average** | | 3,11 | 3,11 | 3,11 | 2,22 | | 4,22 |

Video Category Relevant Weighted Average

| Category | Q1 | Q2 | Q3 | Q4 | Brand | Q5 | |
|---|---|---|---|---|---|---|---|
| **Business** | | | | | | | |
| View 1 | N/A | N/A | N/A | N/A | | N/A | |
| Views 2+3 | 3 | 4 | 3 | 3 | | 2 | |
| **Weighted Average** | 3 | 4 | 3 | 3 | | 2 | |
| | | | | | | | |
| **Culture** | | | | | | | |
| View 1 | 3,4 | 3,8 | 2,6 | 2,2 | | 3 | (x0,4) |
| Views 2+3 | 3,33 | 3,67 | 4 | 1,5 | | 3,33 | (x0,6) |
| **Weighted Average** | 3,36 | 3,72 | 3,44 | 1,78 | | 3,2 | |
| | | | | | | | |
| **Fashion** | | | | | | | |
| View 1 | 4 | 4 | 4 | 2 | | 4 | (x0,4) |
| Views 2+3 | 3,79 | 4,14 | 3,21 | 2,21 | | 3,36 | (x0,6) |
| **Weighted Average** | 3,87 | 4,08 | 3,33 | 2,13 | | 3,62 | |
| | | | | | | | |
| **Food** | | | | | | | |
| View 1 | 3,5 | 3 | 3,5 | 3 | | 4 | (x0,4) |
| Views 2+3 | 3,82 | 4 | 3,82 | 2,45 | | 3,45 | (x0,6) |
| **Weighted Average** | 3,69 | 3,6 | 3,69 | 2,67 | | 3,67 | |
| | | | | | | | |
| **Health** | | | | | | | |
| View 1 | 4,75 | 4,25 | 3,75 | 2,75 | | 3,75 | (x0,4) |
| Views 2+3 | 3,6 | 3,8 | 3 | 3 | | 2,4 | (x0,6) |
| **Weighted Average** | 4,06 | 3,98 | 3,3 | 2,9 | | 2,94 | |
| | | | | | | | |
| **Sports** | | | | | | | |
| View 1 | 3 | 1 | 4 | 2 | | 4 | (x0,4) |
| Views 2+3 | 1 | 1 | 4 | 2 | | 3 | (x0,6) |
| **Weighted Average** | 2 | 1 | 4 | 2 | | 3,5 | |
| | | | | | | | |
| **Tech** | | | | | | | |
| View 1 | 5 | 4 | 3,5 | 2 | | 4 | (x0,4) |
| Views 2+3 | 3,57 | 3,86 | 3,29 | 2,43 | | 3,71 | (x0,6) |
| **Weighted Average** | 4,25 | 3,92 | 3,37 | 2,26 | | 3,83 | |
| | | | | | | | |
| **Travel** | | | | | | | |
| View 1 | 3,17 | 2,83 | 2,83 | 2,75 | | 3 | (x0,4) |
| Views 2+3 | 3,11 | 3,11 | 3,11 | 2,22 | | 4,22 | (x0,6) |
| **Weighted Average** | 3,13 | 3 | 3 | 2,43 | | 3,73 | |

Video Category Non-Relevant Data – First View

| Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|
| b2 | Te-pre2 | 4 | 4 | 3 | 4 | 1 | 3 |
| c1 | Tr-pre2 | 1 | 2 | 3 | 3 | 1 | 2 |
| c1 | B-pre2 | 2 | 3 | 1 | 4 | 2 | 3 |
| c1 | Fa-pre2 | 5 | 5 | 4 | 1 | 1 | 3 |
| c1 | Te-pre2 | 4 | 3 | 4 | 2 | 1 | 3 |
| c1 | B-pre1 | 5 | 2 | 2 | 4 | 1 | 2 |
| c1 | H-pre2 | 1 | 1 | 1 | 4 | 1 | 2 |
| c1 | Fo-pre1 | 1 | 1 | 1 | 4 | 1 | 2 |
| c1 | Fa-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| c2 | Fa-pre2 | 4 | 5 | 1 | 4 | 1 | 2 |
| c3 | S-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| **Average** | | 3,1 | 3 | 2,3 | 3,2 | | 2,4 |
| fa2 | Tr-pre2 | 3 | 3 | 5 | 1 | 1 | 4 |
| fa2 | C-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| **Average** | | 3,5 | 3,5 | 4 | 2 | | 3 |
| h2 | Fa-pre1 | 4 | 3 | 2 | 3 | 2 | 2 |
| s4 | H-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| te3 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| te3 | S-pre1 | 2 | 2 | 2 | 3 | 1 | 1 |
| te4 | C-pre2 | 3 | 4 | 5 | 2 | 1 | 3 |
| **Average** | | 2,33 | 2,67 | 3,33 | 2,67 | | 2,33 |
| tr3 | B-pre3 | 4 | 3 | 1 | 4 | 1 | 1 |
| tr4 | B-pre3 | 3 | 2 | 3 | 2 | 1 | 3 |
| tr4 | B-pre3 | 4 | 4 | 3 | 3 | 2 | 3 |
| tr4 | S-pre1 | 3 | 3 | 1 | 5 | 1 | 1 |
| **Average** | | 3,5 | 3 | 2 | 4,25 | | 2 |

Video Category Non-Relevant Data – Second and Third Views (Part 1)

| Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|
| b2 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| b2 | C-pre2 | 3 | 2 | 3 | 2 | 1 | 2 |
| b2 | Fo-pre3 | 4 | 4 | 4 | 1 | 1 | 1 |
| b3 | S-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| b3 | H-pre1 | 5 | 5 | 3 | 4 | 1 | 2 |
| b4 | Tr-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| b4 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| b4 | S-pre2 | 4 | 4 | 5 | 1 | 1 | 4 |
| **Average** | | 3,5 | 3,38 | 3,25 | 2,38 | | 2,13 |
| c1 | Fo-pre2 | 5 | 5 | 3 | 3 | 1 | 3 |
| c2 | Tr-pre2 | 3 | 2 | 2 | 4 | 1 | 3 |
| c2 | Fa-pre3 | 3 | 3 | 3 | 3 | 1 | 2 |
| c3 | B-pre2 | 5 | 4 | 4 | 3 | 1 | 2 |
| c3 | S-pre3 | 4 | 4 | 4 | 2 | 1 | 2 |
| **Average** | | 4 | 3,6 | 3,2 | 3 | | 2,4 |
| fa1 | Te-pre3 | 4 | 4 | 4 | 1 | 1 | 3 |
| fa1 | S-pre2 | 2 | 1 | 2 | 5 | 1 | 1 |
| fa3 | Tr-pre3 | 2 | 2 | 3 | 3 | 1 | 3 |
| fa4 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| fa4 | Tr-pre3 | 5 | 4 | 4 | 2 | 1 | 3 |
| **Average** | | 3,4 | 3 | 3,2 | 2,8 | | 2,6 |
| fo1 | B-pre1 | 3 | 4 | 1 | 4 | 1 | 1 |
| fo2 | C-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| fo2 | Te-pre1 | 4 | 4 | 3 | 2 | 1 | 3 |
| fo4 | S-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| **Average** | | 3,75 | 4 | 2,75 | 3,25 | | 2,75 |

Video Category Non-Relevant Data – Second and Third Views (Part 2)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| h1 | Te-pre1 | 4 | 5 | 4 | 1 | 1 | 4 |
| h1 | Tr-pre1 | 3 | 2 | 3 | 5 | 2 | 2 |
| h3 | Tr-pre1 | 2 | 3 | 2 | 3 | 1 | 2 |
| h3 | C-pre1 | 5 | 5 | 2 | 4 | 1 | 1 |
| **Average** | | 3,5 | 3,75 | 2,75 | 4,25 | | 3,25 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| s1 | Tr-pre1 | 5 | 5 | 4 | 2 | 1 | 4 |
| s2 | Te-pre1 | 3 | 4 | 4 | 3 | 2 | 5 |
| s4 | Tr-pre1 | 4 | 3 | 3 | 2 | 1 | 2 |
| s4 | B-pre2 | 5 | 5 | 4 | 2 | 1 | 4 |
| s4 | B-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| s4 | Tr-pre1 | 3 | 4 | 1 | 2 | 1 | 3 |
| **Average** | | 4 | 4,17 | 3,17 | 2,33 | | 3,5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| te1 | Tr-pre3 | 5 | 4 | 3 | 2 | 1 | 3 |
| te1 | C-pre3 | 4 | 2 | 2 | 4 | 1 | 1 |
| te3 | C-pre3 | 5 | 4 | 3 | 2 | 1 | 2 |
| te3 | H-pre1 | 2 | 4 | 4 | 3 | 1 | 1 |
| **Average** | | 4 | 3,5 | 3 | 2,75 | | 1,75 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| tr1 | Te-pre2 | 4 | 4 | 2 | 2 | 1 | 3 |
| tr2 | Te-pre1 | 1 | 3 | 4 | 1 | 1 | 3 |
| tr2 | H-pre2 | 3 | 1 | 3 | 3 | 1 | 2 |
| tr2 | S-pre1 | 4 | 4 | 4 | 2 | 1 | 4 |
| tr3 | Te-pre3 | 1 | 2 | 4 | 2 | 1 | 2 |
| tr4 | H-pre2 | 4 | 4 | 1 | 5 | 1 | 1 |
| tr4 | S-pre2 | 3 | 2 | 3 | 2 | 1 | 4 |
| tr4 | B-pre1 | 3 | 4 | 2 | 3 | 1 | 3 |
| **Average** | | 2,88 | 3 | 2,88 | 2,5 | | 2,75 |

# Video Category Non-Relevant Weighted Average

| Category | Q1 | Q2 | Q3 | Q4 | Brand | Q5 | |
|---|---|---|---|---|---|---|---|
| **Business** | | | | | | | |
| View 1 | 4 | 4 | 3 | 4 | | 3 | (x0,4) |
| Views 2+3 | 3,5 | 3,38 | 3,25 | 2,38 | | 2,13 | (x0,6) |
| **Weighted Average** | 3,7 | 3,63 | 3,15 | 3,03 | | 2,48 | |
| **Culture** | | | | | | | |
| View 1 | 3,1 | 3 | 2,3 | 3,2 | | 2,4 | (x0,4) |
| Views 2+3 | 4 | 3,6 | 3,2 | 3 | | 2,4 | (x0,6) |
| **Weighted Average** | 3,64 | 3,36 | 2,84 | 3,08 | | 2,4 | |
| **Fashion** | | | | | | | |
| View 1 | 3,5 | 3,5 | 4 | 2 | | 3 | (x0,4) |
| Views 2+3 | 3,4 | 3 | 3,2 | 2,8 | | 2,6 | (x0,6) |
| **Weighted Average** | 3,44 | 3,2 | 3,52 | 2,48 | | 2,76 | |
| **Food** | | | | | | | |
| View 1 | N/A | N/A | N/A | N/A | | N/A | |
| Views 2+3 | 3,75 | 4 | 2,75 | 3,25 | | 2,75 | |
| **Weighted Average** | 3,75 | 4 | 2,75 | 3,25 | | 2,75 | |
| **Health** | | | | | | | |
| View 1 | 4 | 3 | 2 | 3 | | 2 | (x0,4) |
| Views 2+3 | 3,5 | 3,75 | 2,75 | 4,25 | | 3,25 | (x0,6) |
| **Weighted Average** | 3,7 | 3,45 | 2,45 | 3,75 | | 2,75 | |
| **Sports** | | | | | | | |
| View 1 | 4 | 4 | 3 | 3 | | 3 | (x0,4) |
| Views 2+3 | 3,8 | 4,17 | 3,17 | 2,33 | | 3,5 | (x0,6) |
| **Weighted Average** | 3,88 | 4,1 | 3,1 | 2,6 | | 3,3 | |
| **Tech** | | | | | | | |
| View 1 | 2,33 | 2,67 | 3,33 | 2,67 | | 2,33 | (x0,4) |
| Views 2+3 | 4 | 3,5 | 3 | 2,75 | | 1,75 | (x0,6) |
| **Weighted Average** | 3,33 | 3,17 | 3,13 | 2,72 | | 1,98 | |
| **Travel** | | | | | | | |
| View 1 | 3,5 | 3 | 2 | 4,25 | | 2 | (x0,4) |
| Views 2+3 | 2,88 | 3 | 2,88 | 2,5 | | 2,75 | (x0,6) |
| **Weighted Average** | 3,13 | 3 | 2,53 | 3,2 | | 2,45 | |

Engagement by User Rating of Video – First View (Part 1)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c1 | Fa-pre2 | 5 | 5 | 4 | 1 | 1 | 3 |
| c1 | B-pre1 | 5 | 2 | 2 | 4 | 1 | 2 |
| h2 | H-pre2 | 5 | 5 | 5 | 3 | 2 | 4 |
| h2 | H-pre1 | 5 | 4 | 4 | 2 | 1 | 4 |
| h4 | H-pre3 | 5 | 4 | 3 | 3 | 1 | 4 |
| te1 | Te-pre2 | 5 | 4 | 3 | 2 | 1 | 4 |
| te3 | Te-pre3 | 5 | 4 | 4 | 2 | 1 | 4 |
| **Average** | | | 4 | 3,57 | 2,43 | | 3,57 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b2 | Te-pre2 | 4 | 4 | 3 | 4 | 1 | 3 |
| c1 | Te-pre2 | 4 | 3 | 4 | 2 | 1 | 3 |
| c1 | Fa-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| c2 | C-pre3 | 4 | 4 | 3 | 2 | 1 | 4 |
| c2 | Fa-pre2 | 4 | 5 | 1 | 4 | 1 | 2 |
| c3 | S-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| c4 | C-pre3 | 4 | 4 | 1 | 3 | 1 | 2 |
| fa1 | Fa-pre3 | 4 | 4 | 4 | 2 | 1 | 4 |
| fa2 | C-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| fo2 | Fo-pre1 | 4 | 4 | 4 | 3 | 1 | 4 |
| h2 | Fa-pre1 | 4 | 3 | 2 | 3 | 2 | 2 |
| h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| s4 | H-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| tr1 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| tr1 | Tr-pre2 | 4 | 3 | 1 | 4 | 1 | 3 |
| tr3 | Tr-pre3 | 4 | 4 | 4 | 1 | 2 | 4 |
| tr3 | Tr-pre3 | 4 | 4 | 3 | 4 | 1 | 2 |
| tr3 | B-pre3 | 4 | 3 | 1 | 4 | 1 | 1 |
| tr4 | B-pre3 | 4 | 4 | 3 | 3 | 2 | 3 |
| **Average** | | | 3,84 | 2,74 | 3 | | 2,84 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c3 | C-pre3 | 3 | 3 | 2 | 3 | 2 | 3 |
| c3 | C-pre3 | 3 | 4 | 3 | 2 | 1 | 3 |
| c4 | C-pre3 | 3 | 4 | 4 | 1 | 1 | 3 |
| fa2 | Tr-pre2 | 3 | 3 | 5 | 1 | 1 | 4 |
| fo3 | Fo-pre1 | 3 | 2 | 3 | 3 | 1 | 4 |
| s3 | S-pre2 | 3 | 1 | 4 | 2 | 1 | 4 |
| te4 | C-pre2 | 3 | 4 | 5 | 2 | 1 | 3 |
| tr1 | Tr-pre3 | 3 | 3 | 3 | 2 | 1 | 2 |
| tr1 | Tr-pre2 | 3 | 4 | 2 | 1 | 1 | 1 |
| tr1 | Tr-pre1 | 3 | 2 | 4 | 2 | 2 | 4 |
| tr1 | Tr-pre3 | 3 | 3 | 4 | 4 | 1 | 4 |
| tr2 | Tr-pre3 | 3 | 1 | 3 | 3 | 1 | 4 |
| tr4 | Tr-pre1 | 3 | 2 | 2 | 2 | 1 | 3 |
| tr4 | B-pre3 | 3 | 2 | 3 | 2 | 1 | 3 |
| tr4 | S-pre1 | 3 | 3 | 1 | 5 | 1 | 1 |
| **Average** | | | 2,73 | 3,2 | 2,33 | | 3,07 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c1 | B-pre2 | 2 | 3 | 1 | 4 | 2 | 3 |
| te3 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| te3 | S-pre1 | 2 | 2 | 2 | 3 | 1 | 1 |
| tr1 | Tr-pre3 | 2 | 2 | 2 | 4 | 1 | 2 |
| tr4 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| **Average** | | | 2,2 | 2,2 | 3,4 | | 2,4 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c1 | Tr-pre2 | 1 | 2 | 3 | 3 | 1 | 2 |
| c1 | H-pre2 | 1 | 1 | 1 | 4 | 1 | 2 |
| c1 | Fo-pre1 | 1 | 1 | 1 | 4 | 1 | 2 |
| **Average** | | | 1,33 | 1,67 | 3,67 | | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b3 | H-pre1 | 5 | 5 | 3 | 4 | 1 | 2 |
| c1 | Fo-pre2 | 5 | 5 | 3 | 3 | 1 | 3 |
| c3 | B-pre2 | 5 | 4 | 4 | 3 | 1 | 2 |
| c4 | C-pre1 | 5 | 5 | 4 | 1 | 1 | 4 |
| fa1 | Fa-pre3 | 5 | 4 | 4 | 1 | 1 | 4 |
| fa2 | Fa-pre2 | 5 | 5 | 5 | 1 | 1 | 3 |
| fa4 | Fa-pre2 | 5 | 5 | 5 | 2 | 1 | 4 |
| fa4 | Tr-pre3 | 5 | 4 | 4 | 2 | 1 | 3 |
| fo1 | Fo-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| fo2 | Fo-pre3 | 5 | 5 | 4 | 2 | 1 | 5 |
| fo3 | Fo-pre3 | 5 | 4 | 3 | 2 | 1 | 4 |
| fo3 | Fo-pre2 | 5 | 5 | 4 | 3 | 1 | 4 |
| h3 | C-pre1 | 5 | 5 | 2 | 4 | 1 | 1 |
| s1 | Tr-pre1 | 5 | 5 | 4 | 2 | 1 | 4 |
| s4 | B-pre2 | 5 | 5 | 4 | 2 | 1 | 4 |
| te1 | Te-pre1 | 5 | 5 | 5 | 1 | 1 | 5 |
| te1 | Tr-pre3 | 5 | 4 | 3 | 2 | 1 | 3 |
| te3 | Te-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| te3 | C-pre3 | 5 | 4 | 3 | 2 | 1 | 2 |
| tr3 | Tr-pre2 | 5 | 5 | 3 | 1 | 1 | 4 |
| tr3 | Tr-pre1 | 5 | 5 | 4 | 3 | 1 | 5 |
| **Average** | | | 4,71 | 3,67 | 2,24 | | 3,52 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b2 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| b2 | Fo-pre3 | 4 | 4 | 4 | 1 | 1 | 1 |
| b3 | S-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| b4 | S-pre2 | 4 | 4 | 5 | 1 | 1 | 4 |
| c2 | C-pre1 | 4 | 4 | 3 | 1 | 1 | 5 |
| c3 | S-pre3 | 4 | 4 | 4 | 2 | 1 | 2 |
| c4 | C-pre1 | 4 | 3 | 4 | 2 | 1 | 1 |
| fa1 | Fa-pre1 | 4 | 4 | 1 | 4 | 1 | 3 |
| fa1 | Fa-pre2 | 4 | 4 | 4 | 1 | 1 | 5 |
| fa1 | Te-pre3 | 4 | 4 | 4 | 1 | 1 | 3 |
| fa2 | Fa-pre2 | 4 | 3 | 1 | 2 | 1 | 1 |
| fa3 | Fa-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| fa3 | Fa-pre2 | 4 | 4 | 4 | 1 | 2 | 5 |
| fa3 | Fa-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| fa3 | Fa-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| fa4 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| fo1 | Fo-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| fo2 | Fo-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| fo2 | C-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| fo2 | Te-pre1 | 4 | 4 | 3 | 2 | 1 | 3 |
| fo3 | Fo-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| fo4 | Fo-pre2 | 4 | 4 | 2 | 2 | 1 | 2 |
| fo4 | S-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| h1 | H-pre2 | 4 | 4 | 3 | 2 | 2 | 4 |
| h1 | H-pre1 | 4 | 4 | 2 | 4 | 1 | 1 |
| h1 | Te-pre1 | 4 | 5 | 4 | 1 | 1 | 4 |
| h4 | H-pre2 | 4 | 5 | 4 | 2 | 1 | 4 |
| h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| s4 | Tr-pre1 | 4 | 3 | 3 | 2 | 1 | 2 |
| s4 | B-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| te1 | C-pre3 | 4 | 2 | 2 | 4 | 1 | 1 |
| te3 | Te-pre1 | 4 | 4 | 2 | 3 | 1 | 2 |
| te4 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 5 |
| tr1 | Te-pre2 | 4 | 4 | 2 | 2 | 1 | 3 |
| tr2 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| tr2 | S-pre1 | 4 | 4 | 4 | 2 | 1 | 4 |
| tr4 | H-pre2 | 4 | 4 | 1 | 5 | 1 | 1 |
| **Average** | | | 3,92 | 2,95 | 2,54 | | 2,81 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b2 | B-pre3 | 3 | 4 | 3 | 3 | 1 | 2 |
| b2 | C-pre2 | 3 | 2 | 3 | 2 | 1 | 2 |
| c1 | C-pre1 | 3 | 4 | 5 | 1 | 1 | 4 |
| c2 | Tr-pre2 | 3 | 2 | 2 | 4 | 1 | 3 |
| c2 | Fa-pre3 | 3 | 3 | 3 | 3 | 1 | 2 |
| fa1 | Fa-pre3 | 3 | 4 | 4 | 2 | 1 | 3 |
| fa3 | Fa-pre1 | 3 | 4 | 2 | 4 | 1 | 3 |
| fa4 | Fa-pre1 | 3 | 4 | 3 | 2 | 1 | 4 |
| fo1 | B-pre1 | 3 | 4 | 1 | 4 | 1 | 1 |
| fo4 | Fo-pre3 | 3 | 3 | 1 | 4 | 1 | 2 |
| h1 | Tr-pre1 | 3 | 2 | 3 | 5 | 2 | 2 |
| s2 | Te-pre1 | 3 | 4 | 4 | 3 | 2 | 5 |
| s4 | Tr-pre1 | 3 | 4 | 1 | 2 | 1 | 3 |
| te1 | Te-pre1 | 3 | 4 | 4 | 2 | 1 | 3 |
| te3 | Te-pre2 | 3 | 4 | 3 | 2 | 1 | 3 |
| tr2 | H-pre2 | 3 | 1 | 3 | 3 | 1 | 2 |
| tr3 | Tr-pre3 | 3 | 4 | 3 | 2 | 1 | 4 |
| tr4 | Tr-pre3 | 3 | 2 | 4 | 1 | 1 | 4 |
| tr4 | S-pre2 | 3 | 2 | 3 | 2 | 1 | 4 |
| tr4 | B-pre1 | 3 | 4 | 2 | 3 | 1 | 3 |
| **Average** | | | 3,25 | 2,85 | 2,7 | | 2,95 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b4 | Tr-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| b4 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| c2 | C-pre2 | 2 | 2 | 4 | 2 | 1 | 2 |
| c3 | C-pre3 | 2 | 4 | 4 | 2 | 1 | 4 |
| fa1 | S-pre2 | 2 | 1 | 2 | 5 | 1 | 1 |
| fa3 | Tr-pre3 | 2 | 2 | 3 | 3 | 1 | 3 |
| fo3 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 3 |
| h1 | H-pre2 | 2 | 2 | 3 | 4 | 1 | 1 |
| h3 | Tr-pre1 | 2 | 3 | 2 | 3 | 1 | 2 |
| te3 | H-pre1 | 2 | 4 | 4 | 3 | 1 | 1 |
| tr1 | Tr-pre2 | 2 | 2 | 3 | 2 | 1 | 5 |
| tr2 | Tr-pre1 | 2 | 2 | 2 | 3 | 1 | 4 |
| tr2 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 4 |
| tr3 | Tr-ptr3 | 2 | 2 | 3 | 2 | 1 | 4 |
| **Average** | | | 2,29 | 3 | 2,71 | | 2,71 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| fa3 | Fa-pre2 | 1 | 5 | 4 | 1 | 1 | 4 |
| fo1 | Fo-pre2 | 1 | 4 | 5 | 1 | 1 | 5 |
| s3 | S-pre2 | 1 | 1 | 4 | 2 | 1 | 3 |
| te3 | T-pre1 | 1 | 1 | 3 | 3 | 1 | 4 |
| tr2 | Te-pre1 | 1 | 3 | 4 | 1 | 1 | 3 |
| tr3 | Te-pre3 | 1 | 2 | 4 | 2 | 1 | 2 |
| **Average** | | | 2,67 | 4 | 1,67 | | 3,5 |

Engagement by User Rating of Video Weighted Averages

| Q1 | Q2 | Q3 | Q4 | Brand | Q5 | |
|---|---|---|---|---|---|---|
| **5** | | | | | | |
| First View | 4 | 3,57 | 2,43 | | 3,57 | (x0,4) |
| 2+3 View | 4,71 | 3,67 | 2,24 | | 3,52 | (x0,6) |
| **Weighted Average** | 4,43 | 3,63 | 2,32 | | 3,54 | |
| **4** | | | | | | |
| First View | 3,84 | 2,74 | 3 | | 2,84 | (x0,4) |
| 2+3 View | 3,92 | 2,95 | 2,54 | | 2,81 | (x0,6) |
| **Weighted Average** | 3,89 | 2,87 | 2,72 | | 2,82 | |
| **3** | | | | | | |
| First View | 2,73 | 3,2 | 2,33 | | 3,07 | (x0,4) |
| 2+3 View | 3,25 | 2,85 | 2,7 | | 2,95 | (x0,6) |
| **Weighted Average** | 3,04 | 2,99 | 2,55 | | 3 | |
| **2** | | | | | | |
| First View | 2,2 | 2,2 | 3,4 | | 2,4 | (x0,4) |
| 2+3 View | 2,29 | 3 | 2,71 | | 2,71 | (x0,6) |
| **Weighted Average** | 2,25 | 2,68 | 2,99 | | 2,59 | |
| **1** | | | | | | |
| First View | 1,33 | 1,67 | 3,67 | | 2 | (x0,4) |
| 2+3 View | 2,67 | 4 | 1,67 | | 3,5 | (x0,6) |
| **Weighted Average** | 2,13 | 3,07 | 2,47 | | 2,9 | |

Engagement by Matched Expectations – First View (Part 1)

| Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|
| c1 | Fa-pre2 | 5 | 5 | 4 | 1 | 1 | 3 |
| c2 | Fa-pre2 | 4 | 5 | 1 | 4 | 1 | 2 |
| h2 | H-pre2 | 5 | 5 | 5 | 3 | 2 | 4 |
| **Average** | | 4,67 | | 3,33 | 2,67 | | 3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b2 | Te-pre2 | 4 | 4 | 3 | 4 | 1 | 3 |
| c1 | Fa-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| c2 | C-pre3 | 4 | 4 | 3 | 2 | 1 | 4 |
| c3 | S-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| c3 | C-pre3 | 3 | 4 | 3 | 2 | 1 | 3 |
| c4 | C-pre3 | 4 | 4 | 1 | 3 | 1 | 2 |
| c4 | C-pre3 | 3 | 4 | 4 | 1 | 1 | 3 |
| fa1 | Fa-pre3 | 4 | 4 | 4 | 2 | 1 | 4 |
| fa2 | C-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| fo2 | Fo-pre1 | 4 | 4 | 4 | 3 | 1 | 4 |
| h2 | H-pre1 | 5 | 4 | 4 | 2 | 1 | 4 |
| h4 | H-pre3 | 5 | 4 | 3 | 3 | 1 | 4 |
| h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 3 |
| s4 | H-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| te1 | Te-pre2 | 5 | 4 | 3 | 2 | 1 | 4 |
| te3 | Te-pre3 | 5 | 4 | 4 | 2 | 1 | 4 |
| te4 | C-pre2 | 3 | 4 | 5 | 2 | 1 | 3 |
| tr1 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| tr1 | Tr-pre2 | 3 | 4 | 2 | 1 | 1 | 1 |
| tr3 | Tr-pre3 | 4 | 4 | 4 | 1 | 2 | 4 |
| tr3 | Tr-pre3 | 4 | 4 | 3 | 4 | 1 | 2 |
| tr4 | B-pre3 | 4 | 4 | 3 | 3 | 2 | 3 |
| **Average** | | 4 | | 3,23 | 2,5 | | 3,14 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c1 | Te-pre2 | 4 | 3 | 4 | 2 | 1 | 3 |
| c1 | B-pre2 | 2 | 3 | 1 | 4 | 2 | 3 |
| c3 | C-pre3 | 3 | 3 | 2 | 3 | 2 | 3 |
| fa2 | Tr-pre2 | 3 | 3 | 5 | 1 | 1 | 4 |
| h2 | Fa-pre1 | 4 | 3 | 2 | 3 | 2 | 2 |
| tr1 | Tr-pre2 | 4 | 3 | 1 | 4 | 1 | 3 |
| tr1 | Tr-pre3 | 3 | 3 | 3 | 2 | 1 | 2 |
| tr1 | Tr-pre3 | 3 | 3 | 4 | 4 | 1 | 4 |
| tr3 | B-pre3 | 4 | 3 | 1 | 4 | 1 | 1 |
| tr4 | S-pre1 | 3 | 3 | 1 | 5 | 1 | 1 |
| **Average** | | 3,3 | | 2,4 | 3,2 | | 2,6 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c1 | B-pre1 | 5 | 2 | 2 | 4 | 1 | 2 |
| c1 | Tr-pre2 | 1 | 2 | 3 | 3 | 1 | 2 |
| fo3 | Fo-pre1 | 3 | 2 | 3 | 3 | 1 | 4 |
| te3 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| te3 | S-pre1 | 2 | 2 | 2 | 3 | 1 | 1 |
| tr1 | Tr-pre1 | 3 | 2 | 4 | 2 | 2 | 4 |
| tr1 | Tr-pre3 | 2 | 2 | 2 | 4 | 1 | 2 |
| tr4 | Tr-pre1 | 3 | 2 | 2 | 2 | 1 | 3 |
| tr4 | B-pre3 | 3 | 2 | 3 | 2 | 1 | 3 |
| tr4 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 3 |
| **Average** | | 2,6 | | 2,7 | 2,9 | | 2,7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c1 | H-pre2 | 1 | 1 | 1 | 4 | 1 | 2 |
| c1 | Fo-pre1 | 1 | 1 | 1 | 4 | 1 | 2 |
| s3 | S-pre2 | 3 | 1 | 4 | 2 | 1 | 4 |
| tr2 | Tr-pre3 | 3 | 1 | 3 | 3 | 1 | 4 |
| **Average** | | 2 | | 2,25 | 3,25 | | 3 |

# Engagement by Matched Expectations – Second and Third Views (Part 1)

| Vid ID | Ad ID | Q1 | Q2 | Q3 | Q4 | Brand | Q5 |
|---|---|---|---|---|---|---|---|
| b3 | H-pre1 | 5 | 5 | 3 | 4 | 1 | 2 |
| c1 | Fo-pre2 | 5 | 5 | 3 | 3 | 1 | 3 |
| c4 | C-pre1 | 5 | 5 | 4 | 1 | 1 | 4 |
| fa2 | Fa-pre2 | 5 | 5 | 5 | 1 | 1 | 3 |
| fa3 | Fa-pre2 | 1 | 5 | 4 | 1 | 1 | 4 |
| fa4 | Fa-pre2 | 5 | 5 | 5 | 2 | 1 | 4 |
| fo1 | Fo-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| fo2 | Fo-pre3 | 5 | 5 | 4 | 2 | 1 | 5 |
| fo3 | Fo-pre2 | 5 | 5 | 4 | 3 | 1 | 4 |
| h1 | Te-pre1 | 4 | 5 | 4 | 1 | 1 | 4 |
| h3 | C-pre1 | 5 | 5 | 2 | 4 | 1 | 1 |
| h4 | H-pre2 | 4 | 5 | 4 | 2 | 1 | 4 |
| s1 | Tr-pre1 | 5 | 5 | 4 | 2 | 1 | 4 |
| s4 | B-pre2 | 5 | 5 | 4 | 2 | 1 | 4 |
| te1 | Te-pre1 | 5 | 5 | 5 | 1 | 1 | 5 |
| te3 | Te-pre3 | 5 | 5 | 3 | 3 | 1 | 4 |
| tr3 | Tr-pre2 | 5 | 5 | 3 | 1 | 1 | 4 |
| tr3 | Tr-pre1 | 5 | 5 | 4 | 3 | 1 | 5 |
| **Average** | | 4,67 | | 3,78 | 2,17 | | 3,78 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b2 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| b2 | Fo-pre3 | 4 | 4 | 4 | 1 | 1 | 1 |
| b2 | B-pre3 | 3 | 4 | 3 | 3 | 1 | 2 |
| b3 | S-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| b4 | S-pre2 | 4 | 4 | 5 | 1 | 1 | 4 |
| c1 | C-pre1 | 3 | 4 | 5 | 1 | 1 | 4 |
| c2 | C-pre1 | 4 | 4 | 3 | 1 | 1 | 5 |
| c3 | B-pre2 | 5 | 4 | 4 | 3 | 1 | 2 |
| c3 | S-pre3 | 4 | 4 | 4 | 2 | 1 | 2 |
| c3 | C-pre3 | 2 | 4 | 4 | 2 | 1 | 4 |
| fa1 | Fa-pre3 | 5 | 4 | 4 | 1 | 1 | 4 |
| fa1 | Fa-pre1 | 4 | 4 | 1 | 4 | 1 | 3 |
| fa1 | Fa-pre2 | 4 | 4 | 4 | 1 | 1 | 5 |
| fa1 | Te-pre3 | 4 | 4 | 4 | 1 | 1 | 3 |
| fa1 | Fa-pre3 | 3 | 4 | 4 | 2 | 1 | 3 |
| fa3 | Fa-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| fa3 | Fa-pre2 | 4 | 4 | 4 | 1 | 2 | 5 |
| fa3 | Fa-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| fa3 | Fa-pre3 | 4 | 4 | 2 | 4 | 1 | 2 |
| fa3 | Fa-pre1 | 3 | 4 | 2 | 4 | 1 | 3 |
| fa4 | Tr-pre3 | 5 | 4 | 4 | 2 | 1 | 3 |
| fa4 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| fa4 | Fa-pre1 | 3 | 4 | 3 | 2 | 1 | 4 |
| fo1 | Fo-pre2 | 4 | 4 | 4 | 2 | 1 | 4 |
| fo1 | B-pre1 | 3 | 4 | 1 | 4 | 1 | 1 |
| fo1 | Fo-pre2 | 1 | 4 | 5 | 1 | 1 | 5 |
| fo2 | Fo-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| fo2 | C-pre1 | 4 | 4 | 2 | 4 | 1 | 2 |
| fo2 | Te-pre1 | 4 | 4 | 3 | 2 | 1 | 3 |
| fo3 | Fo-pre3 | 5 | 4 | 3 | 2 | 1 | 4 |
| fo3 | Fo-pre2 | 4 | 4 | 3 | 3 | 1 | 3 |
| fo4 | Fo-pre2 | 4 | 4 | 2 | 2 | 1 | 2 |
| fo4 | S-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| h1 | H-pre2 | 4 | 4 | 3 | 2 | 2 | 4 |
| h1 | H-pre1 | 4 | 4 | 2 | 4 | 1 | 1 |
| h4 | H-pre1 | 4 | 4 | 3 | 3 | 1 | 2 |
| s2 | Te-pre1 | 3 | 4 | 4 | 3 | 2 | 5 |
| s4 | B-pre3 | 4 | 4 | 3 | 3 | 1 | 3 |
| s4 | Tr-pre1 | 3 | 4 | 1 | 2 | 1 | 3 |
| te1 | Tr-pre3 | 5 | 4 | 3 | 2 | 1 | 3 |
| te1 | Te-pre1 | 3 | 4 | 4 | 2 | 1 | 3 |
| te3 | C-pre3 | 5 | 4 | 3 | 2 | 1 | 2 |
| te3 | Te-pre1 | 4 | 4 | 2 | 3 | 1 | 2 |
| te3 | Te-pre2 | 3 | 4 | 3 | 2 | 1 | 3 |
| te3 | H-pre1 | 2 | 4 | 4 | 3 | 1 | 1 |
| te4 | Te-pre1 | 4 | 4 | 3 | 3 | 1 | 5 |
| tr1 | Te-pre2 | 4 | 4 | 2 | 2 | 1 | 3 |
| tr2 | Tr-pre2 | 4 | 4 | 3 | 3 | 1 | 4 |
| tr2 | S-pre1 | 4 | 4 | 4 | 2 | 1 | 4 |
| tr3 | Tr-pre3 | 3 | 4 | 3 | 2 | 1 | 4 |
| tr4 | H-pre2 | 4 | 4 | 1 | 5 | 1 | 1 |
| tr4 | B-pre1 | 3 | 4 | 2 | 3 | 1 | 3 |
| **Average** | | 3,75 | | 3,08 | 2,48 | | 3,02 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| c2 | Fa-pre3 | 3 | 3 | 3 | 3 | 1 | 2 |
| c4 | C-pre1 | 4 | 3 | 4 | 2 | 1 | 1 |
| fa2 | Fa-pre2 | 4 | 3 | 1 | 2 | 1 | 1 |
| fo4 | Fo-pre3 | 3 | 3 | 1 | 4 | 1 | 2 |
| h3 | Tr-pre1 | 2 | 3 | 2 | 3 | 1 | 2 |
| s4 | Tr-pre1 | 4 | 3 | 3 | 2 | 1 | 2 |
| tr2 | Te-pre1 | 1 | 3 | 4 | 1 | 1 | 3 |
| **Average** | | 3 | | 2,57 | 2,43 | | 1,86 |

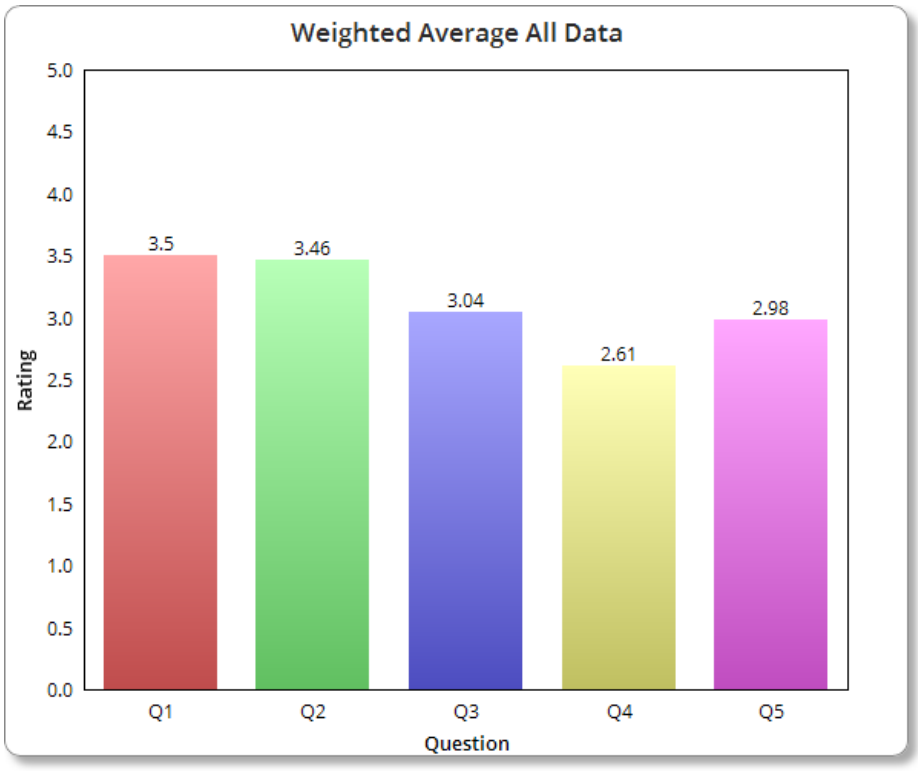
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| b2 | C-pre2 | 3 | 2 | 3 | 2 | 1 | 2 |
| b4 | Tr-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| b4 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 2 |
| c2 | Tr-pre2 | 3 | 2 | 2 | 4 | 1 | 3 |
| c2 | C-pre2 | 2 | 2 | 4 | 2 | 1 | 2 |
| fa3 | Tr-pre3 | 2 | 2 | 3 | 3 | 1 | 3 |
| fo3 | Fo-pre3 | 2 | 2 | 3 | 2 | 1 | 3 |
| h1 | Tr-pre1 | 3 | 2 | 3 | 5 | 2 | 2 |
| h1 | H-pre2 | 2 | 2 | 3 | 4 | 1 | 1 |
| te1 | C-pre3 | 4 | 2 | 2 | 4 | 1 | 1 |
| tr1 | Tr-pre2 | 2 | 2 | 3 | 2 | 1 | 5 |
| tr2 | Tr-pre1 | 2 | 2 | 2 | 3 | 1 | 4 |
| tr2 | Tr-pre2 | 2 | 2 | 3 | 3 | 1 | 4 |
| tr3 | Tr-ptr3 | 2 | 2 | 3 | 2 | 1 | 4 |
| tr3 | Te-pre3 | 1 | 2 | 4 | 2 | 1 | 2 |
| tr4 | Tr-pre3 | 3 | 2 | 4 | 1 | 1 | 4 |
| tr4 | S-pre2 | 3 | 2 | 3 | 2 | 1 | 4 |
| **Average** | | 2,35 | | 3 | 2,65 | | 2,82 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| fa1 | S-pre2 | 2 | 1 | 2 | 5 | 1 | 1 |
| s3 | S-pre2 | 1 | 1 | 4 | 2 | 1 | 3 |
| te3 | T-pre1 | 1 | 1 | 3 | 3 | 1 | 4 |
| tr2 | H-pre2 | 3 | 1 | 3 | 3 | 1 | 2 |
| **Average** | | 1,75 | | 3 | 3,25 | | 2,5 |

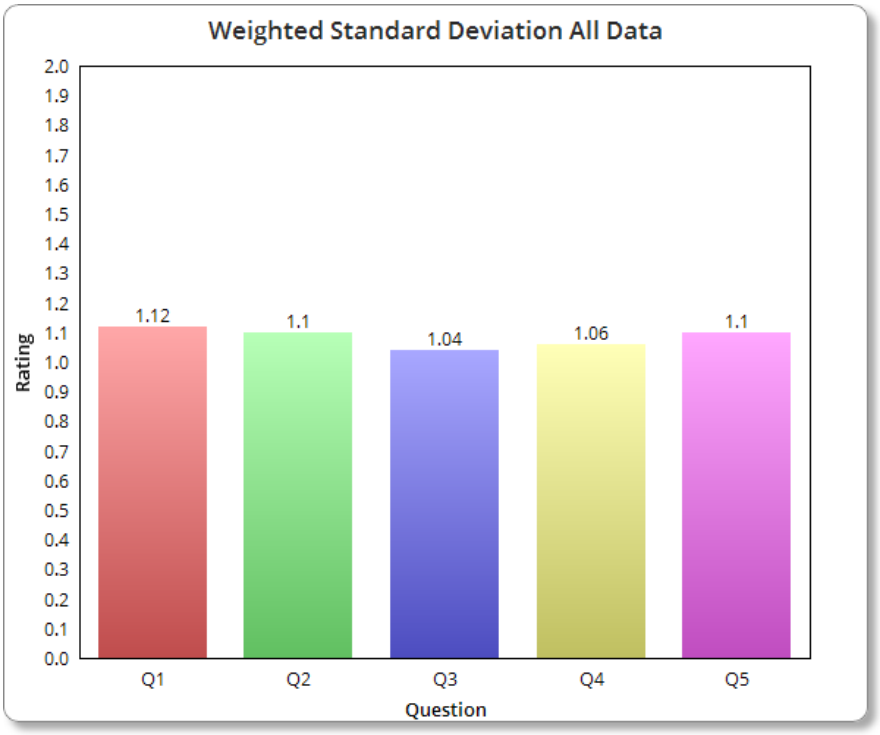
Engagement by Matched Expectations Weighted Averages

| Q2 | Q1 | Q3 | Q4 | Brand | Q5 | |
|---|---|---|---|---|---|---|
| **5** | | | | | | |
| First View | 4,67 | 3,33 | 2,67 | | 3 | (x0,4) |
| 2+3 View | 4,67 | 3,78 | 2,17 | | 3,78 | (x0,6) |
| **Weighted Average** | 4,67 | 3,6 | 2,37 | | 3,47 | |
| **4** | | | | | | |
| First View | 4 | 3,23 | 2,5 | | 3,14 | (x0,4) |
| 2+3 View | 3,75 | 3,08 | 2,48 | | 3,02 | (x0,6) |
| **Weighted Average** | 3,85 | 3,14 | 2,49 | | 3,07 | |
| **3** | | | | | | |
| First View | 3,3 | 2,4 | 3,2 | | 2,6 | (x0,4) |
| 2+3 View | 3 | 2,57 | 2,43 | | 1,86 | (x0,6) |
| **Weighted Average** | 3,12 | 2,5 | 2,74 | | 2,17 | |
| **2** | | | | | | |
| First View | 2,6 | 2,7 | 2,9 | | 2,7 | (x0,4) |
| 2+3 View | 2,35 | 3 | 2,65 | | 2,82 | (x0,6) |
| **Weighted Average** | 2,45 | 2,88 | 2,75 | | 2,77 | |
| **1** | | | | | | |
| First View | 2 | 2,25 | 3,25 | | 3 | (x0,4) |
| 2+3 View | 1,75 | 3 | 3,25 | | 2,5 | (x0,6) |
| **Weighted Average** | 1,85 | 2,7 | 3,25 | | 2,7 | |

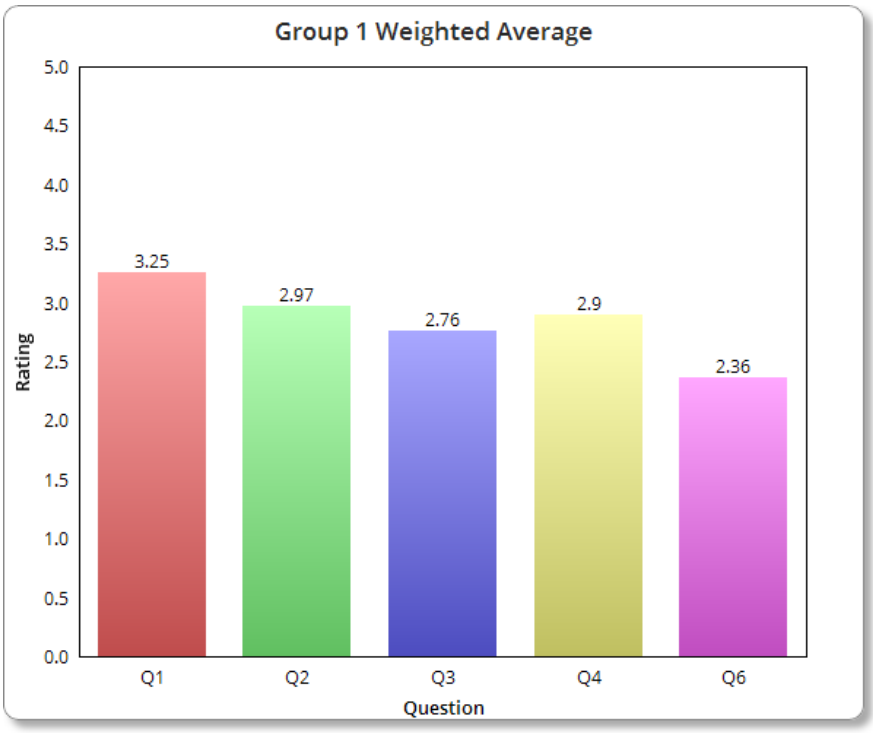
User Engagement Weighted Averages – All Data



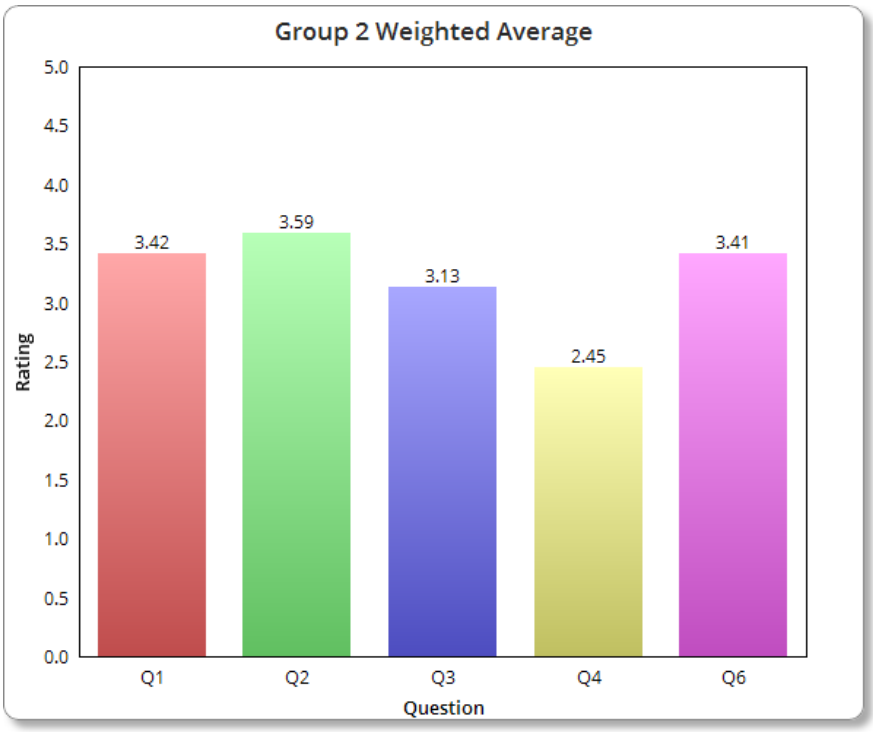

Weighted Standard Deviation



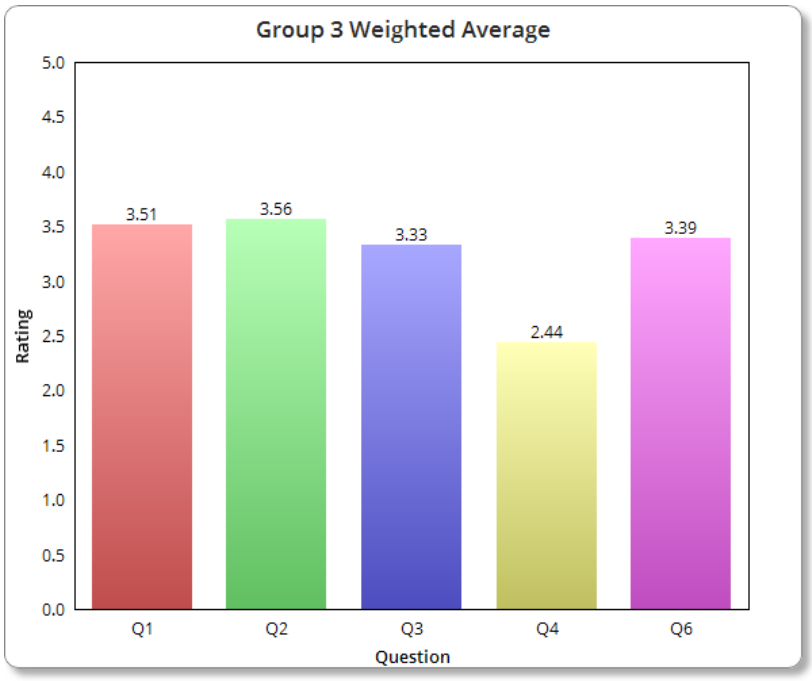
Group 1 Weighted Averages



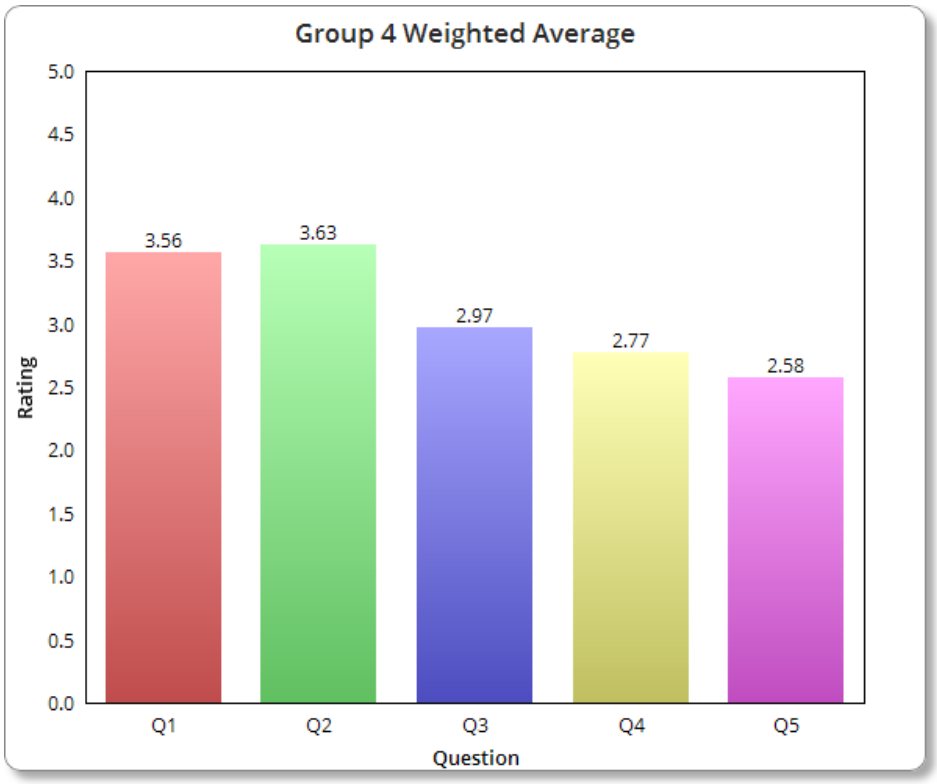

Group 2 Weighted Averages



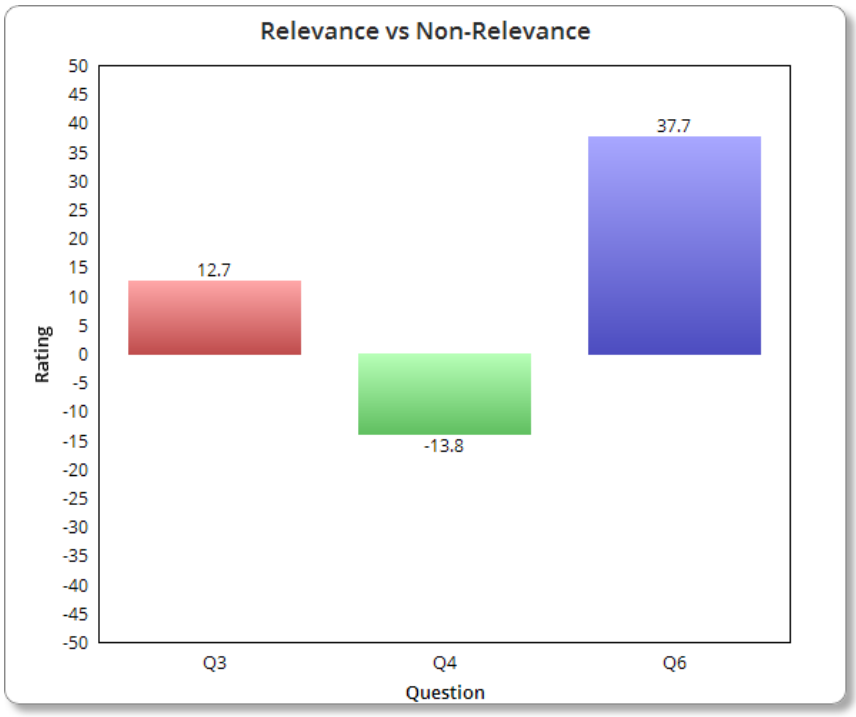
Group 3 Weighted Averages



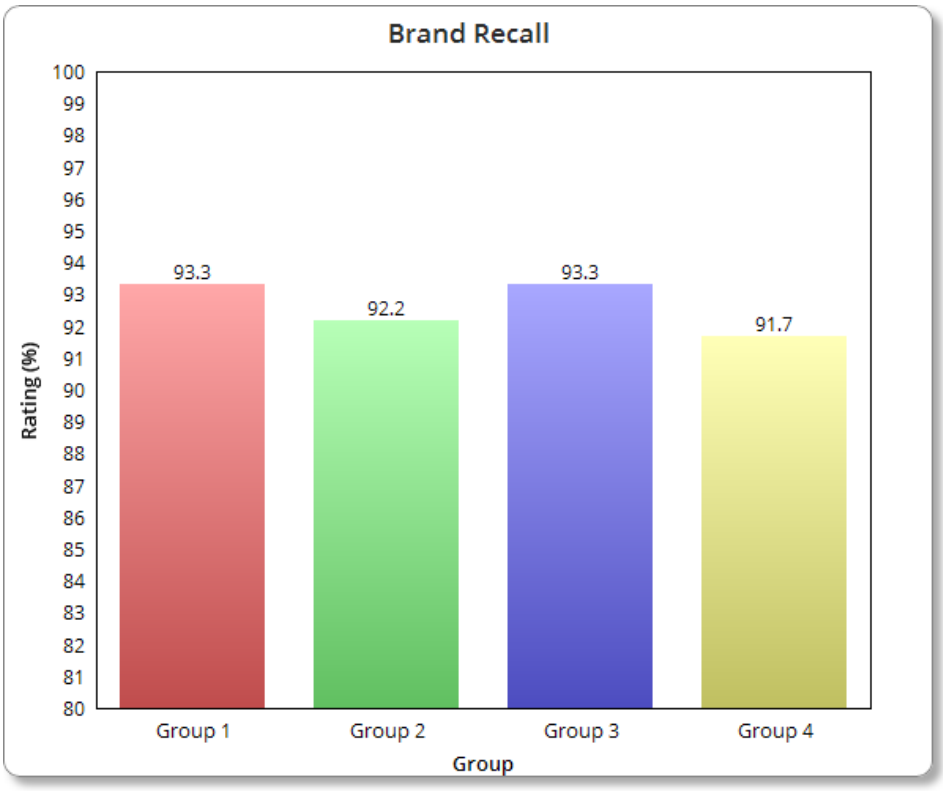

Group 4 Weighted Averages



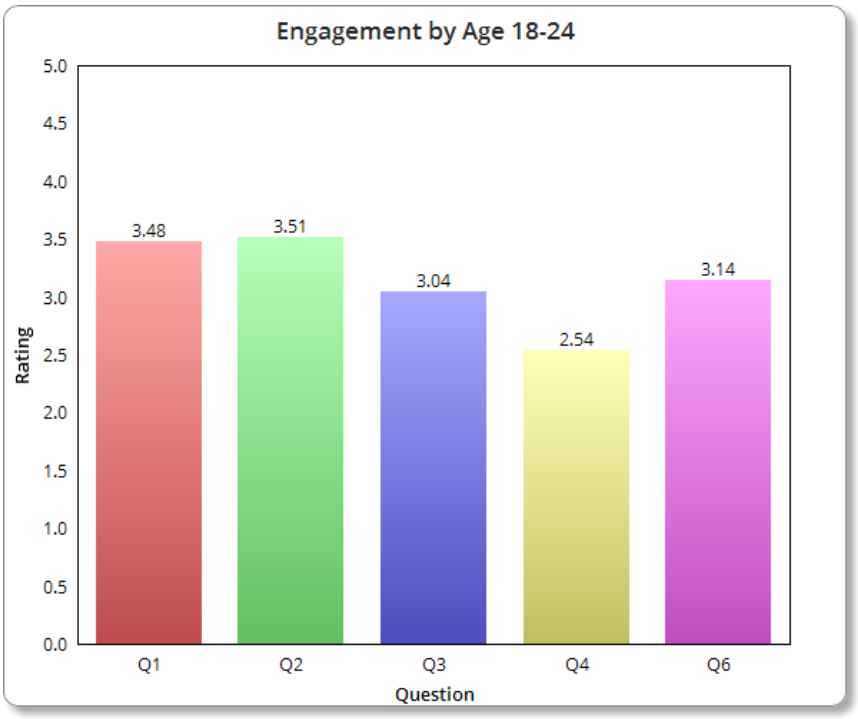
Percentage Engagement Gains from Relevance – All Data



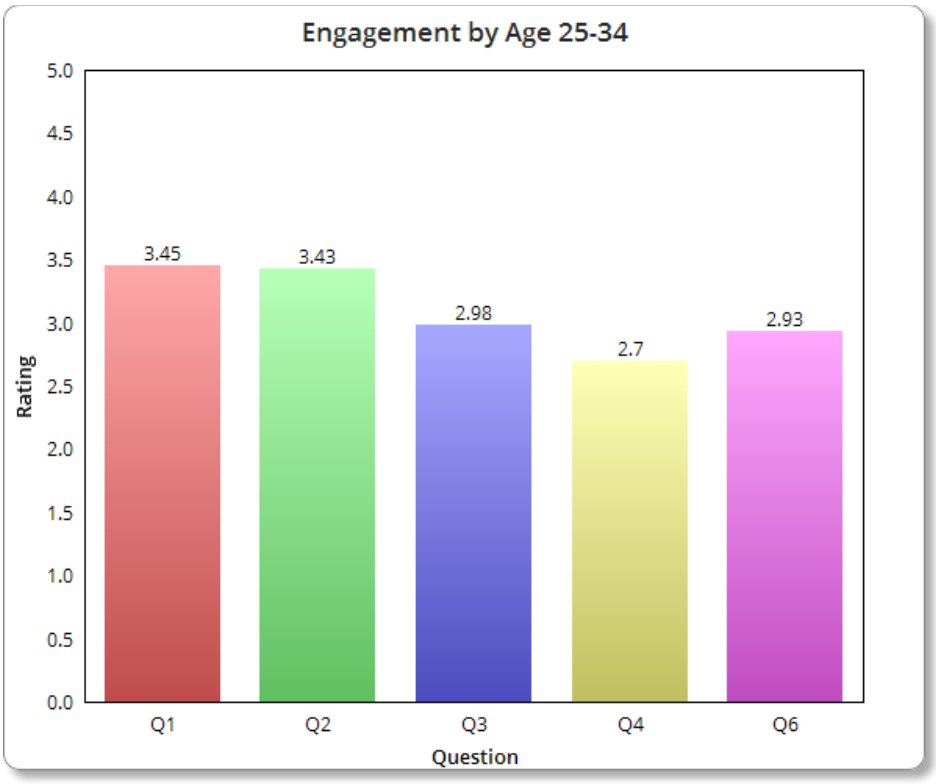

Brand Recall



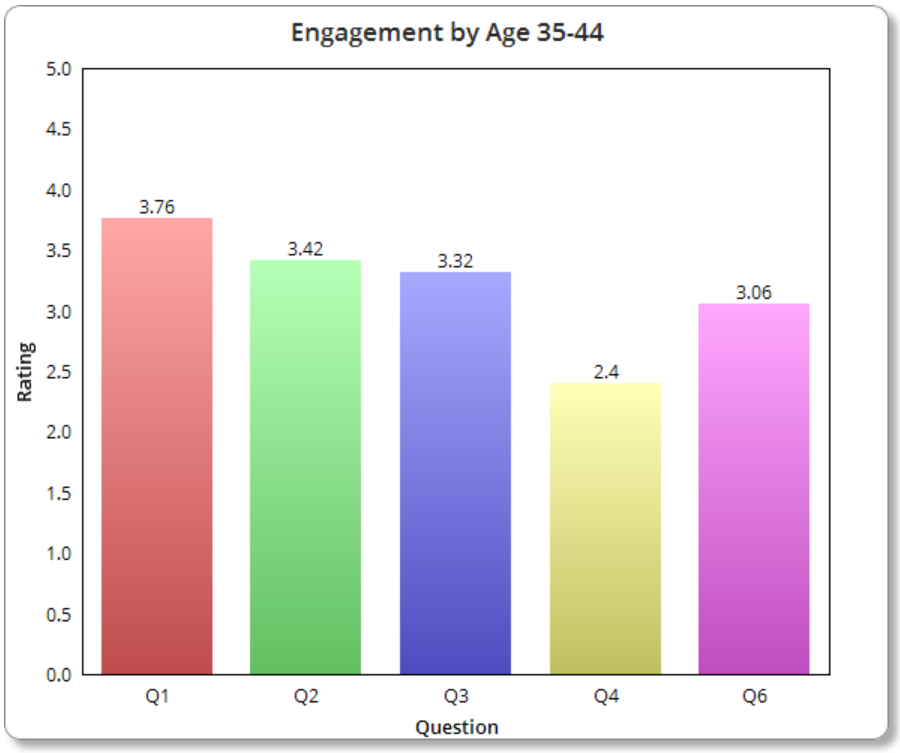
Engagement by Age Group (18 – 24)



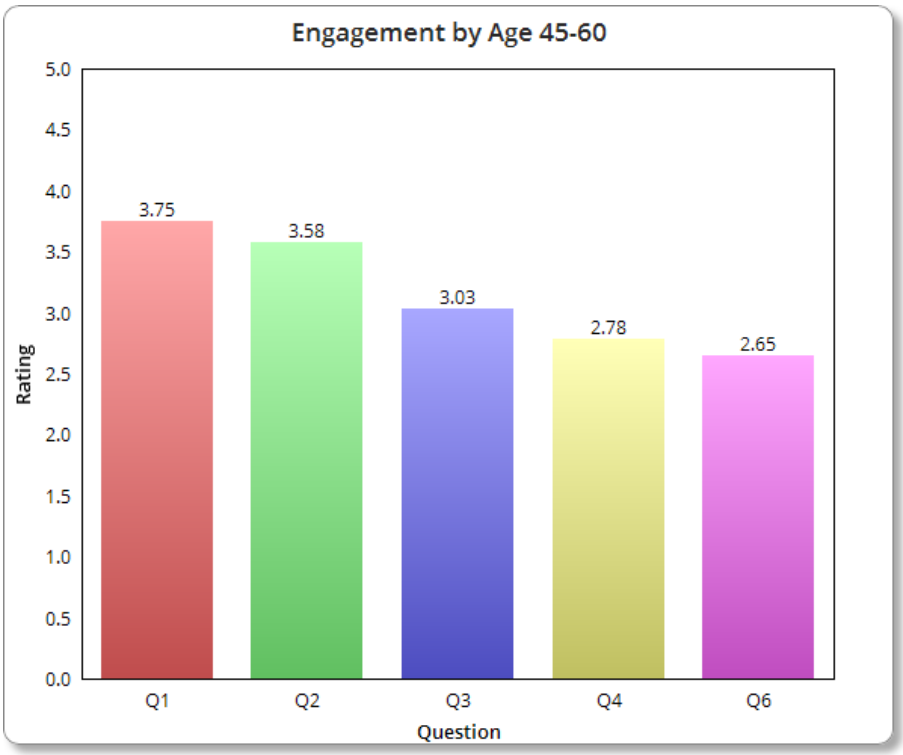

Engagement by Age Group (25 – 34)



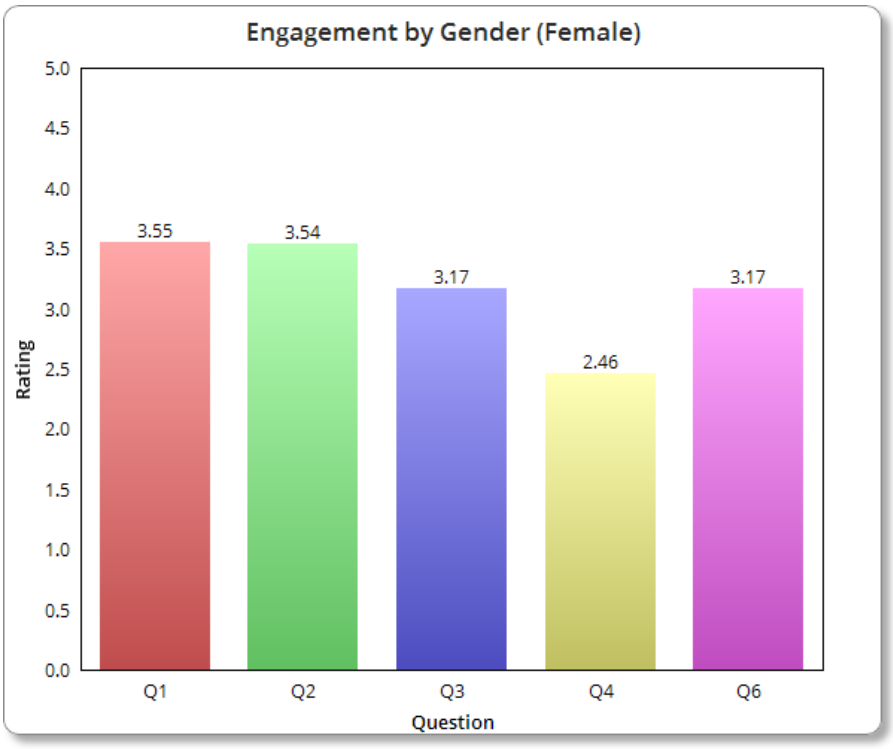
Engagement by Age Group (35 – 44)



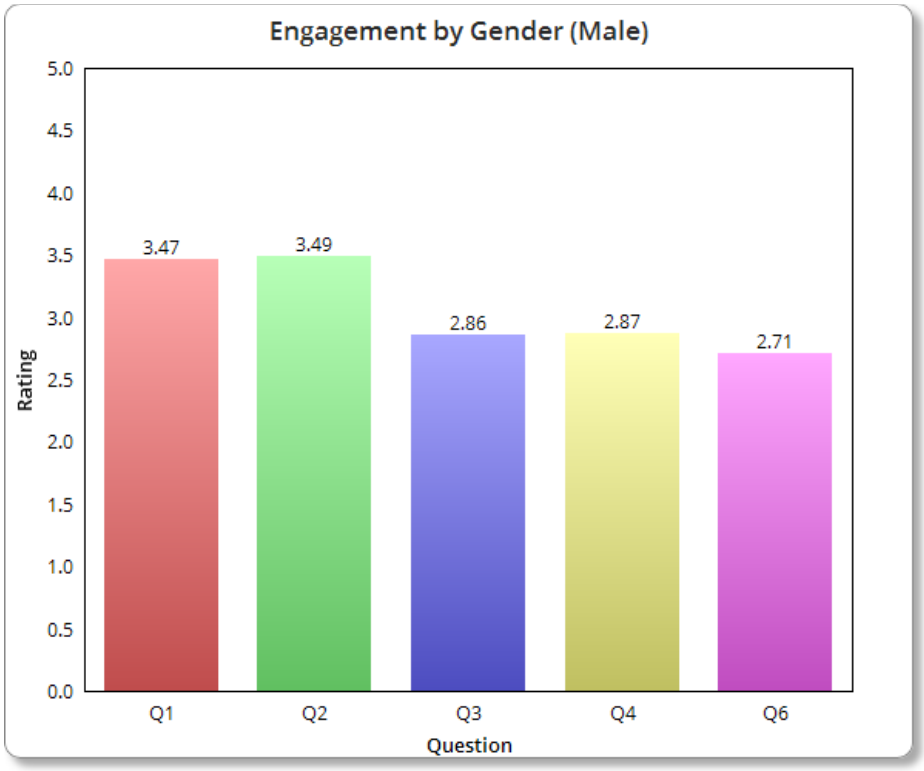

Engagement by Age Group (45 – 60)



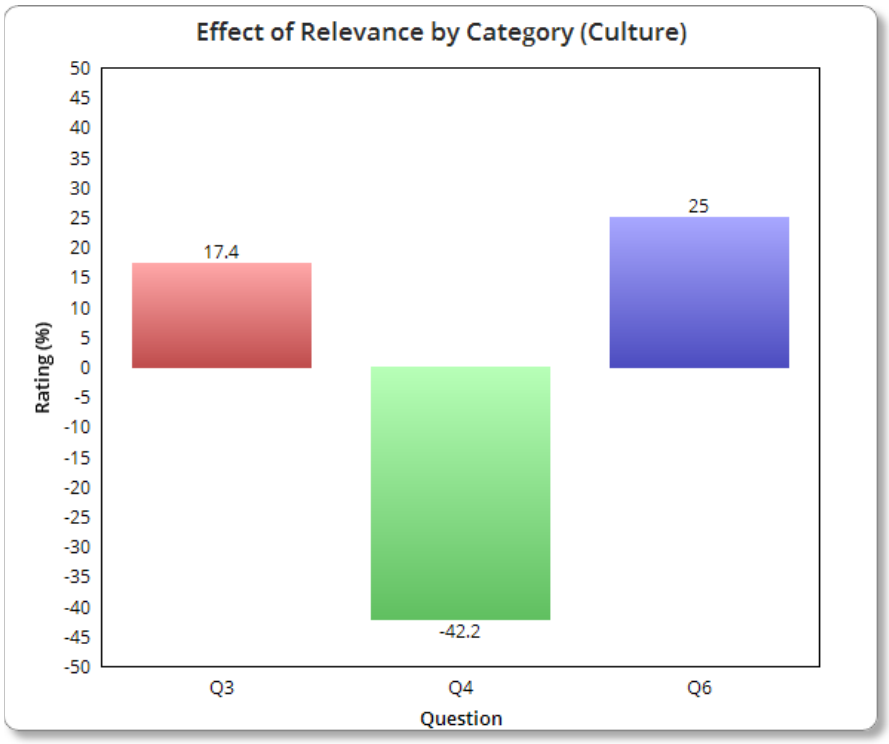
Engagement by Gender – Female



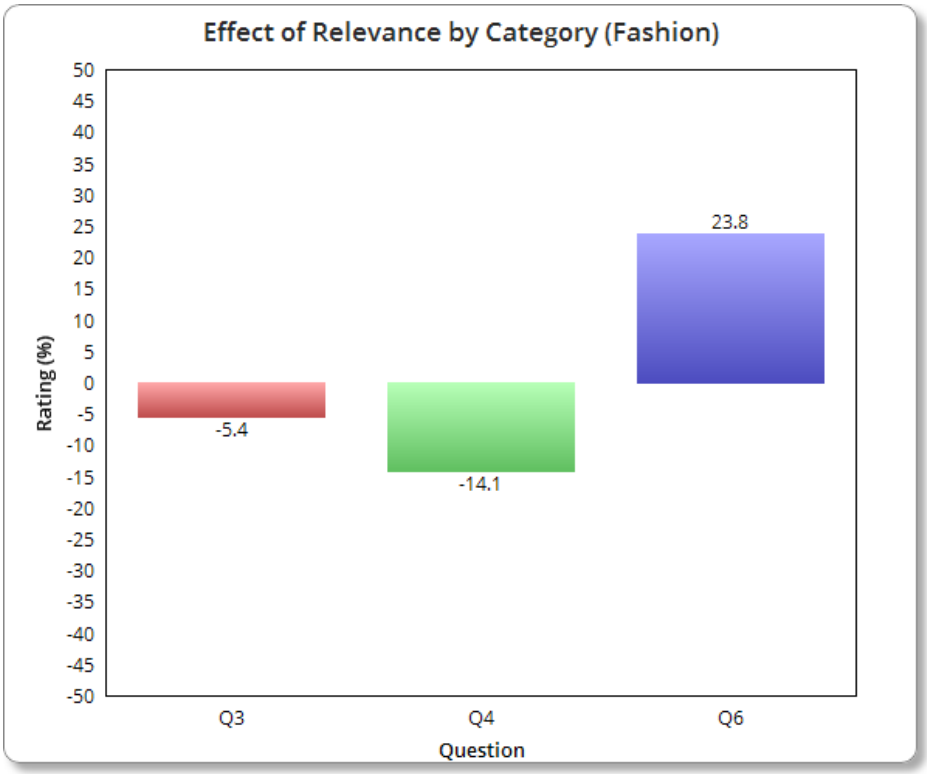

Engagement by Gender – Male



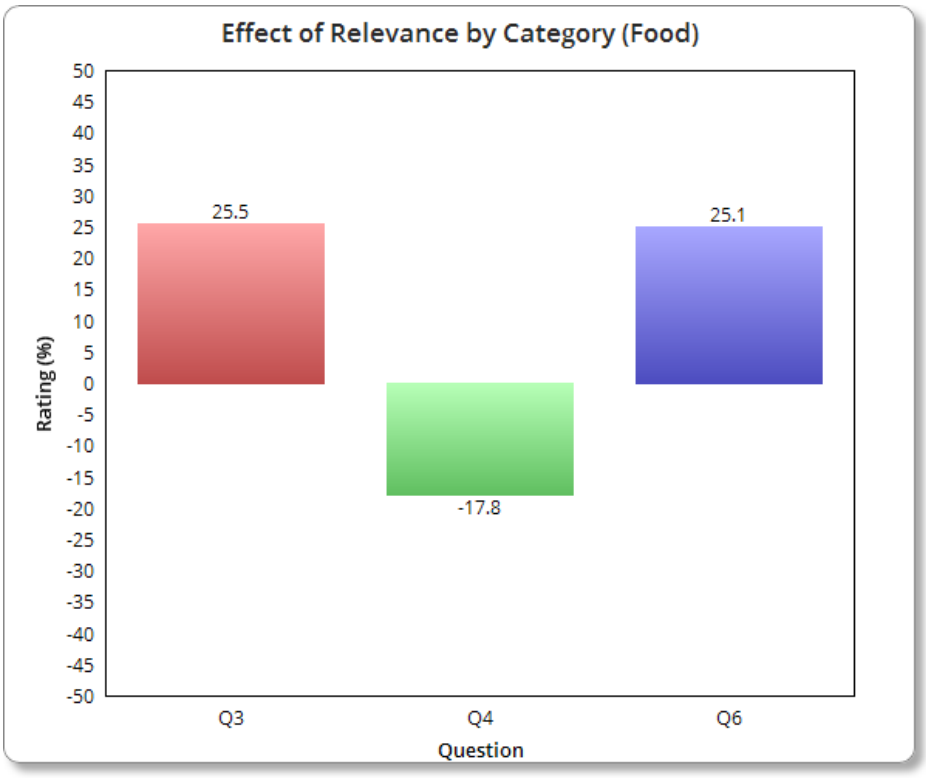
Percentage Engagement Gains from Relevance by Category – Culture



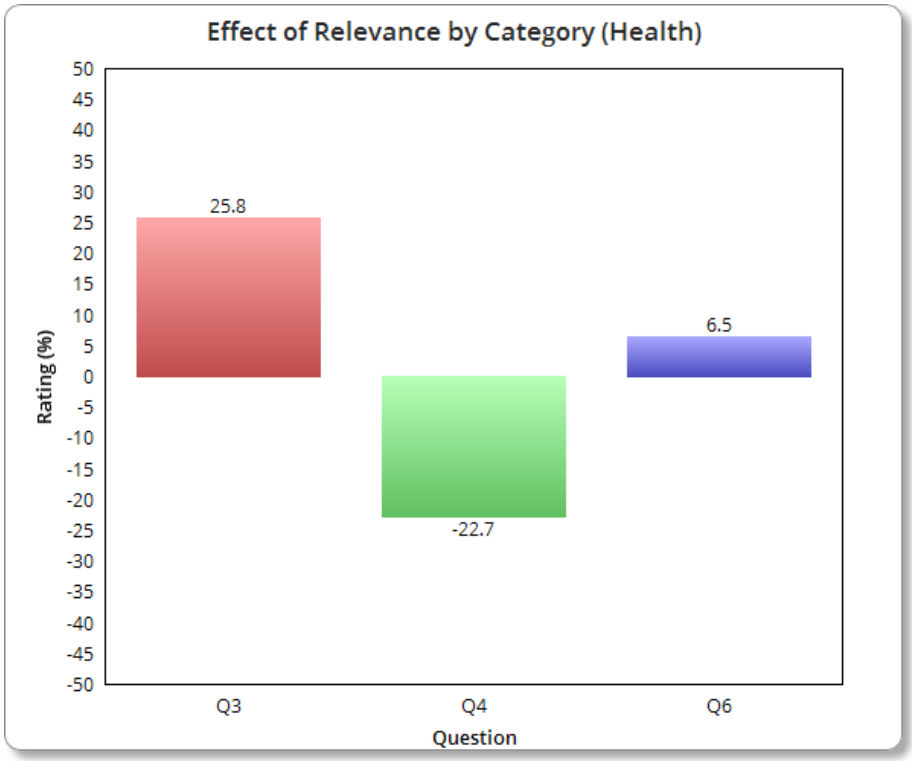

Percentage Engagement Gains from Relevance by Category – Fashion



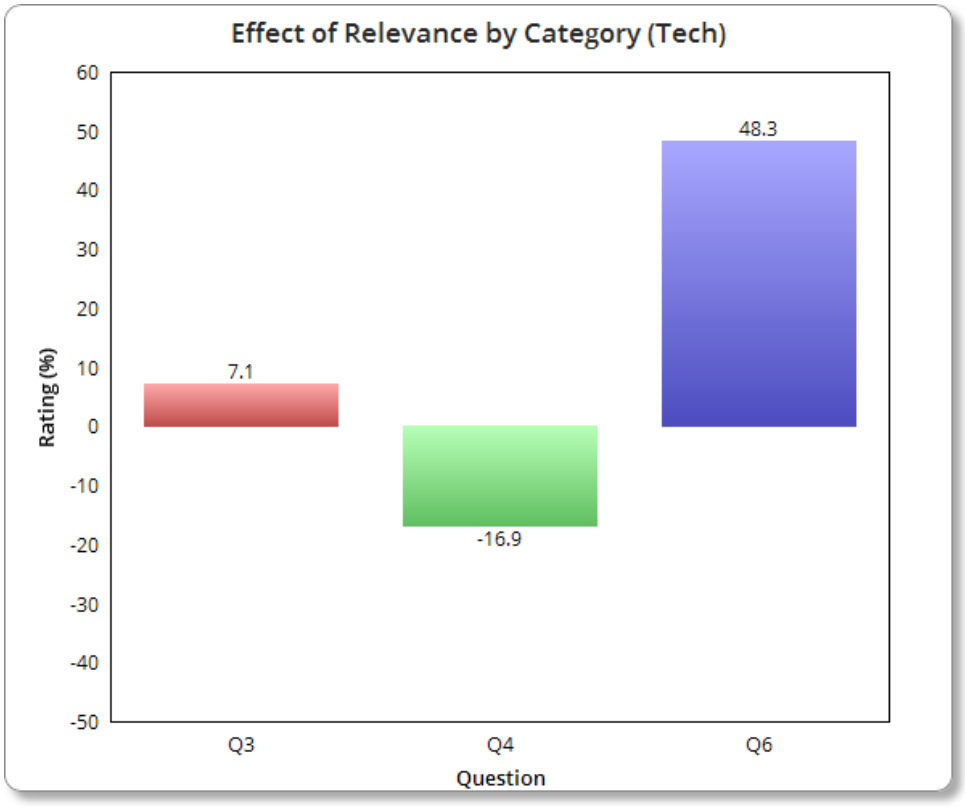
Percentage Engagement Gains from Relevance by Category – Food



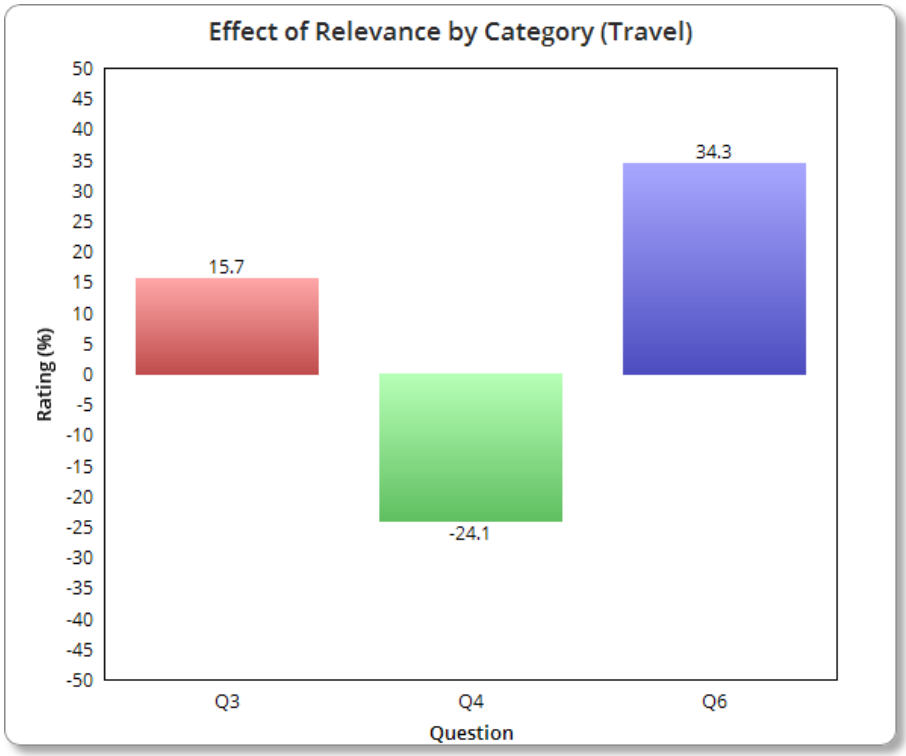

Percentage Engagement Gains from Relevance by Category – Health



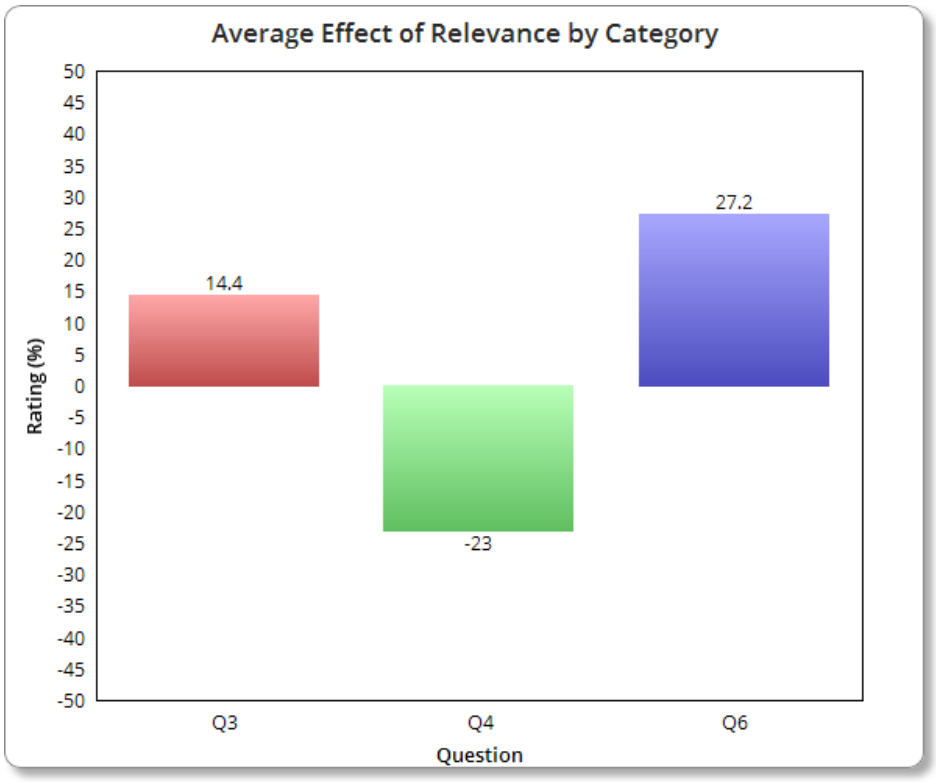
Percentage Engagement Gains from Relevance by Category – Tech



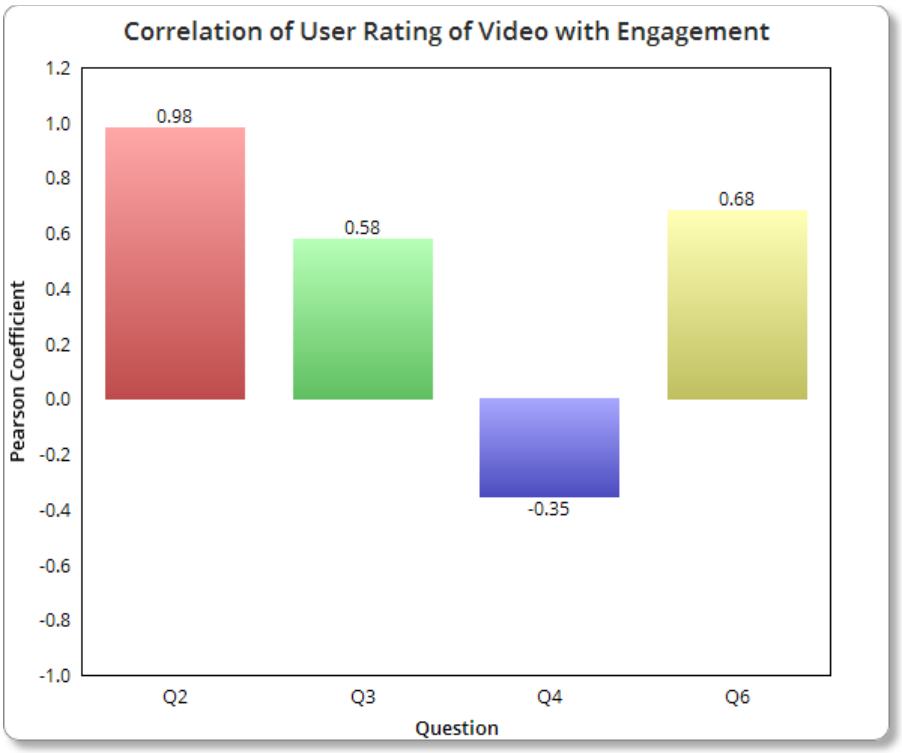

Percentage Engagement Gains from Relevance by Category – Travel



Percentage Engagement Gains from Relevance by Category – Average




Correlation Between User Rating of Content and Engagement



Correlation Between Matched Expectations and Engagement