Old Tradition, New Technologies: Comprehension and Retention Using
AUGMENTED REALITY

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MPC MAJOR RESEARCH PAPER

Old Tradition, New Technologies: Comprehension and Retention Using Augmented
Reality

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The Major Research Paper is submitted
in partial fulfillment of the requirements for the degree of
Master of Professional Communication

Ryerson University
Toronto, Ontario, Canada

July 21, 2014

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ABSTRACT

OLD TRADITION, NEW TECHNOLOGIES: COMPREHENSION AND RETENTION

USING AUGMENTED REALITY

School of Professional Communication

Ryerson University, 2014

Traditional media, especially printed media, such as newspapers, books, and posters, is static. The increased usage of smart devices has trigged the use of mobile augmented reality (AR) in commercial print media. This technology allows consumers to overlay supplemental multimodal content on the real-world environment through the use of an AR app on a smartphone or tablet. The addition of mobile AR provides an extra dimension through which to absorb or dismiss an advertisement's content. The main objective of this study is to determine if the use of mobile augmented reality in print affects the customer's ability to understand and remember the message of an advertisement. Assessing augmented reality's affect on printed media will help determine the value of investing in this technology and its future potential in the advertising landscape. This experiment was designed to test whether participants in two groups, one that used Layar, an augmented reality application, and one that did not, were still able to understand and remember the messages and content of a Nissan car advertisement featured in the Toronto Star. Through interviews and questionnaires subjects were tested on their recall ability and message comprehension given the passage of time. The results indicate that AR poses no significant advantage or disadvantage when compared to traditional print media. It appears that regardless of the mode of communication the advertisement's messages are successfully conveyed. The results have shown that over time the viewer is likely to remember what interests them independently of whether augmented reality is used or not.

ACKNOWLEDGMENTS

A researcher has to depend on the advice and assistance of others in order to be successful. This MRP (Major Research Paper) is the cumulation of months of research, analysis, and revisions. Therefore, I wish to recognize and thank all those who have helped me on this journey, without the contributions of these individuals and groups I would not have been able to perform this study. If have inadvertently forgotten anyone I hope that they will forgive the oversight.

First, I would like to thank my faculty supervisor, Dr. Ava Cross, who throughout this trail was patient and understanding, offering me guidance and support. Her assistance with the technicalities in my writing have contributed to the clarity of my MRP making it what it is today and I cannot thank her enough for always being available to answer my questions. I am also grateful to my second reader, Associate Professor Gillian Mothersill, , who provided me with insights into the world of augmented reality and was always excited to hear about my progress.

Second, I would like to thank the School of Graphic Communications Management, the School of Professional Communication, and the RTA School of Media. These FCAD departments willingly and graciously distributed my consent form to applicable applicants using their listservs, and without their involvement it would not have been possible for me to find research subjects.

Third, to those twenty individuals willing to assist me with my research by being my experimental subjects I cannot thank you enough for taking time out of your schedules to meet with me and complete the interview and subsequent questionnaires. Your participation was greatly appreciated.

I hope that this research inspires others to explore the possibility and potential of augmented reality in printed media, and I would be honoured if my labour leads to progressive and extensive studies in this topic. Augmented reality (AR) has become a close friend to me over this past year and I look forward to the day when it is incorporated into mainstream media and touching the lives of thousands of consumers.

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INTRODUCTION

Traditional media, especially printed media, such as newspapers, books, and posters, suffer from a number of limitations. Print media is perceived as static and unidirectional, where only the sender plays an active role in encoding and transmitting the message through pictures and words while the receiver simply decodes and absorbs the transmitted message. Though some printed documents can produce a response from the reader, like cheques, coupons, or advertising which encourage a consumer to purchase a product, print itself "is a mono-media, in that it uses only one medium to communicate the content; other information resources (such as audio, video etc.) cannot be included in traditional paper publishing" (Inglobe Technologies, 2011, p. 5).

However, the increased saturation of mobile devices has provided consumers with the opportunity to bring their traditional legacy media, i.e. newspapers and magazines, to life through the use of mobile augmented reality (AR). Since advertisers strive to create ads that attract and engage the scarce resource of consumer attention (Sirdeshmukh & Unnava, 1994), mobile AR, when used in conjunction with print media, enhances the way consumers perceive and interact with the real world by displaying information that viewers may not be able to detect with their own senses (Azuma, 1997). By using an

application (app) found on a mobile device to detect triggers, "[augmented reality] allows the user to see [and interact] with a real world that is supplemented with virtual elements" (Kerawalla, Luckin, Seljeflot, & Woolard, 2006, p.164).

In advertising, nonverbal stimuli (e.g. pictures) are used to provide examples, convey information, or complement the messages discussed in the copy text of the advertisement. The addition of mobile AR provides an extra dimension through which to absorb or dismiss the content while also presenting an exciting opportunity to deliver interactive – and engaging – multimodal[1] content to viewers that creates a memorable user experience. Therefore, the aim of this study is to determine if the use of augmented reality actually improves the comprehension and retention of an advertisement's intended message. The topic needs to be examined because simply using the technology is not enough to prove its value. This study's approach uses methods of semiotic analysis to assess and to measure the influence the use of AR has on a consumer's ability to comprehend and retain a print advertisement.

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[1] The mixing of multiple modes or forms of communication.

LITERATURE REVIEW

Pairing certain pictures with text in carefully constructed advertisements relays information about a product through persuasive, subjectively inferred messages. Therefore, there are a number of key elements that must be considered for an adequate assessment of the comprehension and retention of augmented reality-aided messages in print advertisements.

Many studies show that "audiences are active, that interpreting media texts is complex and involves agency, and that interpretations vary across individuals" (Millard, 2009, p.149). One must be aware that each element in an advertisement possesses a heavily connoted meaning, which influences the overall message of the advertisement. The selection of text and pictures are the stimuli that influence how messages are interpreted and how well they are recalled. In the case of print advertising, augmented reality serves to enhance the logos of its existing textual and graphical attributes, and messages by either providing additional virtual context to a real world object or by focusing the user on a virtual object belonging to reality (Kalkofen, Mendez, & Schmalstieg, 2009).

In this section, the existing literature discussing mobile augmented reality and the semiotic studies of textual and pictorial comprehension and retention, as well as social semiotics and multimodality will be explored. These selected theoretical areas provide an effective lens with which to analyze the impact of augmented reality on the end user's memory and understanding of advertised messages, by identifying the elements in advertisements that affect these dependent variables.

Mobile Augmented Reality

The definition most widely adopted in AR communities is from Ronald T. Azuma (1997). He states that "an AR system supplements the real world with virtual (computer-generated) objects that appear to coexist in the same space as the real world" (Azuma, Baillot, Behringer, Feiner, Julier, & MacIntyre, 2001, p.34). Augmented reality is

characterized by possessing three properties: (1) combining real and virtual objects in a real environment, (2) running interactively in real time, and (3) aligning real and virtual objects within the relative environment (Azuma et al., 2001).

The notion of augmented reality has existed since the 1950s (Carmigniani, & Furht, 2011). However, it was only in 2004 when smartphones[2] became capable of simple image processing using AR technologies (Carmiginani et al., 2011; Billinghurst, & Thomas, 2011) that AR became a reality. This coincided with Horizon Report's (2005) predictions that AR technologies would emerge within the next four to five years. In order for mobile augmented reality to work a trigger, a specific element, either text or an image, is identified by the app, causing virtual objects to be superimposed upon reality using the live camera feed of the mobile device.

Nowadays, given that approximately 75% of all Canadian adults own a smartphone (comScore, 2014), the number of AR apps, such as Layar, Aurasma, and Google Goggles, specifically designed for use on mobile smart devices, is increasing. However, to be truly considered a mobile augmented reality application, "an app must interactively attach graphics or data to objects in real time, to achieve the real and virtual combination of graphics into the physical environment" (Hahn, 2012, p.429). Nevertheless, it is important to note that AR evangelists believe that a "killer app will be needed to make AR technologies truly catch the consumer space" (Kroeker, 2010, p.19), and many critics argue that the addition of augmented content merely transfers the consumer from one passive experience, looking at a printed photograph, to another, viewing a video on a mobile device. "However, proponents [of the technology believe] the key is using relevant, dynamic and live information that is consistently updated" (Washburn, 2013).

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[2] A smartphone "is a cellular phone that can also perform many functions of a computer by running applications (apps) including: Internet accessing, emailing, and text messaging. A smartphone provides instant access to information and instant capacity to communicate" (Klonoff, 2014, p.2).

For the purposes of the research detailed in this paper, mobile AR is defined as supplementary visual information overlaid on the real-world environment through the use of an AR app on a mobile smart device (Cook, Hill, Kalawsky, & Stedmon, 1999b.).

The Semiotic Analysis of Advertisements

Message analysis of advertisements and supplemental AR content is carried out through the semiotic tradition. Semiotics is the study of signs and sign systems, which make up society. Semiotic theory views communication as the development of shared meanings between language and the world through the use of signs

(Hillert, 2010). Ferdinand de Saussure, a semiotician, defined a sign as a two-sided entity consisting of a material signifier, a word or image that carried meaning, and a signified - a mental concept which the signifier signifies (de Saussure, 1959). The relationship and understanding of language was mediated by the association existing between the sign's two attributes, its appearance and its meaning.
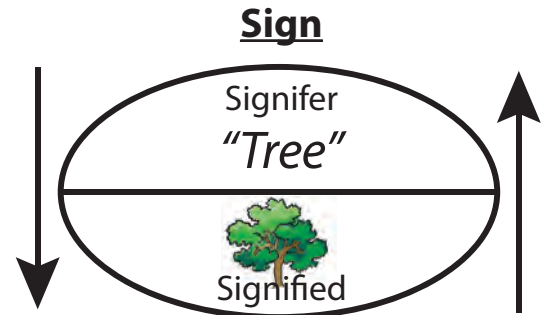
Advertisements can be analyzed through a number of frames of reference to determine the sign's suitability at conveying the message and its staying power. In order to devolve meaning from an advertisement, one must have knowledge of what the combination of signs, the selected pictures and text, in the ad represents. It can be particularly challenging to convey a concrete message because people perceive the same visual differently given the arbitrariness of the signifier-signified relationship.

Advertisements have both denotative and connotative meanings. The terms denotation and connotation were first introduced by Louis Hjelmslev who suggested that a semiotic element could be polysemic, i.e. possesses multiple meanings. Roland Barthes (1977) states that the denoted message is the literal reality captured by a photograph on its first viewing, while the "connoted message is the manner in which society to a certain extent communicates what it thinks of it" (p. 17). Connotation uses

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              ┌─────────────────┬───────────────────┐
              │  1. Signifier   │   2. Signified    │
              ├─────────────────┴───────────────────┤
 Denotation   │            3. Sign                   │
 MYTH         │         I. SIGNIFIER      │  II. SIGNIFIED  │
 (Connotation)├──────────────────────────────────────┤
              │         III. SIGNIFIER                │
              └──────────────────────────────────────┘
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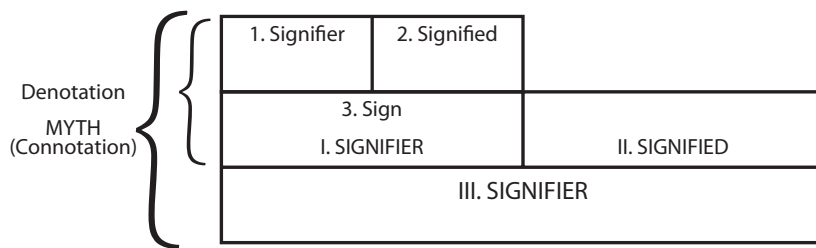
the sign in the advertisement as the signifier for a second, higher level analysis of its meaning. In other words, the denotation-connotation dichotomy is informed by the way in which the "dominant" cultural code, myth,[3] influences the signified message of a signifier. Even though a range of interpretations for a particular image may exist, a specific one is connoted as a result of the specific social context; signs are understood by consumers using the common cultural and social meanings at hand (Kraver, 2002; Mortelmans, 1998; Shawcross, 1997; Yoon & O'Connor, 2010). A viewer's interpretation of a photograph can be influenced by six connotation procedures identified by Barthes: trick effects, pose, objects, photogenia, aestheticism, and syntax.[4] These connotation procedures help connote the signs that are part of the pictorial advertisement by signifying values, emotions, and attitudes through various aesthetic choices. For example, photographic techniques, such as framing, distance, lighting, focus, speed, "all effectively belong to the plane of connotation; it is as though in the beginning…there were a brute photograph…on which man would lay out, with the aid of various techniques, the signs drawn from a cultural code" (Barthes, 1977, p. 44).

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[3] In Mythologies, Barthes uses the term myth to convey how signs are organized to express cultural, national, practical and aesthetic values assimilated by individuals (Huppatz, 2011). Myth permits "the photographic message [to be] informed by the viewer's accumulated perceptions and assumptions… What makes the picture's movement from denotative meaning to connotative meaning possible is the store of knowledge from which the viewer can draw" (Kraver, 2002, p. 136).

[4] Trick effects refers to editing photos so that the plane of denotation is manipulated; by relying on the credibility of the photograph a heavily connoted message can be passed of as part of the denoted message (Barthes, 1977). Pose refers to the posture of people in the photograph while similarly objects refers to the arrangement and selection of objects in the photograph. Edgar Morin (1956) established photogenia, or the element of photogénie, as a "quality that is not in life but in the image of life" (p.17). Photogenia has the ability to create a presence of life within the photograph or advertisement through the way the image is embellished using photographic techniques. Aestheticism is understood as the imitation of artistic styles, which create connotative meaning from the association between styles (Barthes, 1977). Finally, syntax is working with images arranged in a sequence to produce a recognized meaning.

In the "Theory of the Photographic Message," Barthes suggests that text has the ability to connote the image quickly by objectifying the photograph. Text "directs the reader [through] the various signifieds, causing him to avoid some and to accept others" (Barthes, 1985, p. 40). As part of the advertisement text is a mode of communication that, at times, literally states the meaning of the advertisement. However, it also has the potential to suggest or invent alternative connotations, duplicate and reinforce present messages, or create compensatory connotation that may even contradict the presented signs. The choice of the viewer to rely on the text makes it just as viable a communication tool as the photograph for helping understand and recall the advertisement's message.

Attributes Affecting Advertisement Analysis

The use of text and images in advertising and augmented reality show how the pairing of interactive content with print content can complement each other and potentially play a large role in the understanding and recall of the intended message. First, the use of pictures in advertisements has been shown to allow for excellent retention in the memory over time (Standing, 2007). Viewers consider "bottom-up factors (such as form, color, luminance, and contrast) and top-down factors (recipients' personal characteristics, such as interests, attitudes, goals and motives, prior knowledge, experiences, individual preferences, emotions and cultural differences)" (Holasanova, 2012, p.252), when analyzing photographs. The vividness of an advertisement's message has not only been shown to improve immediate recall of a message after exposure but also after delay. The work of Reyes, Thompson, and Bower (1980) and Shelder and Manis (1986) "found that subjects recalled more vivid information than nonvivid information after a two-day delay between presentation and recall" (Burnkrant, & Unnava, 1991, p. 227). These photographic properties have a strong effect on an individual's interpretation and recall of the connoted messages of the advertisement.

Second, the recognition and recall of text and images is influenced by the abstract-concrete dichotomy, which is largely affected by a viewer's familiarity with the content

and its degree of meaningfulness (Bastian, & Dukes, 1966). It has been found that concrete words, or high image words (Burnkrant, et al., 1991), those that refer directly to objects, materials or sensations are easier to remember, understand and visualize then abstract words, those that refer indirectly to objects, materials or sensations (Gorman, 1961). For example, when you hear or read the word 'chair' an end user visualizes the object more easily in their mind's eye than a term like 'freedom.'

Concreteness has also been found to correlate with performance in free recall (Bastian & Dukes, 1966; Olver, 1965; Paivio, 1967; Stoke, 1929), recognition memory (Gorman, 1961; Jampolsky, 1950; Olver, 1965), and short-term memory (Borkowski & Eisner, 1968). However, Bastian and Dukes established that even abstract words that were used less frequently were better recalled than those used frequently (1966). This can be attributed to whether the low-frequency abstract words are "emotionally loaded" or "personally relevant" to the user. Although the retention of concrete language is more common, this attribute of personal meaningfulness as well as pre-existing knowledge and expertise is important to consider when analyzing the textual and graphical choices made in the advertisement's design. The selection of these elements and their personal relevance to the viewer will influence the individual's abilities of retention and comprehension.

Third, repetition is a tactic frequently employed in advertising. "A considerable body of research shows that the likelihood of retrieval is related directly to the number of alternative retrieval routes in memory" (Burnkrant et al., 1991, p. 231), developed as a result of increasing a subject's exposure to the same message through a different form. The ability to enhance brand recall, increase the recollection of information, and increase an advertisement's persuasive impact are all reasons for repeating an ad's messages (Craig, Leavitt, & Sternthal, 1976). As Aloysia Gorman (1961) found in his research, frequency had a significant affect on a subject's memory. However, the work of Anita Cunitz and Murray Glanzer (1966) states that the successive repetitions of words did not increase the probability of recall. These two conflicting opinions present an opportunity

to determine the influence message repetition has on comprehension and recall when implementing augmented reality in advertising. Augmented reality creates the opportunity for an advertisement's intended message to be repeated in a different way, potentially in a way that allows the end user to better understand and remember the content.

Multimodality

The mixing of multiple modes of communication is referred to as multimodality. Multimodality is a term introduced to compensate for the increased ubiquity of multiple message media: image, sound, text, film etc., provided through computers or television. Naturally, messages were created from the combination of different communication modes, each with its own potential for making meaning (Bezemer, Diamantopoulou, Jewitt, Kress, & Mavers, 2012). The blurring of semiotic boundaries was further exacerbated by the semiotic landscape becoming more populated with cultural and social diversity (Iedema, 2003). This issue can be seen especially in the area of advertising where the rule of 'what can signify what' is constantly being challenged and is changing (Iedema, 2003). As a result, semioticians such as Michael Halliday (1978), and Robert Hudge and Gunther Kress (1988) developed a more inclusive iteration of semiotics, social semiotics.

The notion of social semiotics revolves around the belief that signs "acquire meaning as a result of interaction and practice that are always embedded in situation contexts specific to a culture or community" (Vannini, 2004, p.149). As Kress (2010) elaborates, contemporary signs are made with many different means and modes and consequently are interpreted using the culturally available semiotic signs, "which have been shaped by the practices of members of social groups and their cultures" (p.10).

Therefore, the interpretation of signs in the complex world is guided by the three principles of social semiotics:

> (1) Semioticians believe all people see the world through signs, (2) the meaning of signs is created by people and does not exist separately from them and the life of their social/cultural community, and (3) semiotic systems provide people with a variety of resources for making meaning (Harrison, 2003).

Social semiotics and multimodality are useful lenses through which to study the effect augmented reality has on the comprehension and retention of the advertised messages because this theory addresses the use of multiple communication forms and the relationships between them. It also analyzes media from both the production perspective, the interplay and contribution of various modes in order to convey the message (Holsanova, 2012), and the reception perspective, the ability of the recipient to select, process and interpret the message (Holsanova, 2012).
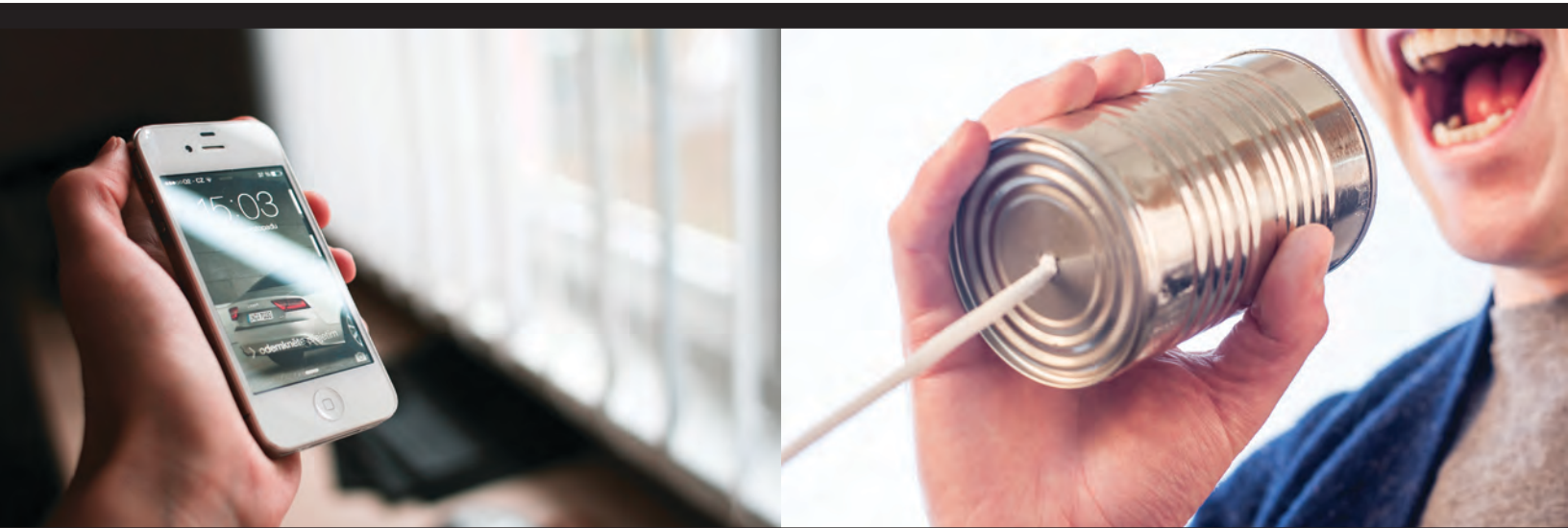
CURRENT STATE OF RESEARCH

There are a few preliminary studies discussing the retention and comprehension of augmented reality. One example was a study carried out by the Defense Evaluation and Research Agency (DERA) Centre for Human Sciences to evaluate the potential for the assimilation of information by using an augmented reality headset. Their results showed that "simple comprehension and retention performance is the same using an AR headset or a primary display" (Cook, Hill, Kalawsky, & Stedmon, 1999a., p.1358). These sentiments are echoed in the research of Mark Billinghurst and Andreas Dünser (2012), who found that students could recall the same key points of a story from both a regular book and an interactive one.

However, given the limited number of studies available on augmented reality's use and applications in advertising, this paper will discuss how messages are conveyed and recalled when mobile AR is implemented in commercial print advertising by examining the effectiveness of multimodality in message recall and recognition. It is also important to point out that the area of mobility and mobile devices in relation to multimodality requires further exploration (Armfield, 2011).

RESEARCH QUESTION

The research will address the following question: Does the use of mobile augmented reality in print advertisements affect the end user's comprehension and retention of the intended advertised message?

METHODOLOGY

Design

For this study an experimental design was used in order to understand how augmented reality affected a consumer's comprehension, short-term retention,[5] and long-term retention[6] of an advertisement and its messages. Experimental designs give researchers the ability to control and analyze the impact of the intervention by comparing the differences between the control and experimental groups. The experiment, conducted between April 26 and June 2, 2014, divided twenty random participants into two ten member panels, where the control group and the experimental group were asked to analyze one advertisement in depth and then immediately remember its features. The control group viewed the advertisement without augmented reality, and the experimental group viewed the advertisement with augmented reality. Two days later the participants were asked to recall what they had previously analyzed. A time of forty-eight hours was selected as a consistent measurement for testing long-term memory, according to the collected literature since the work of Reyes, Thompson, and Bower (1980) and Shelder and Manis (1986) "found that subjects recalled more vivid information than nonvivid information after a two-day delay between presentation and recall" (Burnkrant, & Unnava, 1991, p. 227). Both ten-member panels viewed the print copy of the advertisement, but the experimental group used the independent variable, augmented

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[5] Short-term memory or retention refers to the ability to immediately recall aspects of the advertisement once the stimulant is removed.

[6] Long-term memory or retention refers ability to recall aspects of the advertisement given the passage of time without the stimulant present. The Atkinson-Shiffrin memory model (1968) suggests that memories reside in the short-term memory for a limited period of time, because due to its limited space older entries are pushed out and woven into the fabric of the long-term memory. The work of Yadin Dudai (2003) describes consolidation the "progressive postacquisition stabilization of memory" (p.55), using two terms: (1) synaptic consolidation, a type of memory encoding completed within the first few minutes or hours after the practice has ended, and (2) system consolidation, is the encoding of information over weeks, months, or even years. "Long-term memory, in the context of discussion of synaptic consolidation, is conventionally defined as memory that lasts more than 24 hours" (Dudai, 2003, p. 56), as this experiment tests the memory of the participant after 48 hours the application of the expression "long-term memory" is applicable.

reality, to analyze the advertisement while the control group did not. This research technique evaluated the cause-and-effect relationship between the two groups in order to identify and measure the potential effect of the independent variable on the three dependent variables (Leedy & Ormrod, 2013).

Participant Sampling

The experimental study consisted of twenty adult participants who were recruited using the listservs of the School of Professional Communication, School of Graphic Communications Management, and the RTA (Radio and Television Arts) School of Media. Using listservs protected the researcher and the listserv members' personal information. This was a form of convenience sampling that drew on the readily available population on hand at Ryerson University. When required, snowball[7] sampling was also used in order to recruit additional participants.

For snowball sampling, a few listserv members of the target population were contacted by the researcher and asked to pass the invitation on to their fellow classmates and alumni. In addition, Gillian Mothersill of the School of Graphic Communications Management also helped distribute the consent form as part of snowball sampling. However, a snowball method of recruitment may not lead to a representative sample, so it was used sparingly.

Stimulus Materials

All the subjects in the experiment were audio recorded when presented with a print advertisement for the Nissan Leaf featured in the September 19, 2013 issue of the Toronto Star. This advertisement was from the Toronto Star's "Go Beyond" campaign in September, which required the mobile AR app Layar to access the supplemental content featured throughout the newspaper. While those in the control group were only allowed to view the print copy of the Nissan

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[7] Snowball sampling is a "non-random sampling strategy [where] the researchers first contact key informants, who then suggest additional people for research" (Wilkins, 2011, p. 96).

Leaf advertisement, those in the experimental group used an iPad belonging to the School of Professional Communication that had Layar installed, enabling them to view the four accompanying videos when the device was pointed at the advertisement. In addition, the recall questionnaire was filled out on a School of Professional Communication laptop using Ryerson University's Opinio survey tool to allow for immediate entry of data into the researcher's secure database prior to content analysis and result comparison.

Procedure

The researcher used the listservs to distribute an invitation to potential participants, making them aware of the proposed experiment and asking them to register and provide consent online, if they would like to be part of the study. At this stage they were also be asked to select a time and a preferred, secure location on Ryerson's campus where the experiment could be carried out. The consent form also asked for their permission to record the interview where the subject was asked to describe the advertisement's message. Once the desired number of eligible participants had joined the study, they were randomly assigned into either the control group, or the experimental group.

Once the participant has chosen to participate, he or she met with the researcher at a safe location and time on the Ryerson campus agreed upon by both parties. On that date the participant was given (1) a laptop with which to respond to the questions in the Opinio survey, and (2) if they belong to the experimental group, an iPad with which to interact with the print advertisement's augmented reality. At that time, the researcher described the experiment and the participant's role, checking that they had properly signed the consent form before proceeding.
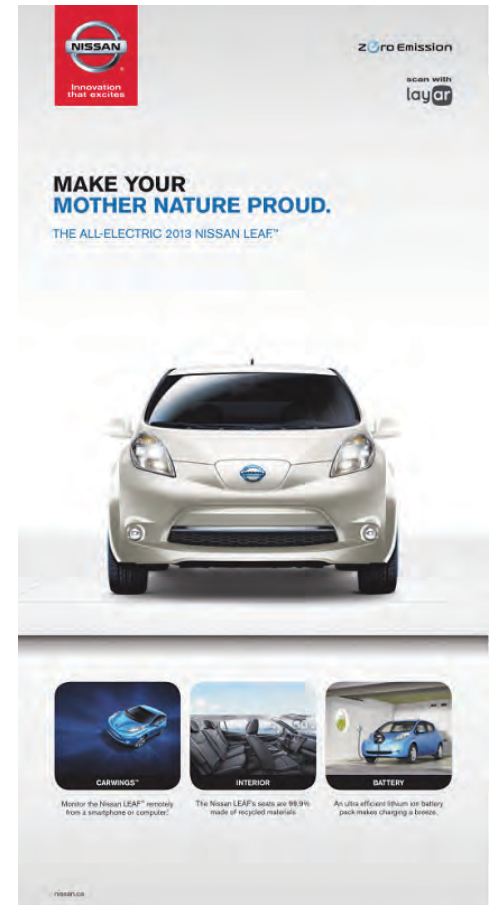
To most adequately simulate a real user experience the participant was asked to use the AR app following the provided instructions. In addition, the researcher did not prompt or intervene with any subject. The researcher's minimal intervention with the participant adequately portrayed the actual conditions a subject would experience when introduced to this technology, because in most scenarios the end user must make an active choice to use augmented reality in order to interact with the supplemental content. In this way the subject's interaction with the AR app will mimic a genuine interaction with the technology. Notes were taken during their interaction to assess whether the subject actually managed to activate the supplemental content that provided the additional advertised messages. It was also emphasized at the beginning of the experiment that the subject should understand what the claims of each advertisement are and what they mean.

After analyzing either the print Nissan advertisement, with or without augmented reality, the subject was interviewed. The researcher asked the subject to identify messages, symbols and elements of the chosen advertisement. When faced with an advertisement the "consumer is urged at that moment to fill in the gap that is created between the product and [the signifiers]" (Mortelmans, 1998, p.193). These 'gaps' are the messages, which through the use of semiotic and social semiotic analysis, in the case of the experimental group, are 'filled' in by the subject to create meaning. This is the experiment's way of measuring one dependent variable, comprehension.

The ad was then removed and the participant answered a quick, five-minute Opinio-based questionnaire asking them about the basic properties of the advertisement to test their short-term memory. Questionnaires are useful tools with which to collect the opinions and attitudes of a group through the use of factual questions, "intended to obtain information about conditions or practices of which the respondent is presumed to have knowledge" (Good & Scates, 1954, p. 606). However, it must be pointed out that without incentive recipients of the questionnaire may not be interested in either the project or the investigator and are merely participating out of generosity or curiosity. As a result,

there was the potential for attrition when the second questionnaire was distributed to the subject two days later to test their long-term recall of the advertisement's elements. The time period of two days was selected following the research of Reyes, Thompson, and Bower (1980) and Shedler and Manis (1986) who "found that subjects recalled more vivid information than nonvivid information after a two-day delay between presentation and recall" (Burnkrant, et al., 1991, p. 227). For the second questionnaire the participant was not allowed to see the advertisement and had to answer all the questions by relying on their long-term memory. Once this online questionnaire was complete the experiment concluded.

Method of Analysis

Given the established literature it is clear that end users could be affected by a number of elements that impact their message comprehension and retention. This study aimed to analyze whether these attributes – photographic properties, concrete versus abstract images and text, and repetition through different modes of media – actually did affect an end user's ability to understand and remember the advertisement when augmented reality offered supplemental, vivid, and repeated information on top of the already present messages in the printed piece.

The interviews from the experiment underwent content analysis, categorizing the subjects' responses and language choices in relation to the messages codified by the advertisement through its signs. The combination of the product, the setting, the text, and the persons in the advertisement should produce a clear message despite the cultural and social meanings that independently influenced a participant's interpretation of polysemic signs. Prior to the experiment an analysis of the advertisement's message was conducted and the intended message determined. Once both the control and experimental groups interview answers had been categorized, they were compared with the actual identified message.

The comparison of the questionnaire answers employed to test short-term and long-term memory highlighted the cause-and-effect relationship on short-term and long-term memory recall resulting from the use of augmented reality, the independent variable in the experimental group versus the control group. Initially, descriptive statistics assessed individual survey questions for their compatibility and completeness using counts, percentages and means. The next level of analysis included descriptive statistics ascertaining the relationship between independent variables such as age and gender, and the dependent variables of comprehension and retention. The key analysis, however, was focused on determining the connections between the two groups (experimental and control) and the two questionnaires (i.e., pre-exposure and post-exposure of augmented reality), establishing whether any differences found were statistically significant. As there is only one "right" answer the subject's ability to provide this answer correctly was easily comparable between the two groups.

While the researcher conducted the experiment they also observed the participants' body language and spoken words when viewing the advertisement or interacting with the technology in order to gauge the subject's user experience and thinking process. Although usability was not a variable being measured, it was important to note the effect that using augmented reality had on the overall user experience and consider its potential impact on message interpretation. For example, participants who could not understand how to use the app or could not hold the iPad steady long enough to access the content may have completely lost focus and provided inaccurate assessments they would not have given otherwise.

Limitations

Due to the modest scope of this study – i.e. the small sample of participants – the results of the analysis may not be representative of the actual ability of the members of the population to interpret and recall advertisements and their messages. In addition, given that the background and expertise of each participant was not substantially

investigated, the fact that the participants are coming from listservs where the members might have previously worked with augmented reality or been exposed to advertisement analysis will influence the results as being representative of the general population.

Another issue considered was the repetition of the questionnaires and the environment created between the researcher and subject during the experiment. Using the same questionnaire twice may lead to familiarity with the material, which can affect the dependent variable's validity (Kirk, 1995), especially during the measurement of long-term memory. Subjects may also already have existing predispositions where the experimenter's expectations and motives influence their performance by making them more cooperative, uncooperative, apprehensive or faithful. A subject acting to please or sabotage the researcher may not be representative of their actual experience analyzing the advertisement or using augmented reality; information not truly representative of the subject's feelings can skew the data.

The use of repetitive questions and providing the subject with an explanation of the experiment prior to participation has the potential to result in the placebo effect, a situation where the subject acts in a manner that is consistent with their expectations and not an accurate reflection of their actual experience. However, because the ad was shown to the participant prior to the experiment and all questions asked during the interview were open ended and broad, the likelihood of this effect was greatly reduced.

An additional concern is the response time for the second questionnaire. A time of forty-eight hours was selected as a consistent measurement for testing the long-term memory's ability to recall vivid content, according to the literature of Reyes, Thompson, and Bower, "Judgmental Biases Resulting From Differing Availabilities and Arguments" (1980), and Shelder and Manis, "Can the Availability Heuristic Explain Vividness Effects?" (1986). Participants who do not choose to complete the second questionnaire after the forty-eight hour period, or wait a longer time to respond, could cause inconsistencies in analysis by having more time to either forget or better consolidate and encode the information.

FINDINGS AND DISCUSSION

Data collection was conducted between April 26 and June 2, 2014. Twenty volunteer participants were interviewed and surveyed as part of the researcher's experiment. These individuals were randomly divided evenly into two groups, a control group and experimental group, to analyze a print advertisement for the Nissan Leaf featured in the September 19, 2013 issue of the Toronto Star. The experimental group analyzed the advertisement with the help of its augmented reality (AR) enabled portions, which included four thirty-second videos listing various features of the vehicle and their environmental benefits. On the other hand, the control group merely observed the static, print advertisement. Following an interview to gauge the participants' understanding of the advertisement and two questionnaires distributed over a fixed period of time to test their memory, the findings and discussion highlight the key themes that the qualitative and quantitative analysis of this specific AR advertisement revealed in regard to message comprehension and retention when augmented reality was present.

Demographic Breakdown of Respondents

The following charts illustrate the demographic characteristics of the participants in the experiment. Figure 1 shows that, at least at the beginning of the experiment, gender was equally divided between both the experimental and control groups, with five males and five females in each panel. However, only eighteen participants completed the long-term memory questionnaire distributed two days later. One male member of experimental group and one female member of the control group contributed to this attrition. Figure 2 shows the occupation distribution of the participants. The largest percentage of subjects, 35 percent, were students in the Graphic Communications Management (GCM) program and 20 percent were graduates of GCM, making over 55 percent of the interviewees individuals knowledgeable in AR, advertisement analysis, and graphic design. Figure 3 indicates the ages of the subjects; 85 percent were between the ages of 20 to 29 years old. This makes age an inadequate descriptive factor for comparison; since so many subjects were the same age it makes the collected data analysis homogeneous in that regard.
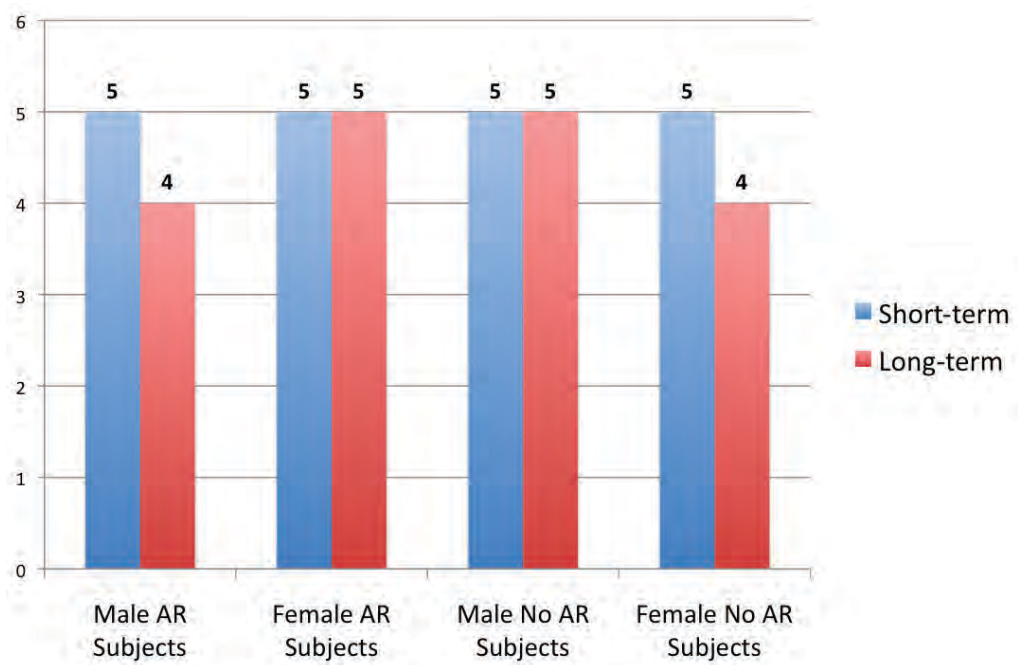
Figure 1: *Gender breakdown between experimental groups.*
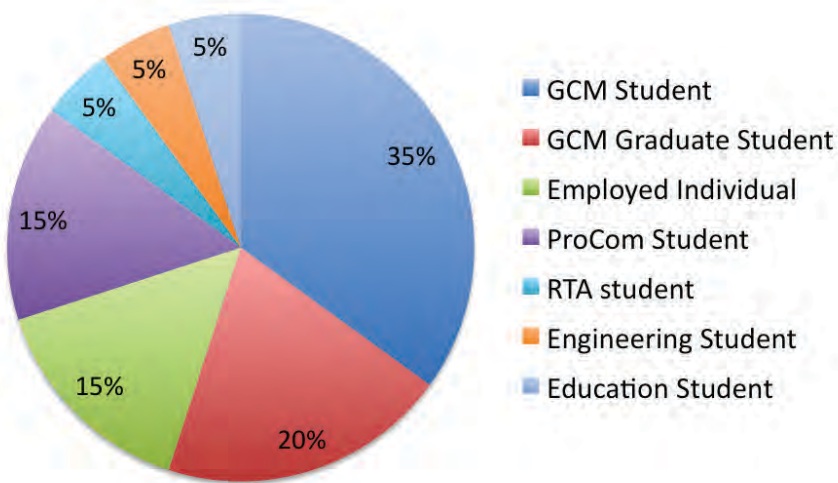
Figure 2: *Occupational breakdown of participants.*
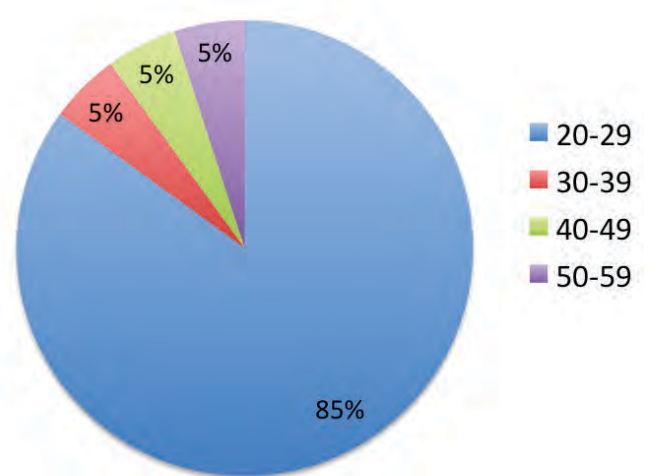
Figure 3: *Age breakdown of participants.*

As a result of the small sample size and its quasi-experimental conditions, a representative breakdown of the population and observations cannot be made in this report. Likewise, any findings cannot be generalized to the general population. Instead, the results from this pilot study may be the basis for a broader research effort in the future.

Qualitative Analysis: Message Comprehension
(see Appendix D on p. 64 for interview transcripts)

The qualitative analysis involved a content analysis of the interviewees' interpretation of the advertisement's message and the comparison between the answers provided by those participants who used augmented reality and those who did not. This involved looking at the language choices, the repetition of key terms and themes, and the identification of the advertisement's messages and how they were signified. All participants answered all the questions about advertisement's messages; meanings were inferred from their responses. It is important to note that the results and findings discussed herein pertain specifically to this particular augmented reality enabled advertisement and its messages. Therefore, these results cannot be universally applied or generalized to any other commercially printed advertising that implements augmented reality.

General Understandings

All twenty participants, regardless of the presence of augmented reality, identified that the product being advertised was a car. However, only 60 percent of the participants referred to the vehicle as a Nissan Leaf. The eight instances in which the product was simply referred to as the "car" primarily occurred for those participants belonging in the control group with the exception of one experimental subject. This result might be attributed to the fact that, in the augmented reality advertisements, the name of the vehicle was repeated seven times throughout the various accompanying videos (refer to Appendix E: Transcripts of Augmented Reality Advertisements on page 146 for the

exact wording of these advertisements). The increased repetition of this phrase via multimodal communication likely provided a positive impact on participants' memory and understanding, while also linking the vehicle name with a concrete word like "leaf". Hence, those subjects using augmented reality were more likely to correctly remember the vehicle. In fact, with the exception of a single individual, all the experimental subjects mentioned the vehicle's name at least once during their interview (refer to Table 2: Comparison of Number of Categorized Words Spoken to see the frequency of the term's usage). However, in the case of the participants who were exposed to traditional media, in order to have them explicitly state the vehicle name a number of follow-up questions were required.

The purpose of the advertisement was to sell the vehicle, the Nissan Leaf. Many participants identified two distinct themes upon viewing the advertisement: selling the vehicle and providing information about the vehicle. Despite almost all of the subjects identifying environmental selling features of the car – the Carwings system, the comfortable interior, and the state-of-the-art battery – participants who belonged to the control group commonly referred to the advertisement as selling, promoting, or advertising the vehicle – all words synonymous with encouraging consumers to purchase the car. Alternatively, the participants who used augmented reality interpreted the purpose of the advertisement as a soft sell[8], trying instead to explain to consumers the beneficial features of the vehicle in an attempt to "increase viewers' awareness of the Nissan Leaf product and to entice them into purchasing the car itself" (Subject 6, personal communication, May 1, 2014). As a result, many of the subjects in the experimental group referred to the ad as being informative and demonstrating why the Nissan Leaf was a superior electric vehicle. Subjects noted different approaches in how the advertisement sold the vehicle to them: eliciting guilt for environmental harm or being factual in nature to inform them of the car's benefits.

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[8] A soft sell is a subtle appeal in which human emotions are emphasized to create an atmosphere to induce an affective (feeling) reaction from the viewer as a result of a beautiful scene, story or some other vehicle (Mueller, Okazaki, & Taylor, 2010).

The Primary Message: Environmentalism

Environmentalism was the key message of the advertisement, since the slogan "Make Your Mother Nature Proud," encouraged users to buy the all-electric Nissan Leaf. In addition, the advertisement, more specifically the AR, highlighted the various environmental features of the vehicle; the vehicle was being sold "for all the benefits of it being an electric car" (Subject 17, personal communication, May 28, 2014). Although all subjects identified this as the primary message of the advertisement, some subjects, especially those who belonged to the experimental group, identified concurrent messages.

The Secondary Message: Product Utility

Skepticism exists amongst consumers about the practicality of purchasing an electric car. Although electric cars are an environmentally friendly alternative they also cause occasional inconveniences including having to wait for the car to charge, the lack of charging stations, and the susceptibility of the vehicle to running out of power. These factors are large deterrents for consumers who wish to purchase such a vehicle. However, the positive technological advancements emphasized in the augmented reality content depicted a viable electric vehicle that could overcome these challenges.

Seven participants stressed that the advertisement conveyed this additional message of ease of use and convenience. Five of the seven belonged to the experimental group. This distinction indicates that those individuals exposed to the more detailed information communicated through augmented reality's multimodal content were more inclined to believe the car was a feasible alternative to fossil fuel vehicles as a result of the benefits being presented in a unique, repetitive fashion that directly appeared to address these concerns (refer to Appendix E: Transcripts of Augmented Reality Advertisements on page 146 for the exact wording of these advertisements).

Tertiary Message: Family Values

As indicated by the narrator featured in the augmented reality advertisements the Nissan advertisement was primarily intended for an audience of young, affluent, eco-conscious adults. For three of the ten participants in the control group, the tagline "Make Your Mother Nature Proud" suggested a subjective, underlying meaning in the phrase that gave it a more familial undertone.

> With the text stating, 'Make Your Mother Nature Proud' that kind of tries to connect with your sense of emotion, in that if you care about the environment then you'll care to make Mother Nature proud and then it also kind of links to your own mother. Because everyone has a mother of some varying degree, anyone can relate to making their mother proud. (Subject 6, personal communication, May 1, 2014).

Some subjects saw the tagline as a way of guilting the consumer into buying the vehicle and taking ownership for their consumption decisions: "they're talking about Mother Nature so that would probably make certain people feel guilty that they're not contributing to environmental stuff" (Subject 10, personal communication, May 5, 2014), and "I think it's trying to say that Mother Nature would be proud that you're not pumping carbon into the atmosphere" (Subject 11, personal communication, May 12, 2014). However, others saw it as a lifestyle, family-oriented vehicle given its appearance and playful message tone. Subject 17, for instance, believed the friendliness of the advertisement was paramount to selling the car, "Then they have the whole "Make Your Mother Proud" thing so it's the whole feeling of family – you and your friends should hop on in, take a road trip to San Francisco" (personal communication, May 28, 2014).

Semiotic Analysis

Semiotic messages are the product of the visual signs and text present in both the print advertisement and its augmented reality content. Referring to Barthes' "Theory of the Photographic Message," all the participants were asked to identify the part of the advertisement that helped them best understand the message. As shown in Table 2,

70 percent of the control group identified the text as the most informative part of the advertisement while 60 percent of the experimental group found the audio accompanying the augmented reality content the most valuable in understanding the intended message.

Table 1: The Most Useful Part of the Advertisement

	Imagery	Text	Video	Audio
Male AR Subjects			2	3
Female AR Subjects			2	3
Male No AR Subjects	3	2		
Female No AR Subjects		5		

One reason why the static imagery of the advertisement might not have had as profound effect as the text and augmented reality was its simplistic nature and functional purpose. Many participants, regardless of the group to which they belonged, stated there were no clear symbols or signs highlighting the environmental message; instead the audience was relying entirely on the implicit meaning of the text "Make Your Mother Nature Proud" to acknowledge the advertisement's environmental message. As Subject 6 put it:

> I think that, the only element that relates to nature, environmentally friendliness, would be, "Make Your Mother Nature Proud." But the imagery does not connect to this so they have a large image of the car, which is in like a grayish-white tone does not look like anything related to the environment, or green space, or green-ery. And there are no images that show the benefits of using the vehicle or its connection to the environment. (personal communication, May 1, 2014).

Neither the advertisement nor the augmented reality enabled videos contained any of the conventional symbols or clichés of environmentalism: images of nature, consequences of poor ecological decisions, or the colour green. These design decisions are particularly important because the work of Les Carlson, Stephen Grove, and Norman Kangun (1993) showed green, pro-environmental, advertisements tend to "be more image-enhancing (i.e., associating the company with a positively viewed environmental cause) than process-oriented (i.e., focusing on technology, production, or disposal)" (Lowrey, McCarty, & Shrum,1995, p. 71). The print advertisement and

its AR content acted in the process-oriented fashion, highlighting the technologically advanced environmental benefits and features of the vehicle while subsequently showing a feature, for example the vehicle's interior, as opposed to the advertisement's proposed environmentally conscious sentiments. The missing, expected, visual stimulations, as many subjects mentioned, made the text and the combination of audio and video, provided via augmented reality, more useful as literal guides to the intended message by directly telling consumers what the message was with little interpretation or analysis on the audience's part. At the same time the text chosen in the advertisement became the focal point. However, the tagline not only enforced or guided the reader to the intended primary message of environmentalism but it also sowed unintended connotations of the message, such as familial values, which were easily acknowledged as true because of the lack of signs to reinforce messages. This lack of creativity made the advertisement boring, plain, and ineffective, especially for those who only viewed the traditional media; of the ten participants who belonged to the control group only two agreed that the advertisement was effective.

However, even with the lack of signs participants who acknowledged environmentalism as the primary message used language reflective of this assessment in their answers. Table 2 lists the number of times words synonymous with the car's various technological features or its environmental benefits were used by each participant. These data shows that, despite augmented reality, all the participants referred to the vehicle as environmentally friendly in some form, using language such as "energy efficient", "eco-friendly", or "green". Even for those who viewed the AR content, its use of technological terminology was not enough to change their opinion about the primary message of the advertisement but was enough to suggest that the purpose of the advertisement was informative in nature.

Table 2: Comparison of Number of Categorized Words Spoken

	Environmental Language	Technological Language	Nissan Leaf	Mother Nature	Nissan
Male AR Subjects					
Subject 8*	13	5	4		
Subject 9	8	4			
Subject 11	16	15	8	2	
Subject 14*	10	2	3	1	1
Subject 15	23	25	1		
Female AR Subjects					
Subject 2	16	3	2		
Subject 4 *	7	8	3		
Subject 5*	22	5	1		2
Subject 13*	18	5	3	2	1
Subject 20	23	7	4		
Male No AR Subjects					
Subject 1	5	7	2	1	1
Subject 3	12	6	1	2	3
Subject 10	8	5	1	3	
Subject 17**	19	2		4	4
Subject 19	16	4		1	
Female No AR Subjects					
Subject 6* **	25	3	3	15	
Subject 7*	12	19	1		
Subject 12**	6	9		2	
Subject 16	21	10	3	4	1
Subject 18	17	1		4	3

* Subjects who suggested the secondary message of product utility
** Subjects who suggested the tertiary message of family values

Social semiotic analysis of augmented reality's multimodal properties showed that disparities in the interpretation of the advertisement's message existed, just as it did for the control group of subjects. The AR's presentation, lack of signs, and focus on innovation in the augmented reality version still led to understanding discrepancies for the experimental group. Social semiotics is simply a lens through which to appraise the multimodal content to find the message. However, the message the end user sees is

filtered through their lens of understanding given the situation and their own social and cultural experiences. Given the similar occupational background and age of many of the participants the experiment produced almost the same results, in spite of some subjects using augmented reality, which repeated key elements of the advertisement through an alternative mode of communication, and associated concrete images with abstract technologies, like Carwings. Regardless of the mode of communication, the primary message of the advertisement, environmentalism, appeared to be clearly conveyed or acknowledged by all participants in the experiment.

Given the polysemic natures of signs individuals belonging to the experimental group who viewed the advertisement' augmented reality content noted a secondary message (i.e., product utility) that became apparent through the videos showing the various features of the car. The videos presented via Layar strayed away from the environmental properties of the car, focusing instead on the innovations that helped make the electric car better than a conventional gasoline-powered one. Throughout all four videos, the word "innovation" was used three times while the exact word "environment" was only used once. This explains why individuals who viewed the advertisement using augmented reality were more likely to describe it using words similar to innovation and technology. These differing interpretations and user experiences between the control and experimental groups may also explain why all the subjects had such differing views about whether the advertisement was persuading them to purchase the vehicle or informing them about the vehicle because those participants who used augmented reality saw the advertisement as informative, with its elaborating information and soft sell tactics, while the traditional media users saw the ad as persuasive with a direct message.

Quantitative Analysis: Recall

Descriptive Analysis

Of the twenty participants who completed the short-term questionnaire, only eighteen completed the long-term questionnaire two days later. The analysis discussed in this section compares the advertisement recall ability of the augmented reality users to that of the traditional media users. It should be noted that some participants did not answer all of the survey questions posed, as stipulated in Table 3.

Table 3: Number of Questionnaire Responses

Question	Number of Short-Term	Number of Long-Term
Car Colour	20	18
Name of Car	20	18
Recyclable Material	20	18
Headline Text	19	17
Battery Type	19	17
Car Company Name	20	18

In order to visually convey the discrepancies in the subjects' memories over time a few graphs were designed to compare the answers given between the two questionnaires. Figure 4 compares four categories: short-term memory of subjects who used augmented reality, long-term memory of subjects who used augmented reality, short-term memory of subjects who did not use augmented reality, and long-term memory of subjects who did not use augmented reality. Percentages are used to compare the answers in these four categories, and indicate how successful subjects were overall at correctly remembering information from the advertisement. Figure 5 depicts a breakdown of the questions answered correctly by the subjects, comparing the results between the short-term memory questionnaire and the long-term memory questionnaire. Each participant was categorized into one of four groups based on their gender and whether they used AR or not.
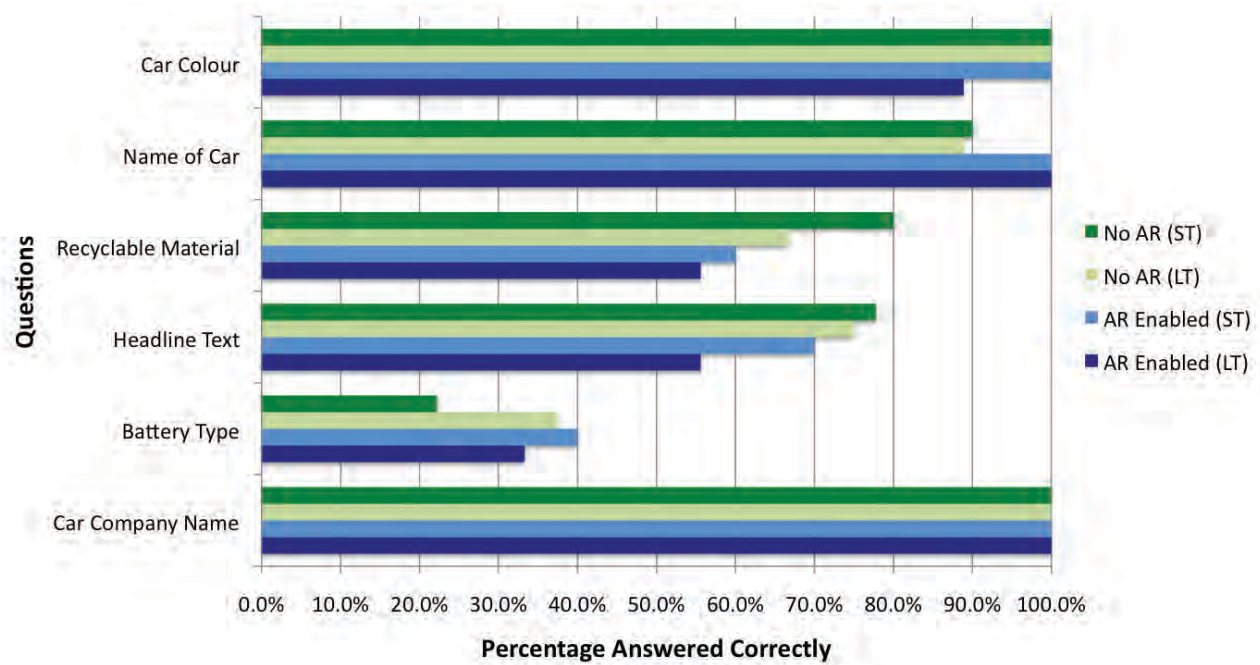
Figure 4: *Percentage of questions answered correctly.[9]*
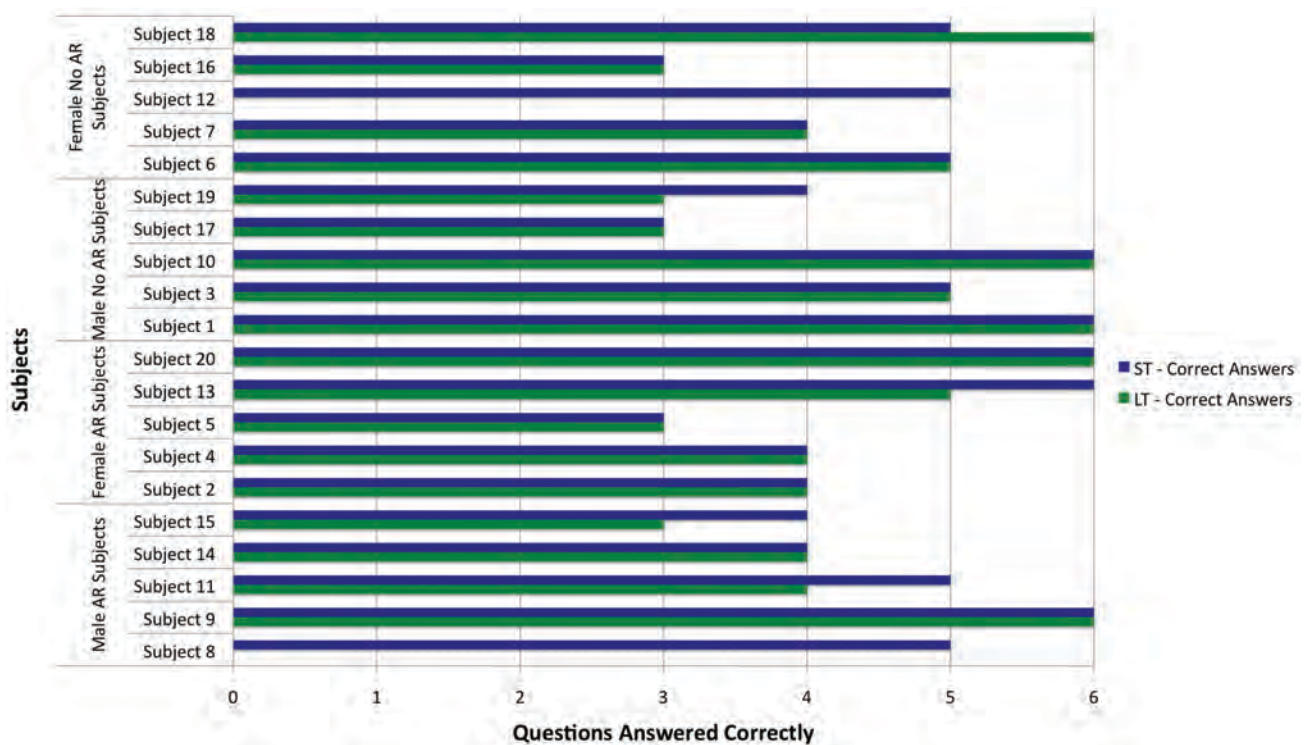
Figure 5: *Number of questions each subject, answered correctly between both questionnaires.*

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[9] Some percentages may appear more substantial then they actually are because of a smaller denominator compared to the other questions..

Inferential Analysis

The prior descriptive analysis provides a summary of the quantitative results gleaned from the study's survey questionnaire. However, to derive a more comprehensive understanding of whether any differences are statistically significant or not, some form of inferential test is required. In this case, the Chi-square[10] test of significance was applied because the quantitative data are nominal and ordinal in nature. The Chi-square module in a SPSS software package was applied (see Appendix I: SPSS Chi-square Tables on p. 176 for SPSS data) to the collected information. The probability level selected to determine whether a result was statistically significant or not was p <0.05.

The inferential results from both the short and long questionnaires revealed no statistically significant differences between the AR enabled experimental group and the control group over time. In addition, both the control group and experimental group subjects tended to provide the same answers throughout the experiment; remembering the advertisement adequately over the long-term. However, it does appear that the short-term memory questionnaire subjects commonly performed better then their long-term counterparts, as can be seen in Figure 4.

As can be seen in Figure 5, thirteen subjects, six using augmented reality and seven using traditional media, provided the same answers throughout the experiment, regardless of whether their responses were wrong or right. In most cases, the subject provided the same answer in both the short-term and long-term questionnaires. Nevertheless, subjects sixteen, seventeen and nineteen of the control group, and subjects five, eleven, and fifteen of the experimental group, provided different incorrect answers between the two questionnaires. Given the almost consistent split in correct answers between both groups, it is difficult to say that those subjects using augmented reality experienced any significant improvement in the end user's ability to retain information.

[10] A Chi-square is used to discover if there is a significant difference between two categorical variables when the value is <0.05.

However, it should be noted that some questions were answered correctly more often when augmented reality was used and, conversely, when the traditional media stood alone. Members of the experimental group were better able to recall the name of the vehicle, most likely because it was repeated numerous times throughout the AR videos. Moreover, in the short-term, they had better recall of the proper name of the battery. On the other hand, the control group consistently appeared to have better recall of many of the other attributes of the advertisement. This particular outcome may result from subjects having to concentrate more on the condensed, distilled summarizations that the print advertisement offered, as opposed to the wordy, at times distracting, augmented reality content, which provided more information but also overloaded the consumer with unnecessary selling features or details. For example, to know what portion of the car was made from recyclable materials, all the subjects had to read the print advertisement thoroughly to ascertain this information, since it was not explicitly stated in the augmented reality video that accompanied the advertisement, where instead features like optional leather seats were mentioned. Given that, according to Figure 4, the experimental group underperformed more often then the control group, it is reasonable to consider that the individuals who decided to focus on the augmented reality part of the advertisement might have been distracted from the actual signs contained in the advertisement's content and overlooked the primary message that it was trying to convey.

Subjective Interpretations

In addition, to simple true/false, or multiple choice questions, subjective questions were presented to participants where they provided comments related to the Carwings system, listed the effectiveness of the advertisement, and provided three adjectives to describe the ad. As a result of the different modes of communication used as part of the experiment, AR and the physical print advertisement, the variability of interpretations between participants might have been exacerbated. As stated previously, the text and the AR, especially the audio portion, provided the viewers with the most information towards

understanding the advertisement but also influenced their interpretation with experimental group subjects seeing the product as utilitarian and control group subjects thinking the advertisement related to family values.

However, the challenge that presented itself was what information the subject chose to ignore when compared to the information they chose to remember. For example, many participants could not recall the exact function of the Carwings system. Four of the control group subjects successfully identified the Carwings system as "a system that allows you to monitor your Leaf remotely from a smartphone or computer." On the other hand, only one experimental participant remembered it throughout the experiment while one participant remembered it in the short-term questionnaire, and two more remembered it in the long-term. Other subjects simply mentioned the features the AR highlighted about the system, that being the navigation system, instead of its actual function. As a result only 35 percent of participants over the course of time accurately remembered the primary function of this feature. This suggests a process-oriented (Lowrey, McCarty, & Shrum,1995) selling approach, in the advertisement which adversely affects the consumer's ability to recall the environmental message of the advertisement since it focuses instead on the technology.

Since signs and symbols have a polysemic nature and the interpretation of the advertisement is subjective to each viewer, the three adjectives each subject selected to describe the advertisement revealed their state of mind and indicated some patterns in apparent engagement between groups. Those who belonged to the experimental group tended towards more affirmative, positive adjectives to describe the advertisement and its AR experience: clean (ten instances), innovative (five instances), and informative (three instances). On the other hand, control group participants used less complimentary language: simplistic or simple (nine instances), and boring or bland (four instances). It is also apparent that only the control group saw the ad as having any familial ties as two subjects used the words "family friendly" and "friendly" to describe the advertisement.

However, again, both groups supplied answers that were a combination of both negative and positive responses. This offers no distinction of either group acting in a particular way when the intervention of AR is present.

Finally, the question posed about the effectiveness of the advertisement actually produced a statistically significant result in the short-term questionnaire, as the Chi-square probability value was 0.048 (see Appendix I on p. 176 for SPSS data), but not in the long-term (see Figure 6). This result might be attributed to two factors: 1) the more positive reception of the advertisement when viewed with augmented reality, and 2) the change in attitude towards the advertisement after two days had passed.
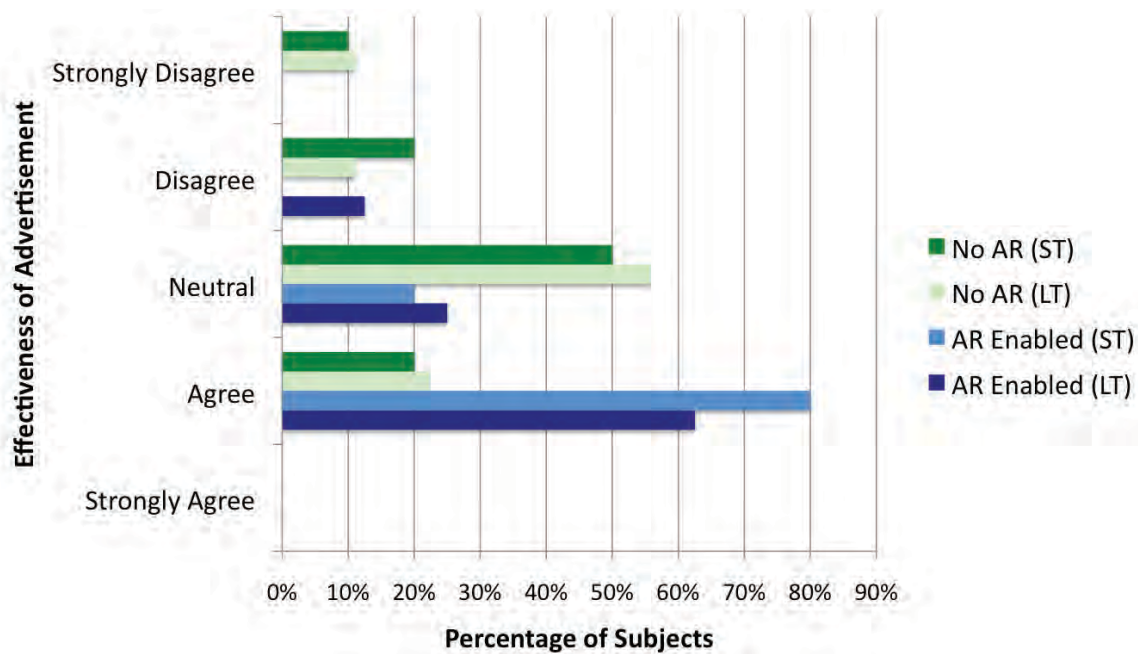
Figure 6: *Percentage of subjects agreeing with the advertisement effectiveness over time.*

As Figure 6 shows, experimental subjects were much more likely to agree that the advertisement was effective than the control group participants. For example, Subject 8 stated, "just looking at this now I feel like I retained a lot more because of the augmented reality. It's more…I guess in today's society we're on computers all the time and so like the audio and video is what we're used to so it kind of enhanced this a lot for me" (personal communication, May 5, 2014). However, their positive feelings did not appear

to persist over the long-term, as two days later many shifted to a stance of neutrality or disagreement. This may indicate that over time the benefits of the AR were not retained suggesting augmented reality only held a brief novelty value, which may also explain why experimental subjects answered more questions incorrectly during the second questionnaire.
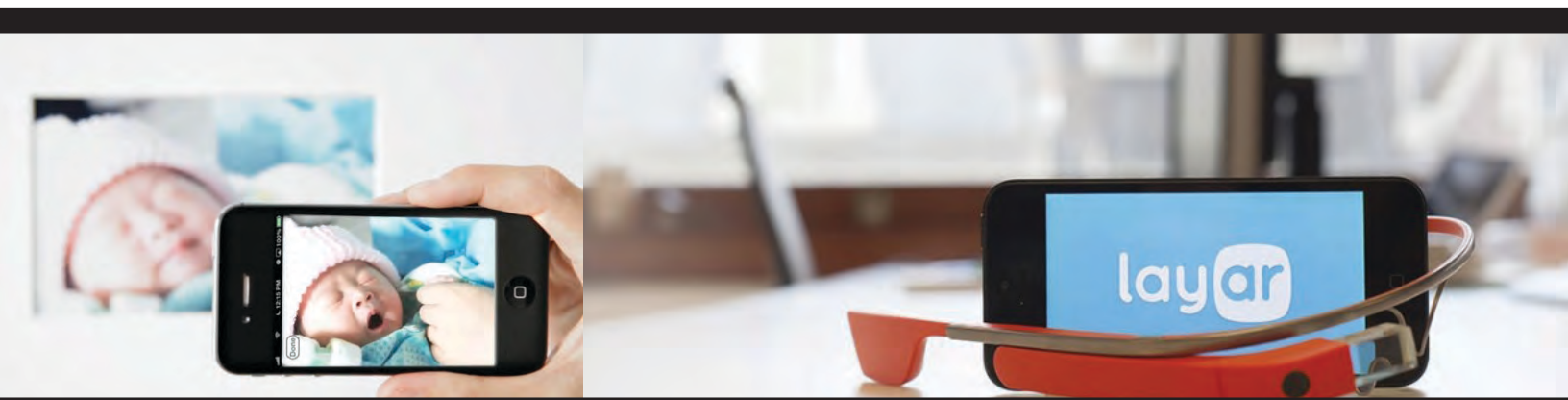
RESEARCH CHALLENGES

One question pertaining to the colour of the box surrounding the Nissan logo in the top left of the advertisement had to be excluded because of metamerism[11] once printed. Because the lighting conditions in each location varied between subjects some did not see a distinctive colour, thus making the question inadmissible.

With approximately 35 percent of all participants belonging to the School of Graphic Communications Management and another 20 percent affiliated with the program as alumni there is the potential that they selected answers reflected not only their experience with augmented reality but also their training in advertisement design and interpretation. Some of their answers may have not adequately represented a general population and their interpretation of the advertisement.

Finally, these results cannot be considered comprehensive enough to be applied universally to all augmented reality enabled advertisements. The small sample size, homogenous nature of the subject pool in age and background, and lack of comparable research makes these results unique to this particular study and do not show any overarching themes that can be applied universally to either the general public or the usage of AR in print advertising.

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[11] Metamerism is a process where a particular colour appears to be a different colour in different illumination conditions (Field, 2004).

OBSERVATIONS ON AUGMENTED REALITY

All the experimental subjects who used the augmented reality application, Layar, were asked to complete a few additional questions to gain insight into their opinions about AR. Seven out of the ten subjects strongly agreed that they found augmented reality enhanced their understanding of the advertisement and all ten said they would use the technology again. One subject noted that the use of augmented reality made the message more apparent by reducing the need for interpretation on the part of the consumer:

> Because when you have tone of voice in a printed message you have one perception but when you can actually hear and see what's being said on the video or any other additional media then it's just it makes it, gives a different perception and much with anything, with tone of voice, you can have like an angry tone of voice, you can have a happy tone of voice, you can have different levels within the same sentence, it really could be anything and, therefore, it actually helps – or at least in my case – it helps the consumer connect with the product more. Because when they actually feel like the person is talking to them they can actually in a way try to relate. (Subject 5, personal communication, May 1, 2014).

As the theory of social semiotics suggests, multimodality allows for the interpretation of signs presented through the various modes of communication is dependent upon the viewer's experience and the situation in which the signs are presented. In this case messages are solidified through the combination of audio and video in the augmented reality content complementing the print advertisement. AR, in theory, serves to make the signs in advertisements more vivid, improve the concreteness of abstract or confusing language, and repeat key information all in the hope of removing the polysemic nature of message and increasing the subject's ability to correctly decode the advertisement's meaning. Similar to the nature of text to simply use a connoted medium to make the denoted message apparent, AR serves as a communication mode that adds a second layer of message denotation.

Many subjects commented that the technology was very cool and interactive. Again, this would be one of the primary reasons cited why the experimental subjects found the ad much more effective when AR was employed, as opposed to the traditional

printed media, which lacked the visual signs needed to properly convey the message. Subject 15 found it to be a clever interactive alternative to learning more about the product:

> I think it's really cool and I think it changes the whole landscape of how you view ads, umm, by saying "Scan with Layar" or any type of app. It asks the audience to, or it tells the audience, if you're interested in finding out more here's what you can do in a very soft way… So I definitely think I would use it again and it's really interesting and neat. (personal communication, May 28, 2014).

In general, what the findings indicate is that the use of augmented reality did not have any statistically significant effect on an end user's ability to comprehend or recall an advertisement and its message. Although there were instances where memory decay occurred over time, participants were able to consistently answer the questions with the same response regardless of its accuracy. Moreover, the subjects who focused on the print advertisement and those who focused on the augmented reality enabled media were both just as likely to produce the same answers and identify the same messages. The semiotic properties of vivid visuals, concreteness, and repetition showed augmented reality neither further enhanced advertisement analysis nor did it improve a subject's memory, but instead appeared to eclipse the individual's attentiveness to reading the advertisement. Hence, AR had the potential, as a mode of communication, to be able to repeat the message and facts more succinctly for the end user in order to increase the meaningfulness of the content. Instead, by engaging with the augmented reality content, the subjects became fixated on extraneous features and were less likely to remember pertinent aspects of the ad. Regardless, many subjects, in both groups observed that the design choices did not correlate with the intended message and, therefore, subjects did not receive as clear, unambiguous a message. As one subject pointed out, there is very little connection between the text, the imagery, and the overall message:

I mean I think the slogan, "Make Your Mother Nature Proud" and then just this picture of the vehicle. I have a bit of a disconnect with that but I see what they are trying to do, and I mean they've named, they've named, the vehicle Nissan Leaf so I can see that they're trying to attach environmentally conscious sentiments to the vehicle and it makes sense when I look at, uh, the features. (Subject 16, personal communication, May 28, 2014).

Although augmented reality appears to have no significant bearing on message comprehension or recall, it does appear to overcome the mono-media state of print and evolve the medium into an information resource capable of engaging the senses. Even with only a novelty value it still appeared to encourage consumers to talk at greater length about the ad and to show more comprehensive analysis, if only to point out its issues. As a transmitting medium it provides another plain for semantic interpretation but it still succumbs to the challenges of polysemic signs interpreted through the end user's own lens of experience.

CONCLUSIONS

The question asked at the beginning of this paper was whether augmented reality posed any significant advantage in improving an end user's ability to better understand and remember commercial printed advertisements and their messages. The results appear to indicate neither subjects who used augmented reality nor subjects who only viewed the print Nissan Leaf advertisement experienced any significant difference in either of these two categories. Although the potential of interactive advertising holds substantial future promise, the research presented in this study demonstrates that AR currently poses no particular advantages or disadvantages when compared to traditional printed media. The repetition of key phrases, the use of vivid imagery through multiple modes of communication, and the use of concrete images aided members of the augmented reality group in performing just as well as those who studied the print advertisement alone. Similar to any form of advertisement, augmented reality and its multimodal content did not appear to overcome the nature of polysemic signs, allowing for multiple interpretations of the message. Furthermore, the AR did not appear to have any influence on the ability of the participant to remember key features or messages, making it apparent that consumers will pragmatically still only gravitate towards the information they were interested in and ignore the rest.

There is a clear shift in the marketplace for the adoption of this technology with numerous legacy media sources, such as newspapers and magazines, adopting augmented reality to help convey messages to their audiences in a new way. However, AR appears to still only serve a superficial role for engagement. As has been pointed out the movement from static print to the passive experience of watching videos does not exploit the potential of this medium to deliver interactive, creative, engaging, and multimodal content nor does it encourage the continued usage of the technology over time.

However, there are barriers. Augmented reality (AR) is an intrusive technology; it requires the consumer to make the conscious decision to interact with it and is contingent

on the end user having an Internet connection and some form of mobile device capable of interfacing with the technology. End users can only use the technology if they know about it, deem it valuable, and are able to use it properly. As was found for this Nissan Leaf ad in particular, subjects pointed out that the "Scan with Layar" indicator was small and vague – it did not explain to consumers what it was or how it was relevant. In addition, at times the technology was more difficult to use because it required the individual to focus their device on specific parts of the advertisement – even the slightest movement could cause the video to end prematurely.

Augmented reality is a technology being widely embraced in the graphic communications industry, since the saturation of mobile devices, including smartphones and tablets, has increased the potential of AR technologies. This research has shown that consumers find AR to be an enjoyable addition to their experience, suggesting that advertisements can be more effective, even if the technology does not appear to have any significant advantage over time. Further research must be done to examine the feasibility and usability of the technology given its imitations. Additionally, more research should be done into the impact of AR on advertising using a larger population and more advertisements so the findings could be generalized to a larger audience and not be limited to this particular advertisement and these twenty subjects. Finally, research must be done to examine the value of the investment in and potential value of AR because this study shows is that, at present, it poses no unique advantage. The findings of this study will help contribute to the overall body of knowledge on this topic.

REFERENCES

2005 Horizon Report. Johnson, Laurence F. and Smith, Rachel S. *2005 Horizon Report.* Austin, TX: The New Media Consortium, 2005.

Armfield, D. (2011). Book review: Multimodality: A social semiotic approach to contemporary communication. *Technical Communication Quarterly, 20*(3), 347-349. Retrieved from doi: 10.1080/10572252.2011.551502

Atkinson, R.C., & Shiffrin, R.M. (1968). "Chapter: Human memory: A proposed system and its control processes." *The Psychology of Learning and Motivation, 2,* 89-195. Retrieved from doi: 10.1016/s0079-7421(08)60422-3

Azuma, R. (1997). A survey of augmented reality. *Teleoperators and Virtual Environments, 6*(4), 355-385.

Azuma, R., Baillot, Y., Behringer, R., Feiner, S., Julier, S., & MacIntyre, B. (2001). Recent advances in augmented reality. *Computer Graphics and Applications, 21*(6), 34-47. Retrieved from doi: 10.1109/38.963459

Barthes, R. (1957). *Mythologies.* Paris, FR: Editions du Seuil.

Barthes, R. (1977). *Image music text.* Hammersmith, UK: Fontana Press.

Barthes, R. (1985). *The responsibility of forms.* New York, NY: Hill and Wang.

Bastian, J., & Dukes, W. (1966). Recall of abstract and concrete words equated for meaningfulness. *Journal of Verbal Learning and Verbal Behaviour, 5,* 455-458.

Bezemer, J., Diamantopoulou, S., Jewitt, C., Kress, G., & Mavers, D. (2012). Using a social semiotic approach to multimodality: Researching learning in schools, museums and hospitals. *National Centre for Research Methods,* 1-15.

Billinghurst, M., & Thomas, B. (2011). Mobile collaborative augmented reality. In Alem, L. & Huang, W. (Eds.), *Recent Trends of Mobile Collaborative Augmented Reality Systems* (1 – 20). New York, NY: Springer.

Billinghurst, M., & Dünser, A. (2012). Augmented reality in the classroom. *IEEE Computer Society, 45*(7), 56-63. Retrieved from doi: http://doi. ieeecomputersociety.org/10.1109/MC.2012.111

Borkowski, J., & Eisner, H. (1968). Meaningfulness and abstractness in short term memory. *Journal of Experimental Psychology, 76,* 56-60.

Bower, G., Reyes, R., & Thompson, W. (1980). Judgmental Biases Resulting From Differing Availabilities and Arguments. *Journal of Personality and Social Psychology, 39*, 2-12.

Bulmer, S., & Buchanan-Oliver, M. (2004). Meaningless or meaningful? Interpretation and Intentionality in post-modern communication. *Journal of Marketing Communications, 10*(1), 1-15.

Burnkrant, R., & Unnava, H. (1991). An Imagery-Processing View of the Role of Pictures in Print. *Journal of Marketing Research, 28*(2), 226 – 231.

Calkins, S., Duke, N., Knight, J. Martin, N., Morsink, P., Norman, R., & Roberts, K. (2013). Beyond concepts of print: development of concepts of graphics in Text, PreK to Grade 3. *Research in Training of English, 48*(2), 175-203.

Carlson, L., Grove, S.J. and Kangun, N. (1993). A Content Analysis of Environmental Advertising Claims: A Matrix Method Approach. *Journal of Advertising*, *22*(3), 27-39.

Carmigniani, J., & Furht, B. (2011). Augmented reality: An overview. In B. Furht (Ed.), *Handbook of Augmented Reality* (3 – 46). New York, NY: Springer.

comScore. (2014). Canada Digital Future in Focus 2014. Toronto, Ontario.

Cook, C., Hill, K., Kalawsky, R., & Stedmon, A. (1999a.). Old theories, new technologies: comprehension and retention issues in augmented reality systems. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting, 43*(23), 1358-1362. Retrieved from doi: 10.1177/154193129904302320

Cook, C., Hill, K., Kalawsky, R., & Stedmon, A. (1999b.). Old theories, new
technologies: cumulative clutter effects using augmented reality.
*Proceedings of the Human Factors and Ergonomics Society Annual
Meeting,* 132-137. Retrieved from http://ieeexplore.ieee.org/stamp/stamp.
jsp?tp=&arnumber=781549&isnumber=16965

Craig, C., Leavitt, C., & Sternthal, B. (1976). Advertising Wearout: An
Experimental Analysis. *Journal of Marketing Research, 13,* 365-372.

Cunitz, A., & Glanzer, M. (1966). Two storage mechanisms in free recall. *Journal
of Verbal and Learning and Verbal Behaviour, (5),* 351-360.

de Saussure, F. (1959). *Course in General Linguistics.* New York, NY: Philosophical
Library.

Dudai, Y. (2003). "The neurobiology of consolidations, or, how stable is the engram?".
Annual Review of Psychology, 55, 51-86. Retrieved from doi: http://dx.doi.
org/10.1146/annurev.psych.55.090902.142050

Field, G. (2004). *Color and Its Reproduction: Fundamentals for the digital imaging and
printing industry.* Sewickley, PA: GATFPress.

Good, C., & Scates, D. (1954). *Methods of research: educational, psychological,
sociological.* New York: Appleton-Century-Crofts, Inc.

Gorman, A. (1961). Recognition memory for nouns as a function of abstractness
and frequency. *Journal of Experimental Psychology, 61*(1)*,* 23-29.

Hahn, J. (2012). Mobile augmented reality applications for library services. *New
Library World, 113*(9), 429-438. Retrieved from doi:
10.1108/03074801211273902

Halliday, M. A. K. (1978). *Language as social semiotic: The social interpretation of
language and meaning*. Maryland. University Park Press.

Harrison, C. (2003). Understanding how still images make meaning. *Technical
Communication, 50*(1), 46-60.

Hillert, K. (2010). *Advertising and the use of misleading signs.* Retrieved December 1, 2013, from http://www.colorado.edu/communication/meta- discourses/Papers/ App_Papers/Hillert.htm

Holsanova, J. (2012). New methods for studying visual communication and multimodal integration. *Visual Communication, 11*(3), 251-257. Retrieved from doi: 10.1177/1470412912446558

Huppatz, D. (2011). Reconsidering Roland Barthes, mythologies. Design and Culture, 3(1), (85-100).

Iedema, R. (2003). Multimodality, resemiotization: Extending the analysis of discourse as multi-semiotic practice. *Sage Publications, 2*(1), 29-57.

Inglobe Technologies. (2011). *Augmented Reality and the Future of Printing and Publishing: Opportunities and Perspectives.* Ceccano, Italy.

inma. (2013). *Toronto Star uses augmented reality to "Go Beyond" the expected   with mobile editorial, advertising campaign.* Retrieved February 2, 2014 from http://www.inma.org/blogs/integrated-advertising-sales/post.cfm/toronto- star-uses-augmented-reality-to-go-beyond-the-expected-with-mobile-editorial- advertising-campaign

Jampolsky, M. (1950). Etude de quelques épreuves de reconnaissance. *Annee Psychol, 49,* 63-97.

Kalkofen, D., Mendez, E., & Schmalstieg, D. (2009). Comprehensible visualization for augmented reality. *IEEE Transactions on Visualization and Computer Graphics, 15*(2), 193-204.

Kerawalla, L., Luckin, R., Seljeflot, S., & Woolard, A. (2006). "Making it real": exploring the potential of augmented reality for teaching primary school science. *Virtual Reality,* 163-174. Retrieved from doi: 10.1007/s10055-006-0036-4

Kirk, R. (1995). *Experimental Design: Procedures for the Behavioural Sciences.* Pacific Grove, California: Cole Publishing Company.

Klonoff, D. (2014). New wearable computers move ahead – Google Glass and Smart Wigs. *Journal of Diabetes Science Technology, 8*(3), 3-5. Retrieved from doi: 10.1177/1932296813518858.

Kraver, J. (2002). "Mobile images": Myth and resistance in nikky finney's rice. *Southern Literary Journal, 34*(2), 134-147.

Kress, G. (2010). *Multimodality: A social semiotic approach to contemporary communication.* New York, New York: Routledge.

Kroeker, K. (2010). Mainstreaming augmented reality. *Communications of the ACM, 53*(7), 19-21. Retrieved from doi: 10.1145/1785414.1785422

Leedy, P., & Ormrod, J. (2013). *Practical research planning and design.* Upper Saddle River, NJ: Pearson Education Inc.

Lowrey, T. M., McCarty, J. A., & Shrum, L. J. (1995). Buyer characteristics of the green consumer and their implications for advertising strategy. *Journal of Advertising, 24*(2), 71. Retrieved from http://ezproxy.lib.ryerson.ca/login?url=http://search.proquest.com/docview/236599445?accountid=13631

Manis, M., & Shedler, J. (1986). Can the Availability Heuristic Explain Vividness Effects?. *Journal of Personality and Social Psychology, 51*(1), 26-36.

Millard, J. (2009). Performing beauty: Dove's "Real Beauty" campaign. *Symbolic Interaction, 32*(2), 146-168. Retrieved from doi: 10.1525/si.2009.32.2.146

Morin, E. (1956). *The cinema, or the imaginary man.* Minneapolis, MN: University of Minnesota Press.

Mortelmans, D. (1998). Socio-semiotic analysis of print advertisements for luxury products. *Semiotica, 120*(1), 181-206.

Mueller, B., Okazaki, S., & Taylor, C. R. (2010). Measuring soft-sell versus hard-sell advertising appeals. *Journal of Advertising, 39*(2), 5-20. Retrieved from http://ezproxy.lib.ryerson.ca/login?url=http://search.proquest.com/docview/516285835?accountid=13631

Olver, M. (1965). Abstractness imagery, and meaningfulness in recognition and free recall. *University of Western Ontario.*

Paivio, A. (1967). Paired-associate learning and free recall of nouns as a function of concreteness, specificity, imagery, and meaningfulness. *Psychological Reports, 20,* 239-245.

Shawcross, N. (1997). *Roland Barthes on photography: the critical tradition in perspective.* Gainsville, FL: University Press of Florida.

Singh, M. & Singh, M. (2013). Augmented reality interfaces. *Internet Computing IEEE, 17*(6), 66-70. Retrieved from doi: 10.1109/MIC.2013.107

Sirdeshmukh, D., & Unnava, R. (1994). Reducing Competitive Advertising Interference. *Journal of Marketing Research, 31*(3), 403-411.

Standing, L. (2007). Learning 10,000 pictures. *Quarterly Journal of Experimental Psychology, 25*(2), 207-222. Retrieved from doi: 10.1080/14640747308400340

Stoke, S. (1929). Memory of onomatopes. *Journal of Genetic Psychology, 36,* 594-596.

University of Calgary. (n.d.). *Semiology//semiotics.* Retrieved November 27, 2013, from http://people.ucalgary.ca/~rseiler/semiolog.htm

Vannini, P. (2004). The meanings of a star: Interpreting music fans' reviews. *Symbolic Interaction, 27,* 47-69.

Washburn, R. (2013). *Augmented Reality: the latest fad for newspapers or a real innovation?.* Retrieved June 9, 2014, from http://j-source.ca/article/augmented-reality-latest-fad-newspapers-or-real-innovation

Wilkins, K. (2011). *Questioning numbers: How to read and critique research.* New York, NY: Oxford University Press Inc.

Yoon, J., & O'Connor, B. (2010). Engineering an image-browsing environment: Re purposing existing denotative descriptors. *Journal of Documentation, 66*(5), 750-774. doi:http://dx.doi.org/10.1108/00220411011066826

APPENDIX A: REB LETTER OF APPROVAL

RYERSON UNIVERSITY
RESEARCH ETHICS BOARD

To: Olivia Parker
School of Professional Communication
Re: REB 2014-092: Old Tradition, New Technologies: Comprehension and Retention Using
Augmented Reality
Date: April 15, 2014

Dear Olivia Parker,

The review of your protocol REB File REB 2014-092 is now complete. The project has been approved for a one year period. Please note that before proceeding with your project, compliance with other required University approvals/certifications, institutional requirements, or governmental authorizations may be required.

This approval may be extended after one year upon request. Please be advised that if the project is not renewed, approval will expire and no more research involving humans may take place. If this is a funded project, access to research funds may also be affected.

Please note that REB approval policies require that you adhere strictly to the protocol as last reviewed by the REB and that any modifications must be approved by the Board before they can be implemented. Adverse or unexpected events must be reported to the REB as soon as possible with an indication from the Principal Investigator as to how, in the view of the Principal Investigator, these events affect the continuation of the protocol.

Finally, if research subjects are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and approvals of those facilities or institutions are obtained and filed with the REB prior to the initiation of any research.

Please quote your REB file number (REB 2014-092) on future correspondence.

Congratulations and best of luck in conducting your research.

Lynn Lavallée, Ph.D.
Chair, Research Ethics Board

APPENDIX B: RYERSON UNIVERSITY CONSENT FORM

CONSENT TO PARTICIPATE IN RESEARCH

Old Tradition, New Technologies: Comprehension and Retention Using Augmented Reality
Experimental Group Participants

You are being invited to participate in a research study. Please read this Consent Form so that you understand what your participation will involve. Before you consent to participate, please ask any questions necessary to be sure you understand what your participation will involve.

INVESTIGATOR

This research study is being conducted by Olivia Parker, from the School of Professional Communication at Ryerson University. The results of this study will contribute to the researcher's Major Research Project, a requirement towards the completion of her Master of Professional Communication degree.

If you have any questions or concerns about the research, please feel free to contact:

  Olivia Parker, Primary Researcher
School of Professional Communication
  Ryerson University
  Rogers Communication Centre
80 Gould Street
  Toronto, Ontario M5B 2K3
  olivia.parker@ryerson.ca

Ava Cross, Undergraduate Program Direction (Supervisor)
School of Professional Communication
  Ryerson University
  Rogers Communication Centre, RCC 370C
80 Gould Street
  Toronto, Ontario M5B 2K3
  416-979-5326 ext. 6381 or across@ryerson.ca

PURPOSE OF THE STUDY

The purpose of the study is to determine if the use of mobile augmented reality (AR) in print affects the customer's ability to understand and remember the message of an advertisement. Augmented reality brings photographs in advertisements to life with the use of an application (app) on a smartphone or tablet, which presents videos on the device's screen when it is waved over the augmented reality element on the printed page.

DESCRIPTION OF THE STUDY AND YOUR PARTICIPATION

If you volunteer to participate in this study, you will be asked to do the following three things:

Interview
First, you will meet with the researcher at a safe, secure location on the Ryerson campus between April 21th to May 30th. During this meeting you will be given a single printed advertisement from the Toronto Star and asked to study it or view the additional content using an iPad owned by the School of Professional Communication Management with the Layar augmented reality app installed. The separation of participants into two groups, one using augmented reality and one not using augmented reality makes the study experimental.

A brief fifteen minute, audio recorded interview will then take place to discuss your analysis of the advertisement, questions may include:
- What product is being sold?
- What is the advertisement's key message?
- What feelings or emotions is the ad trying to associate with the product?

These questions are meant to illicit and stimulate your analysis of the advertisement and organically help you contextualize the message or messages contained in the combination of the advertisement's colours, photographs, and text.

Short-Term Questionnaire
Second, following the interview, you will access a questionnaire hosted on Ryerson's secure Opinio survey tool on a secure laptop belonging to the School of Professional Communication. At this time demographic data pertaining to the subject's program of enrolment, gender and age will be collected in order to help identify the effect of augmented reality content between age groups, experience and gender.

This questionnaire focuses on asking you to immediately recall elements of the advertisement. The comparison between the two groups, those using augmented reality and those not using augmented reality, allow for the measurement of the effect augmented reality has on your memory. This makes the nature of this questionnaire experimental. The questionnaire will last no more than seven minutes and ask questions such as:

- What colour is the car company's logo?
- What car company was being advertised?

These questions are meant to illicit recall of specific parts of the advertisement and their impact on message analysis and memory retention.

Long-Term Questionnaire
Third, two days later you will be emailed a link to a second questionnaire consisting of the same demographic and recall questions from the short-term questionnaire, merely rearranged. This will test your ability to remember the advertisement after a set period of time and allow the researcher to measure and compare the long-term memory of the subjects. Again this questionnaire will take no more than seven minutes to complete.

Contacting Participants
You will provide an email address as part of the first questionnaire in order for the researcher to be able to email you the second questionnaire. Following the conclusion of the study all the emails will be deleted from the databank to protect you anonymity.

Research Findings
If you wish to receive an electronic copy of any research articles or the findings of the final report produced from the results of this study, you can check the box and provide your email information at the end of the consent form where specified in order to have a PDF emailed to you in September.

EXPERIMENTAL ASPECTS OF THIS STUDY

This study uses an experiment in order to measure the effect augmented reality has on your understanding and recall of an advertisement's message. Therefore, the interview and both questionnaires are experimental procedures as the results between two distinct groups, subjects using augmented reality and subjects not using augmented reality, are measured and compared in order to assess if the augmented reality does have an effect on a customer's understanding, short-term and long-term memory.

POTENTIAL RISKS AND DISCOMFORTS

The risks associated with this study are minimal. The only risks involve your comfort level with answering questions and providing information regarding your attitudes and feelings upon using this technology and your opinions on the message of the advertisement. Since these interviews will be conducted in an environment where you feel safe and you will only be discussing the advertisement there is no apparent harm to you except in your willingness to answer questions. In the survey portion of the study you will be asked to self-identify certain demographic characteristics, including age and gender for segmentation purposes. This level of risk is deemed to be comparatively minor in nature.

If you experience trouble using the app the researcher will be present to assist you and provide instruction.

You are free to skip questions, take a break, or discontinue participating, if you wish, for any reason at any time. If at any time you feel uncomfortable you are free to withdraw. The decision to take part or not will have no effect upon your relationship with the researcher, academic standing, or relationships with the programs, professors and Ryerson. If you withdraw you can request that your data be removed.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

By completing the research elements of the study, you will be introduced to a new dynamic technology as well as gain experience in advertisement analysis. From a societal perspective, this research will move forward the graphic communication industry's understanding of the role of augmented reality and its effect on printed media, indicating whether the technology is a valuable investment.

I cannot guarantee, however, that you will receive any benefits from participating in this study.

PAYMENT FOR PARTICIPATION

You will be offered a $5 honorium at the beginning of the study when you meet with the researcher to first view the printed advertisement, answer the interview questions, and complete the short-term memory questionnaire. This money will be distributed as cash. If you choose to discontinue participating following the first interview and questionnaire the full amount of compensation will be still be given to you for your participation.

CONFIDENTIALITY

Confidentiality will be respected and no information that discloses your identity will be released or published without your express permission. A full dataset, including your data, will be stored on the personal computer of the principal investigator off site from Ryerson University. The files will password protected and any backup files will also be password protected. No data is being released to another party/agency/person.

As part of the study you will need to be audio recorded. The recordings will be made using a handheld digital recorder and all the recordings and transcripts will be stored on the primary investigator's computer in password protected folders and files. Only the principal investigator will have access to the raw and transcribed recordings, and they will only be used for the purposes of the study described here. Data for this study will be stored for five years after the last publication of the results as recommended by the American Psychological Association.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

Participation in this study is voluntary. You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. If you choose to withdraw from this study you may also choose to withdraw your data from the study. You may also choose not to answer any question(s) and still remain in the study. Your choice of whether or not to participate will not influence your future relations with Ryerson University.

QUESTIONS ABOUT THE STUDY

If you have any questions about the research now, please ask. If you have questions later about the research, you may contact:

> Olivia Parker
> olivia.parker@ryerson.ca

This study has been reviewed by the Ryerson University Research Ethics Board. If you have questions regarding your rights as a research participant in this study, please contact:

> **Toni Fletcher, Research Ethics Coordinator**
> **Research Ethics Board**
> **Office of the Vice President, Research and Innovation**
> **Ryerson University**
> **350 Victoria Street**
> **Toronto, Ontario M5B 2K3**
> **416-979-5042 or toni.fletcher@ryerson.ca**

By registering for the study, you agree that:
    You have read and understand the study description.
You understand the possible harm and discomforts and possible benefits (if any) of this study.
You understand that you have the right not to participate and the right to stop at any time
You understand that you may refuse to participate without consequence.
You have a choice of not answering any specific questions.
You have been told that your personal information will be kept confidential.
You understand that data results will be aggregated and that no identifiers will appear on any data used in reports arising from this study.
You consent to be being audio recorded, if selected.

Welcome to the study.

SIGNATURE OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

Your signature below indicates that you have read the information in this agreement and have had a chance to ask any questions you have about the study **"Old Tradition, New Technologies: Comprehension and Retention Using Augmented Reality"** as described herein. Your questions have been answered to your satisfaction, and you agree to participate in this study. You have been given a copy of this form.

_____

Name of Participant (please print)

_____   _____

Signature of Participant   Date

After reading the study's description and instructions given above, do you consent to be audio recorded as a participant in Olivia Parker's augmented reality study.

☐ ₁	Yes
☐ ₂	No

As indicated in the study's explanation, a critical requirement of the project is being able to track people's responses during the various parts of the research. Your name will be anonymously coded for this purpose, with names not being connected to individual responses.

_____   _____

Signature of Participant   Date

☐	I request a copy of the research report and any associated publications.

Email address to which publications are to be sent: _____

APPENDIX C: INTERVIEW GUIDE

INTERVIEW GUIDE – EXPERIMENTAL STUDY

For use in the focus group and interviews with industry experts. A rough guide outlining the questions that will be asked of interviewees as a way to gauge their understanding, experience and use of augmented reality in print media applications for the use advertising. Interviews will last between 60 to 90 minutes.

Date: _____   Time: _____

Name(s) of Interviewee(s): _____

Location: _____

Check that the subject has signed the experimental participant consent form, agreed to have himself or herself audio recorded for the purposes of the study, and understand they can leave at anytime if they wish, skip any question, or discontinue the study.

Section 2: Denoted Observations

1. What product is being sold?

2. In one sentence summarize the purpose of the advertisement.

3. What is the advertisement specifically highlighting about the product? What is its key message?

Probe: What feelings or emotions is the ad trying to associate with the product?
         What symbols are used to represent the message?
         What aesthetics of the advertisement convey the message? Photos, text?
         Do you feel the advertisement is effectively conveying the message?
         Is anything missing from the advertisement?

Section 3: Connoted Observations

4. How does the advertisement try to convince you to buy this product?

5. What theme or themes do we find in the advertisement? What is it about? (The plot of an advertisement may involve a man and a woman drinking but the theme might be jealousy, faithlessness, ambition, passion, etc.)

Section 4: Augmented Reality Evaluation (Only for Experimental)

1. Was the augmented reality application easy to use?

☐ 1	Strongly agree
☐ 2	Agree
☐ 3	Neutral
☐ 4	Disagree
☐ 5	Strongly disagree

2. If you selected disagree or strongly disagree why?

3. Does the use of augmented reality enhance your understanding of the advertisement?

☐ 1	Strongly agree
☐ 2	Agree
☐ 3	Neutral
☐ 4	Disagree
☐ 5	Strongly disagree

4. If you selected disagree or strongly disagree why?

5. Would you use augmented reality again?

☐ 1	Yes
☐ 2	No

APPENDIX D: INTERVIEW TRANSCRIPTS

Interviewer: Olivia Parker
Interviewee: Subject 1 (male, 20 – 29 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in the lobby of the Graphic Communications Management building on Bond Street. This interview was conducted April 26, 2014 at 9:34 AM.

(Start of the Interview)

Interviewer: So what would say is the product being sold?

Interviewee: Uh….it's the Nissan Leaf electrical car.

Interviewer: Can you summarize the purpose of the advertisement?

Interviewee: It is to show the…uh…few key features of the car. Um…such as, you know, accessing it remotely with your phone. Um…how it's made from this recycled material and battery power in it.

Interviewer: What is the advertisement specifically highlighting about the product? You mentioned some of those features.

Interviewee: So, the, um, Carwings, which is what you can do remotely from your smartphone to monitor the car, the seats made out of recycled material, and the litium-ion battery.

Interviewer: So given all these facts, what do you think is the message of the advertisement?

Interviewee: Um, I think the key is that they want you to "make mother nature proud" so they're trying to show how green this car is. I think that's the main purpose. To show how much of a green car it is.

Interviewer: Okay. So is the advertisement trying to relate feelings or emotions with the product?

Interviewee: I'd say no. I'd say it's more just factual.

Interviewer: Are there any symbols that represent that environmental message?

Interviewee: You know what, surprisingly no. I would say.

Interviewer: Why surprisingly?

Interviewee: Um…because blue…the colour blue is pretty prominent in here: the Nissan logo, the header, the cars down [at the bottom of the ad] but I don't represent blue with nature, or mother nature. I'd almost represent blue with energy, like I can see that being the colour of electric, electricity but I can't see that as nature.

Interviewer: So you've mentioned photos is text somehow conveying message to you?

Interviewee: Um…No. I'd say. There's nothing special with the text. Factual. Header. Maybe the only area would be the zero emissions, but that's more of a brand. That's zero emissions the brand. So that's a logo I'd guess. So I would say no.

Interviewer: So that message you're getting it from? Where?

Interviewee: Just the imagery. Mainly.

Interviewer: Do you think that the advertisement is effectively conveying its message?

Interviewee: Um…[pregnant pause] somewhat effectively. I'd say. I'd say it doesn't have strong ties into being a green product from the advertisement that I can see. But the factual basis is getting its message across.

Interviewer: Is anything missing from the advertisement?

Interviewee: [pause]

Interviewer: Like you mentioned you're not seeing the colour green or –

Interviewee: Yeah, I would say colour. Yeah, some different colour maybe to portray more the green aspect of it. Um…I'd almost say just a different angle of the car because I can just see the front. I'd rather see the whole thing. It's almost deceiving. Because I couldn't see the rest of it.

Interviewer: So how does the advertisement convince you to buy this product?

Interviewee: Uh…purely factual. I would only be convinced to buy this product by reading the facts that are on the advertisement, at a glance I would probably just ignore it.

Interviewer: What theme or themes are in the advertisement? Is there some sort of plot going on?

Interviewee: I'd say it is a minimalistic ad. It is not trying to throw a lot at you. A few simple key points, a couple images, and it uses a lot of space. Right. So it's not taking up too much it's just very, um, right to the point I would say.

Interviewer: Any other comments about the advertisement?

Interviewee: I mean, I follow car companies. I don't know where the orange fits in, it kind of just jumps out. I don't know where that would fit necessarily.

Interviewer: I bet you it's probably red but I could only get a scan of the newspaper.

Interviewee: [Laughter] Yeah, red would make sense. No. I have no other comments aside from that. It is a pretty simplistic ad. It really is nothing…I mean it's got this layar stuff which is the alternative reality…right…so I guess that would add another layer to it eventually but aside from that it's a very simple ad.

Interviewer: Is there anything you like about the ad? Dislike?

Interviewee: I like the simplicity of it. Ads that are too busy, that I have to focus on, I mean if I were to glance at this I know it's about a car. If I was interested in reading something about a car I'd read into it. If it was way too busy and I couldn't tell what it was about right off a glance I'd just it ignore it and keep going.

Interviewer: So kind of…I'm seeing a bit of contradiction…so all the facts are in the photos or the text? Which?

Interviewee: I mean if you take out all the text I'm just looking at the photos, it means nothing to me. It's the photos combined with the text that help me understand. If I were to read that the Leaf's seats are 99.9% made of recycled material without seeing the interior it would leave something wanted. I want to see something else. Same with the ion battery if I didn't see how it was being charged it would leave me wanting more and then the opposite way around if it had no text and just saw these pictures I would have no idea what they are trying to portray especially with the Carwings photo. Right, if it had no text there it's just a car. There's nothing there.

Interviewer: Okay so text is important?

Interviewee: Yes.

Interviewer: Any other comments you would like to add?

Interviewee: No.

(End of the Interview)

Interviewer: Olivia Parker
Interviewee: Subject 2 (female, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in the lobby of the Graphic Communications Management building on Bond Street. This interview was conducted April 26, 2014 at 9:51 AM.

(Start of the Interview)

Interviewer: So what product is being sold?

Interviewee: The Nissan Leaf. It's a new car.

Interviewer: 'Kay. In one sentence can you summarize the purpose of the ad?

Interviewee: It is to tell you all about the new features of the Leaf.

Interviewer: Um, is the advertisement highlighting any specific, anything specific, about the product?

Interviewee: It's energy efficiency.

Interviewer: Anything else?

Interviewee: That's it…that would be my main thing I would say.

Interviewer: Okay, so what do you think the key message of advertisement is?

Interviewee: Mmm…I guess that's green, that's its an efficient car. The way of the future.

Interviewer: Is the advertisement trying to associate any feelings or emotions to this product?

Interviewee: Not so much emotions, I guess. But I guess it makes you want to be excited for the new car but it's like it's not like you can go out and buy a new car everyday.

Interviewer: Yeah, I suppose not. Are there any, umm, symbols that make one excited about the car?

Interviewee: [pregnant pause]

Interviewer: Or any pictures? You can refer both to the layar or to the physical advertisement, if you would like.

Interviewee: I guess that it's, just, that it's green, it's supposed to be energy efficient I guess.

Interviewer: Do you think energy efficiency is important to their sales pitch?

Interviewee: Yes.

Interviewer: Why?

Interviewee: That's what people are looking for to be green. You want to appeal to what the masses want.

Interviewer: 'Kay. How are they doing that?

Interviewee: They've created a product that is green, and now they've made it available. So they're selling it on that ability.

Interviewer: Um, do you feel that it was photos, text, videos, that got this message across?

Interviewee: The videos. Yeah, like, without layar looking at this it is not as convincing. It just seems like a typical car ad. But the augmented reality made a big difference.

Interviewer: How?

Interviewee: It gave you more information then just less then a line of text. You have just that it's a green car when looking at the print ad but layar gave you more details.

Interviewer: Did it effectively convey the message it was trying to portray?

Interviewee: Yes.

Interviewer: How?

Interviewee: They made it easy to understand and spelled it out. They didn't use big words, and, like, un- for people to understand.

Interviewer: Was there anything particular you liked about the augmented reality?

Interviewee: I guess it just ads, like another, adds more detail. But if you're not interested in learning more about cars you probably wouldn't watch it anyways.

Interviewer: Was there anything that stood out about the augmented reality that you liked?

Interviewee: It was clean and simple. It wasn't overly flashy or tacky.

Interviewer: Do you feel anything is missing from the advertisement?

Interviewee: I guess pricing. I mean if you're going to buy a car you kind of want to know what the price was. I mean they say "it went down in price" in the AR but they never said what the price was.

Interviewer: That's a good point. How do you think the advertisement is convincing you to buy the product?

Interviewee: Convincing me to buy the product. I guess it's just selling me on all its best features. All the green features. That it looks good and is still efficient.

Interviewer: Looks good and feels good?

Interviewee: Yeah.

Interviewer: Is there any theme or themes in the advertisement? Is there like a plot that it's following or –

Interviewee: No not really.

Interviewer: So no story?

Interviewee: No story.

Interviewer: If you were considering buying this car what sold you on it? The augmented reality, the text, the photos?

Interviewee: I guess the AR because it provided me with a lot of information.

Interviewer: And the information was useful?

Interviewee: Yes.

Interviewer: Any other comments?

Interviewee: No. That's about it.

Interviewer: Anything aesthetically about the ad that you liked or disliked?

Interviewee: I guess. It's just simplicity. It's easy, it's not distracting. It's not overwhelming.

Interviewer: Are there any symbols representing the message?

Interviewee: No…I guess like it's, it's, guess it made a way of saying its zero emissions. Other than that, like, I would have thought it might have looked more green rather then blue text but I guess that it's more that it's brand then understanding that the car supposed to be like efficient. But that's it.

Interviewer: So kind of going back, the message the advertisement is? Just want to make sure.

Interviewee: To sell…to convince you to buy an energy efficient car, and this one in particular.

Interviewer: So? The message is the car or the environmentalism?

Interviewee: The car is the message, but to sell you it, its talking about how it's green.

Interviewer: 'Kay, using the green would you say it's guilt tripping into buying the car? Like some environmental ads?

Interviewee: Yeah, like, I feel that's one…it's trying to sell you on that feature rather then a typical car, "we're better we're green." But I guess you would only really look to buy it if you were looking for green. Most people probably wouldn't put that into a budget.

Interviewer: And, alright so we just have a few more questions. Was the augmented reality application easy to use? Do you agree, strongly agree, neutral, disagree, strongly disagree?

Interviewee: Strongly agree. But I guess I'm technologically friendly.

Interviewer: Is there a reason you strongly agree it was easy to use?

Interviewee: It wasn't you had to flip through a million pages to find the information with AR it presented it all in three, three to four easy buttons.

Interviewer: Okay. Does, and we've probably answered this but we're going to do it one more time, does the use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Strongly agree.

Interviewer: Would you use augmented reality again?

Interviewee: Yes.

(End of the Interview)

Interviewer: Olivia Parker
Interviewee: Subject 3 (male, 20 – 29 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in the lobby of the Graphic Communications Management building on Bond Street. This interview was conducted April 26, 2014 at 10:15 AM.

(Start of the Interview)

Interviewer: What is the product being sold?

Interviewee: A car. Nissan Leaf.

Interviewer: In one sentence can you summarize the purpose of the advertisement? If you need to repeat that's fine.

Interviewee: In one sentence?

Interviewer: What is the ad trying to do?

Interviewee: Talk about environmental friendliness of the car.

Interviewer: 'Kay. Would you say that's the message of the advertisement?

Interviewee: Yeah, well I mean it says "Make Your Mother Nature Proud" so I'm assuming it's environmentally friendly. Being green and all that.

Interviewer: Umm…what is the advertisement specifically highlighting about the product?

Interviewee: Umm…other than what it says at the bottom just the battery, uh, the interior, as well as being able to remotely access it with your smartphone, the Carwings. Never heard of that, but I think that's about it.

Interviewer: Do those aspects contribute to the message at all?

Interviewee: Ummm…I mean being an all-electric car I guess the battery would be a main point but the interior doesn't really mean anything to me.

Interviewer: 'Kay. Is any feelings or emotions being associated with the product?

Interviewee: No. Not at all. I wouldn't really consider myself a car lover either so I'm not a huge automotive junky.

Interviewer: I wouldn't be able to tell you the difference between anything in a car. Are there any symbols being used to represent, if the message is environmentalism, are there any symbols representing that?

Interviewee: Umm…not really. Typically you'd see something green but, there's a plant in the window of this thing [points to image on ad], but that's about it.

Interviewer: So then where did you get the notion that it was an environmental ad?

Interviewee: Uh, because the saying, "Make Your Mother Nature Proud."

Interviewer: So you're relying on text?

Interviewee: Yeah.

Interviewer: [whisper] Text more so.

Interviewee: Because it's the first thing I saw obviously.

Interviewer: So that's the, those are the aesthetics of the advertisement you are relying on? More text versus photo, or photo versus text.

Interviewee: Uh, text. Yeah, like I said I don't see anything that would, like I said you'd typically see green for environmentally friendly but…

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: Umm…no. If someone first glanced at this they would assume it was just a typical car ad if they wanted to highlight the environmentally friendly parts of it they could have added a bit more colour; it's very bland.

Interviewer: So was anything missing from the advertisement?

Interviewee: Probably just colour. Like I said, just something to highlight the green.

Interviewer: Anything else?

Interviewee: That's about it that I can see right now, other then obviously you got the Layar part of it.

Interviewer: Do you feel like it follows the typical car ad?

Interviewee: Yeah, I mean for Nissan, because Nissan's not a high end producer so it's typical for that type of company to produce something like this.

Interviewer: How does the advertisement convince you to buy this product?

Interviewee: [pregnant pause] I mean personally it doesn't convince me at all.

Interviewer: Why? You can tell me why.

Interviewee: I…I…I not…I obviously care about the environment but it's not a major factor in me buying something. Like I could honestly care less. Even if I was environmentally friendly this would convince me less because there's nothing to actually prove other than it is an electric car that it's environmentally friendly. Like it tells me the seats are 99.9% made of recycled material but it shows like a small picture of the interior. Like that's about it.

Interviewer: Mmmm, are there any theme or themes in the advertisement? Is there some sort of plot it's following?

Interviewee: Nothing that I can see.

Interviewer: It's not like the story of the car going over the hill or through the obstacles?

Interviewee: No, nothing like that.

Interviewer: Um, just kind of going back to the environmentalism, is that what you'd say is the message of the ad or –

Interviewee: Yeah, well that's their whole selling point for the car.

Interviewer: 'Kay.

Interviewee: I can see trying to be simplistic. But, like to me, it's not something that pops out like if you flip the page it's not something I'm going to stop and look at. It's…even like this [Layar logo] being as small as it is I mean I know what Layar is. If I was just an average consumer just looking at the page I just wouldn't notice it very well.

Interviewer: Any other comments about the advertisement?

Interviewee: Ummm, not that I can think of. I mean I'd probably remake the whole thing, personally.

Interviewer: No it's fair.

Interviewee: It's just too white. I like simplistic but it's too white for me.

Interviewer: Cool.

Interviewee: And white is typically a brand colour, like in a Lexus or something but Nissan is very low end. They typically have a lot more colours in their cars.

Interviewer: 'Kay.

Interviewee: That's about it that I can see.

Interviewer: Alright. So I'm just going to stop this. Do you have anything else to add?

Interviewee: Ummm, not really. They have a lot of like empty space but that's really about it I can think of. Yeah.

Interviewer: Okay.

(End of the Interview)

Interviewer: Olivia Parker
Interviewee: Subject 4 (female, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in the lobby of the Graphic Communications Management building on Bond Street. This interview was conducted April 26, 2014 at 10:40 AM.

(Start of the Interview)

Interviewer: Okay, so what is the product being sold?

Interviewee: Uh, the Nissan Leaf, a car.

Interviewer: Okay. What is the purpose of the advertisement? Purpose being why the ad company created the advertisement.

Interviewee: To, from what I gathered, they made it to explain this new type of car because it's a hundred percent, I think it was hundred percent, electric, so recyclable and stuff so…

Interviewer: So what's the message of the advertisement? What is its selling point? What is it trying – how is it selling to you?

Interviewee: Umm, the main things they kept repeating is that its recyclable and very energy efficient, yeah, so they were focusing on the environment.

Interviewer: What is it [the advertisement] specifically highlighting about the product?

Interviewee: Uh, the ease of use and that's pretty much the main thing – how easy it was to charge it, how easy it is to access it, how easy it is to remember to charge it.

Interviewer: That's important in an electric car I guess. Are there any feelings or emotions the ad is trying to associate with the product?

Interviewee: Umm, I don't know if its an emotion but the words that kept coming to my mind as I was watching it were clean and modern and yeah, those were the two words I kept thinking about as I was watching it.

Interviewer: So –

Interviewee: It's not really an emotion it's more calm, I guess.

Interviewer: No problem, calm can be an emotion. I kind of just sort of wondering did they use humour, were they trying to guilt trip you, like other environmental car ads?

Interviewee: Umm, I felt like they were, they didn't really use guilt very much, they were doing more logical, like, this is what it does, this is what it – they were trying to help me imagine myself using the car and the lifestyle that would go with.

Interviewer: Are there any symbols used to represent this environmental message?

Interviewee: The colour green.

Interviewer: Is it present?

Interviewee: Umm, a little bit, they have like a small green leaf they had at different parts.

Interviewer: Okay.

Interviewee: Unless I'm imagining that. I don't know. Umm, yeah.

Interviewer: Okay. Ummm, what are the aesthetics of the advertisement that told you the message? The video? The text? The pictures?

Interviewee: I found that the audio was the most informative part of the advertisement. There was a lot more detail in explaining then the text was.

Interviewer: Did it increase your understanding?

Interviewee: Uh, yes.

Interviewer: Why?

Interviewee: Um, it, well for example, this one [points to picture of car interior] that the Leaf's seating is 99.9% made of recycled materials but in the video it details what its made of and other recyclable aspects of the car. So I felt like I had better understanding of what they were trying to say for each of the parts.

Interviewer: Do you feel the advertisement is effectively conveying the message?

Interviewee: Uh, yes.

Interviewer: How?

Interviewee: [chuckles nervously]

Interviewer: Take your time its okay.

Interviewee: [pregnant pause] Uh I think that, it's effectively conveying it because, like um, I had to choose to listen to the thing. It wasn't just screaming at me, I chose to click the button and to listen to the video and kind of knew what the video was going to be about because I was choosing which picture was doing. So I felt like that helped the ad convey what they wanted to because I was actually paying attention to what was happening.

Interviewer: Would you say there is anything missing from the advertisement?

Interviewee: Umm, they said it was affordable but they didn't say where the starting price was.

Interviewer: So there's a gap somewhere, interesting –

Interviewee: Yeah, they didn't say how long the battery would last either. They just said they'd tell you when to recharge it.

Interviewer: Um, kind of going back to the environmental message? Do you think it's present? Where did you get the notion it was environmental?

Interviewee: The name. It was the Nissan Leaf, so that was my first clue. Um, then when they started talking about the recycled materials and then when they talked – they had the whole video just about the battery. So…

Interviewer: How does the advertisement convince you to buy the product?

Interviewee: I think they're trying to convince me by using, they tried to sell features of the car. So that I can remotely use my smartphone to connect with the car and how that would be easy and cool and convenient and then they, yeah, in the battery when they talked about how it was easy and you can charge it really fast. So they were trying to sell the points that normally I would be skeptical about for an electric car. So like, yeah.

Interviewer: Okay. Were there any theme or themes in the advertisement? Like was there a plot to it? Or a story?

Interviewee: Um, I don't think there was necessarily a story, uh, there was like a similar – in the different videos there was the same voice – and like a similar mood in all the different things. Same colours were used in all of them but that was like it.

Interviewer: Almost done. Then you're free. Was the augmented reality app easy to use? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Um, I agree. Just cause it was hard to get it to register.

Interviewer: Um, does the use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?
Interviewee: Strongly agree.

Interviewer: It added a lot?

Interviewee: Yeah.

Interviewer: And would you use augmented reality again? Yes or no.

Interviewee: Yes.

Interviewer: Okay, thank you very much.

Interviewee: You're welcome.

(End of the Interview)

Interviewer: Olivia Parker
Interviewee: Subject 5 (female, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in the lobby of the Graphic Communications Management building on Bond Street. This interview was conducted May 1, 2014 at 10:00 AM.

(Start of the Interview)

Interviewer: Okay, so what is the product being sold?

Interviewee: The Nissan car. It's electric. Has the word "leaf" in the title.

Interviewer: Um, in one sentence can you summarize the purpose of the advertisement. Why was it created?

Interviewee: Why was it created this way of why was it created in general?

Interviewer: In general, why would they have created this ad?

Interviewee: Um, basically to sell the electric car and to show why it's better for you then one of the other brands, or one of the other models that is on, um, that's on market.

Interviewer: What is the key selling message of the advertisement? What are they trying to say?

Interviewee: What I understood from it is they're trying to get the fact that it's more environmentally friendly as well as the fact that it's an electric car, due to the – because of the fact that it is electric does also touch into the environmentally friendly aspect behind it.

Interviewer: So they're mutually exclusive?

Interviewee: I think so.

Interviewer: What is the advertisement specifically highlighting about the product?

Interviewee: Ummm, I think just, what I understood was the whole environmental aspect behind it, because even when it was referring to the interior it was talking about how even when you're sitting it can be environmentally friendly cause of the fact that the seats are made from recycled water bottles. So it really did touch upon that.

Interviewer: Um, what feelings or emotions is the ad trying to associate with the product?

Interviewee: Um, I see…I think it's just, what I got from it was like, you know, just the feeling of caring. Just kind of getting an idea there that you should care and you should, and awareness more so.

Interviewer: Were they trying to, umm, perhaps guilt trip you or make you laugh? What were they trying to –

Interviewee: I don't think they were trying to guilt trip you per say but I think just in regards make you more aware of what you could be doing to help the environment, because in the end you compare it to some of the other brands and the other cars that are on market and you really can tell the difference between how they affect the environment versus how this [the Nissan Leaf] affects the environment.

Interviewer: Are there any symbols being used to represent that message?

Interviewee: Not necessarily from what I saw.

Interviewer: So you'd there's not much symbolism for environmentalism?

Interviewee: Could be? I didn't really take that into account when I saw the ad.

Interviewer: How do – what aesthetics of the advertisement can convey the message? Is it the text, the photos, the videos?

Interviewee: I think more so the videos. But, mmm, yeah more so the videos.

Interviewer: Why?

Interviewee: Well at least in the interior videos they kind of give a bit of – well I mean it's the text that's being spoken that really does convey the message the best. But in the videos it's the way it's filmed so it's shown, it's the way it interacts with what's being said. To really kind of – for example the whole thing about the environment, er, the water bottle seats again. Where he's talking about that and then as he's saying it, it's [the camera] is going over the seats and you can really sort of get and feeling and sort of see this what is being referred to.

Interviewer: Would you say that the advertisement is effective in conveying its message?

Interviewee: Mmm, yes and no. I think, I mean, it's effect-more effective as an interactive version then as a print copy that's for sure because the print copy doesn't necessarily convey the mess-really sort of reach out and get the message out as much as the interactive version. Because in the interactive version you have that connection with the person who's onscreen and whose actually talking to you and giving you the information as opposed to here where you're just looking at the print copy but they haven't exactly

put anything there. I mean it's a picture of a car. But at the same time they really could, if the purpose of it really was to demonstrate the aspect of environmentalism and how this car can help benefit that they – I feel like they – really should have at least in the exterior scenes used to demonstrate the videos they really should have maybe touched a bit on the environment a little more, because, other then, uh, it really still was – I feel like they could have just put the car in a different location or something of the sort to show how… Like for example, in this area it can be better or how actually in a scenario what they could have done is show how it's good for the environment but also how this necessarily like benefits you. Like the whole idea behind electric cars and such that people aren't too, no wait, necessarily keen on from what I understand is because it's slightly an inconvenience because gas powered cars are so much more, um, you can find gas stations in more area and it's more convenient. Well, like electric cars I mean I don't know of too many places that have stations for electric cars and stuff like that so you really have to know where you're going, know where you're trying – where you can find a station and, it, it's great it's environmental but unless you're really like that keen on it does kind of inconvenience you a little bit. So I feel that in order to make the ad a bit more effective and a bit more appealing to consumers it could have tried to twist in that way a little more, which they could have really done in regards to augmented reality.

Interviewer: So, that kind of goes into my next question, was anything missing from the advertisement?

Interviewee: [laughs] Well there we go.

Interviewer: Anything else?

Interviewee: I think that was just the main thing that I got from it because for the other aspect it was uh, it got its message across, it was good, but just the whole if this was its purpose it really should have tried to show how this car specifically can be used to benefit the consumer in this way and it's not actually – try to remove the perception of inconvenience and annoyance from the brand of electric.

Interviewer: How does the advertisement try to convince you to buy this product?

Interviewee: Hmm, I just, well through the interactive videos it really does talk about the message – talk about the message – talk about the benefits, that's the word I'm going for, talk about the benefits of the car and really what it can do. I mean and it does spend a lot of time talking about how the car is more environmentally friendly and such, so it's not necessarily trying to guilt trip you but make you realize, "hey, like this is simple. This is what I can do for, if I want to do my part for the environment." So I think it's just trying to play along that idea of it.

Interviewer: What theme or themes in the advertisement? What is it about? Is there some sort of plot going on? Or a story?

Interviewee: I don't necessarily think there's a story going on per say. It's just to me it just seems like, to me, more so a regular car advertisement. You have your – it's just car, and you have the benefits behind it and even in the videos they really is pretty standard car advertisement. They didn't really change it up I don't think.

Interviewer: Any other comments about the ad?

Interviewee: Could be prettier.

Interviewer: How so?

Interviewee: Uh, I just I mean, when I – it depends on maybe it's because a lot of the brands I recently did in my advertising internship over at Bim. I was helping with, uh, Audi, so maybe just because I'm used to looking at Audi advertisements and such but basically what they had – they had a car but the put it in uh scenario where the reader, the consumer, really try to envision themselves behind the wheel of the car. For example, here it's literally just the hood of the car. If they had put in sort of made it in a scenario where yes all the benefits of the car are showing and everything, but trying to make it so that – because in the end if your consumer can't really envision themselves in the product or using the product or with the product they are less likely to buy it so if they can sort of try to see themselves in the car and through the – see themselves actually driving that car then your chances of turning them more into leads then into hand raisers.

Interviewer: Alright almost done. Was the augmented reality app easy to use? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: It's uh, I found it was pretty easy to use.

Interviewer: So agree or strongly agree?

Interviewee: Oh agree, however, uh, do you want my commentary on it though.

Interviewer: Sure give me commentary.

Interviewee: Just I found that some parts were a lot easier then others. For example, these videos down here [gestures to three bottom photos], were a lot easier to use because it was touch and go and the video played. But when I had to focus it on the car, it kept jumping in and out and the video kept cutting off.

Interviewer: Think that would be a problem for someone on a commute.

Interviewee: Oh yeah, because it just keeps going and going and if you have to have the printed ad in one spot and have it focused then it's a little bit of a pain.

Interviewer: Does the use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: I think so. Agree, strongly agree.

Interviewer: Why?

Interviewee: Because like I said the ad, or the printed ad, it really only tells you so much but when you add the augmented reality behind it and for example, you add that person standing by the Nissan and just talking about it really can – it's just tone of voice because when you have tone of voice in a printed message you have one perception but when you can actually hear and see what's being said on the video or any other additional media then it's just it makes it, gives a different perception and much with anything, with tone of voice, you can have like an angry tone of voice, you can have a happy tone of voice, you can have different levels within the same sentence, it really could be anything and, therefore, it actually helps – or at least my case – it helps the consumer connect with the product more. Because when they actually feel like the person is talking to them they can actually in a way try to relate.

Interviewer: Okay and the final question, would you use augmented reality again? Yes or no.

Interviewee: Yes.

Interviewer: So that's the end of the interview.

(End of the Interview)

Interviewer: Olivia Parker
Interviewee: Subject 6 (female, 20 – 29 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in the Master of Professional Communications student lounge at the Rogers Communication Centre. This interview was conducted May 1, 2014 at 12:17 PM.

(Start of the Interview)

Interviewer: What product being sold?

Interviewee: It is the Nissan Leaf.

Interviewer: 'Kay. In one sentence can you summarize the purpose of the advertisement? So why was the ad created?

Interviewee: The ad was created to increase viewers' awareness of the Nissan Leaf product and to entice them into purchasing the car itself. So by stating, "Make Your Mother Nature Proud" essentially it's kind of a play on making your mother proud and because this is an electric car making Mother Nature proud ties in quite nicely.

Interviewer: What would you say is the key message of the advertisement? What is it trying to say?

Interviewee: I would say the key message is pretty unclear, in some regards, so the main takeaway I get is to make your "Mother Nature Proud."

Interviewer: Which means?

Interviewee: I would say this means be friendly to the environment. That's how I would interpret it.

Interviewer: Is there anything the advertisement is specifically highlighting about the product?

Interviewee: So they're highlighting in three main areas on the bottom, Carwings, which I have no idea what that is. Ummm, the interior which looks pretty nice from this picture although it's pretty small so you can't see much detail, although they do highlight that 99.9% is made of recycled material, and the battery they show a picture of plugging the car in so I'm assuming that you have to plug the car in and that it solely operates on electricity.

Interviewer: So you say the ad is primarily focusing on environmentalism or something like that?

Interviewee: I would say yes. Being environmentally friendly and you can still drive a car and still be environmentally friendly.

Interviewer: What feelings or emotions is the ad trying to associate with the product?

Interviewee: That's a difficult question because from the imagery I get zero sense of emotion. It's quite bland, plain, no sense of emotion there. With the text by stating, "Make Your Mother Nature Proud" that kind of tries to connect with your sense of emotion, in that if you care about the environment then you'll care to make Mother Nature proud and then it also kind of links to your own mother. Because everyone has a mother of some varying degree, anyone can relate to making their mother proud.

Interviewer: Are there any symbols used to represent the message of the advertisement?

Interviewee: Any symbols? Not that I can see. I mean typically I know with environmentally friendly ads like they'll go with green or like images of trees, flowers, green space but I literally see nothing so I think in a sense that can make the ad confusing because all I'm seeing a lot of white space and it's kind of grey in tone. So I don't really pick up on any environmentally related notes. Aside from "Mother Nature."

Interviewer: What aesthetics of the advertisement help you understand the message? Photos? Text?

Interviewee: So again, I would say that pretty much just the text. So the words "Mother Nature," all electric, so I only know that's related to the environment because electric cars are friendly towards the environment and the only imagery I see that can relate to the environment is a teensy little window that looks like there's some sort of greenery peeking out through it and that's the size of a dime. And then they show the roof of the car, it's cut off so I think there's sky. But other then that nothing.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: Absolutely not. Not at all.

Interviewer: Why?

Interviewee: I think that, the only element that relates to nature, environmentally friendliness, would be, "Make Your Mother Nature Proud." But the imagery does not connect to this so they have a large image of the car, which is in like a grayish-white tone does not look like anything related to the environment, or green space, or greenery. And there are no images that show the benefits of using the vehicle or its connection to the environment. So it may have been more effective if they placed the car in the field of like green space but – sorry what was the question again?

Interviewer: If it was effective at telling you it was environmental.

Interviewee: Oh yes, no. Not at all. I think the only reason is I connect to "Mother Nature" and electric to environmental but other than that there's no distinction that it is environmental related.

Interviewer: Just three more questions. Is anything missing from the advertisement? You've mentioned a couple of things.

Interviewee: Hhhmm-mmm, so I would say that the main thing missing would be imagery that connects and corresponds with the theme of both "Mother Nature" and environmentally friendly so again something like green space, greenery – anything green. I think obviously it's kind of like stereotypical that you would use the colour green in something environmentally friendly but I think that consumers, and as a consumer, you pick up on that instantly. And I think that, in terms of the textual elements, I think that tagline, "Make Your Mother Nature Proud" is pretty lame. I think they could have done something better than that, what that is I'm not sure, but I that this is kind of a last ditch effort.

Interviewer: I might have asked this but what feelings or emotions is the ad trying to associate with the product?

Interviewee: So I think in terms of feelings and emotions. Like I stated before, um, trying to connect with your attachment with the environment, your attachment to your mother in that by stating, Make Your Mother Nature Proud" umm you obviously want to care for your environment. Connecting it into your sense of caring, connecting it into your sense of guilt even, like I feel guilty for driving a motor vehicle. Oh wait, this Nissan Leaf will help me feel less guilty because its environmentally friendly so I think they're definitely tying it into your emotion and perhaps even nostalgia in some regards. Like perhaps if you're older making your mother proud isn't something you necessarily still do but it was something you did in the past.

Interviewer: How does this advertisement convince you to buy this product?

Interviewee: I don't think it even does. Um, I don't think they do a good job of that at all. The only way I can see, or connect, in which they try to make you buy the car is by saying, "Make Your Mother Nature Proud." It's almost like guilting you into making Mother Nature Proud – protect your environment, be good to your environment and in some ways it's like who is Mother Nature? What does she look like? Who is she? It's almost like a mythical, kind of persona, they're trying to make you like fantasize about.

Interviewer: And the final question. What theme or themes do you find in the advertisement? What is it about something? Is there a plot?

Interviewee: Themes, okay, I would say the only theme that I pick up on is Mother Nature and the environment, and then with all electric the theme of electric cars and that electric cars are more environmentally friendly. Aside from that I don't pick up on any theme, perhaps they were going with the theme of bland, boring.

Interviewer: Maybe they were relying to heavily on whatever is the augmented content.

Interviewee: Ahhh, maybe. Didn't even think about that.

Interviewer: Alright, well thank you. Thank you for participating.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 7 (female, 20 – 29 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in the lobby of the Graphic Communications Management building on Bond Street. This interview was conducted May 3, 2014 at 11:48 AM.

(Start of the Interview)

Interviewer: What is the product being sold?

Interviewee: Car.

Interviewer: Um, in one sentence can you summarize the purpose of the advertisement? Why was it create?

Interviewee: Well, it's created to advertised a car and, so, basically it's advertising the Nissan company. It's like the interior of the car, the battery and these things.

Interviewer: Yeah. Is the advertisement highlighting anything specific about the product?

Interviewee: Um, like the components of the car. Maybe more like interior, Carwings, battery and how – it's like comparing to other cars how its battery is better.

Interviewer: Better in what way?

Interviewee: How it stands out from other cars. Like this Nissan Leaf.

Interviewer: Is there a particular way it stands out? Like I guess this will tie into my next question – what's their key selling message?

Interviewee: The battery it charges instead of like fuel, it's battery charged. For the interior it's like 99.9% recyclable, and it's remotely – from smartphone so you can control the car from the smartphone.

Interviewer: So do you see, like, any particular theme? Is there something the ad is saying in terms of message?

Interviewee: Mmmm, it's saying that this car is better then other cars because it's environmentally friendly, kind of, and you're not using the environment – like you're not using the fuel, you're using the battery instead and the car is recyclable so it's not like – even if something happens to the car it's totally recyclable like all the materials in the car. And you can also really automate and use it through your phone, so it's like faster.

Interviewer: Thank you. So what feelings or emotions is the ad trying to associate with this product?

Interviewee: It's simple, it's fast, it's automated, it's easy to get, I mean it's really easy to control the car, and amongst other cars – like if you buy something else it will be like you have to go to the car and remotely open while with this car you can control it through your smartphone or computer. It just makes it, your life a bit easier.

Interviewer: So they're selling to you on ease of use?

Interviewee: Ease of use, yeah.

Interviewer: Um, you mentioned environmentalism what makes you think of that message? Are there any symbols or signs or something that makes you think it's environmental or do you rely more on text, perhaps?

Interviewee: The text, I guess. It's made out of recycled materials so I rely on text because the picture doesn't say environmentally friendly.

Interviewer: Do you see any symbols? Or are you just finding the text the most helpful?

Interviewee: The text is most helpful.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: No, because I don't see any colours, it's too white. Like, there should be more colour and like it doesn't stand out like if you see other car advertisements it's so bright and it like words kind of stand out and you get the message at once. This one you don't, like you have to read under the pictures, like it says interior, battery but under the interior it says, "oh it's recyclable." Like if there was a symbol of recycle, a recycle symbol, I would have guessed it, "oh it's something about recyclable."

Interviewer: Is there anything missing from the advertisement?

Interviewee: Yeah, I would say colour. There should be more brighter colour. It's too dull.

Interviewee: How does this advertisement convince you to buy the product?

Interviewee: I would say the smartphone part. Nowadays you use smartphone a lot, like I use it everyday and all the time so if this car is remotely controlled from my smartphone it just makes it ease of use, so, only that part. I wouldn't care about the recyclable.

Interviewer: So not a nature buff. What theme or themes do you find in the advertisement? What is it about? Is there a plot? Is it telling a story perhaps?

Interviewee: It's not telling a story or anything. Just a plain, simple ad. Like this is, this is what, they give you three things they're like Carwings, Interior and Battery and it's like, "okay this car has this, this features that why it stands out from the other cars."

Interviewer: Is there anything you'd like to add?

Interviewee: Uh…the colours are really dull.

Interviewer: Unfortunately, it's a scan that's all I could get. I'm just going to turn this off. Thank you very much.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 8 (male, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in the lobby of the Graphic Communications Management building on Bond Street. This interview was conducted May 5, 2014 at 12:08 PM.

(Start of the Interview)

Interviewer: So what is the product being sold?

Interviewee: It is the Nissan Leaf, a hundred percent electric car.

Interviewer: Cool: Can you in one sentence summarize the purpose of the advertisement, so why was it created?

Interviewee: Umm, to explain, I guess, the most core benefits of the Leaf to potential buyers.

Interviewer: What is the advertisement specifically highlighting about the product?

Interviewee: Umm, to me it's kind of explaining electric cars and, like, the convenience of it I suppose some people are concerned about where they are able to charge it or the charging time and they make that very clear in the advertisement. Umm…

Interviewer: How do they make it clear?

Interviewee: Just by explaining that you can reach, I believe, eighty percent charging in under half and an hour, and also, umm, the stations and the four hour charging time.

Interviewer: What is the key message? How is it selling to you? What's its selling message?

Interviewee: To me, I guess, it's the eco-friendliness. Even the name alone, it's called Leaf, and they're explaining that a hundred percent, they've reiterated a couple times, a hundred percent all-electric. Whereas most, I guess, cars nowadays are kind of hybrid, green moving into it but this one is a total hundred percent.

Interviewer: 'Kay. What feelings or emotions is the ad trying to associate with the product?

Interviewee: There's a lot of like white use, umm, in the videos and in this ad itself which feel very clean. It's nice to look at. Even the imagery on the flat ad is all very, umm, kind of, not, like visually it's not cluttered at all to me it feels very open and green and clean, which kind of adheres to the message they are trying to portray.

Interviewer: Speaking more on emotions do you think they are trying to guilt you into buying the car, use humour to make you interested in buying the car?

Interviewee: There was a bit of humour use when in the interior video he said, "ohhh all the lights." But, umm, feeling wise I just, feel like watching this if I were to buy this car I would be part of movement, some sort of next generation, "I'm doing something good." I didn't feel guilt at all but felt like in a way I'd be cool by getting this car.

Interviewer: What symbols are perhaps used to represent your message being eco-friendly?

Interviewee: Well this image alone here [battery image], there's like - I don't if it makes sense – but it all feels very modern. Like, with the round window and you see, like, the trees in the background. Umm, what was the question again?

Interviewer: Are there any symbols being used to convey eco-friendliness?

Interviewee: Well, it's not, I guess it's a word symbol. But even the name alone the fact that its called Leaf I think was a good idea. Just really reiterates the eco-friendliness. In terms of other symbols I don't think, nothing really stood out to me.

Interviewer: So that basically ties into the next question, so the aesthetics of the advertisement that tell you the message. Were you thinking photos, text, audio, video? Which one works best for you? Or a combination thereof?

Interviewee: Yeah, for me, for me yeah. It's the fact there are videos and augmented reality worked very well hand in hand. I guess the video and audio is what did it most for me in terms of sticking out to me. It did a lot more then just looking at this flat ad now.

Interviewer: Do you feel the advertisement is effectively conveying that message of eco-friendliness?

Interviewee: Umm, I'd say so. Yeah.

Interviewer: Why?

Interviewee: Umm, because this kind of has stuck out to me more then any sort of car ad I watch on the TV, whereas, like, the eco-friendliness is not something that they are trying to push on the TV ads, just the ones that I'm thinking of right off the top of my head. Remembering what I remember from looking at this, like, the fact that they are really pushing the all-electric aspects of it. The fact that you need to charge it and all that stuff, it just stands out as different to me and the different is mainly in the eco-friendliness.

Interviewer: Would you say there is anything missing from the advertisement, that may have contributed to making the message more pronounced or…?

Interviewee: I guess if anything I would say maybe more like traditional symbolism of eco-friendliness would have pushed it more for me. Like, it's so overdone and cliché at this point but like trees, and, like, the colour green maybe.

Interviewer: Okay, just a few more questions. How does this advertisement convince you to buy the product?

Interviewee: Umm, I think it's mostly in the, I guess the, for me the visuals of the actual augmented reality didn't really push it fore me it's more what the man was saying. Umm, even the, "all the pretty lights" and like the short charging time. Like I guess for some people considering electric cars, the charging is maybe a deterrent to wanting to buy it but he made a point of saying eighty percent charged in under half an hour which is good…I feel like I've lost my track again…what was the original question?

Interviewer: How does this advertisement convince you to buy the product? You were saying that the man describing -

Interviewee: Yeah, yeah, so a lot of the audio, and kind of the specs make it stand out from other cars would do it for me. And also the kind of monitoring it remotely via smartphone, that whole video was kind of interesting to me.

Interviewer: What theme or themes exist in the advertisement, if any? Is there some sort of plot? Is it about something?

Interviewee: Umm, I wouldn't say there's an overall plot that tied it all together but visually, umm, I would say the theme is pretty well established. All three of the videos at the bottom start the same just with the blue car and plain white background and umm there's definitely the theme of I guess like cleanliness and, as I mentioned before, you kind of feel like cool, like you're part of a movement by watching this and if you were to buy the car as well.

Interviewer: Just two more questions. Was the augmented reality app easy to use? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: I would say agree.

Interviewer: Any particular reason?

Interviewee: I guess it's more because this was curled, but if it was flat you wouldn't have the whole holding it open part of it. Yeah, no, I think if I was looking at this in an actual newspaper I'd be able to put it flat and hold it at a distance. In that case it would have been strongly agree but for this particular case I would only say agree because I had to hold it and it's curled. It was a bit zoomed in because of that.

Interviewer: Fair enough. Does the use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Yes, strongly agree. This was actually the first ad that I've really looked at with augmented reality. Like, I've looked at test examples but this is like the first one I've actually seen in an actual newspaper. Yeah, and just looking at this now I feel like I retained a lot more because of the augmented reality. It's more…I guess in today's society we're on computers all the time and so like the audio and video is what we're used to so it kind of enhanced this a lot for me.

Interviewer: Would you use augmented reality again? Yes or no.

Interviewee: For sure, I feel like I'm just going to go home and download Layar and look up ads that I can scan now.

Interviewer: 'Kay. Thank you.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 9 (male, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in Gould Street Balzacs. This interview was conducted May 5, 2014 at 12:57 PM.

(Start of the Interview)

Interviewer: So what is the product being sold?

Interviewee: An electric car.

Interviewer: Can you summarize the purpose of the advertisement? Why did the ad company choose to create it?

Interviewee: Umm, I think there was too much information to put in one two-dimensional thing, and yeah, more information; more necessary information.

Interviewer: What do you think is the key message, or the selling message of the advertisement? How are they trying to encourage you to buy this car?

Interviewee: Umm, they mentioned a new lower price, umm, I didn't really feel the need to pay attention to everything they were saying about safety or navigation or the computer that it has because that didn't really matter to me – I figure that every car already has that. So, the new lower price and the fact that it's all electric and all very environmentally friendly.

Interviewer: So would you say environmentally friendly or features were key selling points?

Interviewee: They were trying to sell the features but also it's quote-unquote "it's the car of the future," "the future is here" something about that.

Interviewer: Is there anything the advertisement is specifically highlighting about the product?

Interviewee: Not that I know of. Specifically, well it's the car, so everything about the car. I guess.

Interviewer: Were they trying to associate any feelings or emotions to the product?

Interviewee: [pause]

Interviewer: Like guilt, humour?

Interviewee: Yeah, there was the, uh, there was the guy who was trying to be a salesman but also your buddy, "look at all the lights wow."

Interviewer: Was any symbolism used to represent environmentalism or the features aspect?

Interviewee: Not that I remember. Umm, I don't think so. They made a point of mentioning that it was sustainably created or energy efficient – something like that or Earth conscious, uh, Bose sound system which also alluded to the fact that it doesn't make any noise other then the noise you want it to make kind of thing…it's quiet.

Interviewer: So if you were determining what aesthetics would sell this product would you say it's the video, the audio, the photos, the text?

Interviewee: Just the engagement overall. Umm, you don't have the car and if you're not thinking of buying one then you're not going to see all those things about the car, or hear all those things about the car unless you're at the dealership. So it's giving you more information.

Interviewer: Like, looking at the ad would you say there is something that's more useful in terms of information: photos, text, would you say the augmented reality and its content was more useful?

Interviewee: Umm, sorry one more time the question.

Interviewer: Was, like if you wanted to find out information about this vehicle and you were presented with all of the options here what would provide the most information?

Interviewee: Oh, the augmented reality.

Interviewer: Okay.

Interviewee: I'd say like three steps, which is the base amount of information and selling, then the second layer would be the augmented reality, and the third layer would actually go over there and see it.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: "Innovation that excites," said "it's a hundred percent electric and hundred percent electrifying" they want you to be excited about it. Which I am, can't afford a car but I'd be happier if more people go for it. Umm, effectively conveying it's message? I think so.

Interviewer: Its message being?

Interviewee: You should probably buy this because it's what you wanted for a really long time.

Interviewer: Is anything missing from the advertisement? Is there something you would have liked to have seen?

Interviewee: Umm, I don't think so.

Interviewer: Just a few more questions. How does the advertisement try to convince you to buy the product?

Interviewee: It's trying to appeal to those things it thinks you already know. Maybe to those people who have seen that movie "The Death of the Electric Car," it's actually here. Umm, it's just their advertising to what seems to be a general audience but if it's in the, The Star and Metro then it's looking at that target market it's not advertising anywhere else. Just in this case it might be advertising in the Globe and Mail or Macleans but yeah.

Interviewer: Were there any, umm, themes or theme in the advertisement? Is it about something? Is there a plot?

Interviewee: Almost, it's um – it's kind of like a friend of yours that you don't know very well but still get along with telling you about his new car. Kind of puts the two and two together.

Interviewer: So the next questions are about your augmented reality experience. Was the augmented reality app easy to use? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Sort of neutral. It's hard when it's – maybe if it was static on a board and I had thing. An iPad is tougher to really deal with, when it's so close for me. Yeah, neutral, agree.

Interviewer: Does the use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: When it worked it did. When it didn't it removed from it.

Interviewer: So when didn't it work?

Interviewee: Just at the first part when I was trying to focus on just the once icon, or whatever but then I did all three. And then if perchance while I was watching one of them it moved and didn't go back to that photo or view it would lose itself and then I'd have to adjust it.
Interviewer: Okay. So was that an agree or a neutral?

Interviewee: Oh, uh, agree.

Interviewer: I don't remember if you said it. Would you use augmented reality again? Yes or no.

Interviewee: As a producer or an ad or as a…?

Interviewer: Whatever interpretation you choose to take.

Interviewee: Yeah, absolutely. It's got a huge, huge potential.

Interviewer: Do you think its current usage is good?

Interviewee: One would almost want to take the ad home if you're on the…well I guess if you need the Internet you're not going to look at it in the subway but if you're on transit or walking around you don't really have that much time so you're going to want to take it home and check it out.

Interviewer: Thank you very much.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 10 (male, 50 – 59 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in the main office of the Heidelberg Centre on Bond Street. This interview was conducted May 5, 2014 at 1:27 PM.

(Start of the Interview)

Interviewer: So, just really easy, what is the product being sold?

Interviewee: A car.

Interviewer: Great. In one sentence can you summarize why the advertisement company would have made this ad?

Interviewee: It's to sell cars.

Interviewer: What is the advertisement specifically highlighting about the product?

Interviewee: The Leaf.

Interviewer: Anything else distinguish it?

Interviewee: It's promoting something to do with the smartphone and then it's got the interior picture and it's, uh, also um plugging it in.

Interviewer: Again, you're welcome to look at the ad at this stage it's later when I take it away.

Interviewee: Okay.

Interviewer: What is the key message of the advertisement? What are they trying to sell to you? What are they selling you on?

Interviewee: They're selling I guess environmental stuff because "Mother Nature Make You Proud."

Interviewer: In that case what feelings or emotions is the ad trying to associate with the product?

Interviewee: I would say, environmentally friendly.

Interviewee: Would you say they are perhaps playing to the guilt like some advertisements or are they perhaps using a different technique?

Interviewee: Umm, yeah, they're talking about Mother Nature so that would probably make certain people feel guilty that they're not contributing to environmental stuff.

Interviewer: Are there any symbols that are used to represent this environmental message that you can see?

Interviewee: The only symbol that I can see is that, basically, it goes in a lithium battery plugging in.

Interviewer: Any pictures, icons?

Interviewee: Yup. There's a picture of a little car plugged in at the bottom.

Interviewer: In terms of the aesthetics of the advertisement what are you perhaps getting the most information –

Interviewee: Can I go back? It also says zero emission.

Interviewer: Yes, alright. Would you say you're getting most of your information from the photos or the text?

Interviewee: Both.

Interviewer: How, or why?

Interviewee: Umm, because it specifically talks about emissions and just the picture of the battery that's being plugged in. That tells me its environmentally friendly and that it probably uses less gas and more of a battery.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: Umm, yeah. It's sort of pretty simple, pretty direct.

Interviewer: Is there anything missing from the advertisement?

Interviewee: I would have maybe put on that it actually is an electric car, I don't know. I would sort of say that it's a hybrid. [Interviewer points to words all-electric.] Oh, all electric [subject laughs]. It does say on there.

Interviewer: No, but it's interesting to note what you missed.

Interviewee: Yeah, yeah.

Interviewer: Do you feel that the design was properly chosen to convey the message of environmentalism?

Interviewee: Yeah, I think it's a nice looking car. It's small, it's cute, it's probably easy to park, and easy to use.

Interviewer: How does the advertisement try to convince you to buy the product?

Interviewee: [pregnant pause] It doesn't convince me that much to be honest. It's very simple. The only other thing is, "Make Mother Nature Proud," just the text there, is sort of a little bit interesting. It wants me to sort of check out more.

Interviewer: This is the final sort of question. What theme or themes do you find the advertisement? Is it about something? Is there perhaps a plot?

Interviewee: The bottom line is selling cars, and basically trying to choose the best car that you can.

Interviewer: How are they perhaps convincing you?

Interviewee: By the all-electric, but mind you hydro's going up too. [laughter]

Interviewer: Is there any other comments you have?

Interviewee: No.

Interviewer: Alright nice and simple.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 11 (male, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in the basement of the Heidelberg Centre on Bond Street. This interview was conducted May 12, 2014 at 1:17 PM.

(Start of the Interview)

Interviewer: You ready? What is the product being sold?

Interviewee: The Nissan Leaf.

Interviewer: In one sentence summarize the purpose of the advertisement. So why was it created?

Interviewee: The advertisement was created to let customers know how environmentally friendly the Nissan Leaf is.

Interviewer: What is the advertisement specifically highlighting about the product? If anything.

Interviewee: The Nissan Leaf, I mean the advertisement, is highlighting that the Nissan Leaf runs on full electric, umm, the a part of the Nissan Leaf is made from recycled products, like the seats, umm, and yeah, it's just basically saying how environmentally friendly the Nissan Leaf is.

Interviewer: What is the key message? What are they trying to sell you? What is the selling point?

Interviewee: Basically, they're just trying to sell you a car that runs on full electricity and basically uses recycled parts or recycled products to make its parts, like the seats, and yeah it's got a lot of neat features in it as well. Like, you can use your smartphone to communicate with it. So just selling an environmentally friendly car that has a lot of technology in it as well.

Interviewer: So you'd say that would be the theme? Environmentalism?

Interviewee: Well, the theme, yeah environmentally friendly.

Interviewer: What feelings or emotions is the ad trying to associate with the product?

Interviewee: Umm, I think it's trying to associate feelings of…it's trying to tell you… trying to make you happy that they're going in the right direction in terms of innovation with cars and trying to move away from fossil fuel burning cars to full electric so we can help save our environment.

Interviewer: 'Kay. Any other things that stood out to you about emotional appeals?

Interviewee: No.

Interviewer: Are any symbols used to represent the message of environmentalism? Do you see any signs or icons?

Interviewee: Umm, I guess the name itself, Nissan Leaf. The name of the car "leaf" is.

Interviewer: Anything else?

Interviewee: No, they, in a lot of the videos they emphasized plugging in the car so I guess you don't have to fill up at a gas station you just plug it into an outlet.

Interviewer: What aesthetics of the advertisement helped you understand this message? Photos, text, video, audio?

Interviewee: Probably, umm, probably audio – well mostly audio – and then they showed pict- they basically showing the picture of plugging in the Nissan Leaf but other then that it was mostly just audio.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: Umm, I think so. Well the thing is in the advertisement it also added extra stuff, like it would just talk about it would have leather seats, it would have all these gadgets, shiny lights, so it was just random stuff but into the advertisement. So if they would have taken that stuff out and focused more on the main environmental stuff it would have probably appealed to me a little more.

Interviewer: Why?

Interviewee: Well, most new cars will have all these new gadgets, all these new features, umm, yeah, they also said "parking assist" or something, most new cars will have all this stuff. So they don't really need to focus on that, what they need to focus on is what this car – the features that stand out in this car then the other cars and the feature that stand out is an all-electric engine. The features that stand out is, umm, parts being made by recycled products. Those are the things that stand out; everything else was just like a brand new car will have this extra stuff in it.

Interviewer: 'Kay. Is there anything missing from the advertisement? That would have made it stronger?

Interviewee: Umm, I don't think they told you how long a charge will last, that's obviously key because if you can only drive the car for,l ike, two hours before you have to charge it again that's something that they probably have to add in, and I guess the

price. I don't think they actually said a price; they could say like ranging from 20,000 to 30,000 – they didn't actually say a price. That's something you'd have to look up because of the ad.

Interviewer: 'Kay. How does the advertisement try to convince you to buy the product?

Interviewee: It, well, it tells you the main stuff, the environmental stuff but it also slips in all these other extra gadgets like optional leather seats, park assist, umm, navigation, so all those other little perks I guess will help entice people to buy it.

Interviewer: What is the advertisement about? Is there like a theme or a story being told or…?

Interviewee: Still say the theme is just environmentalism. And like the thing itself says, "Make Your Nature Proud" right?

Interviewer: And what does that say to you?

Interviewee: I think it's trying to say that Mother Nature would be proud that you're not pumping carbon into the atmosphere, you're using recycled products.

Interviewer: And, just about basically three more quick questions. Was the augmented reality app easy to use? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Say strongly agree. It was easy to use.

Interviewer: Does the use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: I'd say…agree.

Interviewer: Is there a reason?

Interviewee: Well the ad itself basically what was written on the ad was the key points anyways. The augmented reality videos emphasized on those key points but, I guess if you're interested in the car itself you would probably look it up more yourself. So even just watching the video I would still look it up to gain a better understanding of those key points.

Interviewer: And final question, would you use augmented reality again? Yes or no.

Interviewee: Umm, I'd probably try. It's not something I would depend on.

Interviewer: Okay. Thank you.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 12 (female, 30 – 39 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in an upstairs lab in the Heidelberg Centre on Bond Street. This interview was conducted May 20, 2014 at 4:54 PM.

(Start of the Interview)

Interviewer: So what is the product being sold?

Interviewee: It's a car, a vehicle.

Interviewer: Alright. In one sentence can you summarize the purpose of the advertisement? Why did the firm create it?

Interviewee: Uh, to try and promote this new car; with eco-friendly advertisement.

Interviewer: What is the advertisement specifically highlighting about the product, if anything?

Interviewee: Eco-friendly. You can tell. Its interior, its battery.

Interviewer: Why those things?

Interviewee: Well you can tell, uh, right now in the market this is pretty popular. Seems like these technologies comes out with this car, they have this battery charging car that is getting really famous right now so they are trying to compete with this market.

Interviewer: 'Kay. What is the key message you would say of the advertisement?

Interviewee: Uhh, key message? Umm, what was the last question?

Interviewer: I asked you about things that they were specifically highlighting and why.

Interviewee: Okay. The key message, for me?

Interviewer: Uh huh.

Interviewee: I'd say it's, uh, for me, it's kind of really the small size of the car and it seems its really eco-friendly and it can be used for smartphone or computer – high technology.

Interviewer: So you would say they are trying to advertise environmentalism?

Interviewee: Yeah. It also says zero emissions.

Interviewer: What feelings or emotions is the ad trying to associate with the product?

Interviewee: The feelings? I'm pretty sure its really…here says "Mother Nature Proud" so it's family using you can tell.

Interviewer: Any other emotions?

Interviewee: Really smooth feeling. Relax.

Interviewer: Are there any symbols that are used to represent this message of environmentalism? Is there anything that you look at and you think green vehicle?

Interviewee: Actually they use blue colour I think this makes me feel that it's really eco-friendly, also there's, uh, zero emissions labels.

Interviewer: What aesthetics of the advertisement made you think of that message? Was it the photos, the text?

Interviewee: It is the text.

Interviewer: 'Kay. Anything else?

Interviewee: The colour.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: Yes. I would say yes.

Interivewer: Why?

Interviewee: It seems really simple and not a lot of text. For me I don't like a lot of text because I don't really read an advertisement. So I think simple works and they give, uh, keywords a lot. This is useful for me and, um, actually I don't really get it like what's mean, "Make Mother Nature Proud."

Interviewer: Okay.

Interviewee: But it's kind of interesting because I have no idea what that means.

Interviewer: Fair enough. Do you feel that there's anything missing from the advertisement?

Interviewee: Mmmm, I would say if it's about eco-friendly I would love to see more green colour.

Interviewer: Anything else?

Interviewee: Scan with Layar, that means we have to use our smartphone to scan it – but it may be missed by most of the viewers. We have to make sure that people are actually using the Layar apps.

Interviewer: Just a few more questions. How does the advertisement try to convince you to buy this product?

Interviewee: How does… I would say it's save the money for the battery using, the battery pack using, and um, it says it can remotely from a smartphone or computer, it sounds really good. And it seems right now that everyone has experienced some economic crisis, it possible, it seems like this car is really small size so it must be like lower price, at lower price. This is the point.

Interviewer: What theme or themes do you find in the advertisement? What is it about? Is there some sort of plot?

Interviewee: Uhh, just explain more details about this question.

Interviewer: Umm, like is there a story. Sometimes you'll see an ad where a woman eating chocolate and drinking champagne and you think romance.

Interviewee: Uh-huh, you think there's a story or something?

Interviewer: Do you think there's something like that here?

Interviewee: No I don't see anything.

Interviewer: What do you see?

Interviewee: Mmmm, it's more about "Mother Nature Proud" still stuck on that sentence. I pretty sure. I'm pretty sure it looks like pretty family relevant.

Interviewer: Hmm-mm.

Interviewee: Actually I think it should be more about safety because if it's talking about mother, then safety is sometimes very important too.

Interviewer: Okay. Those are all my questions. So do you have anything else to ad?

Interviewee: I think the logo is really stick out, you can tell, because of the colour right? The colour red. So…I would say the car part, the vehicle part, is not very obvious because of the colour. I won't read it. If I saw this ad on subway, on newspaper because the colour is not attract me. But the second page seems like much better.

Interviewer: Thank you very much.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 13 (female, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in the lobby of the Heidelberg Centre on Bond Street. This interview was conducted May 20, 2014 at 5:34 PM.

(Start of the Interview)

Interviewer: Alright are you ready for some questions?

Interviewee: Sure.

Interviewer: So what is the product being sold?

Interviewee: Uh, an all-electric Nissan car.

Interviewer: In one sentence can you summarize the purpose of the advertisement. Why would the company have made it?

Interviewee: To convince us that it is the best eco-friendly car on the market.

Interviewer: Is the advertisement specifically highlighting anything about the vehicle?

Interviewee: It's all-electric.

Interviewer: Anything else?

Interviewee: It has advanced features, battery and heated seats, and all the stuff a regular car has except it's more eco-friendly.

Interviewer: What would you say is the key message of the advertisement? What are they selling? Like their selling message to their audience?

Interviewee: That a luxurious, eco-friendly car could potentially be affordable. Maybe…

Interviewer: It's all subjective. Are there any feelings or emotions that the ad is trying to associate with their product?

Interviewee: I think that they're trying to, uh, get to me to feel like it's classy, and, um, very modern, and very in touch with like new generations; but the ad itself felt really old. So it didn't really work.

Interviewer: Are there any symbols used to represent the message of the ad?

Interviewee: They used the "Leaf" didn't they.

Interviewer: Like a physical leaf or the word "Leaf?"

Interviewee: Well they use the word Leaf a lot and…

Interviewer: You are welcome to look at the ad.

Interviewee: And I thought I saw an actual leaf. [pregnant pause] So apparently that was a figment of my imagination. Ummm, otherwise no – they made their logo blue, that's new. But I don't know if that's just for their hybrid cars or not or their, yeah, I don't think so. Just the leaf, right, maybe? It's all I can remember.

Interviewer: That's fair. What aesthetics of the advertisement of convey this message of eco-friendly or environmentalism to you? Photos, text, video, audio?

Interviewee: Umm, well everything was crisp and clean and clear so that to me portrays –especially the whiteness, the starkness – it might be my print background but that to me says eco-friendly as opposed to something being all black or heavy inked. Umm, also the man was kind of middle class, but you could tell that his language was more elite or professional, his appearance seemed like your average working business man. Um, and I think they went with neutral colours to kind of appeal to everybody. Yeah.

Interviewer: But what made you think of environmentalism?

Interviewee: In the actual ad? Nothing.

Interviewer: Could be the ad, the AR, where does the notion that's it's environmental come from?

Interviewee: I'd say directly from his words. I don't think if I was to look at this ad without the AR I don't think there is anything really that stands out that would say that it's overly environmentally friendly unless of course you look deeper into the text, "Make Your Mother Nature Proud." But in terms of the actual AR, I didn't really feel – I wouldn't have made the connection if he wasn't talking to me.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: With the AR, yes. Uh, without it I think it's a little more hard pressed to convey that message without it. I think it's a lot more subtle without the AR. Like I said I think the man really convinces me that it's eco-friendly and efficient while this print ad doesn't, I don't think does it on its own, not as well as the AR, anyways.

Interviewer: Fair enough. Is anything missing from the advertisement? Something that would have helped?

Interviewee: Well, I mean they didn't exactly tell me how to buy it. [laughter] That would have helped. Yeah a call to action would have for sure have been extremely useful, maybe where I could find out more information if this wasn't enough. It didn't tell me the price, but they say it's affordable, I believe. Umm, they also don't have any safety rating which is usually weird for a car, there's usually something geared towards family or city living kind of - I don't recall feeling that or hearing about its safety at all. On the actual print ad I would say details that they explain in the AR, are missing. Those, the stats, that he talks about and that kind of stuff they're not prominent here in the print at all. I don't think this ad is very effective.

Interviewer: No, it's totally fair. Umm, how does the advertisement try to convince you to buy this product?

Interviewee: I think it tries to pull on your heartstrings with the eco-footprint and "Make Your Mother Nature Proud." I almost feel like it's guilting me [laughter] into it. Umm, yeah, like it says [the interior] is a hundred percent made of recycled materials. Umm, I wouldn't say that's the only way – I mean they're trying to show me the features and I think this car is for a certain type of person, a very eco-friendly individual but…what was your question?

Interviewer: How is it convincing you to buy the car?

Interviewee: I think the imagery around it too. It is very stylish looking, it's very, it's a very modern looking car it has a lot of great, um, like features in terms of hooking up with your smartphone and that kind of stuff. So I think they are trying to relate it to your everyday life. Otherwise I don't think it is. It doesn't even tell me a price. It's not really enticing.

Interviewer: Alright, just a few more. What theme or themes were in the advertisement? What was it about?

Interviewee: It was about an all-electric car that was the theme to me, that was the main theme, that it was, um all-electric but it wasn't inconvenient like some of the other ones. Like it charges quickly, it lasts a long time, it was pretty good speed, um, and yeah this whole idea of reducing your eco-footprint or choosing an eco-friendly option was obviously a theme too. It's pulling on us, younger generation that love to be eco-friendly and green, that was obviously a theme. And the other theme too, was just the idea of something still classy and comfortable and, uh, modern.

Interviewer: So nice and simple. Was the augmented reality app easy to use? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Agree.

Interviewer: Okay. Is there a reason you agree? Or…

Interviewee: Um, yeah…can I do this from my iPhone too?

Interviewer: Yes.

Interviewee: I can right. It is easy to use, but it's not easy to know that this has this feature. Um, yeah in terms of actually using and viewing it was really easy to use but they should probably make the fact that it does that a little more clear because "The Scan with Layar" now that I'm seeing I understand what it is but a lot of typical people may not.

Interviewer: Does the use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Strongly agree.

Interviewer: For the previous reasons, or…?

Interviewee: Yeah I just don't think the print advertisement actually gets the point across. I think you just need that man's, maybe it's just the way I consume media, but I think like the man actually talking to me was more helpful.

Interviewer: Would you use augmented reality again? Yes or no.

Interviewee: Yes.

Interviewer: That's it. Thank you.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 14 (male, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in a public space. This interview was conducted May 24, 2014 at 1:49 PM.

(Start of the Interview)

Interviewer: What is the product being sold?

Interviewee: The Nissan Leaf.

Interviewer: In one sentence can you summarize the purpose of the advertisement? Why was it created?

Interviewee: It was created to promote the energy efficient electric car.

Interviewer: Is the advertisement specifically highlighting anything about the product?

Interviewee: It's highlighting it's special features, such as, fast charging battery, recycled materials.

Interviewer: What would you say is the key message of the advertisement? What are they trying to sell you on?

Interviewee: They're trying to sell you on the energy efficient how it's more convenient then the regular car.

Interviewer: Why would you say that?

Interviewee: Because they're saying how it only take 30 minutes to charge your car and only visiting the gas station to charge your tires.

Interviewer: Any other reasons?

Interviewee: Ah, nope.

Interviewer: What feelings or emotions is the ad trying to associate with the product?

Interviewee: [pregnant pause]

Interviewer: Would say they are trying to use humour to make you interested? Trying to guilt you into buying the vehicle?

Interviewee: I think it's more informing you how it's helping the environment, or not necessarily helping, not harming it.

Interviewer: 'Kay. What symbols are used to represent this message of energy efficiency if any?

Interviewee: Using a leaf, nature, clean.

Interviewer: Anything else?

Interviewee: You mentioned message or symbols right?

Interviewer: You can describe both; is there anything in particular that stands out to you?

Interviewee: In messages they kept saying recycled.

Interviewer: And symbols?

Interviewee: Just the leaf I guess.

Interviewer: And when you say leaf what are you referring to?

Interviewee: The name mark.

Interviewer: Okay. What aesthetics of the advertisement what do you feel is conveying the message? The photos, the text, the audio, the videos?

Interviewee: It is the combination of video and audio.

Interviewer: Okay. You didn't find the text or photos helpful in the ad?

Interviewee: The photos and the videos were similar in terms of content, but the video provided with different angles and more in-depth view.

Interviewer: Do you feel the advertisement is effective in conveying its message?

Interviewee: Yes.

Interviewer: Why so?

Interviewee: Because the ad has more of your attention in comparison to the visual right now on the screen, it's a simple image of the car and their slogan I guess. Whereas the augmented reality piece it has more in-depth explanation of what they do and how the is different I guess.

Interviewer: The AR is what is really selling you this message of environmentalism or energy efficiency?

Interviewee: Yes.

Interviewer: Would you have understood that message without the augmented reality?

Interviewee: Mmmm, yes. Because it says "Make Your Mother Nature Proud" and all-electric Nissan car.

Interviewer: Is anything missing from the advertisement?

Interviewee: A call to action. It's only informing you that this car exists, it doesn't say what to do next.

Interviewer: I just have a couple more questions and then we'll be done. How does the advertisement try to convince you to buy this product?

Interviewee: It outlines the features that this car has over the current cars. So the energy efficient, recycled materials, new design.

Interviewer: 'Kay. Anything else?

Interviewee: No.

Interviewer: Are there any themes in the advertisement? Is there some sort of plot? Is it about something?

Interviewee: It's informing about the car.

Interviewer: So just some general logistical questions. Was the augmented reality app easy to use? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Agree.

Interviewer: 'Kay. Any particular reason?

Interviewee: At the beginning the bigger section of the ad was not working. I guess it was taking time to load the video before it showed the play button but after that then it was working fine.

Interviewer: Does the use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Agree.

Interviewer: Any explanation or just…

Interviewee: AR is more intrusive because it requires you to have an additional device. It requires you to have access to Internet, in comparison to having a print only ad where you can view it at any time.

Interviewer: Would you use augmented reality again? Yes or no.

Interviewee: Yes.

Interviewer: That's it for the interview part. Now it's time for questionnaire.

Interviewee: Before I begin can I say something about the actual AR part.

Interviewer: Sure.

Interviewee: It was funny for me to see how they used two different types of video. In there one of you required you to constantly point at the ad, whereas the bottom three videos they were almost like a link. So as soon as the video starts playing you don't have to keep the device pointing at the ad you can move it away and watch it anywhere. Where the other one was a trigger.

Interviewer: Yeah, it was a really interesting usability issue.

Interviewee: Mmm-hmm.

Interviewer: Yeah because that's something that I've come to realize as I've performed this experiment with people because with Layar especially you're usually supposed to scan the whole page but it won't pick up that big video unless you point it only at the car. So clearly whoever designed it made, I think the big car there it's own separate trigger which has made it really tricky. Because I'd love to test people on usability but then I feel like it would just frustrate people – when I'm like "you're missing one." But, no, I understand where you're coming from. It's really an interesting set up they've got.

Interviewee: Mmm-hmm. Maybe they had their own reasons.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 15 (male, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in the Master of Professional Communication Lounge. This interview was conducted May 28, 2014 at 1:18 PM.

(Start of the Interview)

Interviewer: So what is the product being sold?

Interviewee: The new Nissan Leaf.

Interviewer: In one sentence can you summarize the purpose of the advertisement? Why would the company have created this ad?

Interviewee: To really talk about all of the features of the car, umm, in terms of how it relates to helping the environment.

Interviewer: 'Kay. So what would you say is their key selling message?

Interviewee: Oh, that's a hard one. Uhhhhmm, I don't remember the main ad but the other ones were charging it in less then four hours for thirty minutes with eighty percent, umm, the plastic – I mean - the interior that's made with, partially made with plastic water bottles, and the Carwings system, I don't remember what the "Wing System" is but I remember it tells you when it needs to be charged.

Interviewer: Umm, just taking it from a sales perspective what do you think they're selling to their clients? Are they selling them on features, environment -

Interviewee: I think they're selling them on features mostly, and then secondarily on the environment.

Interviewer: You mentioned a couple of things that the advertisement specifically highlighted about the product, such as Carwings, interior, was there anything else that stood out to you?

Interviewee: "All the lights" [laughter] Because I remember one of the ads says, "Look at all lights" and I agreed. It looked really cool but other then that I don't really remember.

Interviewer: So what feelings or emotions is the ad trying to associate with the product, if any?

Interviewee: Well it's supposed – well I think what it was aiming for was – environmental stewardship; so making you aware and, umm, and conscious about environmental implications of the car, of the electric car. But I was actually really just amazed with all of the features.

Interviewer: Are there any symbols used to represent this message that you're describing?

Interviewee: I couldn't really pick it out but on the charging station there was a blue logo but I couldn't see it.

Interviewer: 'Kay. Anything else that appears to represent what you're trying…

Interviewee: In terms of the symbol no…in terms of a symbol no I couldn't think of any.

Interviewer: Okay…any multiple symbols is something that stands out to you as being particularly representative of environmentalism or features –

Interviewee: No.

Interviewer: Okay. Why would you say that?

Interviewee: I didn't see any associations with the environment. The only associations made were verbal. So it was just vocal but there wasn't like let's say a picture of a leaf – or it wasn't like a blue sky background or anything like that.

Interviewer: Well tying into the next question, what aesthetics of the advertisement helped you really understand the message? Photos, text, video?

Interviewee: I think it was a good combination of, uh, verbal, especially when it was selling the features such as the interior, showing the interior, while talking about the interior made it really easy to follow. And then the charging station you can see what a charging station looks like, so that was easy.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: I don't think so entirely. If it was trying to sell environment, like being environmentally conscious, there was no association with environment, so no imagery. Umm, and that's why I was – I was only struck by all of the features because that's all I can see, the features of the car. Umm, but there were no features of the environment, no image associations with the environment other then the word environment being said – multiple times.

Interviewer: Do you feel anything's missing from the advertisement?

Interviewee: I would say the imagery of environment if that's their selling point. I would was really wowed by all the features so the imagery of all the features was great and that was complemented by all of the verbal, I guess the script. But when they kept saying environment I didn't really think about the environment because I just kept looking at the features.

Interviewer: Okay. Was there you liked or disliked about the augmented reality?

Interviewee: Well for one of the usability. But I thought it was a really good complement to a paper ad because it gave me a lot more information. And I guess what's missing from this ad, if I can go back a little, is the fact that it doesn't tell me to go find out more. It says scan with Layar but I don't know what Layar is. Right.

Interviewer: No that's fair.

Interviewee: So there was no call to action here. It was just a strong sell in terms of features. It didn't tell me to go look for more information. It didn't tell me to visit the website…I mean the website is listed at the bottom but it didn't tell me to go find out more at Nissan.ca, so…

Interviewer: Kind of going from there do you feel that you would have had the same understanding of the advertisement without the augmented reality?

Interviewee: I think so. The messages on the ad itself are very clear and concise and the videos just gave a lot more detail which was good.

Interviewer: Just a couple more questions. How does the advertisement try to convince you to buy this product?

Interviewee: It really doesn't.

Interviewer: Why would you say that?

Interviewee: Because there was no. I guess it was a very soft sell, it was selling the features. It was just saying, "hey look at all of the features" and that's it. Right? So there weren't any user – customer – testimonies or testimonials or anything like that. It didn't say anything about statistics, about it being like the first all-electric car or anything like that. So there was no sell to it, other then the fact that they look at all of the features of this car.

Interviewer: What theme or themes were the advertisement? Is it about something?

Interviewee: It is about the electric car. Is that what you were trying to say?

Interviewer: Kind of more like a plot. Sometimes you look at an ad see a woman drink champagne and a man corner and you're like "oh romance" was the same sort theme or plot present?

Interviewee: I think it was the theme of being environmentally conscious. I mean most – all of the features that they sold tied right into environment.

Interviewer: So it was an over arching idea or?

Interviewee: Yes I think the idea was to associate this with environment and making you environmentally conscious.

Interviewer: As a motivation?

Interviewee: I would say so…somewhat. Because I don't consider myself to be environmentally conscious and I would never think about buying an electric car or even a hybrid but this – the video – the series of videos definitely made me think twice, at least to go check it out. I mean it didn't explicitly tell me to go check it out but by looking at all of the features and hearing all of the features I kept saying in my head "this is really cool;" the car was really cool not Layar was really cool.

Interviewer: So tying into AR and the use of Layar was the augmented reality app easy to use? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: I would say agree.

Interviewer: You had some challenges would you feel…

Interviewee: Yeah. That's why I said agree because other then that, umm, I like the fact that there were buttons on there that you can locate this is where I press. Umm, it was just really easy to use I guess once you get a hang of it. Yes. I would say agree. I wouldn't disagree and I wouldn't strongly agree.

Interviewer: Does the use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Yes. Strongly agree.

Interviewer: And finally would you use augmented reality again?

Interviewee: I definitely would.

Interviewer: Do you have any closing comments either about your experience with the AR or with the advertisement?

Interviewee: No I think it was a – I'd like to see a lot more of these. Umm, because I think it's really cool and I think it changes the whole landscape of how you view ads, umm, by saying "Scan with Layar" or any type of app. It asks the audience to, or it tells the audience, if you're interested in finding out more here's what you can do in a very soft way. I mean the "Scan with Layar" is very small in the top right corner without giving me any context I would not know what Layar is but with a little more context and

if AR was a lot more mainstream then everybody would know, kind of like QR codes – scan this code. So I definitely think I would use it again and it's really interesting and neat.

Interviewer: Thank you.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 16 (female, 20 – 29 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in the Master of Professional Communication Lounge. This interview was conducted May 28, 2014 at 2:06 PM.

(Start of the Interview)

Interviewer: What is the product being sold?

Interviewee: Umm, I mean think the chief product is the car. Yes.

Interviewer: Fair enough. In one sentence can you summarize the purpose of the advertisement? Why was the ad created?

Interviewee: Okay. Mmm, I think the ad was created to present a vehicle with an environmental focus and to attach an environmentally conscious sentiment to the product being sold.

Interviewer: So what would you say the key sales message of the ad is?

Interviewee: [pregnant pause]

Interviewer: Or what speaks to you as a consumer?

Interviewee: I mean I think the slogan, "Make Your Mother Nature Proud" and then just this picture of the vehicle. I have a bit of a disconnect with that but I see what they are trying to do, and I mean they've named, they've named, the vehicle Nissan Leaf so I can see that they're trying to attach environmentally conscious sentiments to the vehicle and it makes sense when I look at, uh, the features. So obviously the fact that it's made out of recycled materials, umm, that they've used this efficient battery pack for easy recharge and such – so I can see what they're trying to do. Yes.

Interviewer: Is there anything the advertisement is specifically highlighting about the product?

Interviewee: I guess when I think of just the product name like "leaf" or the words "Mother Nature" on the slogan or, uh, you know the word efficient, the words recycled materials – it's all making me think of an environmentally conscious consumer. Umm, so that's sort of what I think of when I look at the ad in detail if I was looking at it from further away and I didn't come and read these features here [taps ad] or look at it more critically I might not immediately get that sentiment.

Interviewer: So is the advertisement trying to relate any feelings or emotions with this product?

Interviewee: Definitely. I mean the word proud is right there in the slogan or tagline, what have you, and, um, I think it's also trying to say if you buy this vehicle you can be proud of the choice you've made because you're protecting the environment. You know your vehicle is not made of new materials it's made of recycled materials, you know you have this lithium iron battery pack so obviously your whole mode of charging your car is more environmentally conscious. So I guess on an emotional level it makes the consumer think that, you know, this could be something positive to attach to their brand identity as a person.

Interviewer: Would you say it's making you feel guilty about…?

Interviewee: [laughter] Umm, I wouldn't say that it makes me feel any kind of guilt. I find the ad interesting that they're, um, presenting this eco-conscious sentiment. But it doesn't make me feel guilty.

Interviewer: Okay.

Interviewee: If I can just add on to that…

Interviewer: No, go ahead.

Interviewee: Something that would make me feel guilty would be seeing visually a negative impact of my choices perhaps, but when I'm just looking at a picture of this car and the features there's nothing visually that makes me say, "oh my goodness I need to reframe my decision making as a consumer."

Interviewer: So they're just trying to make you feel like a good person here?

Interviewee: I think so. I think it's sort of a positive reinforcement thing.

Interviewer: Thanks, okay, are there any symbols you can see or icons that represent this message that you're absorbing?

Interviewee: Mmm, I have to say that's something that I feel like is actually kind of missing from the ad because I just see Nissan vehicle, I see their logo, umm, I don't know if the ad really visually screams eco-friendly, eco-conscious consumer product. I don't immediately get that in a visual sense but the language used on the poster I can make sense of that.

Interviewer: So that does tie into my next question, what aesthetics of the advertisement are you using to understand the message?

Interviewee: Well, I mean to understand the message, as I just said visually it doesn't jump out at me but I'm using the tagline, "Make Your Mother Nature Proud," umm you know all-electric, the model name Nissan Leaf, and I'm reading the three main features

they've highlighted: so the Carwings, the Interior, and the Battery. I'm using words to associate the eco-friendly aspect of the product.

Interviewer: 'Kay. Do you feel the advertisement is effective in conveying its message?

Interviewee: There's two ways to look at that. Like if I'm going to take the time to look at it and read it, probably yes, but if I'm passing by, if I'm just a passive, a passing, umm, person on the street I don't know that it would immediately convey it what it sets out to. To me visually.

Interviewer: Okay. We've mentioned this or highlighted it before, do you feel that anything is missing from the advertisement?

Interviewee: A little bit. I feel like if there were some more visual indicators of this being an eco-friendly vehicle perhaps if it was even just set in a backdrop of just sort of, I don't know something lush and green, something that makes you feel like you're immersed in that environment when looking at the ad I think maybe I just don't feel immersed in an eco-friendly mentality when I'm look at it. Umm, but as I said when I see the keywords and the language used on the ad I can make sense of the sentiment they're trying to convey.

Interviewer: Just a few more questions, ummm, how does the advertisement try to convince you to buy this product?

Interviewee: Umm, I think it's – I think it's trying to be convincing by appealing directly to the consumer. So it's saying "Make YOUR Mother Nature Proud" it's giving you a sense of ownership not that you could just own this vehicle but that you could – you can be a part of the eco-friendly movement or that kind of mentality. Umm, yeah I mean, yeah that's the main thing that jumps out at me.

Interviewer: Is there a theme or themes to the advertisement? Is it about something – some sort of plot?

Interviewee: A plot?

Interviewer: Sometimes ads tell a story.

Interviewee: Mmm, not sure about a story but I can see how they're highlighting pieces of the vehicle that make it this sort of composite, uh, eco-friendly vehicle to purchase. Umm, but again I think the storytelling piece with the ad could be more compelling if they used more visual cues or they situated the vehicle in a certain landscape. Umm, maybe even just demonstrated impact of the choice of buying this car, you know like driving this vehicle will save etcetera etcetera or will reduce etcetera etcetera, maybe some more impact factors being either visually or, uh, visually conveyed or conveyed through text.

Interviewer: So do you feel there's a theme to the ad?

Interviewee: Yeah, I think, that with looking at critically and with some detail I think it's uh an ad for an eco-friendly, uh, consumer or someone they could potentially convert to being an eco-friendly consumer and obviously somebody who drives.

Interviewer: Okay. So any closing comments you'd like to make about the advertisement?

Interviewee: Basically just what we discussed I think it's an interesting ad, I think it depends too what you respond to as a stimulus. So if you respond to text on an ad or visuals or movement if it's whatever a TV spot, umm, so I think the visuals could be stronger; I think the language does it what needs to do. But that's sort of my takeaway.

Interviewer: So that's the end of the interview.

Interviewee: Great.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 17 (male, 20 – 29 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in public space. This interview was conducted May 28, 2014 at 6:31 PM.

(Start of the Interview)

Interviewer: So, what is the product being sold?

Interviewee: A car.

Interviewer: Okay. In one sentence can you summarize the purpose of the advertisement? Why was the ad created?

Interviewee: To get me to buy the car.

Interviewer: Okay, simple and straight forward I like it. What is its key message? How are they selling the car to you?

Interviewee: Uh, they're selling it as an electric car. They're basically, like I guess they're sort of, devaluates the last answer a bit but the it's not just about buying this car the ad's Nissan's way of saying we're reaching out into sustainable –like moving away from gas and all that. And so they're basically saying this is an electric car it's good for nature, it's good for you. Thumbs up.

Interviewer: Okay.

Interviewee: Not really good for you but like you know what I mean.

Interviewer: Where are you getting this sort of understanding from? What's saying this to you? What's speaking to you?

Interviewee: Uh, one is the fact that it is an electric car which is like when you're selling an electric car there's just like certain things that come with that like it's not because it's like faster, like selling it for all the benefits of it being an electric car. The whole it, "Will Make Your Mother Nature Proud" thing which is like – ohhh super punny – but it's like it is saying mother nature and then they have like sort of naturey colours like one of the pictures has this sort of green thing hanging in the wall that looks like it came out a Portal video game, uh, one of them has like a nice background it's nature, one of them's got like a blue naturey feel. And then even the grey it's not like a threatening grey it's like a nice fun grey that you take your kids to see at the movie theatre.

Interviewer: Fun grey?

Interviewee: No, it is, it's not like a threatening, and it's not foggy, and it's not depressing, it's like the right level of lightness.

Interviewer: Okay. Is the advertisement highlighting anything specific about the product?

Interviewee: It's an electric car. There's also like the three pictures on the bottom and its highlighting each of the things, but.

Interviewer: What feelings or emotions is the ad trying to associate with the product?

Interviewee: Friendliness. Because there is the car does sort of look like a dog staring at you when you get home, which I'm sure is intentional. Umm, then just like the nice colour. Then they have the whole "Make Your Mother Proud" thing so it's the whole feeling of family – you and your friends should hop on in, take a road trip to San Francisco.

Interviewer: 'Kay. What symbols or icons are being used to represent this message? You mentioned the green that looked like something from a Portal game, is there anything else?

Interviewee: It's like sort of the colours. I wouldn't necessarily say there's any specific symbols. There is the car that sort of looks like the dog, um, there is in the interior picture, even like the interior picture, is not – as much as it's showing the interior – it's highlighting the exterior which is that whole mother nature thing. Umm, it's basically the car and the whole nature thing. Oh that's a window it's not a portal thing, oh whatever. But it's like, you know.

Interviewer: Okay. What aesthetics of the advertisement are conveying this message to you? Are you relying on photos, text, a combination of both?

Interviewee: Mainly photos, like the text obviously does its job in educating, but if it weren't for the photos and the colour it wouldn't get the message across quite as easily because it could just be a page black and white that says, "Nissan has an electric car" and that would get the same message across but not with this whole positive message. This is not only saying we have an electric car but it's saying, "we have an electric car, you know who should drive an electric car [Subject 17]."

Interviewer: Great. I will be covering your name for anonymity sake. Do you feel the advertisement is effectively conveying its message?

Interviewee: Yeah.

Interviewer: Is there anything missing from the advertisement that would have strengthen the message, perhaps?

Interviewee: Like there's always other things that can be in there. But I wouldn't say that there's anything that's been lacking a big way. I think it doesn't really need more information because when you see the ad, if you're interested you'll go and find more information yourself.

Interviewer: Okay. How does the advertisement convince you to buy this product?

Interviewee: It just sort of points out some of the benefits and also counts on the reader already having an idea of the benefits of an electric car and it doesn't really do anything specific to try and sell me on the car – it's not like it's got the price anywhere on the page. Umm, it's more trying to make me friendly to the idea of buying the car.

Interviewer: Is there a theme or themes in the advertisement? Is it about something? Is there some sort of plot?

Interviewee: Yeah, it's about family and nature. It's about being happy to see your car and about being happy to be with your car.

Interviewer: Touching.

Interviewee: It looks like a puppy dog.

Interviewer: Ahh, going back. So you believe the message is environmentalism and family friendliness.

Interviewee: Yeah.

Interviewer: 'Kay.

Interviewee: Yeah and also to drive an electric car for these things to happen.

Interviewer: Do you have any other comments about the ad?

Interviewee: Not really. I just – they do a good job at not over plastering the ad, umm, because like they could have that Nissan thing written diagonally like size 146 font with all that extra space. Just be like "Nissan" that's what we're advertising but it's like, it's the ad was sort of meant to draw you in as opposed to throw what it has in your face.

Interviewer: Okay. That's it for the questionnaire part. Thank you.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 18 (female, 40 – 49 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in public space. This interview was conducted June 1, 2014 at 4:14 PM.

(Start of the Interview)

Interviewer: So, what is the product being sold?

Interviewee: The car.

Interviewer: In one sentence can you summarize the purpose of the advertisement? Why was it created?

Interviewee: It's to sell the car.

Interviewer: Makes sense. Is there anything the advertisement is specifically highlighting about the product?

Interviewee: Specifically I'm sorry…

Interviewer: Specifically highlighting about the product. Is it mentioning anything specific about the car?

Interviewee: Well it would make your mother proud. I don't know why anyone would want to own a car that would make their mother proud, so they must be selling to the older generation not the younger.

Interviewer: 'Kay. Any other things you noticed about the advertisement?

Interviewee: It's electric.

Interviewer: So after looking at the advertisement would you say there's a key selling message? What would you say they are trying to sell to you on?

Interviewee: I think the key message here is make your mother proud. Oh! Mother Nature proud, I beg your pardon. "Make Your Mother Nature Proud." Sorry, sorry I misunderstood the ad. So it's make mother nature proud because obviously it's electric so it's good for the environment; it's a totally different message then what I thought originally. But you know what when I look at it I can hardly see the word nature because it's stuck in the middle – so I see "Make Your" and then mother and proud – nature didn't really stick out when I first looked at the ad.

Interviewer: No that's a fair point. So what would you say now that you better comprehend it is the selling message of the advertisement?

Interviewee: They're trying to say that it's environmentally friendly.

Interviewer: Is the ad trying to associate any feelings or emotions with the advertisement or the product?

Interviewee: Umm, it doesn't evoke any emotions or feelings in me, no.

Interviewer: Given that you've noticed that the message is environmental are there any symbols or objects being used to represent this message?

Interviewee: You know what, I don't see any.

Interviewer: So, basically tying into the previous question what are the aesthetics of the advertisement that help convey the message? Are you relying more on photos, or text, to understand?

Interviewee: I'm relying on text.

Interviewer: So the text is providing more information then the photos?

Interviewee: Yes.

Interviewer: Can you describe what you see in the text?

Interviewee: Well I see zero, what looks like zero-emissions.

Interviewer: Anything else?

Interviewee: I just see Nissan, zero emission, "Make Your Mother Nature Proud." I don't see anything really sparkling, that speaks to me that this is an environmentally friendly car expect for the text.

Interviewer: Okay, no that's fair. Taking that into consideration do you feel the advertisement is effectively conveying it's message?

Interviewee: I don't think it is.

Interviewer: Umm, why?

Interviewee: How's that?

Interviewer: Why do you think it's not conveying its message?

Interviewee: Well because it doesn't have any, there's no nature pictures, there's no like clouds or trees or anything like that, that would convey nature. I think that would probably, I think, be more effective. I found the ad kind of sterile.

Interviewer: Would you say taking that into account is anything missing from the advertisement?

Interviewee: That anything is missing?

Interviewer: Yup.

Interviewee: Well yeah I would say some nature pictures are missing. Like they show the car in three different poses but I don't see any nature, four different poses actually if you count the top one, and there wasn't any nature pictures at all. It's just kind of a grey kind of garage and a kind of a grey car you know that to me that looks kind of industrially rather then naturely.

Interviewer: I have two more questions. How does the advertisement try to convince you to buy this product?

Interviewee: Well actually, Olivia, this ad does not convince me that I would buy this car at all. Because I find it really dull and I just…just…beside the red at the top that says Nissan there's nothing else, to me, that would catch my eye. I would probably, if I saw this ad in a – in an advertisement I would probably skip right over it.

Interviewer: Okay.

Interviewee: Yeah sorry.

Interviewer: No, no, you know it makes sense.

Interviewee: The only thing that sticks out is the Nissan sign. I just don't know how big this would be – if this was a full page ad perhaps. Is this a full page ad in the Toronto Star?

Interviewer: Yes, yes it is.

Interviewee: Okay so I can see as a full page ad it would stick out a little bit more. But the fact that it 99.9% recycled that's not the first thing to catch my eye, what catches my eye is it's a dull ad. It's grey, it's bleak, it has no nature pictures so it wouldn't entice me to read the fine print.

Interviewer: No that's a good point. That's part of the process of advertisement design. So my final question is, are there any theme or themes in the advertisement? Is it about something?

Interviewee: Is it about something?

Interviewer: Kind of like, when you look at a commercial or even like an Old Spice ad, you've got the attractive man doing something – would you say there's a story?

Interviewee: Okay, is there a theme? Is that what the question was?

Interivewer: Yes. Is there a theme?

Interviewee: Well obviously the theme is that its friendly to the environment so they're trying to sell I guess to everyone who's concerned about the environment which would probably be most generations.

Interviewer: Yeah. I think that's fair. And do you see a plot or anything like that? Is there a story being told?

Interviewee: A story?

Interviewer: Potentially?

Interviewee: I don't see a story.

Interviewer: Alright.

Interviewee: And Carwings I mean…I don't know.

Interviewer: No thank you. Do you have any closing comments before I conclude the interview?

Interviewee: No I don't have any other comments. Sorry.

Interviewer: No that's fine I really appreciate you helping me with this.

Interviewee: I hope it's useful.

Interviewer: It is. You know, I wanted to get a variety of people to look at the ad.

Interviewee: Well everyone thinks differently as well. It's funny because, is the tape over?

Interviewer: Yes. I'm about to stop it.

(End of Interview)

The subject did go on to add at a later point they found the red used with the Nissan logo very effective and wish there had been more.

Interviewer: Olivia Parker
Interviewee: Subject 19 (male, 20 – 29 years old)
Group: No Augmented Reality
Interview Setting: Interview conducted in public space. This interview was conducted June 1, 2014 at 5:01 PM.

(Start of the Interview)

Interviewer: So, what is the product being sold?

Interviewee: Well, the car.

Interviewer: Okay. In one sentence can you summarize the purpose of the advertisement? Why was the ad created?

Interviewee: Umm, it to I don't know to create awareness of this vehicle for potential consumers.

Interviewer: 'Kay. So, is the advertisement highlighting anything specific about the product?

Interviewee: Uhh, that it is electric I think that's the principle focus. Uhh, and then the interior of it, the space and the interior.

Interviewer: So given what you understand about the advertisement what would you say is their key selling message? How are they selling it to the consumer?

Interviewee: Umm, that it's electric and it's beneficial to the environment [indistinct muttering].

Interviewer: What feelings or emotions is the ad trying to associate with the product?

Interviewee: Uh, it seems rather grey to me, which I don't see any particular emotional significance that I connect with.

Interviewer: No guilt? Like, some ads will go with the guilt angle.

Interviewee: No. If anything it's depressing, from a lack of emotions – from a lack of colour rather.

Interviewer: Okay.

Interviewee: Maybe it's the photocopy.

Interviewer: Yeah, I couldn't get a real copy.

Interviewee: Yeah, it's uh, it seems rather grey to me. Maybe it's because it's newsprint.

Interviewer: So given that you're kind of getting this environmental message are there any symbols being used to represent this environmental message?

Interviewee: Umm, well not primarily. I mean the foreground is just a car in a grey space right but I mean like, um, sort of secondary glance you see the sky and some green in the window of the garage. So I suppose there's some connection between the vehicle and nature. The natural environment.

Interviewer: Tying into the previous question what aesthetics of the advertisement help you with understanding or conveying the message? Photos, text? Which would you say is having the great impact?

Interviewee: Umm, the greater impact? Umm, like I say predominantly it's just very white, it's very bland. Umm, but I mean I think visually it's just the smaller pictures on the bottom make a stronger connection then, "Make Your Mother Nature Proud" my eye isn't really drawn to that. I'm more sort of drawn to the images at the bottom – the general sort of human response.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: Not particularly.

Interviewer: Why?

Interviewee: Because the bulk of the image is just the car and the white space with tile. So it's not, yeah. I'm not particularly inspired like it doesn't seem very creative in the sense of unifying the car with nature, you know if they're trying to go with that. Uh, I think that – the text, the text obviously makes a very explicit message but it's not as effective as a graphic, visual non-text could be.

Interviewer: So considering that what do you feel is missing from the advertisement?

Interviewee: More visual stimulation. Because right now I just see a car. I mean like to me the layout of this would sort of emphasize more the design of the car rather than, uh, it's connection to nature. Because I mean, yeah, if like I were just browsing through the paper and I saw this I'd just see a car. I wouldn't really, uh, appreciate much else.

Interviewer: So what visuals would help that message?

Interviewee: Well, I mean in this main image if the car were in sort of a natural environment as opposed to this tile background, white background, uh, that would probably be more effective. Something like this image [points to interior photo] were the main image actually that would be more effective because this it sort of creates a landscape of the car, with a natural kind of background which is actually I think pretty interesting so I mean that would have gotten more of my attention then what they used.

Interviewer: Okay just a few more questions. How does this advertisement convince you to buy this product?

Interviewee: Umm, well it's tapping into the general public's sort of environmental conscious just by making the statement, "Make Your Mother Nature Proud." So, uh, sorry the question again?

Interviewer: Ah, how does the advertisement convince you to buy this product?

Interviewee: How does it convince me to buy this product, okay. Umm, yeah, so just, umm, uh, my impression is that manufacturers are aware that the public has this uh environmental issue somewhere in their minds. So I think it just tries to make it subtle this kind of relationship with that part of the consumer population.

Interviewer: Okay and are there any theme or themes in the advertisement that you can see?

Interviewee: Yeah, uh, environmental conservation. Although it's not, like I said, it's not as pronounced as having a car in a natural environment or having some sort of creative, um, association between the car and nature. I mean it's presented in a very, how you say, manufactured kind of space.

Interviewer: Just sort of as a tie in, is it about something? Is there a type of plot to this ad? Or is it just a car on a page?

Interviewee: Mmm, is there a plot?

Interviewer: Like a story?

Interviewee: No, no it just seems like, especially with the images they bring at the bottom, it's just sort of disjointed sort of, um, you know several different points and images and one sort of very bland presentation of the car. I think, so, I don't think there's any clever sort of theme or a creative sort of connection between these concepts they're trying to portray at the bottom, Carwings, interior.

Interviewer: Do you have any closing comments about the ad?

Interviewee: Uhh, yeah I just don't think it's the most effective car ad I've seen. Although I don't see many, very creative car advertisements I have seen some commercials on TV where, you know, they have electric cars driving through a forest or something like that – so that's something that's stood out in my mind as far as, um, ecologically friendly cars. Yeah, it's just, uh, doesn't stand out as far as car advertisements I've seen.

Interviewer: That's about it for the interview portion.

(End of Interview)

Interviewer: Olivia Parker
Interviewee: Subject 20 (female, 20 – 29 years old)
Group: Augmented Reality
Interview Setting: Interview conducted in public space. This interview was conducted June 2, 2014 at 8:11 PM.

(Start of the Interview)

Interviewer: So, what is the product being sold?

Interviewee: The product is the Nissan Leaf. Uh, should I be going into more detail?

Interviewer: Whatever you're comfortable with.

Interviewee: Okay, cool, um so it has a smart system that kind of helps you keep track of your energy use. It's a hundred percent – I think its charged by a lithium battery – so you don't have to use gas at all. So you just charge it like at a charging station at home. It has like a computer that tells you when to charge and I think there's a, like it usually takes like four hours to charge but there's like a power charge option where you can get charged to eighty percent in half an hour which is pretty cool. Umm, and then the interior is also eco-friendly because, um, I think the seats are partially made from recycled water bottles. And, uh, yeah and they said that the only time that you have to go to the gas station is if you have to change your tires.

Interviewer: 'Kay.

Interviewee: Something tire related. Umm, think this is the only, I think yeah this is the only top of mind stuff that I remember.

Interviewer: Okay. Again you're welcome to look at the ad or rewatch a video if you want.

Interviewee: Okay, yeah.

Interviewer: Or we can just continue.

Interviewee: I don't know I feel like I covered it pretty well but, um…

Interviewer: Okay. So in one sentence can you summarize the purpose of the advertisement? Why was it created?

Interviewee: Well, I think the association with those of like, um, zero emission cars, like the Tesla, is that maybe they're a bit more of a nuisance to charge up, I guess, then like a normal car but I think the whole purpose of this advertisement was to make it look, was just to basically make it any normal car and that it could really – like it's not difficult to use and there's a lot of benefits to it.

Interviewer: Okay.

Interviewee: Wait, it wasn't really a good sentence it was a run on sentence. Just give me a second hold on. Umm, I guess it's more that zero-emission cars can be just as easy to use and versatile as normal ones.

Interviewer: Okay.

Interviewee: For the every man. For the every man. There we go. I'm happy with that.

Interviewer: So what would you say is their key selling message? How are they trying to sell the car to you?

Interviewee: Well, I think the main thing that they're really playing up is how eco-friendly it is, I mean even the name itself is "Leaf." So I think that's the main thing that they're going for. That it's so environmentally friendly because that's the main message they're selling with the, uh, with recharging it, even to the fact that you know the computer system helps you track your energy efficiently and the interior is made of water bottles. So that's kind of I think the main thing they are trying to play off.

Interviewer: What is the advertisement specifically highlighting about the product?

Interviewee: What does the advertisement highlight?

Interviewer: Highlight about the product.

Interviewee: In the product?

Interviewer: About the product, in the product.

Interviewee: Yeah, um, how is this different from the previous question? Sorry.

Interviewer: I'm looking more at features in this instance as opposed to selling but they might be mutually exclusive if that's what you feel.

Interviewee: Yeah, um, yeah I think what they're trying to really highlight within this product is how, um, easy to use, and how, um, like environmentally friendly it is. I mean I think those are the two main things that they're trying to sell. Well – I mean communicate – and sell I suppose.

Interviewer: 'Kay. What feelings or emotions is the ad trying to associate with the product?

Interviewee: Motions? [mispronunciation]

Interviewer: Yeah.

Interviewee: Umm, what do you mean by motions?

Interviewer: Emotions, the fact that some ads may use guilt or humour to make it more interesting. Do you see anything like that?

Interviewee: Umm, well I don't think they're trying to guilt you into it. I, uh, I don't know, I don't know I guess it's responsibility but I mean they're also trying to come across as fun; a little bit I think. But I don't think they're trying to use any negative emotions to, um, sell the car to you. I mean yes they're playing up the eco-friendly part a lot but I mean I don't. I didn't personally feel such a huge emotional connection with the advertisement.

Interviewer: Why do you think they're trying to make the ad fun?

Interviewee: Um, I think the fun, they're trying to make it fun because if you're just trying to guilt people into buying an eco-friendly product it's not really going to work, because you're trying to use negative emotions, I guess, to control the customer, but if you're saying that, "Yes, it's basically like a normal car, it's fun to use, and it's eco-friendly" like it's, like, for you as a customer what they're trying to say is it's a win and win so everybody should be feeling happy, I suppose, in terms of emotions. I don't know if that answered your question well.

Interviewer: No it's a fair assessment. Are any symbols used to represent the selling message in the ad?

Interviewee: Huh. I don't, I don't really remember the symbols like all I remember really in the commercials, the car itself and all the accessories that come with it, like the charging station. So it was really, really bare in terms of that; it was all like a white background with just those things in it so you just focus on the car itself. But I mean the Leaf itself brings a very, um, I guess I guess brings like a certain symbolism to mind and the whole eco-friendly nature of the car, which would be nature. I don't know.

Interviewer: Well, I guess this will tie into my next question. Given the aesthetics of the advertisement what helps you understand the message? Was it the photos, the text, the videos, the audio?

Interviewee: Um, I think it was mainly the audio. Uh, I mean even the pictures and the videos, they like, they really helped to communicate as well but for me it was mainly the audio.

Interviewer: Do you feel the advertisement is effectively conveying its message?

Interviewee: Umm, in terms of using augmented reality or just as an advertisement?

Interviewer: First in terms of just the advertisement.

Interviewee: Umm, well, like I really liked the four videos that were there and the link to the Nissan website. I really like that. Because I found that watching those videos was a lot more interesting then reading like a paragraph and at least on my end I felt like I was remembering more. But at the same time I felt like the videos I could tell that those videos were not originally created for the purpose of being viewed as augmented reality I don't think.

Interviewer: Okay.

Interviewee: Sorry if that doesn't make sense. Like if you need me to clarify anything I'm saying just tell me.

Interviewer: Um, I understand what you're saying but perhaps for just the transcript you can clarify.

Interviewee: Uh, yeah, sure. Umm, yes, so I mean I really like the fact that they integrated those four videos with the, uh, printed ad because I really found those video-videos, uh, easy to understand and like I found that I was a lot more interested in watching those videos then, um, reading like a paragraph about the car. But at the same time I felt like maybe they could have put it all together a little bit better because it felt like the four videos – like the augmented reality part of the advertisement was just very separate from the print in terms of like, when they had those videos created originally for the purpose of having videos and then they put it all together without kind of being like this is augmented reality we have to create something to enhance this medium.

Interviewer: Okay.

Interviewee: I feel like I'm just getting more and more vague.

Interviewer: No I think you're being okay. I think what you're trying to say is that it almost seems like these videos were either already created as part of some sort of commercial campaign and then they just got split up as part of it perhaps or they were just an afterthought to make the ad more interesting.

Interviewee: Yes, I guess, yeah that's what I'm trying to say. Yes. Thank you. So much better said then I have.

Interviewer: Well, I've kind of been working with augmented reality. I've gone loopy.

Interviewee: I guess that's what the communication stuff is for [laughter]

Interviewer: That's what the degree is for. So looking at the print ad and comparing it to the your augmented reality experience would you have understood the message that you did if you did not have the augmented reality?

Interviewee: Oh yeah. I felt like looking at the printed information I get a very different understanding of what the car is compared to the videos. I found the videos a lot more informative and I felt like I was able to make more of a connection with this car. But, um, yeah the printed stuff I mean I think it's just because it's so little printed information, like it seems so vague and I don't know, I mean it's, it's a newspaper advertisement you don't really want to read it, right?

Interviewer: Mmm-hmm.

Interviewee: But I like the videos and they were very informative.

Interviewer: Kind of going back to the question though, did you get the same message that you previously saw in the augmented reality?

Interviewee: Umm. Not really I feel like reading the three like smaller boxes under like the car picture. I, if, I can I remember what I saw from the video versus what I'm reading here like I was really impressed with the information in the video but when I read this because it's so like general it's almost like any other, umm, all energy car. I don't see what's so special about it. But with the, uh, video it really helped the Leaf stand out in my memory of other, like the Tesla or something; which is like the only other vehicle I know.

Interviewer: But would you have still understood the message of environmentalism if you only saw the printed ad?

Interviewee: Umm, I feel like I probably wouldn't have read the small captions under the three pictures. Honestly, the only like visual indication of the environmentalism, like I don't know, I feel like if I just skimmed it – if I didn't read the ad, like if I just didn't pay attention to it I'd probably wouldn't have even gotten the environmental image as much. I probably would have just assumed it was a hybrid or something. I didn't really need it because there's no like imagery of nature and it's all like, even the type is blue as opposed to like green. I don't know. I mean if I did read it I probably would be – I would have gotten the message but not as well as I had with the videos.

Interviewer: Alright. So that's a good tie into my next question; is anything missing from the advertisement?

Interviewee: Um, yeah. I feel like if they were gonna play up the whole like environmental, like aspect of it so much, I feel like they should have put a bit more of that type of imagery in there, or something. I mean, yeah, I feel like it's really bare in terms of the way it's set up in both the video and the printed advertisements. So maybe a bit more imagery; just like have one little leaf or something to say this like a certified all-electric car or something.

Interviewer: Okay I just have a few more questions and then we'll be good to go.

Interviewee: Awesome.

Interviewer: How does the advertisement convince you to buy the product?

Interviewee: Umm, I think, from my personal perspective, is that all-electric cars seem like they're a lot more work then normal cars but what I found really convincing about this advertisement is that they're really not that much of a hassle, and if you're also being helpful to the environment and society at the same time it's like a win-win - or it's a triple win for everybody. It's a win for the car sales, for the car company because they sell a car, it's a winner for the consumer because they get a car out of it and it's a win for the environment because it's better for the environment. That was my general impression.

Interviewer: Okay. That's great.

Interviewee: What was the question? I already forgot the question.

Interviewer: I just wanted to know how it convinced you to buy the product and I think you gave a really good answer.

Interviewee: Oh, okay, great.

Interviewer: So is there a theme to the advertisement?

Interviewee: Um, sorry what do you mean by theme?

Interviewer: Well, kind of like is it about something? Is there a plot? Like if it was perhaps an advertisement for chocolate there'd be two – there'd be a man and woman sharing a box and – is there a story?

Interviewee: Umm, no I feel like there is no story. I feel like it's very just like cut and dry. Like this is the car and these are the facts about it. But I mean depending on the consumer that you're trying to reach I feel like it could be good for some people because, even in terms of the imagery it's all just like this very plain white background and it all just kind of draws your eye to the car and, I mean for people that are car buffs or something or really like car facts, um, I guess they would like that there's all this information about the car. Umm, I personally am not a car buff so – but I don't know how much of a story would really be more helpful – but maybe for like the everyday reader, in this case, um, it would have probably been more interesting if there was a story around it.

Interviewer: Okay. So was the augmented reality application easy to use? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Um, strongly agree I had no issues.

Interviewer: Okay. Did you like using it?

Interviewee: Um, yeah, I thought it was really cool how you could, uh, take something that's like a flat printed product and without there being a huge QR code right in the middle of it get something really cool and interactive out of it.

Interviewer: Okay. Does your use of augmented reality enhance your understanding of the advertisement? Strongly agree, agree, neutral, disagree, strongly disagree?

Interviewee: Um, I'm going to go with strongly agree. Because I feel like I got a lot more out of the video then I did out of the printed advertisement and I was a lot more engaged.

Interviewer: Okay. And finally would you use augmented reality again? Yes or no.

Interviewee: I'm really tempted now. Yeah, I feel like I would probably would start using it more now.

Interviewer: Well thank you so much. I'm just going to end the interview I'd like to thank you for your assistance and help it's been great.

(End of Interview)

APPENDIX E: TRANSCRIPTS OF AUGMENTED REALITY ADVERTISEMENTS

Narrator: Young, professional male
Trigger Image: Large photo of the vehicle in the centre of the advertisement
Topic: A general overview of the vehicles features.

The one hundred percent emissions free Nissan Leaf is literally the future of the auto industry and we're not talking silly stuff like flying cars and teleportation. Every inch of this car is loaded with innovations and technology, from a one hundred percent electric engine that packs quite a punch to a state of the art range defying lithium battery. Step inside and you'll find enough gadgetry to make even a smartphone green with envy.

In the end the Leaf isn't just a hundred percent electric it's also a hundred percent electrifying.

Narrator: Young, professional male
Trigger Image: Image on the bottom left labeled "Carwings"
Topic: A description of how and what Carwings is.

While the engine may be the heart of the Leaf the brains are found in its Carwings Telematic system. For a smart car you'll be glad that you have a smartphone, which allows you to monitor your Leaf remotely from a smartphone or computer. Carwings constantly updates the navigation system with charging station locations in your area so you can drive at ease.

Forget writing on your hand Carwings will even remind you to plug in your car in case you forget. See this is the car of the future.

Narrator: Young, professional male
Trigger Image: Image bottom centre labeled "Interior"
Topic: A description of the interior of the vehicle.

Even when sitting you can help the environment. That's because the Leaf's seats are partially made from recycled plastic water bottles and that's not the only innovation inside the Leaf, a state of the art computer tells you your energy consumption, an available around view monitor makes parking a breeze, and an available energy efficient Bose sound system ensures your very quiet Leaf makes all the right sounds.

For your comfort all seats are heated, as well as the steering wheel, the climate control is automatic and there are available leather seats; with plenty of room for five. There's even a new dark interior.

On top of all this the Leaf has a new lower starting price. Just look at all those cool lights. Whoa.
Narrator: Young, professional male
Trigger Image: Image bottom right labeled "Battery"
Topic: A description of the vehicle's battery.

The only time you'll be seeing a gas station is to fill up the tires. That's because the Leaf is powered by a 24-kilowatt hour lithium-ion battery pack, tucked right into the floor, and when it's time to charge you've got options. Use the onboard six-point-six kilowatt hour charger and reduce your two hundred twenty volt charge time to four hours, or use the DC fast charge system and you're eighty percent charged in less then thirty minutes.

You'll never get tired of this.

APPENDIX F: RECALL QUESTIONNAIRE

QUESTIONNAIRE: RECALL

INTRODUCTION
Olivia Parker, as part of her Major Research Project to complete her Master of Professional Communication, is seeking participants for her study, "Old Tradition, New Technologies: Comprehension and Retention Using Augmented Reality
" and would appreciate you being part of this important research initiative.

This study will comprise three research components:
1. An interview discussing your analysis of an advertisement (10 to 15 minutes in length).
2. A questionnaire asking you to identify a few key properties of the advertisement (5 to 7 minutes).
3. A second questionnaire distributed two days later via email asking brief questions on your long-term memory about the advertisement (5 to 7 minutes in length).

The purpose of the study is to determine: Does the use of mobile augmented reality in print affect the end user's comprehension and retention of the intended message? The research initiative encourages all study participants to complete both parts of the study.

The submission deadline is **XXXXX.** Participation in this study is entirely voluntary. Nevertheless, your contribution is essential to improving the understanding we have about the affect augmented reality has on an end user's ability to comprehend and remember advertisements. If you have any questions, contact Olivia Parker by e-mail at olivia.parker@ryerson.ca.

For participating in the survey, you will receive $5 when you meet with the researcher at the beginning of the study. You can also choose to receive electronic copies of any research papers or articles produced. If you want the research outputs, please complete the contact information at the end of the consent form.

STATEMENT OF CONFIDENTIALITY

To ensure confidentiality, your responses to this survey will be combined with those of other participants, and results will be reported in the aggregate - responses will not be attributed to a specific individual information collected in this survey will be managed in accordance with Ryerson University's privacy policy alone with the Tri-Agency Framework: Responsible Conduct of Research

ONLINE INSTRUCTIONS
- Please click on the response for each question that most closely matches your beliefs about the advertisements.
- Where applicable please provide a detailed written analysis of the advertisement. It can be point form or sentences.
- **To submit, click on the "Submit" button at the bottom of the screen. To go back, click on the "Previous" button. DO NOT USE THE NAVIGATION ARROWS OF YOUR WEB BROWSER.**
- **You should plan to complete the questionnaire in a single session, without stopping, since there is no way to return later.**

Section 1: Making Observations

1. Which car company was being advertised?

☐ 1	Ford
☐ 2	Nissan
☐ 3	Toyota
☐ 4	Volkswagon

2. What colour was the headline text? (The text featured at the top of the printed advertisement.)

☐ 1	White/Black
☐ 2	Blue
☐ 3	Red/Black
☐ 4	Blue and Black

3. What kind of electric battery does the vehicle use?

_____

_____

_____

4. Is the vehicle called the "LEAF?"

☐ 1	True
☐ 2	False

5. What does "Carwings" do?

_____

_____

6. How much recycled material are the seats made from?

☐ 1	99.9%
☐ 2	100%
☐ 3	33%
☐ 4	50%
☐ 5	85.9%
☐ 6	66.6%

7. What colour is the box surrounding the car company's logo?

8. What is the colour of the biggest car?

☐ 1	White
☐ 2	Black
☐ 3	Blue
☐ 4	Red

9. Provide three adjectives to describe the ad.

10. What emotions did the advertisement use to sell the product?

11. Is this advertisement effective?

☐ 1	Strongly agree
☐ 2	Agree
☐ 3	Neutral
☐ 4	Disagree
☐ 5	Strongly disagree

YOU HAVE COMPLETED THE QUESTIONNAIRE

Thank you very much for your participation.

Should you have any questions or require additional information, contact Olivia Parker via e-mail at olivia.parker@ryerson.ca

APPENDIX G: QUESTIONNAIRE ANSWERS

Interviewee: Subject 1 (male, 20 – 29 years old)
Group: No Augmented Reality
Occupation: Graphic Communications Management Graduate

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	Lithiom Ion	lithium ion
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	Access your car remotely from your smartphone.	Access your car remotely from your smartphone.
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	Orange	Orange
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	Simplistic, clean, factual	Simplistic, factual, clean
10. Is this advertisement effective?	Agree	Agree

Interviewee: Subject 2 (female, 20 – 29 years old)
Group: Augmented Reality
Occupation: Graphic Communications Management Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	unknown	unknown
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	give you information about the car such as tire pressure etc.	unknown
6. How much recycled material are the seats made from?	85.90%	85.90%
7. What colour is the box surrounding the car company's logo?	orange	orange
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	sell the car, provide details on the car, convince you green is better	sales, informational, simple
10. Is this advertisement effective?	Neutral	Disagree

Interviewee: Subject 3 (male, 20 – 29 years old)
Group: No Augmented Reality
Occupation: Graphic Communications Management Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	Econ	Econ
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	Manual remote control via phone/device.	Phone application, cannot remember full details.
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	yellow	yellow
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	simplistic, efficient, white	simplistic, clean, neutral
10. Is this advertisement effective?	Disagree	Neutral

Interviewee: Subject 4 (female, 20 – 29 years old)
Group: Augmented Reality
Occupation: Graphic Communications Management Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	White and Black	White and Black
3. What kind of electric battery does the vehicle use?	Ion lithium	ion lithium
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	Allows you to connect to the car with your smartphone	Allows you to connect to your car with your smartphone
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	red/orange	red/orange
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	clean, environment, interactive	clean, interactive, informative
10. Is this advertisement effective?	Agree	Agree

Interviewee: Subject 5 (female, 20 – 29 years old)
Group: Augmented Reality
Occupation: Graphic Communications Management Graduate

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Red and Black	White and Black
3. What kind of electric battery does the vehicle use?	Leaf	N/A
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	Can't remember	N/A
6. How much recycled material are the seats made from?	85.90%	85.90%
7. What colour is the box surrounding the car company's logo?	Red	Red
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	clean, boring, neutral	clean, minimalistic, average
10. Is this advertisement effective?	Neutral	Neutral

Interviewee: Subject 6 (female, 20 – 29 years old)
Group: No Augmented Reality
Occupation: Professional Communication Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	cannot recall	cannot recall
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	Not sure.	Cannot recall
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	Cannot recall.	Cannot recall.
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	Bland, boring, mundane	boring, bland, unclear
10. Is this advertisement effective?	Strongly disagree	Strongly disagree

Interviewee: Subject 7 (female, 20 – 29 years old)
Group: No Augmented Reality
Occupation: Graphic Communications Management Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	White and Black	White and Black
3. What kind of electric battery does the vehicle use?	Econ	Fuel Economy (Econ)
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	Car can be controlled by smartphone or computer.	Car can be connect to a phone or a pc and be remotely controlled.
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	Orange	Orange
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	battery, ease of use - controlled by smartphone or computer, recyclable material	Carwings, recyclable, Charged Electronically - electric battery
10. Is this advertisement effective?	Neutral	Neutral

Interviewee: Subject 8 (male, 20 – 29 years old)
Group: Augmented Reality
Occupation: Graphic Communications Management Graduate

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	
3. What kind of electric battery does the vehicle use?	lithium	
4. Is the vehicle called the "LEAF?"	True	
5. What does "Carwings" do?	It is the system that syncs to your mobile or computer to monitor your Leaf.	
6. How much recycled material are the seats made from?	99.90%	
7. What colour is the box surrounding the car company's logo?	Black	
8. What is the colour of the biggest car?	White/Silver	
9. Provide three adjectives to describe the ad.	Trendy, clean, forward-thinking	
10. Is this advertisement effective?	Agree	

Interviewee: Subject 9 (male, 20 – 29 years old)
Group: Augmented Reality
Occupation: RTA Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	lithium ion	Lithium ion
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	no idea... I think it's a monitoring system that extends your relationship with your car? Tells you when to recharge, 'makes parking a breeze'?	Monitors your car via smartphone. A way to extend you relationship with your car to outside of it
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	orangish?	Orange?
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	clean, sterile, contrived organic	interactive, Temporally explorative, Somewhat engaging
10. Is this advertisement effective?	Agree	Neutral

Interviewee: Subject 10 (male, 50 – 59 years old)
Group: No Augmented Reality
Occupation: Employed

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	lithium ion	Lithium Ion
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	?	Don't recall
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	Red	Red
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	simple, direct, mondern	simple, large, effective
10. Is this advertisement effective?	Neutral	Neutral

Interviewee: Subject 11 (male, 20 – 29 years old)
Group: Augmented Reality
Occupation: Mechanical Engineering Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	White and Black	White and Black
3. What kind of electric battery does the vehicle use?	Lithium ion	Lithium ion
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	Navigation System	Navigation System
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	There was no box surrounding the Nissan Logo	There was no box surrounding the logo.
8. What is the colour of the biggest car?	White/Silver	Blue
9. Provide three adjectives to describe the ad.	Interesting, innovative, strong	Interesting, innovative, powerful
10. Is this advertisement effective?	Agree	Agree

Interviewee: Subject 12 (female, 30 – 39 years old)
Group: No Augmented Reality
Occupation: Graphic Communications Management Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	
3. What kind of electric battery does the vehicle use?	no idea	
4. Is the vehicle called the "LEAF?"	True	
5. What does "Carwings" do?	driving	
6. How much recycled material are the seats made from?	99.90%	
7. What colour is the box surrounding the car company's logo?	red	
8. What is the colour of the biggest car?	White/Silver	
9. Provide three adjectives to describe the ad.	family friendly, low cost, energy saving	
10. Is this advertisement effective?	Neutral	

Interviewee: Subject 13 (female, 20 – 29 years old)
Group: Augmented Reality
Occupation: Graphic Communications Management Graduate

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	Lithium Ion	Ion
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?		
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	Blue	Blue
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	crisp, clean, professional	modern, clean, minimalistic
10. Is this advertisement effective?	Agree	Agree

Interviewee: Subject 14 (male, 20 – 29 years old)
Group: Augmented Reality
Occupation: Graphic Communications Management Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	24 mega watt litium ion	24 mega watt litium ion
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	n/a	
6. How much recycled material are the seats made from?	85.90%	85.90%
7. What colour is the box surrounding the car company's logo?	red	red
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	green, energetic, environmental	green, typical, environmental
10. Is this advertisement effective?	Agree	Agree

Interviewee: Subject 15 (male, 20 – 29 years old)
Group: Augmented Reality
Occupation: Professional Communication Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue
3. What kind of electric battery does the vehicle use?	lithium	lithium
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	i remember from the ad: Monitor your car's diagnostics remotely From the AR: It tells you when the car needs to charge	Allows user t monitor car status remotely via an app.
6. How much recycled material are the seats made from?	66.60%	66.60%
7. What colour is the box surrounding the car company's logo?	Not sure	
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	Electrifying, new, clean	Green/environmentally friendly, electric, electrifying
11. Is this advertisement effective?	Agree	

Interviewee: Subject 16 (female, 20 – 29 years old)
Group: No Augmented Reality
Occupation: Professional Communication Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)		
3. What kind of electric battery does the vehicle use?	lithium	lithium
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	Improved visibility for the driver.	some kind of app to control the vehicle's functions?
6. How much recycled material are the seats made from?	66.60%	85.90%
7. What colour is the box surrounding the car company's logo?	Green?	Green?
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	Eco-friendly vehicle, Consumer-centric ('your'), Explanatory (vehicle features)	Explanatory (vehicle features), minimalist, vehicle-centric (visually)
11. Is this advertisement effective?	Neutral	Neutral

Interviewee: Subject 17 (male, 20 – 29 years old)
Group: No Augmented Reality
Occupation: Employed

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue	White and Black
3. What kind of electric battery does the vehicle use?	Lithium	Uncertain
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	No idea	Still don't know
6. How much recycled material are the seats made from?	33%	33%
7. What colour is the box surrounding the car company's logo?	Red	Grey
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	Simple, friendly, inviting	Relaxed, friendly, nice
11. Is this advertisement effective?	Agree	Agree

Interviewee: Subject 18 (female, 40 – 49 years old)
Group: No Augmented Reality
Occupation: Education Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	lithium	Lithium ion
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	allow use of a smartphone	allow you to connect to a cell phone
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	Blue	Blue
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	Corporate looking, conservative, dull	Conservative, bland, corporate looking
11. Is this advertisement effective?	Disagree	Disagree

Interviewee: Subject 19 (male, 20 – 29 years old)
Group: No Augmented Reality
Occupation: Employed

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?		
4. Is the vehicle called the "LEAF?"	False	False
5. What does "Carwings" do?	connect the car to your smart phone	connect your car to your smart phone
6. How much recycled material are the seats made from?	99.90%	85.90%
7. What colour is the box surrounding the car company's logo?	black	black
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	Cold, simple, clean	Clean, simple, cold
11. Is this advertisement effective?	Neutral	Neutral

Interviewee: Subject 20 (female, 20 – 29 years old)
Group: Augmented Reality
Occupation: Graphic Communications Management Student

Questions	Short-term Memory Answers	Long-term Memory Answers
1. Which car company was being advertised?	Nissan	Nissan
2. What colour was the headline text? (The text featured at the top of the printed advertisement.)	Blue and Black	Blue and Black
3. What kind of electric battery does the vehicle use?	Lithium-Ion	Lithium-Ion
4. Is the vehicle called the "LEAF?"	True	True
5. What does "Carwings" do?	Save and conserve energy in partnership with the on board computer.	A smart energy used system that pairs well with the energy saving on board computer.
6. How much recycled material are the seats made from?	99.90%	99.90%
7. What colour is the box surrounding the car company's logo?	Blue	Blue
8. What is the colour of the biggest car?	White/Silver	White/Silver
9. Provide three adjectives to describe the ad.	Straight to the point, plain, informative	Simple, plain, direct
11. Is this advertisement effective?	Agree	Agree

Participant Answers Divided By Questions

Legend:
- Car Company Name
- Name of Car
- Car Colour
- Headline Text
- Recyclable Material
- Battery Type

X-axis: Number of Questions
Y-axis: Subjects

Groups:
- Female No AR Subjects
- Male No AR Subjects
- Female AR Subjects
- Male AR Subjects
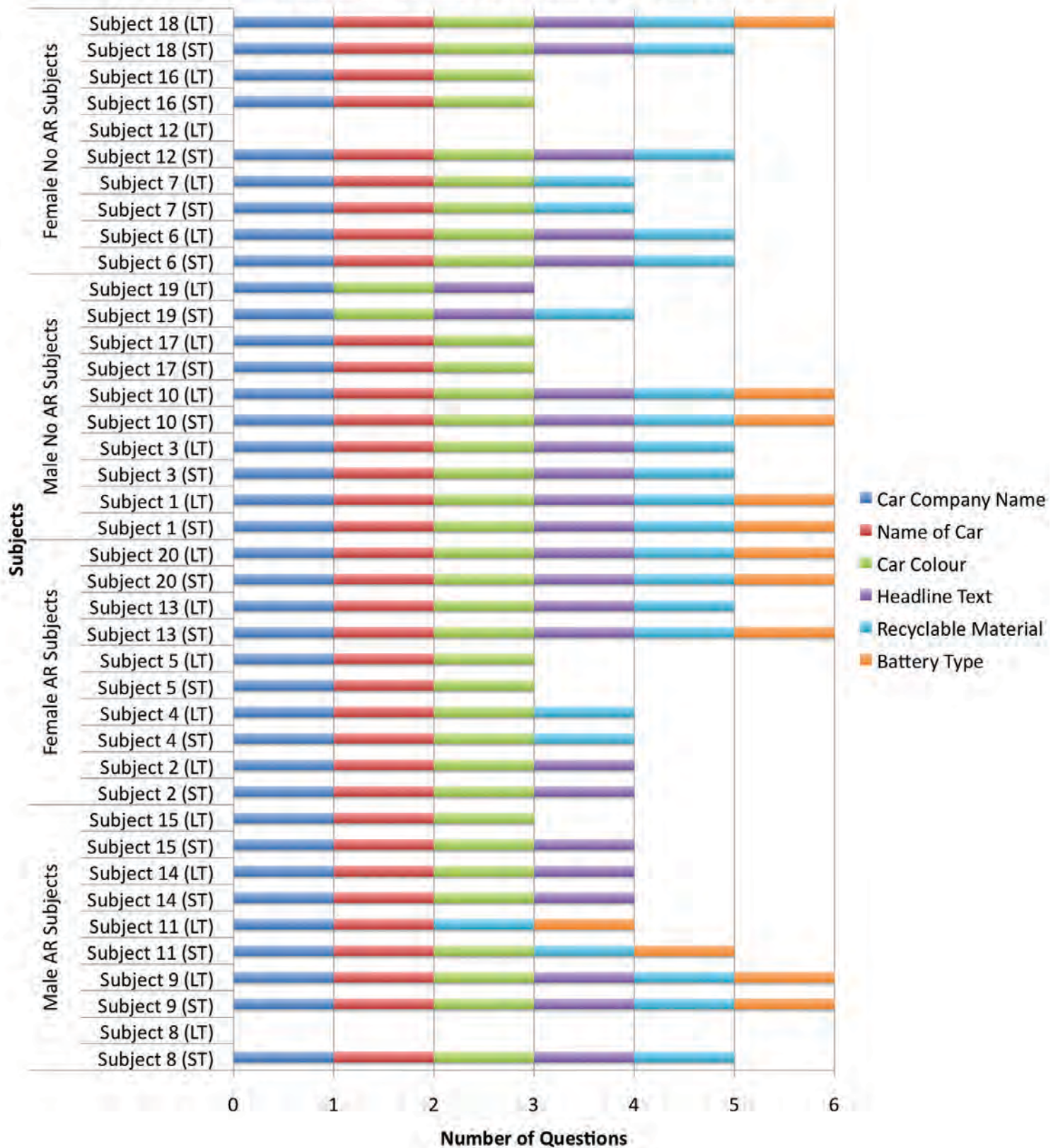
APPENDIX H: SPSS FREQUENCY TABLES

SHORT

Nissan - What is the Car Company

			AR	No AR	Total
Nissan	Nissan	Count	10	10	20
		% within AR	100.00%	100.00%	100.00%
Total		Count	10	10	20
		% within AR	100.00%	100.00%	100.00%

Headline Colour

			AR	No AR	Total
Headline	White/Black	Count	2	1	3
		% within AR	20.00%	11.10%	15.80%
	Blue	Count	0	1	1
		% within AR	0.00%	11.10%	5.30%
	Red/Black	Count	1	0	1
		% within AR	10.00%	0.00%	5.30%
	Blue and Black	Count	7	7	14
		% within AR	70.00%	77.80%	73.70%
Total		Count	10	9	19
		% within AR	100.00%	100.00%	100.00%

Battery Type

			AR	No AR	Total
Battery	Lithium Ion	Count	4	2	6
		% within AR	40.00%	22.20%	31.60%
	N/A	Count	1	2	3
		% within AR	10.00%	22.20%	15.80%
	Ion Lithium	Count	1	0	1
		% within AR	10.00%	0.00%	5.30%
	Lithium	Count	2	3	5
		% within AR	20.00%	33.30%	26.30%
		Count	1	0	1
		% within AR	10.00%	0.00%	5.30%
		Count	1	2	3
		% within AR	10.00%	22.20%	15.80%
Total		Count	10	9	19
		% within AR	100.00%	100.00%	100.00%

Name of Car: Leaf

			AR	No AR	Total
Leaf or not?	TRUE	Count	10	9	19
		% within AR	100.00%	90.00%	95.00%
	FALSE	Count	0	1	1
		% within AR	0.00%	10.00%	5.00%
Total		Count	10	10	20
		% within AR	100.00%	100.00%	100.00%

Percentage of Recycled Material

			AR	No AR	Total
Recycled Cont	33%	Count	0	1	1
		% within AR	0.00%	10.00%	5.00%
	66.60%	Count	1	1	2
		% within AR	10.00%	10.00%	10.00%
	85.90%	Count	3	0	3
		% within AR	30.00%	0.00%	15.00%
	99.90%	Count	6	8	14
		% within AR	60.00%	80.00%	70.00%
Total		Count	10	10	20
		% within AR	100.00%	100.00%	100.00%

Car Colour

			AR	No AR	Total
Car Colour	White /Silver	Count	10	10	20
		% within AR	100.00%	100.00%	100.00%
Total		Count	10	10	20
		% within AR	100.00%	100.00%	100.00%

Is the ad effective?

			AR	No AR	Total
Effective	Stronly Disagree	Count	0	1	1
		% within AR	0.00%	10.00%	5.00%
	Disagree	Count	0	2	2
		% within AR	0.00%	20.00%	10.00%
	Neutral	Count	2	5	7
		% within AR	20.00%	50.00%	35.00%
	Agree	Count	8	2	10
		% within AR	80.00%	20.00%	50.00%
Total		Count	10	10	20
		% within AR	100.00%	100.00%	100.00%

LONG

Nissan - What is the Car Company

			AR	No AR	Total
Nissan	Nissan	Count	9	9	18
		% within AR	100.00%	100.00%	100.00%
Total		Count	9	9	18
		% within AR	100.00%	100.00%	100.00%

Headline Colour

			AR	No AR	Total
Headline	White/Black	Count	3	2	5
		% within AR	33.30%	25.00%	29.40%
	Blue	Count	1	0	1
		% within AR	11.10%	0.00%	5.90%
	Blue and Black	Count	5	6	11
		% within AR	55.60%	75.00%	64.70%
Total		Count	9	8	17
		% within AR	100.00%	100.00%	100.00%

Battery Type

			AR	No AR	Total
Battery	Lithium Ion	Count	3	3	6
		% within AR	33.30%	37.50%	35.30%
	N/A	Count	2	2	4
		% within AR	22.20%	25.00%	23.50%
	Ion Lithium	Count	1	0	1
		% within AR	11.10%	0.00%	5.90%
	Lithium	Count	1	1	2
		% within AR	11.10%	12.50%	11.80%
	Ion	Count	1	0	1
		% within AR	11.10%	0.00%	5.90%
	24 mega watt lithium	Count	1	0	1
		% within AR	11.10%	0.00%	5.90%
	Other	Count	0	2	2
		% within AR	0.00%	25.00%	11.80%
Total		Count	9	8	17
		% within AR	100.00%	100.00%	100.00%

Name of Car: Leaf

			AR	No AR	Total
Leaf or not?	TRUE	Count	9	8	17
		% within AR	100.00%	88.90%	94.40%
	FALSE	Count	0	1	1
		% within AR	0.00%	11.10%	5.60%
Total		Count	9	9	18
		% within AR	100.00%	100.00%	100.00%

Percentage of Recycled Material

			AR	No AR	Total
Recycled Cont	33%	Count	0	1	1
		% within AR	0.00%	11.10%	5.60%
	66.60%	Count	1	0	1
		% within AR	11.10%	0.00%	5.60%
	85.90%	Count	3	2	5
		% within AR	33.30%	22.20%	27.80%
	99.90%	Count	5	6	11
		% within AR	55.60%	66.70%	61.10%
Total		Count	9	9	18
		% within AR	100.00%	100.00%	100.00%

Car Colour

			AR	No AR	Total
Car Colour	White /Silver	Count	8	9	17
		% within AR	88.90%	100.00%	94.40%
	Blue	Count	1	0	1
		% within AR	11.10%	0.00%	5.60%
Total		Count	9	9	18
		% within AR	100.00%	100.00%	100.00%

Is the ad effective?

			AR	No AR	Total
Effective	Stronly Disagree	Count	0	1	1
		% within AR	0.00%	11.10%	5.90%
	Disagree	Count	1	1	2
		% within AR	12.50%	11.10%	11.80%
	Neutral	Count	2	5	7
		% within AR	25.00%	55.60%	41.20%
	Agree	Count	5	2	7
		% within AR	62.50%	22.20%	41.20%
Total		Count	8	9	17
		% within AR	100.00%	100.00%	100.00%

APPENDIX I: SPSS CHI-SQUARE TABLES

Short-term Memory Questionnaire

Chi-square Test Name of the Vehicle

	Value
Pearson Chi-Square	[a]
N of Valid Cases	20
[a] No statistics are computed because Nissan is constant.	

Chi-square Test Colour of Headline Text

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	2.287[a]	3	0.515
Likelihood Ratio	3.060	3	0.383
Linear-by-Linear Association	0.073	1	0.787
N of Valid Cases	19		
[a] 6 cells (75.0%) have expected count less than 5. The minimum expected count is .47.			

Chi-square Test Name of the Battery

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	3.490[a]	5	0.625
Likelihood Ratio	4.280	5	0.510
Linear-by-Linear Association	0.300	1	0.584
N of Valid Cases	19		
[a] 12 cells (100.0%) have expected count less than 5. The minimum expected count is .50.			

Chi-square Test Name of the Car

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	1.053[a]	1	0.305
Likelihood Ratio	1.439	1	0.230
Linear-by-Linear Association	1.000	1	0.317
N of Valid Cases	20		
[a] 2 cells (50.0%) have expected count less than 5. The minimum expected count is .50.			

Chi-square Test Percentage Recycled Material

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	4.286[a]	3	0.232
Likelihood Ratio	5.832	3	0.120
Linear-by-Linear Association	0.045	1	0.831
N of Valid Cases	20		
[a] 6 cells (75.0%) have expected count less than 5. The minimum expected count is .50.			

Chi-square Test Colour of Car

	Value
Pearson Chi-Square	[a]
N of Valid Cases	20
[a] No statistics are computed because CarColour is constant.	

Chi-square Test Effectiveness

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	7.886[a]	3	0.048
Likelihood Ratio	9.342	3	0.025
Linear-by-Linear Association	6.69	1	0.01
N of Valid Cases	20		
[a] 6 cells (75.0%) have expected count less than 5. The minimum expected count is .50.			

Long-term Memory Questionnaire

Chi-square Test Name of the Vehicle

	Value
Pearson Chi-Square	[a]
N of Valid Cases	18
[a] No statistics are computed because Nissan is constant.	

Chi-square Test Colour of Headline Text

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	1.236[a]	2	0.539
Likelihood Ratio	1.620	2	0.445
Linear-by-Linear Association	0.472	1	0.492
N of Valid Cases	17		
[a] 4 cells (66.7%) have expected count less than 5. The minimum expected count is .47.			

Chi-square Test Name of the Battery

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	4.958[a]	6	0.549
Likelihood Ratio	6.873	6	0.333
Linear-by-Linear Association	0.109	1	0.741
N of Valid Cases	17		
[a] 14 cells (100.0%) have expected count less than 5. The minimum expected count is .47.			

Chi-square Test Name of the Car

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	1.059[a]	1	0.303
Likelihood Ratio	1.445	1	0.229
Linear-by-Linear Association	1.000	1	0.317
N of Valid Cases	18		
[a] 2 cells (50.0%) have expected count less than 5. The minimum expected count is .50.			

Chi-square Test Percentage Recycled Material

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	2.291[a]	3	0.514
Likelihood Ratio	3.065	3	0.382
Linear-by-Linear Association	0.052	1	0.820
N of Valid Cases	18		
[a] 6 cells (75.0%) have expected count less than 5. The minimum expected count is .50.			

Chi-square Test Colour of Car

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	1.059[a]	1	0.303
Likelihood Ratio	1.445	1	0.229
Linear-by-Linear Association	1.000	1	0.317
N of Valid Cases	18		
[a] 2 cells (50.0%) have expected count less than 5. The minimum expected count is .50.			

Chi-square Test Effectiveness

	Value	df	Asymp. Sig (2-sided)
Pearson Chi-Square	3.525[a]	3	0.318
Likelihood Ratio	3.984	3	0.263
Linear-by-Linear Association	2.029	1	0.154
N of Valid Cases	17		
[a] 8 cells (100.0%) have expected count less than 5. The minimum expected count is .47.			