The Effect of Experiential Analogies on Consumer Perceptions and Attitudes

by

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ABSTRACT

What does driving a sports car have to do with a first kiss, shopping in New York or purchasing a pair of designer shoes? These comparisons were used in a recent ad campaign for the Alfa Romeo Spider and are prime examples of an experiential analogy. The predominance of experiential analogies in recent advertisements suggests that they are persuasive. Yet understanding what comes to mind when consumers process these comparisons remains to be investigated. By drawing on analogy and consumption experience literatures, an important moderator of analogical persuasiveness is identified, preference for the base experience, and the influence of emotional knowledge transfer on consumer attitudes is explored.

Substantial focus has been devoted to understanding how consumers learn and are persuaded by functional analogies. Digital cameras have been compared to computer scanners, personal digital assistants to secretaries and off-line web readers to VCRs. These functional analogies differ substantially from experiential analogies where consumers are encouraged to compare two experiences. Three studies were conducted to investigate what contributes to the persuasive effect of an experiential analogy. Study 1 explored how base preference moderates the effect of emotional knowledge transfer on consumer attitudes. The findings suggest that an analogy is maximally persuasive for those who like the experience that an advertised product is compared to and cognitively associate a high number of emotions with the advertised product. In Study 2, a cognitive load manipulation was used to provide additional support for the effect of emotional knowledge transfer and base preference on consumer attitudes. Study 3 explored another important moderator, emotional soundness, specific to the persuasiveness of an

experiential analogy. The findings from Study 3 further replicated the effect of base preference and emotional knowledge transfer on consumer attitudes and demonstrate that there needs to be sufficient underlying similarities in order for one to infer that the comparison experience and the advertised target product would have emotions in common with one another. The role of affect in the processing of an experiential analogy was also investigated.

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CHAPTER I INTRODUCTION

“Your first kiss.
Shopping in New York.
Those first designer shoes.
The new Spider.”

What does driving an Italian sports car have to do with a first kiss, shopping in New York or purchasing a pair of designer shoes? These comparisons were used in a recent ad campaign for the Alfa Romeo Spider. Microsoft and Ford have used a similar strategy, comparing the experience of playing the Xbox 360 to participating in a city-wide water balloon fight and driving the Ford Fusion to listening to an iPod. These comparisons are prime examples of experiential analogies. The predominance of experiential analogies in recent advertisements suggests that marketers have found them to be persuasive. Yet understanding what comes to mind when consumers are faced with these comparisons remains to be investigated. Are the feelings associated with the comparison experience simply transferred to the advertised product, or is a deeper level of processing required for these advertisements to be effective? By drawing on analogy and consumption experience literatures, the complexities of experiential analogies are explored.

Analogies have received significant attention in both psychology and marketing. Twenty years of research provide converging evidence and increasing consensus on the mechanics involved in analogical processing. Many important moderators of analogical processing have been identified, and there continues to be a concentrated effort on demonstrating that analogy is central to learning and reasoning. Interestingly, the majority of analogies used in psychology research have not involved comparisons

between experiences. This lack of experiential focus has been mirrored in marketing. Research on new product learning has focused almost exclusively on the transfer of functional knowledge in the context of technology-oriented products. For example, digital cameras have been compared to computer scanners, personal digital assistants to secretaries and off-line web readers to VCRs. These functional analogies differ substantially from experiential analogies where consumers are encouraged to compare two disparate experiences, like a first kiss and driving the Alfa Romeo Spider.

Analogies can be used to explain, make predictions, solve problems and persuade. In psychology, research has focused on the role of analogy in prediction and problem-solving. In marketing, the persuasive effect of analogies has received more attention. However, as highlighted previously, analogies in marketing have involved comparisons of product functionality. Experiential analogies present a unique opportunity to explore how emotional knowledge of a familiar experience can be harnessed to enhance consumer attitudes towards an advertised product. Consideration of the analogy literature provides some evidence that the persuasive effect of experiential analogies resides in consumers thinking about the cued experiences. Both intuition and the consumption experience literature suggest that when consumers process an experiential analogy, prior preferences and the emotions associated with the experiences will be recalled. For example, when comparing a first kiss to driving the Alfa Romeo Spider, how much you liked your first kiss and the rush of emotions you experienced are likely to come to mind.

This research adopts the position that preferences and emotions gleaned from an experience can be stored away as knowledge useful for evaluating products and prospective consumption experiences. Accordingly, the current research will show that

the persuasiveness of an experiential analogy is driven by a more cognitive rather than affective process. Three studies were conducted to investigate what underlies the persuasive effect of experiential analogies. The first two studies demonstrate that the processing of an experiential analogy involves the transfer of emotional knowledge. The effect of this emotional knowledge transfer on an analogy's persuasiveness is shown to be moderated by prior preferences. The third study highlights the importance of emotional soundness, a previously identified moderator of analogical processing, which has been shown to affect the usefulness of an analogy in prediction and learning but has yet to be examined in a persuasive context or with an analogy involving a comparison between experiences. Evidence for affective responses during the processing of an experiential analogy is also found.

The contribution of this research is three-fold. In providing the first known empirical investigation of experiential analogies, how emotional knowledge from a disparate experience can be used to enhance consumer attitudes is explored. An important moderator of analogical persuasiveness, base preference, is identified and shown to moderate the effect of emotional knowledge transfer on consumer attitudes. Importantly, examining this moderator provides a contribution beyond the previously documented effects of expertise and cognitive capacity on analogical persuasiveness. Finally, the moderating effect of emotional soundness is examined and shown to have a significant effect on the persuasiveness of an experiential analogy; thus, further establishing that the persuasiveness of an experiential analogy involves analogical processing.

CHAPTER II

LITERATURE REVIEW

How should information surrounding product performance, benefits and consumption experience be conveyed persuasively to consumers? This question requires a careful consideration of whether marketing should provide performance, benefit and experience information directly to consumers or whether a unique approach should be taken to inform and persuade. To illustrate, a consumer in the market for a digital camera might learn about the product through television commercials, from a friend who recently purchased a camera, or through a retail display. Alternatively, a consumer may be encouraged to draw on existing knowledge to understand the digital camera. This example highlights an important distinction, the difference between acquiring product knowledge through the piecemeal processing of external information versus internal knowledge transfer (see Figure 1) (Gregar-Paxton and Roedder John 1997).

In consumer behaviour, internal knowledge transfer refers broadly to situations where existing knowledge is used to understand a product. This may range from a more effortful comparison process, such as structure mapping, to a relatively effortless transfer process, such as classification. Initially, research on internal knowledge transfer adopted a classification perspective to study areas such as brand extension, comparative advertising and country of origin effects (e.g., Boush and Loken 1991; Broniarczyk and Alba 1994; Shimp, Samiee, and Madden 1993). This approach amassed significant support for the automatic transfer of beliefs and affect based on the classification of an object. With the introduction of the Consumer Learning by Analogy Model (CLA), the scope of research on internal knowledge transfer was extended beyond this classification

approach and was critical to establishing a role for analogy in consumer behaviour. Prior to this model, analogy, and more broadly the study of comparison processes, received significant attention in psychology.

Analogy & Structure Mapping Theory

Analogical processing is fundamental to human cognition (Hofstadter 2001; Holyoak, Gentner, and Kokinov 2001). This ability to identify similarities is what allows us to learn, reason, explain, predict and persuade through the use of prior knowledge (Gentner 2003). However, it was not until recently that detailed process models of analogy were introduced and tested both computationally and experimentally. Increasing consensus suggests that Structure Mapping Theory (Gentner 1983, 1989) provides the most cohesive account of how analogies are processed (Bowdle and Gentner 1997; Holyoak and Thagard 1989; Markman and Gentner 1993; Medin, Goldstone, and Gentner 1993). In fact, research in structure mapping theory (SMT) has been central to identifying the stages and constraints of analogical processing.

Knowledge Domains

An analogy cues a comparison between two domains of knowledge, hereto labeled base and target. This comparison involves matching what you know about the base domain to what you know about the target domain. The goal is to extend what is known about the base to the target in a way that enhances target comprehension (Gentner 1983, 1989). The base is generally a domain that is familiar, while the target is a domain that may or may not be familiar. Familiarity with a base domain implies that the knowledge an individual possesses consists of a network of elements and relations (see

Figure 2 for an example). The base domain may also be referred to as a mental representation or knowledge structure. Elements are concrete object properties, such as the power button or the display screen of a digital camera. These concrete object properties can possess different attribute levels. For example, the display screen can vary in location or size across digital camera models and brands. Relations refer to the links between elements, for example, pressing the power button activates the display screen. The ratio of elements to relations in a base domain is a function of expertise (Gregan-Paxton 2001; Novick 1988). An expert will possess a well developed base knowledge structure consisting of deeply interconnected element and relation information, while the base knowledge structure of a novice consists mainly of elements.

When processing an analogy, what you know about the target also comes to mind. Like the base knowledge structure, the target knowledge structure may consist of elements and relations. When very little is known about a target, an analogy may be useful for providing the formal structure needed to construct an initial understanding of the target (Gregan-Paxton et al. 2002; Gregan-Paxton and Roedder John 1997). Even when an individual is knowledgeable about a target, an analogy may be useful for highlighting or constraining the activation of specific knowledge about the target (Gentner 1989). For example, an individual may be knowledgeable about personal digital assistants (PDAs), but depending on the analogy, different information about the PDA may be highlighted (Gregan-Paxton et al. 2002). If the PDA was compared to a secretary, the PDA may be viewed as a device that performs useful, routine functions such as emailing, word processing and scheduling. However, if the PDA was compared to a librarian, the information gathering and storage functions may be emphasized. The point

of using analogies in marketing is to convey the key benefits of a target product to consumers. Therefore, an analogy needs to be carefully selected if it is to be informative and persuasive (Houssi, Morel, and Hultink 2005).

Analogy, Literal Similarity & Mere Appearance

The power of an analogy resides in its ability to leverage a unique comparison between two *disparate* domains of knowledge. A comparison involving disparate domains implies that the base and target share deeper, underlying relational similarities and fewer, if any, superficial similarities (Gentner and Markman 1997). In presenting a comprehensive review of analogy, it is important to distinguish analogy from other types of comparisons.

Analogy lies at one end of a comparison spectrum that can be characterized by the type of similarity that exists between a base and a target (Gentner 1989) (see Figure 3). Mere appearance comparisons are at the opposite end of the similarity spectrum from analogy. When the base and target are similar mainly in terms of superficial elements, this is a mere appearance comparison. A “me too product” is a good example of this (Gregan-Paxton and Roedder John 1997). Many Louis Vuitton handbag knockoffs exist in today’s marketplace. The knockoff resembles the real thing because it often possesses similarly patterned material and exterior design. However, a close inspection may reveal a severe deficit in relational similarity between the knockoff and the genuine handbag. For instance, differences may exist in how the zippers are bound to the exterior fabric and how the interior compartments are positioned. In between analogy and mere appearance comparisons, lay literal similarity comparisons. With literal similarity, the base and target possess similar elements and relations. For example, comparing an automatic lawnmower

to a typical push/pull lawnmower would be considered a literal similarity comparison (Houssi et al. 2005).

Mere appearance and literal similarity comparisons are useful, but an analogy may provide explanatory, predictive and persuasive superiority over these comparisons. This can be attributed to several factors. Analogy focuses an individual's attention on the relational similarities between a base and a target. Greater cognitive resources and attention are devoted to processing relational similarities in comparison to similarities among elements (Blanchette and Dunbar 2002; Kubose, Holyoak, and Hummel 2002). Identification of relational similarities enables individuals to make predictions about a target consistent with their processing goals (Gregan-Paxton and Roedder John 1997; Spellman and Holyoak 1996) and with greater confidence than predictions generated from other types of comparisons (Gentner and Markman 2005).¹ Finally, in a marketing context, it is these relational similarities between the base and target that are perceived as distinctive benefits offered by a target product (Houssi et al. 2005; Roehm and Sternthal 2001).

Given that a base and target possess some relational similarities in a literal similarity comparison, an important question arises. Why would an analogy confer an advantage over a literal similarity comparison? Literal similarity comparisons are generally the easiest and most natural comparison to compute (Gentner and Kurtz 2006). For example, comparing an automatic lawnmower to a prototypical push/pull lawnmower or to an automatic vacuum would be easier to process than comparing the automatic

¹Gregan-Paxton and Moreau (2003) found confidence to be higher for inferences generated from categorical cues (which signaled a literal similarity comparison) versus analogy. This makes sense since literal similarity comparisons are based on shared elements and relations versus mainly shared relations. However, confidence would likely be decreased if inferences were based on a mere appearance comparison versus an analogy.

lawnmower to the use of a maid service. This is because the elements involved in a literal similarity comparison may support the identification of relational similarities between the base and the target. Also, the elements involved in a literal similarity comparison tend to bear a superficial resemblance to one another (i.e., elements possess similar attribute levels). This superficial resemblance can quickly signal to an individual that comparing the base to the target may have some merit. However, this superficial resemblance can also be detrimental, especially if it diverts attention away from identifying the more informative relational similarities between a base and a target (Markman and Gentner 1993; Roehm and Sternthal 2001). Hence, the lack of superficial similarity between the elements in an analogy has the advantage of directing attention towards the processing of more informative relational similarities. This harkens back to the idea that the power of an analogy resides in the disparateness of the base and target. When a base and target bear little superficial resemblance to one another, emphasis is placed on identifying relational similarities. The result is that an analogy may be more challenging to process (Gentner, Rattermann, and Forbus 1993; Holyoak and Koh 1987; Ross 1987) but can provide both the formal structure needed to comprehend an unfamiliar target or can facilitate a unique or new perspective of a more familiar target (Gregan-Paxton and Roedder John 1997).

The Structure Mapping Process

Structure Mapping Theory provides a coherent and empirically-supported framework for understanding how analogies are processed. This framework was originally developed using analogy but has since been extended to explain how literal similarity, mere appearance, inference-based categorization and metaphors are processed

(Bowdle and Gentner 2005; Gentner and Markman 1997; Gregan-Paxton and Moreau 2003; Markman and Gentner 1993, 1996; Moreau, Markman, and Lehmann 2001; Yamauchi and Markman 2000). The processing of an analogy involves structural alignment and mapping between mental representations (Gentner and Markman 1997). Knowledge of the base and target becomes active in memory. These knowledge structures are aligned such that similarities between the two can be identified. The identified similarities signal that what is additionally known about the base may apply to the target, thus paving the way for the generation of target inferences. In sum, the processing of an analogy can be classified into three stages or sub-processes; access, mapping and transfer, each of which has their own special considerations and constraints. The current research embraces the fundamentals of analogical processing as outlined by SMT. Hence, an in-depth review of the stages and constraints follows.

Access

During access, base knowledge becomes active in memory. Access may be spontaneous, prompted by external sources (e.g., marketing communications), or purposeful when the goal is to explain, persuade or learn (Blanchette and Dunbar 2001; Gentner et al. 1993; Holyoak and Thagard 1989; Moreau et al. 2001). Spontaneous activation occurs when something inadvertently reminds you of something else. This inadvertent reminding is due to the base and target possessing strong surface similarities to one another, as is the case with literal similarity or mere appearance comparisons (Gentner et al. 1993).² For example, when you first encountered a digital camera, you may have immediately thought about a traditional flash and shutter camera. With an

² The term “surface similarities” is used interchangeably with “superficial similarities” and refers to the base and target possessing common elements.

analogy, the base and target are disparate from one another and possess limited surface similarities. Therefore, spontaneous activation of a base is dependent on a target inducing a relational reminding of a base. The chance of a relational similarity coming to mind is quite low even if an appropriate base domain has been recently encountered (Blanchette and Dunbar 2002; Gick and Holyoak 1980, 1983).

In situations where a base does not spontaneously come to mind or an appropriate base cannot be recalled when required, one has experienced transfer failure (Blanchette and Dunbar 2002). Different strategies for overcoming transfer failure have been explored experimentally. Transfer failure can be overcome if: 1) an individual is reminded that a previously encountered base can be used to understand a target (Gick and Holyoak 1980, 1983; Holyoak and Koh 1987; Novick 1988), 2) initial encoding of a base is intensive (Keane 1988), or 3) a similar analogy involving the base is recently processed (Catrambone and Holyoak 1989). Transfer failure may also become less of an issue as expertise with the base domain increases (Gentner et al. 1993). Indirect evidence suggests that experts are both more likely to experience spontaneous activation of a base and to purposefully identify a base when needed, for example, when explaining or persuading (Blanchette and Dunbar 2002; Novick 1988).

The difficulty of access may be partly due to past research methodologies. Past research relied on a “reception paradigm” where participants were encouraged to access a base that was learned or processed prior to making predictions about a target (Blanchette and Dunbar 2000). In these situations, base access was set up to be spontaneous, as participants were not explicitly made aware of the base’s relevance to completing the target task. Therefore, access was highly dependent on the superficial similarities

between the base and target rather than deeper relational similarities. Interestingly, when the goal is to *generate* or come up with a base in order to create an analogy (rather than spontaneously retrieve a recently encountered base), the analogy tends to be based on complex relational similarities (Blanchette and Dunbar 2000).³ This suggests that when people are motivated to come up with a base, whether this is to explain, make predictions or persuade, and they have sufficient knowledge of the target, access will be based on relational versus superficial similarities. However, when an individual is trying to learn about an unfamiliar or new target, access may be spontaneously triggered by superficial similarities. Even if an individual tried to purposefully access a base, if little is known about the target (i.e., relational information is not available), then access may be constrained to superficial similarities.

Superficial similarity seems to be a major determinant of access. What pops into an individual's mind as an appropriate basis of comparison hinges on similarities between the elements of the base and target. With the exception of situations where an individual is knowledgeable about a target and is actively trying to access a base, the effect of relational similarities on access is limited. Not to be downplayed, relations are much more significant during the mapping and transfer stages. In situations where an analogy is used for persuasion purposes, such as in marketing communications, coming up with a base may not be an issue. For example, research on analogy in consumer behaviour has adopted a methodology that provides participants with the base product along with detailed information about the attributes and functions that may be shared by the base and

³ A situation where an individual is actively trying to come up with a base domain highlights the importance of pragmatic considerations in access. When an analogy is generated to serve a specific goal (i.e., to explain, predict, or persuade), this goal will play a role in base access and selection (Holyoak and Thagard 1989).

target. Arguably, this methodology is fairly realistic given the availability of information to consumers outside of a laboratory setting.

Mapping

After access, the base and target knowledge structures are aligned in a way that maximizes the identification of similar elements and relations. With analogy, the focus is on mapping similar relations between the base and target. Even with literal similarity, the mapping of relations will often dominate the mapping of elements. This is because in the mapping stage, there is a preference for coherence and predictive power, more formally denoted as a preference for systematicity (Gentner 1983, 1989). Preference for systematicity leads to a focus on relational mappings and especially those relations that are involved in a system of higher-order interconnected relations. Mapping a system of relations between a base and target enables people to generate inferences about a target with confidence and in a way that enhances target comprehension. Mappings that are based on a loose collection of overlapping but independent facts would not be overly useful for enhancing target comprehension.

Preference for structural consistency is also an important constraint that governs mapping. Preference for structural consistency depends on a one-to-one correspondence between the elements of the base and target and on parallel connectivity (Gentner 1989; Gentner and Clement 1988; Holyoak and Thagard 1989; Spellman and Holyoak 1992). People prefer to align base and target representations such that any one element in one representation corresponds with only one element in the other representation (one-to-one correspondence). In other words, a mapping will not be constructed such that one element in the base domain assumes multiple roles in the target domain. Also, elements in the

base and target do not need to bear a superficial resemblance to one another as long as they hold the same roles in the overall knowledge structure (parallel connectivity). For example, in an analogy that compares an automatic lawnmower to a maid service, the lawnmower and maid assume the same role in the common relational structure (parallel connectivity), and the maid only corresponds to the role of the lawnmower and no other roles in the target representation (one-to-one correspondence) (see Figure 4). Similar to access, mapping can be enhanced when elements and relations bear a resemblance to one another (transparency) (Gentner and Markman 2005; Gentner and Toupin 1986; Ross 1987, 1989).

Systematicity, structural consistency and transparency are inherent constraints of mapping. However, processor characteristics can have a substantial impact on mapping. Processor characteristics include age (which is likely an index of cognitive development) and expertise. Not surprisingly, when children process an analogy, mapping is highly susceptible to superficial resemblance between the base and target elements (Gentner and Toupin 1986). Preference for systematicity plays a more important role in mapping for older children. This correlation between preference for systematicity and age echoes (and is probably correlated with) the effect of expertise on the type of mappings that are made. Experts make relational mappings, while novices make mappings based on similar elements. As alluded to previously, this is purely a function of differences in the base and target representations between experts and novices. An expert possesses a well developed base knowledge structure consisting of deeply interconnected element and relation information, while the base knowledge structure of a novice consists mainly of elements

(Novick 1988). Therefore, it follows that mappings would reflect this difference in knowledge representation.

Situational factors such as availability of cognitive resources, time pressure and immediate context can also have an effect on mapping. The processing of an analogy requires a focus on relations. This relational focus, especially at the stage of mapping, can require substantial cognitive resources (Blanchette and Dunbar 2002; Kubose, Holyoak, and Hummel 2002b; Roehm and Sternthal 2001). Time pressure and the types of comparisons that are processed directly preceding an analogy (i.e., context) can also exacerbate or enhance whether the mappings are based on elements or relations (Goldstone and Medin 1994; Markman and Gentner 1993).

The above discussion highlights the effects of structural, processor and situational constraints on whether or not mappings will be based on corresponding elements or relations. However, even with these constraints operating, an infinite number of mappings is possible (Goldstone and Medin 1994). This is where pragmatic considerations play a role. The pragmatic approach to analogical processing takes into account the goals and purposes of analogy use (Holyoak and Thagard 1989). Whatever the goals of a processor (i.e., understand, explain, predict or persuade), these goals can also be critical to constraining the similarities identified between a base and target (Spellman and Holyoak 1996).

There is consensus that mapping is central to the processing of an analogy (Gentner 2003; Holyoak and Thagard 1989). Most notably, the mapping stage focuses attention on the similarities between a base and target. This focus on similarities, rather

than non-corresponding elements and relations, is crucial to establishing the pathways needed to facilitate the transfer of information from the base to the target.

Transfer

The correspondences identified in the mapping stage signal that additional information from the base may apply to the target. Specifically, transfer refers to the generation of target inferences. This asymmetry in inference generation (base to target) is often maintained because the base knowledge structure is usually relationally rich in comparison to the target (Bowdle and Gentner 1997). The base is the base because people possess a greater familiarity with the base domain. Therefore, target comprehension is maximized if mapping and transfer proceed from base to target.

Similar to access and mapping, structural and pragmatic constraints govern transfer. Most notable is the carry-over effect of the systematicity preference from the mapping stage. People prefer to make target inferences based on mappings that involve a common relational structure between the base and target (Clement and Gentner 1991; Gentner and Toupin 1986; Lassaline 1996; Markman and Gentner 1996; Read 1984; Spellman and Holyoak 1996). Support for this has been examined by asking people to make evaluations of inferential soundness (Gentner et al. 1993) and through the study of people's preference for conceptual similarity between the relations of the base and target (Gentner and Markman 2005).⁴ Generating inferences based on relational mappings is preferred because it enhances confidence in the developing target knowledge structure in comparison to mappings based mainly on common elements (Gentner and Markman

⁴ To illustrate, in Figure 4 conceptual similarity exists between the relations involving “sets up” in the base and “activates” in the target.

2005). Pragmatically, people prefer to make inferences that fit with an individual's goal for processing an analogy (Spellman and Holyoak 1996).

The effect of expertise also extends to the transfer stage of analogical processing and mainly affects transfer accuracy.⁵ Although experts and novices are both subject to inaccurate transfer, novices are more often overwhelmed by the superficial similarities that lead to inaccurate target inferences. Experts are better equipped to override inaccurate transfer, a result that has been supported empirically (Novick 1988) and echoed theoretically (Gregan-Paxton and Roedder John 1997). Aside from transfer inaccuracy, there is some evidence that target inferences generated by novices can be boosted up to include relational inferences. Typically, experts generate relational inferences, and novices generate element inferences. However, positive mood and training may increase the number of relational inferences made by novices (Roehm and Sternthal 2001).

Transfer is the stage in which new knowledge may be acquired. If target inferences are retained as a permanent part of the target knowledge structure, then learning has occurred. Interestingly, these inferences may be retained purposefully or non-consciously (Blanchette and Dunbar 2002; Perrott, Gentner, and Bodenhausen 2005). In either case, learning has occurred.

The preceding discussion of mapping and transfer presumes that little is known about the target. In this situation, base knowledge may be transferred almost unconditionally to the target. This exemplifies an instance of maximal new knowledge

⁵ Inaccurate transfer may occur if inferences are based on superficial similarities between elements at the expense of more systematic and coherent relational similarities, as seen in Novick (1988). Inaccurate transfer may also occur if there is unrestricted transfer of information from the base to the target (Gregan-Paxton and Roedder John 1997).

creation, or pure carry-over of base information to the target (Gentner 1989). In situations where the target is quite familiar, matching rather than mapping occurs. The generation of target inferences (i.e., learning) may be limited, but attention is still devoted to identifying commonalities between the base and target. This may result in a new perspective of the target and/or a deeper consideration of target knowledge (Gregan-Paxton and Roedder John 1997).

Beyond Inferences - Abstraction & Re-representation

Analogy not only promotes learning through the generation of target inferences but also through abstraction and re-representation. Both abstraction and re-representation involve the processor going one step further after mapping and transfer. Abstraction requires the identification of a common relational system between the base and the target. If this common relational system is stored away as a new content-free schema (i.e., without specific linkages to the base or target), then learning has occurred. The abstraction can be accessed at a future time to understand new targets without having to access the original base or previous target (for a review, see Reeves and Weisberg 1994). Abstraction is more likely to happen when people access and map multiple bases during the processing of an analogy (Catrambone and Holyoak 1989; Gick and Holyoak 1983).

Theoretical development and empirical research on abstraction have focused on how abstractions are produced rather than used. One exception is research that has examined abstraction use as a function of expertise in the context of new product learning (Gregan-Paxton 2001). A major assumption in the CLA model is that spontaneous access of an abstraction, rather than spontaneous access of a specific exemplar, is more likely to occur for experts than novices (Gregan-Paxton and Roedder John 1997). When trying to

learn about the new Apple iPhone, experts, for example, may draw on their general knowledge of innovative wireless devices (abstraction) rather than accessing a specific exemplar, such as the iPod, or an even more disparate base. Currently, empirical support for this assumption is mixed (Gregan-Paxton 2001).⁶

Like abstraction, empirical examination of re-representation has been limited. Even theoretical development has only recently begun (Yan, Forbus, and Gentner 2003). Re-representation has the potential to promote learning in a way that may shift perceptions of the base knowledge structure (Gentner 2003). In trying to identify commonalities between a base and a target, an adjustment to the base may be necessary. This adjustment may require abstracting the potential common relations between a base and target to a level that is deemed adequately similar. Thus far, this adjustment has been examined in terms of the decomposition of semantically non-identical relations (Gentner and Kurtz 2006). If this newly deduced similarity is retained in the base knowledge structure, then new base knowledge has been acquired. Interestingly, the notion of base learning has only been cursorily explored.

Gentner (2003) provides a simple example of re-representation. Imagine comparing a situation that involves a dog chasing a cat to a situation that involves a detective following a suspect. *Chasing* links dog to cat and *following* links detective to

⁶ Across four experiments, Gregan-Paxton (2001) examined if experts would rely on an abstraction, rather than a specific exemplar, when learning about a new product (target). The use of an abstraction was cued by presenting the target product's brand name with a picture of the target. The results showed that participants used an abstraction to learn about the target product. Interestingly, even when the abstraction cue was paired with a specific product (base), the abstraction rather than the specific base was relied upon. In actuality, these results provide mixed empirical support for experts' reliance on abstraction. In order to conclude that experts default to the use of an abstraction when trying to learn about an unfamiliar target, the following would be needed: 1) another condition in Study 3B, which paired the abstraction cue with a specific product base that possessed a relational similarity to the target, and 2) a study that examined experts' reliance on abstraction without the inclusion of a specific abstraction cue.

suspect. Although conceptually similar, the common relation may be abstracted to *entity pursues entity*. If this “pursuit” frame is retained in the base knowledge structure, then this would be a case of re-representation promoting learning about the base.

Evaluation

Access, mapping and transfer have received significant empirical and theoretical development in comparison to the evaluation stage of analogical processing. However, it is the evaluation stage that may have an important effect on changes to the target knowledge structure and, ultimately, on whether or not the base is discarded. The evaluation of an analogy may be based on structural and pragmatic considerations, factual correctness or on the knowledge level of the base and target (Gentner 2003; Gentner and Kurtz 2006). Preference for systematicity has a large effect on the evaluation of an analogy (Gentner and Kurtz 2006; Gentner et al. 1993). In particular, preference for systematicity affects the evaluation of target inferences. Analogies are deemed more acceptable or sound if the target inferences are based on relational mappings. Although currently untested, it is likely that systematicity would also have an effect on the believability of target inferences. Target inferences generated based on a deeply interconnected system of mappings may be more believable than inferences generated based on superficial surface similarities. An analogy may also be evaluated in terms of how relevant the inferences are to the processor’s goals or purpose for using an analogy (i.e., explanatory, predictive, persuasive) (Spellman and Holyoak 1996). Finally, the factual correctness of inferences may also play a role in the evaluation of an analogy and is likely a function of expertise (Novick 1988). The more you know about a base then the better position you are in to evaluate the accuracy of target inferences.

Research has focused on evaluation related to target inferences, but evaluation of mappings may also occur. If mappings do not satisfy the systematicity preference, then it is plausible that the base may be discarded even before target inferences are generated. Another interesting issue is whether or not evaluation is always purposeful. Research on evaluation has been done by explicitly asking participants to evaluate an analogy (e.g., Gentner and Kurtz 2006; Gentner et al. 1993). This method of studying evaluation is not well suited to determining at what point evaluation occurs (after mapping or transfer) and its salience. With reference to the latter point, perhaps evaluation only occurs when there is a signal that the analogical match is poor. In other words, a good analogy may not draw attention to its cleverness, and, therefore mapping and transfer may proceed relatively undisturbed by evaluation.

The Big Picture – Analogy in Psychology and Marketing

The examination of analogy in psychology has resulted in a strong theoretical framework which outlines the stages, factors and intricacies that govern analogical processing. Consideration of the reviewed literature reveals three different approaches to the study of analogy, all of which have been necessary in developing a comprehensive account of analogical processing. The structural approach focuses on identifying the stages (access, mapping and transfer) and structural constraints (e.g., structural consistency and systematicity) that operate independent of an analogy's content. The pragmatic approach takes a step back from identifying the fundamental mechanics of analogical processing to incorporate the effect of processor goals, processor characteristics and situational factors on analogical processing. Finally, the third

approach expands beyond the use of computational and experimental methodologies to examine the use of analogy in naturalistic settings (e.g., Blanchette and Dunbar 2001).

As indicated, a major goal of the structural and pragmatic approach is to identify the fundamental mechanics (stages and constraints) and processor and situational factors that affect analogical processing. However, this has often meant stopping at the examination of mappings and inferences and the use of analogies designed for explanation and prediction rather than persuasion. The analogies used in previous research have also resided at either extremes of the information spectrum and have been either very simplistic or have possessed considerable relational detail. More importantly, none of the analogies have involved comparisons of experiences.

In marketing, research on analogy has contributed to understanding the effects of expertise and prior knowledge on access, mapping and transfer (Gregan-Paxton 2001; Moreau et al. 2001; Roehm and Sternthal 2001); how analogical processing differs from and interacts with categorization (Gregan-Paxton and Moreau 2003); the moderating role of cognitive resources and mood on analogical learning (Roehm and Sternthal 2001); the role of analogical thinking in new product development (Dahl and Moreau 2002); and the impact of analogical learning on new product usage (Hoeffler 2003). Unlike analogy research in psychology, there has been increased emphasis on the role of analogy in persuasion. New factors that affect analogical persuasiveness have been identified (such as mood and supplemental base domains), and the effects of previously documented constraints (such as preference for systematicity and expertise) have been replicated and shown to moderate analogical persuasiveness. Nevertheless, the lack of experiential focus noted in psychology has also been echoed in marketing. Broadly speaking, research has

focused on how analogy can be used to enhance learning and consumer attitudes through comparisons involving product functionality and performance. Digital cameras have been compared to computer scanners, personal digital assistants to secretaries and off-line web readers to VCRs. These types of comparisons differ substantially from experiential analogies where consumers are encouraged to compare two disparate experiences, like a first kiss to a sports car. From this overview, two significant issues emerge. What factors affect analogical persuasiveness beyond the structural and pragmatic constraints identified in previous research? ⁷ What is unique about an analogy that involves a comparison of disparate experiences?

Why Experiential Analogies?

What can studying experiential analogies contribute beyond the findings of previous research? One goal of the current research is to explore an important moderator of analogical persuasiveness, preference for the base. Certainly, the effect of base preference on target attitudes could be examined with functional analogies. However, base preferences may be inconsequential if an analogy is used to enhance target attitudes by spotlighting product function and performance. With this kind of comparison, base preferences may not be salient. In contrast, a comparison involving experiences may signal the relevance of base preference. When you think about an experience, how much you liked or disliked the experience may naturally come to mind. In order to understand the rationale for this assumption, it is important to note that the current research takes the following position. Preferences and emotions gleaned from an experience can be stored

⁷ Coincidentally, the necessity for research in this area has been recently acknowledged by Perrott, Gentner and Bodenhausen (2005).

away as knowledge available for future consideration.⁸ From this, it follows that when an analogy cues knowledge of a base experience, preferences will become salient.

Therefore, it is argued that experiential analogies create an opportunity more conducive and relevant to studying the effect of base preference on target attitudes in comparison to functional analogies.

The importance of studying experiential analogies is not only limited to understanding the effect of base preference on analogical persuasiveness. The point of using analogies in marketing is to communicate the benefits of a product (Houssi et al. 2005). Functional analogies highlight important feature and performance related information, but this may come at the expense of highlighting the emotional benefits of a product. Therefore, experiential analogies may be useful for shifting attention to the emotional aspects of a target product. Understanding the emotions associated with a prospective consumption experience may be equally as persuasive as pushing a function or feature-oriented perspective of a target product (Ruth 2001; Zaltman 2003). Using an analogy to leverage a consumer's prior knowledge of an experience is a potentially effective way to 1) enhance knowledge of the emotions associated with a product experience, 2) foster a novel perspective of a product, and/or 3) promote a deeper consideration of a familiar product.

Emotion, Analogy & Persuasion – “What’s been done?”

One of the most ancient and popular uses of an analogy is to *transfer* emotions, a use that is most evident in poetry (Holyoak et al. 2001). The role of analogy in transferring emotions has also been discussed with respect to persuasion and empathy

⁸ The rationale for this position will receive further elaboration in the “Hypotheses” section.

(Barnes and Thagard 1997; Thagard and Shelley 2001). Specifically, it has been proposed that an analogy can be persuasive if the emotional valence of a base is transferred to a target (Thagard and Shelley 2001).⁹ For example, when Microsoft wanted to dispute the inclusion of Netscape in its operating system, Bill Gates compared this to Coca-Cola having to include three cans of Pepsi in every six-pack that it sells (Thagard and Shelley 2001). By associating Microsoft's situation with a negatively valenced base, the goal was to convince people to adopt a negative attitude. Indirect support for this proposition comes from the examination of analogy use in politics and journalism where the goal is usually to persuade. The use of emotionally charged analogies was prevalent in both politics and journalism (Blanchette and Dunbar 2001). Negative bases were selected when the goal was to attack a position, and positive bases were selected when the goal was to rally support for a position. Interestingly, this predicted process of transferring emotional valence is similar to what general affect transfer theory or the "feelings-as-information" perspective might predict (for a review, see Gorn, Goldberg, and Basu 1993 or Pham 2004). The good or bad feelings one has in response to a base experience may be inadvertently attributed to how one feels about the target.

Overall, recent theorizing on the role of emotions (i.e., both emotional knowledge and affect) and base preferences in analogical processing has not been well defined or empirically tested. It is not disputed that analogies may be useful for transferring emotional valence from a base to a target. However, the current research will move beyond this transfer perspective to make specific predictions about what type of

⁹ With empathy, the goal is to identify with another person's situation. This means figuring out how a situation you have experienced (base) relates to the other person's situation (target). Once similarities have been identified, the goal is to transfer, or rather recreate, the shared emotional state (Barnes and Thagard 1997; Thagard & Shelley 2001).

knowledge is accessed, mapped and transferred when two disparate experiences are compared. Through a consideration of both the analogy and consumption experience literatures, a set of hypotheses is developed and tested. These hypotheses address the effect of emotional knowledge transfer and base preference on analogical persuasiveness. Additionally, in order to further demonstrate that analogical processing underlies the effect of an experiential analogy on target attitudes, the moderating effect of emotional soundness is investigated. The role of affective response is also considered.

FIGURE 1
Conceptualization of Knowledge Acquisition in Consumer Behaviour

FIGURE 2
Digital Camera Knowledge Structure

FIGURE 3
Continuum of Comparisons Based on Shared Elements and Relations Between the
Base and Target

FIGURE 4
Knowledge Structures Involved in an Analogy Between an Automatic Lawnmower
and a Maid Service

A. BASE – Maid Service

B. TARGET – Automatic Lawnmower

CHAPTER III HYPOTHESES

Experiential analogies involve a comparison between two disparate experiences, for example, comparing a first kiss to driving a sports car, or seeing a space shuttle launch to the use of a computer operating platform. When processing an experiential analogy, it is anticipated that consumers will access their knowledge of the base experience and any knowledge they might have of the target product experience. With the Alfa Romeo Spider advertisement, consumers are prompted to think about their first kiss (base) and the experience of driving a sports car (target). Once knowledge of the base and target has been accessed from memory, similarities between the two experiences are identified. This mapping process signals that the base and target may share other similarities that are not immediately apparent, thus, enabling the generation of target product inferences. More specifically, it is expected that *emotional* knowledge, acquired from previous experiences or from informed expectations, will be transferred from the base experience to the target product experience. This expectation implies that the mappings between the base and target are such that emotional inferences about the target product will be generated. Distinguishing between emotional knowledge (an expectation or memory of a previously experienced emotion) and affect (the elicitation of emotion in real-time) is critical to the proceeding hypothesis development.

Experience and Emotional Knowledge

An experience can be characterized as all of the thoughts, emotions, activities (events), and appraisals (evaluations and preferences) that occur during or as a result of the experience. In fact, these elements are central to the Thought-Emotion-Activity-Value (TEAV) model of consumption experience (Hirschman and Holbrook 1985). The TEAV

model proposes that the thoughts, emotions, events and evaluations that occur during an experience are deeply interconnected and feed into one another as the experience unfolds. Afterwards, what occurred during the experience may be stored away as knowledge or information that may be accessed from memory at a later time (Comblain, D'Argembeau, and Van der Linden 2005). For example, you may recall the last time you flew with a particular airline. The experience of an overbooked flight might have put you on edge, especially if the airline suggested that your seat was not guaranteed. The events which transpired during the unpleasant experience, the thoughts you had about the airline's reliability and the negative emotions you felt may have been stored in memory; proving to be useful information when booking a future flight. For instance, when choosing a prospective airline you might have remembered how frustrated and annoyed you were about the overbooked flight. Consistent with this, the current research adopts the position that emotions and preferences gleaned from an experience may be stored away as knowledge useful for evaluating products and prospective consumption experiences. Although consumer behaviour research has tended to conceptualize knowledge as information pertaining to a product's benefits, attributes and functionality, other types of non-market information, like knowledge of emotions, have been shown to play a role in persuasion (Ruth 2001). The idea that previously experienced emotions can be stored as knowledge is also consistent with findings which show that emotions are represented in memory as a type of categorical knowledge (Conway and Bekerian 1987; Ruth 2001; Shaver et al. 1987).¹⁰

¹⁰ The proceeding discussion of emotional knowledge is distinct from the "feelings-as-information" perspective explored extensively by Schwarz and colleagues (e.g. Schwarz 1990; Schwarz and Clore 1983; Schwarz and Clore 1996). In general, this perspective examines how momentarily experienced affect is interpreted as evidence of liking, satisfaction or attitude towards a target stimulus. In response to

The previous discussion highlights that consumers *think* about emotions. To illustrate further, when shopping for a sports car, you may not only think about horsepower and torque but also about the specific emotions that you may feel while driving the vehicle. Together, the airline example and the sports car example illustrate that consumers may *think* about emotions. However, there is an important distinction between these two examples. The airline example exemplifies a situation where prior emotional knowledge may be accessed while considering a potential product purchase (i.e., you think back to how frustrated and annoyed you were about the overbooked flight when booking your next flight). In contrast, the sports car example exemplifies a situation where a consumer may try to come up with an online prediction of what emotions would be experienced while driving the sports car. The difference between accessing prior emotional knowledge versus making an online prediction or forecast of the emotions that are anticipated during a consumption experience is an important distinction.¹¹ The point is that the persuasive power of an analogy resides in a comparison of a target product to *prior* knowledge and, in particular, knowledge from a disparate domain. With an experiential analogy, it is anticipated that prior emotional knowledge will dominate transfer.

Emotional Inferences and Emotional Knowledge Transfer

The base experiences tend to be hedonic in an experiential analogy, for example, the experience of a first kiss. Given that hedonic experiences tend to be emotionally

experienced affect, people ask themselves “how do I feel about a particular target?” How *knowledge* of specific emotion states associated with a prior experience play into attitude formation is not explored by the “affect-as-information” stream of research. In contrast, the current research predicts that the persuasiveness of an experiential analogy depends on a relatively cognitive process, the transfer of emotional knowledge.

¹¹ See Wilson and Gilbert (2003) for a review of research on forecasting specific emotions. Importantly, the reviewed research does not consider the role of prior knowledge in the forecasting of specific emotions.

charged (Hirschman and Holbrook 1982; Holbrook and Hirschman 1982; Lofman 1991; MacInnis and Price 1987), it is predicted that the mapping and transfer of emotional knowledge will dominate the processing of an experiential analogy.¹² When an individual thinks of a first kiss, the sequence of events leading to the kiss, the emotions experienced during the kiss and the overall evaluation of the experience are likely to come to mind. Both intuition and research support this expectation.

Empirical investigation of the TEAV model of consumption experience (Hirschman and Holbrook 1985) validated that when consumers are asked to *think* about a hedonic market offering, information related to the emotions, activities, evaluations (preferences) and product attributes is recalled (Lofman 1991). Consistent with this, when an individual's memory of a specific event is cued, details such as the activities, feelings, location and people present become salient (Anderson and Conway 1993; Comblain et al. 2005). Furthermore, when asked to think about a past experience, it is agreed that consideration of previously experienced emotions will dominate this recollection (Havlena and Holbrook 1986; Hirschman and Holbrook 1982; Holbrook, Lehmann, and O'Shaughnessy 1986; Mano and Oliver 1993). Taken together, this suggests indirectly that the processing of an experiential analogy will involve mapping the structural similarities between the base and the target experiences. With reference to the Alfa Romeo Spider advertisement, individuals would think about what happened and the emotions experienced during the kiss (see Figure 5a). Similarities in the events that

¹² This conceptualization of knowledge takes into account that people can acquire knowledge through direct experience and indirect experience with either the base or target. In other words, this conceptualization of knowledge encapsulates both having directly engaged in the base experience on multiple occasions and/or holding informed expectations of the base experience derived from indirect sources, such as media or word of mouth. This is consistent with Alba and Hutchinson's (1987) familiarity construct. Barnes and Thagard (1997) also acknowledge that even when people have not acquired knowledge about a base directly, they can still use general knowledge to construct a base representation.

make the first kiss and sports car experiences emotional are the most likely basis on which mappings will be made (Figure 5b). Finally, based on these mappings, emotional inferences would be generated. Emotional inferences are defined as predictions about the emotions that would be experienced during the use of the target product. As supported by analogy research, inferences represent the transfer of knowledge from the base to the target. With an experiential analogy, the emotions that are associated with the base experience may be predicted to occur during the target product experience. In sum, it is expected that emotional knowledge will be transferred from the base experience to the target product; thus, resulting in the generation of emotional inferences.

Note that the preceding discussion refers to an experiential analogy that involves an unfamiliar target, where the emotional knowledge of the advertised product is assumed to be impoverished. Hence, processing an experiential analogy would result in the acquirement of new emotional knowledge about the target product. However, even if the target product is familiar, an experiential analogy is still expected to promote a deeper consideration of the emotions shared between the base and target. This proposed “deeper consideration” is consistent with Gentner’s (1989) discussion of mapping versus matching. When individuals are familiar with a target, new knowledge may not be acquired about the target, but consideration of base and target similarities will still occur. Furthermore, because the base and target experiences are disparate and may not even be from the same category of experiences, a novel perspective of the target product may be conveyed. For instance, a consumer may be familiar with the experience of driving a sports car (target), but by comparing the sports car to a first kiss (base), a new perspective of how exciting and thrilling the sports car may be communicated.

The Moderating Role of Base Preference

The generation of target inferences is the crux of analogical processing. With experiential analogies, emotional inferences are expected to dominate. However, the effect of these emotional inferences on the persuasiveness of an experiential analogy will depend on how much the base experience is liked.

When an experiential analogy is used to positively influence attitudes, it makes sense that the target product should be compared to an experience that consumers already perceive favourably.¹³ With the Alfa Romeo Spider ad, the underlying assumption is that the experience of a first kiss would be considered positive by the majority of the target audience. As discussed, previous theorizing has been vague and provided little empirical support for the effect of base preference on analogical persuasiveness (for example, Barnes and Thagard 1997; Blanchette and Dunbar 2001; Thagard and Shelley 2001). The current research adopts the perspective that base preference, in addition to knowledge of the emotions associated with the base, will be recalled from memory when processing an experiential analogy. For example, how much you hated or liked your first kiss is likely to come to mind when you process a comparison between a first kiss and driving a sports car.

Base preferences are likely to vary from consumer to consumer, and this may be reflected in the effect that emotional inferences have on the persuasiveness of an experiential analogy. First, in order for an experiential analogy to have an effect on target attitudes, it is proposed that a high number of emotional inferences must be generated. This is because generating fewer emotional inferences may reflect a breakdown in the

¹³ Alternatively, if the goal was to negatively influence target attitudes, then the base experience should be viewed negatively by the majority of the target audience.

mapping stage of analogical processing. When a link (i.e., mapping) cannot be made between a base experience and a target product, the generation of emotional inferences may become impossible. Whether or not the generation of emotional inferences will have a positive or negative effect on target attitudes may depend on how much the base experience is liked (i.e., favourability of the base preference). In other words, the effect of emotional inferences on the persuasiveness of an experiential analogy is expected to be moderated by preference for the base experience. Formally stated, it is predicted that

H1: Target attitudes will be more positive when preference for the base experience is favourable and a high number of emotional inferences are generated for the target.

When preference for the base experience is less favourable and a high number of emotional inferences are generated, it is expected that target attitudes will be more negative. This hypothesis also illustrates that neither a high number of emotional inferences, nor a favourable or less favourable base preference is alone sufficient to influence target attitudes. Both are required to maximize the persuasiveness of an experiential analogy. The current research focuses, however, on the more common use of experiential analogies to positively influence consumer attitudes.

The Persuasive Advantage of an Experiential Analogy

Hypothesis 1 suggests that the persuasiveness of an experiential analogy is contingent on the generation of emotional inferences and on how much the base experience is liked or disliked. The persuasiveness of an experiential analogy (when the goal is to enhance target attitudes) may be severely compromised if consumers generate too few emotional inferences and/or have an unfavourable preference for the base

experience. Stated more informally, there is a sweet spot that must be obtained for an experiential analogy to be persuasive. When a high number of emotional inferences are generated and consumers have a favourable preference for the base experience, it is predicted that an experiential analogy will be maximally persuasive. Obtaining these conditions may even confer a persuasive advantage over other types of appeals similarly designed to promote the consideration of target product emotions. For example, an advertisement that explicitly links an emotion to the target product in the ad copy (heretofore, called an emotional appeal advertisement) may not enhance target attitudes in comparison to an experiential analogy advertisement that presents a unique comparison to consumers. To illustrate, an emotional appeal advertisement for the Alfa Romeo Spider might state, “Excitement and thrills abound when you drive the Alfa Romeo Spider”, while the experiential analogy advertisement might state, “Like a first kiss... the Alfa Romeo Spider”.

For those who have a favourable base preference and generate a high number of emotional inferences, an experiential analogy advertisement may be more persuasive than a general emotional appeal advertisement for several reasons. First and foremost, an analogy involves a comparison between two disparate domains of knowledge. Specifically, an experiential analogy involves a comparison between two disparate experiences. When processing an experiential analogy advertisement, the disparateness of the base and target experiences may 1) enhance consumers’ knowledge of the emotions associated with a target product experience, 2) foster a novel perspective of a target product, and/or 3) promote a deeper consideration of the emotions already known to be associated with a familiar target product. To illustrate, a recent car commercial compared

listening to an iPod and dancing at a club (bases) to driving the Ford Fusion (target). By comparing the Ford Fusion to these experiences, ad viewers may have gained an enhanced understanding of the emotions that may be experienced while driving the Fusion; a new perspective of how “fun and exhilarating” driving the Ford Fusion may have been conveyed; or, perhaps, a deeper consideration of the emotions already assumed to occur while driving the Fusion may have been encouraged. Had the idea of “fun and exhilaration” been cursorily linked to the Ford Fusion via ad copy, and without the comparison afforded by the analogy, the opportunity to enhance consumer attitudes through the acquirement and consideration of emotional knowledge and prior preferences may have been lost. Therefore, it is predicted that

H2: For those who have a favourable base preference and generate a high number of emotional inferences, an experiential analogy advertisement will have a greater positive effect on target attitudes than an emotional appeal advertisement.

For those who have a less favourable base preference and/or generate fewer emotional inferences, an experiential analogy may not enhance target attitudes in comparison to an emotional appeal advertisement.

Emotional Soundness

The hypotheses, thus far, suggest that the persuasiveness of an experiential analogy depends on the basic knowledge transfer process outlined by Structure Mapping Theory (Gentner 1983, 1989). To provide further evidence that analogical processing underlies the effect of an experiential analogy on target attitudes, the moderating role of emotional soundness on the persuasiveness of an experiential analogy is considered.

In general, an evaluation of soundness depends on the extent that inferences generated from the base are expected to hold for the target (Gentner, Ratterman and Forbus 1993). The deeper the relational structure shared between a base and target, the more sound an analogy is rated, and the more useful an analogy is in terms of prediction and learning (Gentner et al. 1993). The current research tests for the operation of soundness as a moderator of an experiential analogy's persuasiveness. To date, the effect of soundness on an analogy's *persuasiveness* has not been empirically examined, nor has the constraint of soundness for an analogical comparison involving emotional experiences been investigated.

Barnes and Thagard (1997) and Thagard and Shelley (2001) suggested that target attitudes may be influenced by transferring the emotional valence of the base to the target, a process akin to affect transfer. In contrast, emotional soundness is proposed to relate to the transfer of emotional knowledge and, specifically to the transfer of specific emotion states from the base to the target product experience. The implication is that simply linking any positive experience with a target product will not produce a sound match and, therefore the comparison will not be as persuasive of a message as when the base and target experiences share deeper relational similarities.¹⁴ It is proposed that the processing and persuasiveness of an experiential analogy will break down if mappings cannot be made between the base and target experiences (as is the case with a less sound analogy). This breakdown would likely be reflected in a reduction of the number of

¹⁴ To illustrate, an analogy that compares the use of a massage chair (target) to hot tubbing after skiing (base) may be considered an emotionally sound analogy. This is because the base and target experiences share an underlying relational structure that may be perceived as evoking similar emotion states, such as relaxation and relief. On the other hand, an experiential analogy that compares the experience of seeing a shuttle launch into space (base) with the experience of using a massage chair (target) would not be as emotionally sound. In this comparison, the base and target experiences, arguably, do not share underlying relational similarities that may be perceived as evoking similar emotion states.

emotional inferences generated for the target product. If mappings between the base and target experiences cannot be identified then emotional knowledge cannot be transferred. In order for an experiential analogy to be persuasive, the analogy must be sound, a high number of emotional inferences must be generated, and preference for the base experience must be favorable. More formally, it is predicted that

H3: When preference for the base experience is favourable and a high number of emotional inferences are generated, target attitudes will be more positive when the analogy is sound.

A Summary of the Current Research

Hypothesis 1 was designed to address the moderating effect of base preference on emotional knowledge transfer in the processing of an experiential analogy. It is proposed that experiential analogies are useful persuasion tools because they may enhance emotional knowledge of unfamiliar target products and/or promote a novel perspective or deeper consideration of more familiar target products. The persuasiveness of an experiential analogy is predicted to hinge on the transfer of emotional knowledge between two disparate experiences. The effect of emotional inferences on target attitudes will depend on preference for the base experience. Hypothesis 2 was designed to highlight the conditions under which an experiential analogy may possess a persuasive superiority over other types of emotional advertisements. Hypothesis 3 examines another constraint of analogical persuasiveness, emotional soundness. It is proposed that the emotional soundness of an experiential analogy depends on how well the base and target experiences structurally align. Mappings are likely to be based on the similarities in the events that make a base and target experience emotional. Therefore, if alignment between

the experiences and/or the mapping of the similarities is poor, then the less emotionally sound an experiential analogy will be perceived. The more emotionally sound an experiential analogy then the greater the effect that emotional inferences and base preference will have on target attitudes.

Studies 1 and 2 provide a test of hypotheses 1 and 2. Additionally, Study 2 considers the role of affect in the processing of an experiential analogy. Study 3 provides a test of hypothesis 3 and, specifically examines how emotional soundness interacts with the generation of emotional inferences and base preference to affect the persuasiveness of an experiential analogy. The role of affect was examined further in Study 3.

FIGURE 5
Base and Target Knowledge Structure Representations for an Experiential Analogy

A. BASE EXPERIENCE REPRESENTATION – Your First Kiss

B. TARGET PRODUCT EXPERIENCE REPRESENTATION – Alfa Romeo Spider

CHAPTER IV

STUDY 1

The purpose of Study 1 was to examine the role of base preference and emotional knowledge transfer in the processing of an experiential analogy. It was expected that the processing of an experiential analogy would involve the generation of emotional inferences and that the effect of these inferences on consumer attitudes would be moderated by base preference. Consumer attitudes were predicted to be most positive for those who had a favourable preference for the base experience and generated a high number of emotional inferences (hypothesis 1).

Experiential analogies involve a comparison between two disparate experiences. These comparisons are a potentially effective way to 1) enhance consumers' knowledge of the emotions associated with a target product, 2) foster a novel perspective of the target product, and/or 3) promote a deeper consideration of emotions already known to be associated with the target product. As outlined in hypothesis 2, it is predicted that an experiential analogy advertisement will possess a persuasive superiority for those who have a favourable base preference and generate a high number of emotional inferences in comparison to an advertisement with an emotional appeal. To test this hypothesis, an emotional appeal advertisement was included as a control in this study. An additional informational advertisement was included as a second control in this study.

Method

Design & Procedure

The study used a two-way between subjects design with two continuous independent variables, base preference and the total number of emotional inferences. This

design was conducted using an experiential analogy advertisement. Two additional control conditions were included and consisted of an emotional appeal ad condition and an informational ad condition. One hundred and twenty-six participants were recruited for pay (\$10) from a large West Coast university for participation in this study and were randomly assigned to the analogy condition or one of two control conditions. Participants were told they were completing the study for a company interested in feedback on a rough advertisement concept (see Appendix 1 for experimenter script). Participants viewed an ad for ten seconds. The ad was removed, and participants were then given thirty seconds to consider the ad before responding to the survey. The survey was designed to measure the independent and dependent variables.

Advertisement Stimuli & Independent Variables

Three advertisements were created to test hypotheses 1 and 2, an experiential analogy ad and two control ads, an emotional appeal ad and an informational ad. The ads were similar in layout and contained a picture of the target product (massage chair) and ad copy, “Now experience this any time of day” (see Figure 6). The analogy ad compared the experience of hot tubbing after a day of skiing (base) to the massage chair. The base and target were selected because these two experiences have relational structures that align well. No emotions were mentioned in the analogy ad. The emotional appeal control ad explicitly stated “relaxation”, the emotion that was most closely associated with the base experience in a pretest. Pretest respondents (n=17) were asked to close their eyes and visualize hot tubbing after an intense day of skiing and then to list the emotions or feelings that came to mind, if any. Relaxation was most associated with the base

experience, as listed by 64% of respondents. The informational control ad contained only the target product picture and the ad copy that was included in all three advertisements.

A test of hypothesis 1 required the measurement of two continuous variables, base preference and emotional inferences, in the analogy condition. Participants' preference for hot tubbing after a day of skiing (base) was measured by three, seven-point Likert scale items (not appealing at all/very appealing, do not like at all/ like very much, do not enjoy at all/enjoy very much; $\alpha = 0.94$). Specifically, participants were asked, "In general, how much does a day of skiing and hot tubbing appeal to you?" An exploratory factor analysis showed that these items loaded onto one factor (89.3% of the variance explained).

An open-ended question was used to measure emotional inferences (adapted from Gregan-Paxton and Moreau 2003). Participants were asked, "What does the advertisement convey to you about the Massage Chair?" Two coders, blind to the experimental condition, coded responses for the mention of emotional inferences (i.e., emotions associated with the target product experience) ($r = 0.90$). Disagreements were resolved through discussion. This coding scheme is consistent with the measurement of target inferences in the analogy literature (Gregan-Paxton 2001; Gregan-Paxton et al. 2002; Gregan-Paxton and Moreau 2003). For example, one participant responded, "The fantastic feeling you get from the hot tub after a long day of skiing can now be experienced at the comfort of your own home; relaxation and relief". Two emotional inferences would be coded in this response, relaxation and relief. The emotional inferences were coded according to the consumption emotion set identified by Richins (1997) and a broader emotion scheme by Shaver et al. (1987). Note that emotional

inferences were also expected for the emotional appeal and informational ad conditions. However, it was expected that emotional inferences in the analogy condition would be a result of transferring emotional knowledge from the base experience to the target product. In contrast, in the two control conditions, emotional inferences would be a result of accessing prior knowledge of massage chairs or making an online prediction of the massage chair experience, as these ads contained no base experience from which to transfer emotional knowledge.

Dependent Variables

The key dependent variable was ad attitude. Participants were asked, “How effective is the ad at conveying the benefits of the massage chair?” and, “Please indicate your agreement with the following statements about the general ad concept”. In response to the former question, participants rated two items on a seven-point Likert scale anchored using the following labels: “not effective”/ “very effective” and “not convincing”/ “very convincing”. In response to the latter question, participants rated two items on a seven-point Likert scale anchored by the following labels: “I dislike the general ad concept”/ “I like the general ad concept” and “the general ad concept is a bad idea”/ “the general ad concept is a good idea”. An exploratory factor analysis showed that these four items were related to a single underlying dimension (76% of the variance explained). Therefore, the scores were averaged to create an overall measure of ad attitude (ad effective, ad convincing, ad like, ad good; $\alpha = 0.89$). Note that the open-ended question used to measure emotional inferences, the base preference measure, and ad attitude measure were counterbalanced and presented as separate surveys to control for order effects. No order effects were found.

Participants also responded to general demographic questions, for example, age, gender, years of education, birth country and years residing in Canada in addition to suspicion probes. The average age of the sample was 21.65 years (± 4.04 SD) and ranged from 18 to 46 years of age. Thirty four percent of participants were male, and 65.5% of participants were female. The average years of university completed was 2.70 years (± 1.71 SD), ranging from 0 to 12 years. Approximately 34% of the sample was born in Canada. On average, the sample reported residing in Canada for 11.78 years (± 8.65 SD), ranging from less than a year to 46 years. None of the demographic measures had a significant effect on the key dependent variables or interacted with the key independent variables in this study. Accordingly, analysis of the suspicion probes revealed that participants were not aware of the hypotheses in this study. See Appendix 2 for survey instrument.

Results

Experiential Analogy Condition

Regression analysis was used to test for the moderating effect of base preference on the relationship between emotional inferences and ad attitude in the analogy condition. Base preference and emotional inference measures were centered and entered as independent variables into a regression model. To test hypothesis 1, the centered base preference and emotional inference variables were multiplied and entered into the regression model as an interaction term. A significant interaction between emotional inferences and base preference on ad attitude was found ($b = 0.18$, $t = 2.03$, $p < .05$). No other effects were significant. Preference for a day of skiing and hot tubbing did not

significantly predict ad attitude ($b = 0.23$, $t = 1.77$, $p > .05$). Emotional inferences did not significantly predict ad attitude ($b = 0.13$, $t = 1.12$, $p > .05$).

To facilitate interpretation of the interaction, simple slopes tests were conducted in the analogy condition. Simple slopes tests allow for the interpretation of an interaction between two continuous independent variables and are comparable to tests of simple effects in ANOVA (West, Aiken, and Krull 1996). With respect to moderation, an interaction between two continuous variables signifies that the regression of a dependent variable on a predictor variable changes at a constant rate as a function of changes in the moderator (Cohen et al. 2003). Essentially, simple slopes tests permit an analysis of whether or not there is a significant effect of the predictor on the dependent variable at specified levels of the moderator (Cohen et al. 2003). Choosing to perform the simple slopes tests at one standard deviation above and below the mean of the moderator is the general convention (Cohen et al. 2003; Preacher, Curran, and Bauer 2006; West et al. 1996). With respect to the current research, an interaction between base preference and emotional inferences was found. The effect of emotional inferences on ad attitude was examined for those who had a more favourable base preference and for those who had a less favourable base preference. A more favourable base preference was designated as one standard deviation above the mean of base preference. A less favourable base preference was designated as one standard deviation below the mean of base preference. Accordingly, a simple regression equation was calculated for those who had a more favourable base preference and for those who had a less favourable base preference (see Figure 7). The significance of the simple slope coefficient in each simple regression equation indicates whether or not the predictor had a significant effect on the dependent

variable at each specified level of the moderator (Cohen et al. 2003; Preacher et al. 2006; West et al. 1996). As shown in Figure 7, the positive effect of emotional inferences on ad attitude was significant when base preference was favourable ($b = 0.39$, $t = 2.65$, $p < .05$). When base preference was unfavourable, the effect of emotional inferences on ad attitude was non-significant ($b = -0.13$, $t = -0.64$, $p > .05$). In other words, the more emotional inferences generated and the more favourable was preference for skiing and hot tubbing, then the more positive was ad attitude. See Table 1 for a comparison of predicted means at one standard deviation above and below the mean of base preference and the mean of emotional inferences.¹⁵ The effect of emotional inferences on ad attitude was mitigated when base preference was less favourable.

Experiential Analogy Ad versus Control Ads

The results of the simple slopes analysis suggest that the persuasiveness of the experiential analogy ad was driven by those who generated a high number of emotional inferences and had a favourable base preference. Therefore, in order to test hypothesis 2, ad attitude for those who generated a high number of emotional inferences and had a favourable base preference in the analogy condition was compared to ad attitude in the two control conditions. Median splits on base preference and emotional inferences were computed in the analogy condition to facilitate comparisons with the control conditions (see Table 2 for means). Ad attitude differed significantly among the three conditions ($F(2,77) = 6.67$, $p < .05$). The analogy ad ($M=5.13$) was liked significantly more by those who generated a high number of emotional inferences and had a favourable base preference in comparison to the emotional appeal control ad ($M=3.90$) and the

¹⁵ The predicted means in Table 1 were calculated by substituting one standard deviation above and below the mean number of emotional inferences generated into the simple regression equations shown in Figure 7.

informational control ad ($M=3.54$) (respectively, $t(45) = 2.81, p < .05$; $t(45) = 3.70, p < .01$). Ad attitude did not significantly differ between the emotional appeal and informational control ads ($t(64) = 1.06, p > .05$).¹⁶

Discussion

The findings are consistent with hypotheses 1 and 2. Experiential analogies cue the transfer of emotional knowledge from the base experience to the target product. One's preference for skiing and hot tubbing moderated the effect of emotional knowledge transfer on ad attitudes. This suggests that base preference and emotional knowledge are distinct pieces of information both considered during the processing of an experiential analogy. In the analogy condition, ad attitude was more positive for those who transferred a high number of emotions and had a more favourable preference for skiing and hot tubbing. Simply having a favourable preference for the base experience (which would have been represented as a main effect) or simply transferring a high number of emotions (which also would have been represented as a main effect) was not sufficient to enhance ad attitudes in the analogy condition.

At a broader level, the experiential analogy ad was significantly more persuasive than both the emotional appeal and informational control ads. This also coincided with significantly more emotional inferences generated in response to the analogy ad versus the emotional appeal and informational control ads. Analysis in the analogy condition

¹⁶ A broader analysis was also conducted to determine if the analogy ad was liked overall in comparison to the control ads (see Table 3 for means). There was a significant difference in ad attitude and emotional inferences among the ad conditions (respectively, $F(2,114)=6.93, p < .01$; $F(2,114)=5.47, p < .01$). Overall, the experiential analogy ad ($M=4.60$) was liked significantly more than the emotional appeal ad ($M=3.90$) and informational ad ($M=3.54$) (respectively, $t(82)=1.99, p = .05$; $t(82)=3.01, p < .01$). This pattern of results was replicated with emotional inferences as the dependent variable. Significantly more emotional inferences were generated in response to the experiential analogy ad ($M=2.06$) versus the emotional appeal ad ($M=1.42$) and the informational ad ($M=1.15$) (respectively, $t(82)=2.04, p < .05$; $t(82)=3.12, p < .01$).

suggests that this effect was driven by the interaction of emotional inferences and base preference. Individuals who generated a high number of emotional inferences and had a favourable base preference in the analogy condition had more positive ad attitudes in comparison to the emotional appeal and informational control ads. In other words, if you liked skiing and hot tubbing and associated a high number of emotions with the massage chair experience then, the analogy ad was more persuasive than the emotional appeal or informational ads.

These results are interesting for several reasons. The persuasive superiority of the analogy ad for those who had a favourable base preference and generated a high number of emotional inferences may have been a result of both the unique comparison afforded by the analogy and the number of emotional inferences generated. First, recall that relaxation was explicitly mentioned in the ad copy of the emotional appeal condition. This could have had two effects on the generation of emotional inferences in the emotional appeal condition. The direct emotional reference may have provided a signal for participants to focus and elaborate on the emotional aspects of the massage chair. Alternatively, the emotional reference may have narrowed attention to relaxation at the expense of considering additional emotions. No emotions were mentioned in the analogy ad copy. However, significantly more emotional inferences were generated in response to the analogy ad versus the emotional appeal ad. This suggests that the emotional appeal ad narrowed participants' focus to relaxation, whereas the analogy ad encouraged elaboration and the transfer of emotional knowledge from the base experience to the target product.

In contrast to the emotional appeal ad, the informational ad arguably provided a less restrictive cue to think about experiences and/or emotions. The ad copy consisted only of the experiential tagline that was included in all three ads, “Now experience this anytime of day”. However, despite this less restrictive cue, emotional inferences were still higher in the analogy condition. This suggests that an experiential analogy derives its persuasiveness from enhanced consideration of emotional knowledge and something more unique to the analogy. In veritably, the persuasiveness of an experiential analogy may also be attributed to the comparison it affords. Comparing the massage chair to hot tubbing after a day of skiing cued the activation and consideration of emotional knowledge and preferences associated with this base experience. The significant interaction between emotional inferences and base preference is evidence of this. Since a base experience is not cued in the emotional appeal or informational conditions, this provides additional evidence for the effect of base preference on the persuasiveness of an experiential analogy. This study provides the first known empirical evidence for what type of knowledge is salient during the processing of an experiential analogy and highlights an important moderator of analogical persuasiveness, base preference.

Considering that emotional knowledge is transferred and that the base experience tends to be emotionally charged, it is possible that affective responses may play a role in the processing of an experiential analogy. Therefore, Study 2 was designed to address the role of affective responses in the processing of an experiential analogy.

FIGURE 6
Analogy and Control (Emotional Appeal and Informational) Advertisements
(Study 1)

FIGURE 7
Analogy Condition: Effect of Emotional Inferences and Base Preference on Ad Attitude (Study 1)

NOTE. – The slope coefficient for favourable base preference is significant at $p < .05$; for less favourable base preference, the slope coefficient is $p = \text{NS}$.

TABLE 1
Analogy Condition: Predicted Means for Ad Attitude as a Function of Base Preference and Emotional Inferences (Study 1)

	<u>Low Emotional Inferences (-1SD)</u>		<u>High Emotional Inferences (+1SD)</u>	
	Base Preference Less Favourable (-1SD)	Base Preference Favourable (+1SD)	Base Preference Less Favourable (-1SD)	Base Preference Favourable (+1SD)
Ad Attitude	4.41	4.33	4.03	5.47

TABLE 2
Means for Those Who Generated a High Number of Emotional Inferences and had
a Favourable Base Preference in the Analogy Condition Versus the Emotional
Appeal and Informational Conditions (Study 1)

	Ad Attitude
Experiential Analogy Ad (high emotional inferences & favourable base preference)	5.13
Emotional Appeal Ad	3.90 ^a
Informational Ad	3.54 ^a

Note: column means that do not share a common superscript differ at $p < .05$

TABLE 3
Means Across All Ad Conditions (Study 1)

	Ad Attitude	Emotional Inferences
Experiential Analogy Ad	4.60	2.06
Emotional Appeal Ad	3.90 ^a	1.42 ^a
Informational Ad	3.54 ^a	1.15 ^a

Note: column means that do not share a common superscript differ at $p < .05$

CHAPTER V

STUDY 2

The results from Study 1 were consistent with hypotheses 1 and 2. The processing of an experiential analogy involved the transfer of emotional knowledge from the base experience to the target product. The effect of emotional inferences on analogical persuasiveness was moderated by base preference. For those who had a favourable base preference and generated a high number of emotional inferences, the experiential analogy advertisement possessed a persuasive superiority over other types of emotion-oriented advertisements.

Both the results of Study 1 and findings from previous analogy research indicate that the processing of an analogy may require substantial cognitive resources (Blanchette and Dunbar 2002; Kubose et al. 2002; Roehm and Sternthal 2001). Effortful and purposeful are terms often used to describe analogical processing (Gregan-Paxton and Roedder John 1997). This suggests that manipulating the availability of cognitive resources may be an ideal way to demonstrate that the processing of an experiential analogy involves the cognitive consideration and transfer of *emotional* knowledge. In other words, by manipulating the availability of cognitive resources through low and high levels of cognitive load, the generation of emotional inferences should be directly affected. It was anticipated that participants under high load would generate significantly fewer emotional inferences than those under low load; thus, providing further evidence that the processing of an experiential analogy entails the transfer of emotional knowledge. Like Study 1, it was expected that the effect of emotional inferences on ad attitude would be moderated by base preference. Specifically, this effect would be

represented as a significant interaction between cognitive load and base preference. This effect was also expected to extend to target product attitudes.

Accounting for the role of affect that may be generated in the processing of an experiential analogy is also important in providing converging evidence for the effect of emotional knowledge transfer on target attitudes. Given that an experiential analogy tends to involve a more emotional base experience and that resolving an analogy has been shown to generate positive affect (Gregan-Paxton et al. 2002; McQuarrie and Mick 1996, 1999), it is necessary to measure and assess affect as a predictor of target attitudes. Affect in the current research refers to any momentarily experienced feelings that are elicited while viewing an ad. Measuring affect will provide additional support for the persuasiveness of an experiential analogy being contingent on emotional knowledge transfer rather than the generation or transfer of positive feelings from the base experience to the target product as might be predicted by the “feelings-as-information” perspective or the metaphor literature (McQuarrie and Mick 1996, 2003; Pham 1998; Schwarz 1990; Schwarz and Clore 1983, 1996). It is anticipated that the moderating effect of base preference on emotional inferences and target attitudes will remain significant when affect is included as a predictor into the regression model.

Two control conditions (an emotional appeal advertisement viewed under low and high cognitive load) were included in this study. This allowed for a comparison similar to the emotional appeal control condition in Study 1 and an additional test of hypothesis 2.

Method

Design & Procedure

A two-way between subjects experimental design was used with one manipulated factor, cognitive load (low/high), and one continuous measured factor, base preference. This design was conducted using an experiential analogy advertisement. Two additional control conditions were included and consisted of an emotional appeal ad condition at low and high levels of cognitive load. One hundred and eighteen participants from a large West Coast university were recruited to participate in the study in exchange for course credit. Participants were told that they were completing the study for a company interested in examining the effect of media multi-tasking on consumer memory (see Appendix 3 for experimenter script). Participants were given twenty-five seconds to complete the cognitive load manipulation with the goal of accurately recalling the number later in the study (see Appendix 4 for participant instructions) (adapted from Shiv and Fedorikhin 2002). After the cognitive load manipulation, the procedure followed Study 1 with one exception. While viewing the ad, participants were reminded to also keep their focus on the number. Prior to completing the base preference measure and key dependent variables, participants were asked to recall the memorized number and were reminded that they no longer needed to focus on the number for the remainder of the study.

Advertisement Stimuli & Independent Variables

A new experiential analogy was used in this study. The target product was an eco-tour adventure package. The base experience was finishing a challenging video game. Similar to Study 1, the base experience and target product were selected because they

possess relational structures that seem reasonably well aligned. The ad stimuli were similar in format to Study 1. Both the experiential analogy ad and the control ad contained a picture of the target product experience and a fictitious brand name, “ActionZone Eco-Tours” (see Figure 8). The analogy ad copy described the base experience, while the control ad copy described the target experience and referenced the emotion, excitement. Excitement was shown to be most closely associated with the base experience in a pretest. Pretest respondents (n=20) were instructed to close their eyes and visualize the experience of finishing a challenging video game and to list the emotions or feelings that came to mind, if any. Twenty-five percent of pretest respondents associated excitement with finishing a challenging video game, which was significantly more than any other cited emotion. The analogy ad copy did not cite any emotions.

Participants were randomly assigned to receive low or high cognitive load. Participants under low cognitive load memorized a two-digit number, 85, and those under high load memorized a thirteen-digit number, 85491763289 (adapted from Shiv and Fedorikhin 2002). Preference for the base experience was measured the same as in Study 1. Participants were asked, “In general, how much does playing video games appeal to you?” Participants rated three items on a seven-point Likert scale (not appealing at all/very appealing, do not like at all/ like very much, do not enjoy at all/enjoy very much). The base preference items loaded onto one factor that accounted for 93% of the variance and were averaged to form an overall base preference index ($\alpha = 0.96$).

Dependent Variables

Target Product and Ad Attitudes. To measure target product attitudes, participants were asked, “Based on the ad you saw, what is your impression of

ActionZone Eco-Tours?” Participants rated three items ranging from -4 to 4 and anchored by “dislike very much”/ “like very much”, “very negative”/ “very positive”, “very unfavourable”/ “very favourable” ($\alpha = 0.93$). The items loaded onto a single factor that accounted for 88% of the variance. The ad attitude measure consisted of the same four items used in Study 1 (ad effective, ad convincing, ad like, ad good; $\alpha = 0.89$). An exploratory factor analysis showed that the items were related to a single underlying dimension (76% of the variance explained).

Affect. Affect was measured using a five item index that consisted of emotions that were associated with the base experience in the pretest (excited, energetic, aroused, positive and satisfied; $\alpha = 0.79$). These items were measured using a seven-point Likert scale with one being the least representative and seven being the most representative of how participants felt in the present moment. The instructions for this task were adapted from Watson, Clark, and Tellegen (1988). A factor analysis showed that these five items represented a single underlying dimension (54.1% of the variance explained). The items were averaged to form an overall affect index.

Manipulation Check. The cognitive load manipulation, designed to manipulate the generation of emotional inferences, was assessed through an open-ended question and through a one item index asking participants how much attention they paid to the ad, where one represented “very little” and seven represented “very much”. The open-ended question in Study 1 was used to measure emotional inferences and to assess how much participants focused on the memory task. The latter measure was a cognitive load manipulation check used by Shiv and Fedorikhin (2002). Two coders coded the open-

ended question for the mention of emotions associated with the target product.

Agreement was 92%, and discrepancies were resolved through discussion.

Note that the open-ended question (used to measure the manipulation check), attitude and affect measures were counterbalanced to control for order effects. No order effects were found.

Demographics. Like Study 1, participants responded to general demographic questions and suspicion probes. The average age of the sample was 20.76 years (± 1.68 SD) and ranged from 18 to 31 years of age. Thirty eight percent of participants were male, and 62.0% of participants were female. The average years of university completed was 2.67 years (± 1.04 SD), ranging from 1 to 6 years. Approximately 41.4% of the sample was born in Canada. On average, the sample reported residing in Canada for 12.29 years (± 6.63 SD), ranging from one to 23 years. None of the demographic measures had a significant effect on the key dependent variables or interacted with the key independent variables in this study. Accordingly, analysis of the suspicion probes revealed that participants were not aware of the hypotheses in this study. See Appendix 5 for survey instrument.¹⁷

Results

Manipulation Check

The manipulation check was consistent with a successful cognitive load manipulation (see Table 4). Participants reported paying significantly more attention to the advertisement under low load ($M=4.35$) than under high load ($M=3.13$) ($b = 1.24$, $t =$

¹⁷ The survey was run on the computer. However, for ease of reporting, the survey is appended in written form. While completing the study on the computer, participants were presented with one question at a time on the display screen.

4.23, $p < .01$). Significantly more emotional inferences were generated under low load ($M=0.30$) than under high load ($M=0.06$) ($b = 0.25$, $t = 2.04$, $p < .05$). Finally, participants mentioned that they focused more on the number in the high load condition ($M=0.15$) than in the low load condition ($M=0$) ($b = 0.15$, $t = 2.64$, $p < .01$).

Experiential Analogy Condition

Regression was used to test for the predicted interaction between cognitive load and base preference in the analogy condition. The base preference measure (centered) was multiplied by the cognitive load measure (dummy-coded) to create an interaction term. To test hypothesis 1, this interaction term, along with the cognitive load and base preference measures, was entered into the regression model to predict target product attitudes, ad attitudes, and affect in the analogy condition.

Target Product and Ad Attitudes. Consistent with hypothesis 1, the interaction between base preference and cognitive load significantly predicted target product and ad attitudes in the analogy condition (respectively, $b = -0.33$, $t = -2.08$, $p < .05$; $b = -0.42$, $t = -2.70$, $p < .05$) (see Table 5). Base preference also significantly predicted target product and ad attitudes (respectively, $b = 0.38$, $t = 3.30$, $p < .05$; $b = 0.35$, $t = 3.18$, $p < .05$). There was a moderately significant main effect of cognitive load on target product attitude ($b = -0.56$, $t = -1.93$, $p = .06$). There was no significant main effect of cognitive load on ad attitude ($b = -0.37$, $t = -1.33$, $p > .05$).

To facilitate interpretation of the interactions, simple slopes tests were performed the same as in Study 1 in the analogy condition. The simple slopes tests were conducted to examine the effect of cognitive load (i.e., the manipulation of emotional inferences) on target product and ad attitudes for those who had a more favourable base preference (one

standard deviation above the mean of base preference) versus those who had a less favourable base preference (one standard deviation below the mean of base preference). As shown in Figure 9, when preference for playing video games was more favourable, target product and ad attitudes were more positive for those under low cognitive load (i.e., a high number of emotional inferences were generated) than those under high cognitive load (respectively, $b = 0.41$, $t = -2.81$, $p < .01$; $b = 0.41$, $t = -2.81$, $p < .01$). When base preference was less favourable, target product and ad attitudes did not differ regardless of cognitive load (respectively, $b = 0.40$, $t = 0.12$, $p > .05$; $b = 0.39$, $t = 0.98$, $p > .05$) (see Table 6 for predicted means at one standard deviation above and below the mean of base preference). Overall, target product and ad attitudes were more positive for those who had a favourable base preference and generated a high number of emotional inferences (low load) in comparison to when base preference was less favourable or cognitive load was high.

Affect. A significant effect of base preference on affect was found in the analogy condition ($b = 0.20$, $t = 1.95$, $p = .05$). The more you liked playing video games, the more excited you felt after processing the analogy ad. No other significant effects were found (see Table 5). The interaction between base preference and cognitive load did not predict affect ($b = -0.19$, $t = -1.34$, $p > .05$), nor did cognitive load ($b = -0.36$, $t = 1.39$, $p > .05$). When included as a predictor into the model, affect significantly predicted attitudes toward the target product and ad (respectively, $b = 0.29$, $t = 2.27$, $p < .05$; $b = 0.36$, $t = 2.96$, $p < .01$). However, the interaction between cognitive load and base preference remained at least moderately significant (product attitude: $b = -0.28$, $t = -1.76$, $p = .08$; ad attitude: $b = 0.36$, $t = 2.96$, $p < .05$), as did the main effect of base preference on target

product and ad attitudes (product attitude: $b = 0.32$, $t = 2.27$, $p < .05$; ad attitude: $b = 0.28$, $t = 2.60$, $p < .05$).

Experiential Analogy Ad versus Control Ads

Target Product and Ad Attitudes. To test hypothesis 2, a median split on base preference was performed in the analogy condition. Similar to Study 1, this enabled a comparison between those who had a favourable base preference and generated a high number of emotional inferences (low load) in the analogy condition and the two control conditions (emotional appeal ad under low and high cognitive load). Consistent with expectations, target product attitudes were highest for those with a favourable base preference under low load in the analogy condition ($M=6.43$) versus the emotional appeal control ad under low load ($M=5.65$) and the emotional appeal control condition under high load ($M=4.88$) (respectively, $t(43) = 2.48$, $p < .05$; $t(35) = 3.21$, $p < .01$). Similarly, ad attitudes were highest for those with a favourable base preference under low load in the analogy condition ($M=4.02$) versus the emotional appeal control ad under low load ($M=3.30$) and the emotional appeal control ad under high load ($M=3.12$) (respectively, $t(43) = 2.02$, $p = .05$; $t(35) = 2.07$, $p < .05$) (see Table 7).¹⁸

Affect. Affect also did not differ significantly among those with a favourable base preference under low cognitive load in the analogy condition versus the emotional appeal control ad under low load and the emotional appeal control ad under high load (respectively, $t(43) = 0.55$, $p > .05$; $t(35) = 0.59$, $p > .05$) (see Table 7).¹⁹

¹⁸ An overall comparison of the analogy ad to the emotional appeal control ad revealed no significant difference in product or ad attitudes in either the low or high cognitive load conditions (see Table 8).

¹⁹ Affect did not differ significantly between the analogy ad and the emotional appeal control ad under low or high cognitive load (see Table 8).

Discussion

The results from Study 2 provide additional support for the transfer of emotional knowledge during the processing of an experiential analogy. In support of hypothesis 1, the analogy ad was more persuasive for those who liked playing video games and generated a high number of emotional inferences (low cognitive load). When emotional inferences were low (high cognitive load) or playing video games was less preferred, the positive effect of the analogy ad on target product and ad attitudes was reduced. Not only was additional support for hypothesis 1 provided, but, consistent with previous analogy research, the findings indicate that the processing of an experiential analogy is cognitively demanding.

Given that experiential analogies involve a comparison of a target product to an emotionally charged base, measures were included to examine the effect of affect on the processing and persuasiveness of an experiential analogy. Not surprisingly, some evidence for the generation of affect was found. In the analogy condition, those who had a favourable preference for playing video games reported feeling more excitement after viewing the ad. Overall, affect did not differ across the ad and cognitive load conditions. This result is promising, as it provides additional evidence that a cognitive process underlies the persuasive effect of an experiential analogy. Regardless of whether or not participants were under cognitive load, affect was elicited. This suggests that affect may be generated relatively automatically in response to the emotional nature of the advertisements. More importantly, when affect was included as a predictor into the model, the effect of emotional inferences and base preference on target attitudes was not significantly reduced.

In addition to examining an important constraint of analogical persuasiveness, Study 3 was designed to enable a replication of the findings in studies 1 and 2 for the effect of base preferences and emotional inferences on target attitudes and affect.

FIGURE 8
Analogy and Control (Emotional Appeal) Advertisements (Study 2)

For hours you gripped the video game controller,
as you escaped fiery peril and solved the unsolvable.
Finally, you raised the last flag high on its post.

A black and white
picture of a hiker has
been removed due to
copyright restrictions

Now take this experience outside with ActionZone Eco-Tours.

Higher and higher... step by step... sweat drop by sweat drop...
You finally climbed Mount Baker in Washington State Park.

A black and white
picture of a hiker has
been removed due to
copyright restrictions

Now experience excitement and victory outside with ActionZone Eco-Tours.

TABLE 4
Means for Manipulation Check (Study 2)

	Low Load Mean	High Load Mean	b	t
Emotions associated with target product	0.30	0.06	-0.25	-2.04*
Mention of focusing on number in open response	0.15	0.00	0.15	2.64**
Attention paid to ad	4.35	3.13	-1.24	-4.23**

* $p < .05$ level, ** $p < .01$ level.

TABLE 5
Analogy Condition: Regression Results (Study 2)

	<u>Product Attitude</u>		<u>Ad Attitude</u>		<u>Affect</u>	
	b	t	b	t	b	t
Cognitive Load	-0.56	-1.93	-0.37	-1.33	-0.36	-1.39
Base Preference	0.38	3.30**	0.35	3.18**	0.20	1.95*
Cognitive Load x Base Preference	-0.33	-2.08*	-0.42	-2.70**	-0.19	-1.34

* $p < .05$ level, ** $p < .01$ level

FIGURE 9
Analogy Condition: Effect of Cognitive Load and Base Preference on Product and Ad Attitudes (Study 2)

NOTE. – The slope coefficients for favourable base preference in part A and B are significant at $p < .05$; for less favourable base preference in part A and B, the slope coefficients $p = NS$.

TABLE 6
Analogy Condition: Predicted Means for Ad and Product Attitudes as a Function of
Cognitive Load and Base Preference ($\pm 1SD$) (Study 2)

	<u>High Load</u>		<u>Low Load</u>	
	Base Preference Less Favourable (-1SD)	Base Preference Favourable (+1SD)	Base Preference Less Favourable (-1SD)	Base Preference Favourable (+1SD)
Product	5.09	5.25	5.05	6.41
Attitude				
Ad Attitude	3.27	3.27	2.97	4.15

TABLE 7
Means for Product and Ad Attitudes Across Ad Conditions (Study 2)

	Product Attitude	Ad Attitude	Affect
Analogy/ favourable base preference /low load	6.43	4.02	4.31
Emotional Appeal/low load	5.65 ^a	3.30 ^b	4.14
Emotional Appeal/high load	4.88 ^a	3.12 ^b	3.91

Note: column means that do not share a common superscript differ at $p < .05$

TABLE 8
F-Values for the Effect of Ad Type and Cognitive Load on Product and Ad Attitudes and Affect (Study 2)

	<u>Product</u> <u>Attitude</u>	<u>Ad</u> <u>Attitude</u>	<u>Affect</u>
Ad Type	0.54	0.11	1.50
Cognitive Load	6.89**	1.15	2.00
Ad Type x Cognitive Load	0.12	0.29	0.12

*p = .05 level, **p < .05 level

CHAPTER VI

STUDY 3

The primary goal of Study 3 was to examine the effect of emotional soundness on the persuasiveness of an experiential analogy. Emotional soundness is a proposed moderator of analogical persuasiveness that is expected to operate in conjunction with the moderating role of base preference. Studies 1 and 2 showed that the persuasiveness of an experiential analogy depends on the basic knowledge transfer process outlined by Structure Mapping Theory (Gentner 1983, 1989). Studies 1 and 2 also used analogies that were designed to be emotionally sound. The primary goal of Study 3 was to manipulate the emotional soundness of an experiential analogy in order to further demonstrate that analogical processing underlies the effect of an experiential analogy on target attitudes. In order for an experiential analogy to be emotionally sound, there must be perceived relational commonalities between the base and target in terms of what is contributing to the emotionality of the two experiences. If deeper relational commonalities cannot be identified between the base and target experiences, then the transfer of emotional knowledge will be negatively affected. Similar to Study 2, affect measures were included to further demonstrate the independent effect of emotional knowledge transfer on target attitudes.

Method

Design & Procedure

A three-way between subjects experimental design was used with one manipulated factor, emotional soundness (sound experiential analogy/less sound experiential analogy), and two continuous variables, base preference and the number of

emotional inferences. Like Studies 1 and 2, an additional emotional appeal control ad was included. Participants (n=180) were recruited for course credit from a large West Coast university to participate in the study. Similar to Study 1, participants were told they were completing the study for a company interested in feedback on a rough advertisement concept (see Appendix 6 for experimenter script). Participants viewed an emotionally sound analogy ad, a less emotionally sound analogy ad or a control ad for ten seconds and were then given thirty seconds to consider the ad before responding to the survey containing the continuous independent variables and the key dependent variables.

Advertisement Stimuli & Independent Variables

A new experiential analogy was used in this study. The ad stimuli were similar in format to Studies 1 and 2 and included an emotionally sound analogy ad, a less emotionally sound analogy ad and a control ad. The sound analogy and less sound analogy advertisements were central to testing hypothesis 3. Like Studies 1 and 2, the control advertisement depicted an emotional appeal and was included to test hypothesis 2. The target product was the Bugatti Sportster, a European sports car. All of the ads contained an experiential tagline, “an experience worth repeating”, a picture of the sports car and the brand name of the target product. In the sound analogy condition, the target was compared to a first kiss. In the less sound analogy condition, the target was compared to a weekend at the cottage (see Figure 10).

A pretest confirmed that the base and target matches were perceived as more and less emotionally sound. Pretest respondents (n=19) were randomly assigned to read either the sound or less sound analogical comparisons. Respondents rated the extent to which they thought the base and target experiences shared common feelings and emotions on a

one to seven Likert scale. Respondents also answered an open-ended question where they were asked to list the feelings and emotions, if any, that they thought the base and target experiences shared. Participants rated the experiences in the sound condition ($M=2.60$) as having significantly more feelings and emotions in common than the experiences in the less sound condition ($M=1.45$) ($t(38) = 3.98$, $p < .05$). Accordingly, participants listed significantly more emotions in the open-ended question as shared between the base and the target in the sound analogy condition ($M=2.30$) than in the less sound condition ($M=1.25$) ($t(38) = 2.48$, $p < .05$). Excitement and thrilling were the emotions most frequently associated with a first kiss and driving a sports car, as listed by 61% of respondents. Therefore, these emotions were used in the ad copy of the control condition. The ad copy in the analogy conditions did not reference any emotions.

Preference for the base experience in the sound and less emotionally sound conditions was measured similar to Studies 1 and 2 (respectively, $\alpha = 0.89$, $\alpha = 0.97$). The same open-ended question as Study 1 was used to measure the generation of emotional inferences ($r = 0.90$). Disagreements were resolved through discussion.

Dependent Variables

Target product and ad attitudes were measured the same as Studies 1 and 2 (respectively, $\alpha = 0.92$, $\alpha = 0.84$). The affect measure was expanded from the five item index in Study 2 to a twelve item index. A mix of emotional descriptors both related and unrelated to the base experiences were used (e.g., excited, energetic, proud, content, relaxed, lazy). A principle components analysis of the emotions revealed three factors with eigenvalues greater than one, explaining 60% of the variance. Interpretation suggests the following three affect factors: 1) contentedness (content, positive, happy,

calm, relaxed and satisfied; $\alpha = 0.78$), 2) excited (excited, proud, energetic, and aroused; $\alpha = 0.67$), and 3) tired (tired and lazy; $\alpha = 0.70$). The item scores were averaged to form three affect indices.

Note that the open-ended response, attitude and affect measures were counterbalanced and presented as separate surveys to control for order effects. No order effects were found. Like Studies 1 and 2, participants responded to general demographic questions and suspicion probes. The average age of the sample was 22.36 years (± 4.90 SD) and ranged from 18 to 47 years of age. Thirty four percent of participants were male, and 66.0% of participants were female. The average years of university completed was 3.04 years (± 1.98 SD), ranging from zero to 15 years. Approximately 33.0% of the sample was born in Canada. On average, the sample reported residing in Canada for 12.25 years (± 8.52 SD), ranging from zero to 47 years. None of the demographic measures had a significant effect on the key dependent variables in this study. Accordingly, analysis of the suspicion probes revealed that participants were not aware of the hypotheses in this study. See Appendix 7 for an example of the survey instrument used in the less emotionally sound analogy condition. The survey was adapted accordingly for the sound analogy and control conditions.

Results

Emotionally Sound Analogy versus Less Sound Analogy Ads

Target Product and Ad Attitudes. To test hypothesis 3, the base preference and emotional inference independent variables were standardized and entered into a regression along with a dummy variable for emotional soundness (sound versus less sound) and their respective interaction terms. The independent variables and regression

results are shown in Table 9. Hypothesis 3 implies that there should be a significant interaction between base preference and emotional inferences in the emotionally sound analogy condition but not in the less sound analogy condition. In support of this, a three-way interaction between emotional soundness, base preference and emotional inferences significantly predicted target product and ad attitudes (respectively, $b = -0.55$, $t = -1.92$, $p = .05$; $b = -0.56$, $t = -2.08$, $p < .05$). The interaction between base preference and emotional inferences was also found to significantly predict target product and ad attitudes (respectively, $b = 0.50$, $t = 2.62$, $p < .05$; $b = 0.41$, $t = 2.30$, $p < .05$).

Further analysis revealed, as expected, that the interaction between base preference and emotional inferences had a significant effect on target product and ad attitudes in the sound analogy condition (respectively, $b = 0.50$, $t = 2.28$, $p < .05$; $b = 0.41$, $t = 2.28$, $p < .05$) but not in the less sound analogy condition (respectively, $b = -0.05$, $t = -0.31$, $p > .05$; $b = -0.15$, $t = -0.86$, $p > .05$). Other than a significant effect of base preference on ad attitude ($b = 0.33$, $t = 2.39$, $p < .05$), no other effects were significant in the sound analogy condition (see Table 10).

Similar to studies 1 and 2, simple slopes tests were conducted to examine the effect of emotional inferences on target product and ad attitudes for those who had a more favourable and less favourable base preference. As shown in Figure 11, the effect of emotional inferences on target product attitude was significantly more positive when base preference was favourable ($b = 0.40$, $t = 2.62$, $p < .05$). When base preference was unfavourable, the effect of emotional inferences on target product attitude was non-significant ($b = 0.36$, $t = -1.40$, $p > .05$). This pattern of results was replicated with ad attitude. The effect of emotional inferences on ad attitude was significantly more positive

when base preference was favourable ($b = 0.36, t = 2.22, p < .05$). When base preference was unfavourable, the effect of emotional inferences on ad attitude was non-significant ($b = 0.33, t = -1.46, p > .05$). In summary, the more emotional inferences generated and the more a first kiss experience was liked, then the more positive were target product and ad attitudes (see Table 11 for predicted means).

Affect. Similar to the analysis of attitudes, base preference and emotional inferences were entered as standardized independent variables along with their respective interactions and a dummy variable for emotional soundness (sound versus less sound) to predict affect. The independent variables and regression results are shown in Table 12. There was a significant effect of emotional soundness on reported feelings of contentedness ($b = -0.29, t = -2.09, p < .05$). Participants felt significantly more content after viewing the sound analogy ad ($M=5.01$) versus the less sound analogy ad ($M=4.73$).

There was a significant effect of base preference on excitement ($b = 0.35, t = 2.83, p < .01$), which was qualified by a moderately significant interaction between emotional soundness and base preference ($b = -0.34, t = -1.82, p = .07$). Base preference significantly predicted how excited participants felt in the sound analogy condition ($b = 0.35, t = 2.78, p < .01$), but this relationship was non-significant in the less sound analogy condition ($b = 0.01, t = 0.05, p > .05$). These results suggest that the more participants liked a first kiss experience, the more excited they reported feeling after viewing the emotionally sound analogy ad.

There was also a significant effect of emotional soundness on how tired participants reported feeling ($b = 0.71, t = 2.96, p < .01$). Participants felt significantly more tired in the less sound analogy condition ($M=3.92$) in comparison to the sound

analogy condition ($M=3.24$). Finally, there was a significant effect of base preference on how tired participants reported feeling ($b = -0.35$, $t = -2.14$, $p < .05$).

To determine if accounting for affect would reduce the significant three-way and two-way interactions between emotional soundness, base preference and emotional inferences on target product and ad attitudes, the three affect measures were standardized and individually entered as predictors into the regression model. When the contentedness factor was included as a predictor, the previously reported significant three-way interaction effect between emotional soundness, base preference and emotional inferences on target product and ad attitudes remained at least moderately significant (respectively, $b = -0.51$, $t = -1.79$, $p = .07$; $b = -0.52$, $t = -1.95$, $p = .05$). Similarly, the previously reported significant two-way interaction effect between base preference and emotional inferences on target product and ad attitudes remained significant (respectively, $b = 0.46$, $t = 2.48$, $p < .05$; $b = 0.38$, $t = 2.16$, $p < .05$). Interestingly, the contentedness factor was also a significant predictor of target product and ad attitudes (respectively, $b = 0.27$, $t = 2.45$, $p < .05$; $b = 0.24$, $t = 2.33$, $p < .05$).

When the excitement factor was included as a predictor into the model, the previously reported significant three-way interaction effect between emotional soundness, base preference and emotional inferences on target product and ad attitudes remained significant (respectively $b = -0.55$, $t = -1.93$, $p = .05$; $b = -0.56$, $t = -2.10$, $p < .05$). The two-way interaction effect between base preference and emotional inferences on target product and ad attitudes also remained significant (respectively, $b = 0.50$, $t = 2.65$, $p < .01$; $b = 0.42$, $t = 2.35$, $p < .05$). Unlike the contentedness factor results, the excitement factor was not a significant predictor of target product or ad attitudes when

included in the regression model (respectively $b = 0.15$, $t = 1.34$, $p > .05$; $b = 0.19$, $t = 1.77$, $p > .05$).

Similar to the excitement factor results, when the tired factor was included as predictor into the model, the previously reported significant three-way interaction effect between emotional soundness, base preference and emotional inferences on target product and ad attitudes remained significant ($b = -0.55$, $t = -1.91$, $p = .05$; $b = -0.57$, $t = -2.13$, $p < .05$). The significant two-way interaction effect between base preference and emotional inferences on target product and ad attitudes also remained significant (respectively, $b = 0.50$, $t = 2.60$, $p < .05$; $b = 0.43$, $t = 2.40$, $p < .05$). Finally, similar to the excitement factor results, the tired factor was not a significant predictor of target product and ad attitudes when included in the regression model (respectively, $b = -0.01$, $t = -0.10$, $p > .05$; $b = -0.09$, $t = -0.83$, $p > .05$).

Emotionally Sound Analogy Ad versus Less Sound Analogy and Control Ads

Target Product and Ad Attitudes. Median splits on base preference and emotional inferences were computed in the sound analogy condition to facilitate a test of hypothesis 2 and additional comparisons with the sound analogy ad condition. Specifically, this involved a comparison among those who had a favourable base preference and generated a high number of emotional inferences in the sound analogy condition to the less sound analogy condition and the control condition (see Table 13 for means). Target product and ad attitudes were highest for those who had a favourable base preference and generated a high number of emotional inferences in the sound analogy condition ($M=6.70$) in comparison to the less sound analogy condition ($M=5.99$) (respectively, $t(95) = 2.67$, $p < .05$; $t(95) = 3.36$, $p < .05$) and the emotional appeal control condition ($M=5.93$)

(respectively, $t(63) = 2.48$, $p < .05$; $t(63) = 2.44$, $p < .05$). Target product and ad attitudes did not differ significantly between the less sound analogy and control conditions (respectively, $t(102) = 0.28$, $p > .05$; $t(102) = 1.07$, $p > .05$).²⁰

Affect. Those with a favourable base preference and who generated a high number of emotional inferences in the sound analogy condition reported feeling significantly more content, less tired and moderately more excited than those in the less sound analogy condition (See Table 13 for means). Those with a favourable base preference and who generated a high number of emotional inferences in the sound analogy condition reported feeling less tired than those in the emotional appeal control condition. Finally, there were no significant differences between the less sound and emotional appeal conditions on any of the affect measures.

Discussion

Support for hypothesis 3 was found, thus providing empirical evidence that emotional soundness operates as a moderator of an analogy's persuasiveness when the comparison involves experiences. Study 3 showed that the use of any positive base experience in an experiential analogy may not be effective. The transfer of emotional knowledge breaks down when the mappings between the base and target experiences are not based on relational similarities. The emotionally sound analogy ad was shown to be more persuasive for those who generated a high number of emotional inferences and had a favourable first kiss experience. Further, for those who had a favourable base

²⁰ Overall, the results suggest that the apt analogy ad ($M=4.33$) was liked more than the less apt analogy ad ($M=3.93$) ($t(142) = 1.86$, $p = .06$). The apt analogy ad was also liked significantly more than the emotional appeal ad ($M=3.69$) ($t(110) = 2.35$, $p < .05$). However, similar to Study 2, there was no overall significant difference in target product attitude among the apt ($M=6.13$), less apt ($M=5.99$) and emotional appeal control ($M=5.93$) conditions ($t's < 0.74$, $p's > .05$).

preference and generated a high number of emotional inferences, the emotionally sound analogy ad possessed a persuasive superiority over a more general emotional appeal ad. When the emotional valence of the base and target experiences were positive, but the base and target did not share a strong structural alignment, (i.e., when the sports car was compared to a weekend at the cottage), participants were likely unable to establish the mappings necessary to transfer emotional knowledge from the base experience to the target product.

Similar to Study 2, an experiential analogy was shown to evoke an affective reaction. Most notably, feelings of contentedness and excitement seemed to be associated with viewing the emotionally sound analogy advertisement. To some extent, these feelings of contentedness and excitement were higher for those who had a favourable base preference and generated a high number of emotional inferences in comparison to the less sound analogy and emotional appeal ads. Importantly, when the three affect factors were included as predictors into the regression model, the interaction between base preference and emotional inferences remained significant. These findings are also consistent with the results from Study 2 and further suggest that the processing of an experiential analogy cannot be fully accounted for by affect transfer.

FIGURE 10
Emotionally Sound Analogy, Less Sound Analogy and Control (Emotional Appeal)
Advertisements (Study 3)

TABLE 9
Regression Results for the Effect of Emotional Soundness, Base Preference and Emotional Inferences on Target Product and Ad Attitudes (Study 3)

Independent Variable	Target Product Attitude		Ad Attitude	
	b	t	b	t
Emotional Soundness	-0.10	-0.47	-0.37	-1.82
Emotional Inferences (EI)	0.28	1.87	0.17	1.19
Base Preference (BP)	0.28	1.88	0.33	2.39**
Emotional Soundness x EI	-0.21	-0.89	-0.08	-0.37
Emotional Soundness x BP	0.07	0.33	0.04	0.17
EI x BP	0.50	2.62**	0.41	2.30**
Emotional Soundness x EI x BP	-0.55	-1.92*	-0.56	-2.08**

*p = .05 level, **p < .05 level

TABLE 10
Emotionally Sound Analogy Condition: Regression Results (Study 3)

	<u>Product Attitude</u>		<u>Ad Attitude</u>	
	b	t	b	t
Emotional Inferences	0.28	1.63	0.17	1.07
Base Preference	0.28	1.64	0.33	2.16*
Emotional Inferences	0.50	2.28*	0.41	2.07*
x Base Preference				

* $p < .05$ level, ** $p < .01$ level

FIGURE 11
Emotionally Sound Analogy Condition: Effect of Emotional Inferences and Base Preference on Product and Ad Attitudes (Study 3)

A) Product Attitude

B) Ad Attitude

NOTE. – The slope coefficients for favourable base preference in part A and B are significant at $p < .05$; for less favourable base preference in part A and B, the slope coefficients $p = \text{NS}$.

TABLE 11
Emotionally Sound Analogy Condition: Predicted Means for Target Product and
Ad Attitudes as a Function of Emotional Inferences ($\pm 1SD$) and
Base Preference ($\pm 1SD$) (Study 3)

	<u>Low Emotional Inferences</u>		<u>High Emotional Inferences</u>	
	Base Preference Less Favourable (-1SD)	Base Preference Favourable (+1SD)	Base Preference Less Favourable (-1SD)	Base Preference Favourable (+1SD)
Product	6.35	5.04	4.93	8.00
Attitude				
Ad Attitude	4.45	3.69	3.10	5.96

TABLE 12
Regression Results for the Effect of Emotional Soundness, Base Preference and
Emotional Inferences on Affect (Study 3)

Independent Variable	<u>Contentedness</u>		<u>Excited</u>		<u>Tired</u>	
	b	t	b	t	b	t
Emotional Soundness	-0.29	-2.09*	-0.20	-1.09	0.71	2.96**
Emotional Inferences (EI)	0.05	0.57	0.08	0.66	-0.03	-0.16
Base Preference (BP)	0.11	1.21	0.35	2.83**	-0.35	-2.14*
Emotional Soundness x EI	-0.14	-0.93	0.17	0.88	0.06	0.22
Emotional Soundness x BP	0.00	0.02	-0.34	-1.82 ^a	0.32	1.29
EI x BP	0.10	0.86	-0.04	-0.22	0.37	1.75
Emotional Soundness x EI x BP	-0.14	-0.76	0.01	0.05	-0.27	-0.84

*p < .05 level, **p < .01 level, a denotes p = .07 level

TABLE 13
Means for Those Who Generated a High Number of Emotional Inferences and had
a Favourable Base Preference in the Sound Analogy Condition Versus the Less
Sound and Emotional Appeal Conditions (Study 3)

	Product Attitude	Ad Attitude	Content Factor	Excited Factor	Tired Factor
Sound Analogy/ favourable BP /high EI	6.70	4.82	5.28 ^b	3.97 ^b	2.90
Less Sound Analogy	5.99 ^a	3.94 ^a	4.73 ^a	3.53 ^a	3.92 ^a
Emotional Appeal	5.93 ^a	3.69 ^a	4.90 ^{ab}	3.75 ^{ab}	3.84 ^a

Note: column means that do not share a common superscript differ at $p < .05$ for; BP = base preference; EI = emotional inferences

CHAPTER VII

GENERAL DISCUSSION

Overview

A first kiss. Shopping in New York. A first pair of designer shoes. When included in a comparison, the current research shows that these experiences may enhance an individual's emotional knowledge and attitude towards a seemingly unrelated experience, like driving a sports car. By drawing on the analogy and consumption experience literatures, an account of how consumers process these comparisons has been provided. More importantly, a significant moderator of analogical persuasiveness has been identified, base preference. Emotional soundness was also found to be an important moderator, thus providing additional evidence that analogical processing underlies the persuasive effect of an experiential analogy on target attitudes.

Findings across three studies suggest that experiential analogies promote the acquirement of emotional knowledge through a comparison of disparate experiences. When faced with an analogy that compares an advertised product with a base experience, the findings indicate that individuals cognitively consider the emotions known to be associated with the base experience and transfer this knowledge to the target product. The generation of emotional inferences, measured as an independent variable across all three studies, is evidence of this. A major contribution of the current research, however, is the identification of preference for the base experience as an important moderator of analogical persuasiveness. How much the base experience is liked was shown to moderate the effect of emotional knowledge transfer on the persuasiveness of an experiential analogy. The more an individual liked the base experience and the more emotional inferences that were generated, then the more positive were attitudes towards

the target product and ad. In essence, there is a “sweet spot” that must be obtained for an experiential analogy to be persuasive. When a base experience is perceived less favourably, or if too few emotional inferences are generated, the persuasiveness of an experiential analogy may be compromised. Generating fewer emotional inferences may signal a breakdown in the transfer of emotional knowledge from the base experience to the target product. When this occurs, individuals may not have comprehended the emotional link between the base and target. Alternatively, nothing new may have been learned about the emotions associated with the use of the target product or a novel perspective of the target product may not have been conveyed. All of this may be signaled when a low number of emotional inferences are generated.

Not only is the examination of base preference as a general moderator of analogical persuasiveness a contribution, but finding that base preference *specifically* moderates the effect of emotional inferences on target attitudes is also unique to the current research. The findings strongly suggest that neither base preference, nor emotional inferences are individually sufficient to maximize the persuasiveness of an experiential analogy. When a high number of emotional inferences are generated and preference for the base experience is favourable, the findings indicate that an experiential analogy may even be more persuasive than other types of emotional advertisements (e.g., a direct emotional appeal ad).

Base Preference, Emotional Knowledge Transfer & Emotional Soundness

Study 1 explored how the persuasiveness of an experiential analogy depends on the moderating effect of base preference and emotional knowledge transfer. In particular, a massage chair (target) was compared to the experience of hot tubbing after a day of

skiing (base). The point was to encourage the access of prior emotional knowledge and preferences related to hot tubbing and skiing in order to enhance an individual's perspective of the emotions that may be experienced while using the massage chair.

When an individual thinks about prior experiences, research has suggested that consideration of emotions will dominate this recollection (Havlena and Holbrook 1986; Hirschman and Holbrook 1982; Holbrook et al. 1986; Mano and Oliver 1993). However, how much the base experience is liked was predicted and found to have a significant effect on how the emotions cognitively associated with the base experience affect target attitudes.

The use of a cognitive load manipulation in Study 2 enabled a more direct manipulation of emotional inferences than the continuous measure used in Studies 1 and 3. Consistent with previous research on analogy, the use of this manipulation confirmed that the processing of an experiential analogy is cognitively demanding. In this study, an adventure tour package (target) was compared to the experience of finishing a challenging video game (base). Like Study 1, attitudes toward the adventure tour package and the respective advertisement depended on the transfer of emotional knowledge and on individuals' preferences for playing video games. The findings from this study provided a replication of the moderating effect of base preference. However, the actual manipulation of emotional inferences demonstrated that when the mapping and transfer of emotional knowledge is disrupted (e.g., through the use of cognitive load) or cognitive resources are limited, the persuasiveness of an experiential analogy may be diminished.

While Study 2 focused more directly on the role of emotional knowledge transfer in the processing of an experiential analogy, Study 3 was designed to examine another

important constraint of analogical persuasiveness, emotional soundness. The findings from Study 3 indicate that an experiential analogy must be emotionally sound in order to be persuasive. The emotionally sound analogy in this study involved a comparison between a first kiss (base) and a sports car (target), while the less emotionally sound analogy involved a comparison between a weekend at a cottage (base) and a sports car (target). The findings suggest that a base and target must have more than an emotional valence in common with one another in order to be persuasive. In other words, there are limitations on what types of experiences a target product may be compared to if the goal is to enhance consumers' emotional knowledge of a target product. The findings from Study 3 suggest that comparing a target product to any positive experience will not enhance consumer attitudes. Therefore, careful consideration must be given as to whether or not a base experience and a target product may be perceived as evoking similar emotional states.

Affect versus Emotional Knowledge

Theorizing on emotions and analogy has suggested that an analogy may be persuasive if the emotional valence of a base is transferred to a target (Thagard and Shelley 2001). This prediction is also similar to what affect transfer theory might attribute to the persuasiveness of an experiential analogy. The good or bad feelings one has in response to a base experience may be inadvertently attributed to how one feels about the target product. The findings from the current research diverge from this prediction in two ways. First, it is worth highlighting again that the current research distinguished between base preference, emotional knowledge and affective responses. While previous theorizing predicted that an analogy would be persuasive if the emotional valence attached to the

base was transferred to the target, the findings from the current research indicate that the persuasiveness of an experiential analogy involves the cognitive consideration of prior emotional knowledge. In other words, the processing and persuasiveness of an experiential analogy involves thinking about previously experienced emotions (or one's expectations about the emotions associated with a base experience). Affective responses were evoked as a result of processing an experiential analogy. However, affective responses did not consistently predict target attitudes, nor did including affect as a predictor into the model diminish the moderating effect of base preference on emotional knowledge transfer. These results suggest that affect is generated when processing an experiential analogy but cannot fully account for the persuasiveness of an experiential analogy.

Limitations & Future Directions

Across all three studies, the experiential analogies were created to obtain variance on the base preference measure. Variance in base preference was necessary in order to demonstrate support for hypotheses 1 and 2. However, the base experiences in all three studies were likely to be positive or at least neutral experiences for the majority of participants. Therefore, it is questionable as to whether the findings may generalize to experiential analogies that use negative base experiences to diminish consumer attitudes. The current findings, in addition to the earlier theoretical development of base preference as a moderator of analogical persuasiveness, suggest that a negative base preference will moderate the transfer of emotional knowledge in a manner that decreases target attitudes. Yet, empirical investigation is needed to determine if the effect of base preference on the persuasiveness of an experiential analogy is, indeed, symmetric for positive and negative

base experiences. The use of experiential analogies that involve a negative base experience may be particularly relevant to public policy issues. For example, public policy makers could use experiential analogies to promote consideration of the negative emotional effects and/or a new and unique perspective of harmful behaviours, such as smoking or binge drinking.

An additional limitation of the current research is that the generalizability of the findings is restricted to a younger adult population (i.e., early twenties) who have completed approximately two years of post secondary education. Future research should aim to use a sample that possesses broader variance on the key demographic variables measured in this study.

This research provides a starting point for understanding how consumers process experiential analogies, but additional research may be pursued in at least three areas. Ruth (2001) examined how a brand's emotional benefits can serve as important input into the formation of a brand attitude. In the spirit of this, future research may wish to determine if emotional inferences are perceived as target product benefits. Is this underlying perception contributing to the increase in consumer attitudes for those who generate a high number of emotional inferences and have a favourable preference for the base experience? From this, it may be predicted that the more emotional inferences generated, then the more benefits that would be associated with the target product.

Future research may also explore the role of visualization in the processing of an experiential analogy. Specifically, MacInnis and Price's (1987) seminal article on imagery in information processing indirectly suggests a role for visualization in the processing of an experiential analogy. Imagery processing occurs with greater

spontaneity when knowledge is more emotional in nature (MacInnis and Price 1987).

Given that the processing of an experiential analogy involves emotional knowledge transfer, it is possible that visualization of the base experience may occur. This may even contribute to the cognitive identification of emotions associated with the base experience.

The effect of providing an emotional mapping along with a base experience cue is another potential area to explore in terms of analogical persuasiveness. To illustrate, a recent Microsoft advertisement compared the use of its new operating platform with the experience of seeing a space shuttle launch. One of the key emotional commonalities advertised was “the feeling of WOW” that is shared between these experiences. This emotional commonality was provided directly in the ad copy along with the base experience. With respect to the current research, the general finding was that the persuasiveness of an experiential analogy, versus an emotional appeal ad, may be partially attributed to a deeper consideration of emotional knowledge. When given a direct emotional appeal, it seemed as though participants clung to the emotion in the ad copy rather than elaborating on additional emotions. Given this, it may be predicted that inclusion of an emotional mapping in the ad copy of an experiential analogy ad may inadvertently narrow consumers’ focus to the specified emotion. Alternatively, inclusion of an emotional mapping may act as a signal for the identification of additional commonalities between the base and target experiences. Support for the latter prediction is based on evidence that analogical processing is cognitively demanding. Therefore, any signal as to what similarities exist between a base and a target may serve to lower the cognitive hurdle posed by an experiential analogy.

With respect to the choice of target products in the current research, a possible limitation and opportunity for research exists. A massage chair, an adventure tour package and a sports car are all, arguably, hedonic products. This focus on more hedonic target products in the current research creates an opportunity to empirically investigate if the persuasiveness of an experiential analogy would extend to utilitarian target products. Two different predictions are plausible. First, experiential analogies may highlight product information that is usually more peripheral in the consideration of a utilitarian product (e.g., emotional benefits). From this, it follows that consumers may be less inclined to counter argue the emotion-centric appeal of an experiential analogy given that utilitarian products are often marketed with a focus on functional or pragmatic benefits. In contrast, the comparison of an emotionally charged base experience to a utilitarian target product may result in a breakdown of the mapping and transfer processes. Consider the Microsoft advertisement. If the mapping was not explicitly provided in this ad, consumers would be left trying to figure out how the use of a computer operating platform relates to seeing a space shuttle launch. If no common emotions or other underlying similarities can be identified between these two experiences, then the generation of additional emotional inferences may be impossible. This may actually relate to the emotional soundness of an experiential analogy. A utilitarian target product and an emotionally charged base experience may not be perceived as sharing specific emotion states.

Future research should also attempt to account for the role of involvement in the processing and persuasiveness of an experiential analogy. Since analogical processing is cognitively demanding (Blanchette and Dunbar 2002; Kubose, Holyoak, and Hummel

2002; Roehm and Sternthal 2001), one might expect to find a difference in involvement between those who view an experiential analogy advertisement, and who have a favourable base preference and generate a high number of emotional inferences, in comparison to a more general emotional appeal advertisement. Importantly, involvement is not an alternative explanation for the findings. This is because the current research makes specific predictions about how consumers process experiential analogies and the type of knowledge that underlies the persuasive effect of an experiential analogy on target attitudes. Accounting for differences in involvement both within an experiential analogy advertisement condition and for a comparison involving an experiential analogy advertisement versus an emotional appeal advertisement would simply contribute towards a more complete understanding of why and when experiential analogies are persuasive.

Substantive Implications

From a substantive viewpoint, the predominance of experiential analogies in recent advertisements necessitates a more informed understanding of how consumers process these comparisons. The findings from this research suggest that marketing practitioners should be mindful of the experiences chosen for use in an experiential analogy ad. Experiential analogies are not persuasive because positive affect and attitudes are automatically transferred from the base experience to the advertised product. The processing of an experiential analogy is cognitively demanding, and the persuasive superiority of an experiential analogy may even be restricted to a smaller target audience than anticipated (i.e., those who have a favourable base preference and generate a high number of emotional inferences). Therefore, it is important to carefully consider the level

of cognitive resources available to the target audience. Furthermore, simply associating any positive experience with the target product may not have the desired effect on consumer attitudes. An experiential analogy must be emotionally sound. A target product needs to be perceived as capable of evoking the kind of emotional experience that is known to be associated with the base experience. Finally, if the goal is to enhance attitudes, it must be ascertained that the target audience has a favourable preference for the base experience. The latter recommendation is likely an obvious consideration for marketing practitioners, while the more surprising insight is with respect to the purposefulness with which the analogy must be processed in order to be persuasive.

Contribution & Conclusions

This research provides the first known empirical investigation of experiential analogies. The findings suggest that the processing of an experiential analogy involves the transfer of emotional knowledge from a base experience to an advertised product. This purposeful comparison process is a discerning point between the findings of the current research and predictions that have been based on affect transfer. Additionally, a major contribution of the current research involves the consideration of base preference. Moving beyond previously documented moderators of analogical persuasiveness, such as preference for systematicity and expertise, base preference was identified and found to be a significant moderator of analogical persuasiveness. The importance of this moderator is even more striking given that the effect of emotional knowledge transfer on target attitudes is dependent on base preference. However, neither base preference, nor emotional inferences is alone sufficient to enhance consumer attitudes. Finally, the introduction and development of emotional soundness is another

important contribution. This constraint takes into consideration the importance of perceived overlap between the emotionality of the base and target experiences.

The study of experiential analogies offers insight into how consumers reconcile a comparison of disparate experiences. These comparisons promote the transfer of emotional knowledge. To date, much research has been devoted to the study of cognition and affect in consumer behaviour. Researchers have broadly questioned: How does affect influence cognition? When does cognition lead to affect? In contrast, the current research examines how thinking about emotions, and, specifically, how the access of prior emotional knowledge, can have an impact on consumer attitudes. The consideration of emotional knowledge as an input relevant to attitude formation is a relatively unique approach, and even more so when acquirement of this emotional knowledge is derived from a comparison of disparate experiences.

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APPENDIX 1

Study 1 Experimenter Script

The advertisement that you are about to view is for a product that has just been launched on the market. Specifically, you are doing this study because the company that makes this product is interested in obtaining some feedback on a VERY rough idea that they may use in a future advertisement. As such, you may not want to focus so much on the specific design elements of the ad, but focus more on the GENERAL idea. It is important to keep in mind that the advertising materials that you view in this study have been designed to simply give you a general idea about what the ad concept will look like, but by no means reflect what the final version of the ad may look like. So please keep in mind that the company is interested in your general impressions of the potential advertisement. You will view the ad for about 10 seconds and then have a few seconds to think about the ad before starting on the first survey.

APPENDIX 2

Study 1 Survey Instrument

What does the advertisement convey to you about the Massage Chair? Please write down ALL of your thoughts no matter how simple, complex, relevant or irrelevant they may seem to you.

- How effective is the ad at conveying the benefits of the massage chair?

Not effective	1	2	3	4	5	6	7	Very effective
Not convincing	1	2	3	4	5	6	7	Very convincing

- Please indicate your agreement with the following statements about the **GENERAL** ad concept:

I dislike the general ad concept	1	2	3	4	5	6	7	I like the general ad concept
The general ad concept is a bad idea	1	2	3	4	5	6	7	The general ad concept is a good idea

- *In general*, what is your evaluation/impression of massage chairs?

Not favourable at all	1	2	3	4	5	6	7	Very favourable
Do not like at all	1	2	3	4	5	6	7	Like very much
Negative	1	2	3	4	5	6	7	Positive

- ***In general***, what is your experience with massage chairs?

Not familiar	1	2	3	4	5	6	7	Very familiar
Never experienced	1	2	3	4	5	6	7	Definitely experienced
Not knowledgeable at all	1	2	3	4	5	6	7	Very knowledgeable

- ***In general***, how much does a day of skiing and hot tubbing appeal to you?

Not appealing at all	1	2	3	4	5	6	7	Very appealing
Do not like at all	1	2	3	4	5	6	7	Like very much
Do not enjoy at all	1	2	3	4	5	6	7	Enjoy very much

- How much attention did you pay to the print ad?

Very little	1	2	3	4	5	6	7	Very Much
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Gender: ____male ____female

Age: ____

What country were you born in? _____

If not born in Canada, how many years have you lived in Canada? _____

What is your major of study? _____

How many years of university have you completed? _____

Are you an exchange student? _____

What is your best guess about the purpose of this study?

Have you ever done a study similar to this before? _____YES _____NO

- How seriously did you take this study?

Not at all 1 2 3 4 5 6 7 Very seriously
 Seriously

- How much had you heard about this study before participating in it today?

Nothing at all 1 2 3 4 5 6 7 Quite a bit

If you heard something what did you hear?

Thank you for participating! PLEASE do not talk to other students about this study, as the results of this study depend on you not discussing this research with other people. Thanks, again.

APPENDIX 3

Study 2 Experimenter Script

Consumer Memory:

People are devoting an increased amount of time to new media, such as the Internet and video games, without decreasing time spent on old forms of media such as television and print. In other words, people are multi-tasking and consuming many forms of media at the same time. Relatively little is known about the effect of this phenomenon on consumers' memory and responses. Therefore, the marketing division at the Sauder School of Business is working in conjunction with several industry affiliates to better understand the effect of media multi-tasking on consumer memory.

Your Role as a Participant:

The purpose of this study is to investigate **how multi-tasking affects consumer memory**. Therefore, you will be completing a memory task prior to viewing an advertisement. Accuracy on this part of the study is very important.

The advertisement you will be viewing may be used in future marketing campaigns. This ad is still in the concept testing phase. Therefore, you should not focus so much on the *specific* design elements of the ad (i.e., the quality of the print, font, picture etc.). You should focus more on the consumer memory task and on your GENERAL impressions of the ad idea and product.

After completing the consumer memory task, you will be viewing the rough ad concept and responding to some questions.

Please let the experimenter know if you have any questions while you proceed through this study.

APPENDIX 4

Study 2 Participant Instructions for Cognitive Load Manipulation

Consumer Memory Task Instructions:

The purpose of this study is to examine how media multi-tasking affects memory, a situation that consumers often find themselves in. Hence, you will memorize a number. After memorizing the number, you will be viewing an advertisement. You should still keep your focus on the number while viewing the advertisement. In order to ensure that you were completing two tasks at once, you will be asked to ACCURATELY recall the number later in the study.

When you advance to the next screen you will have exactly 25 seconds to memorize the number. Please press Continue when you are ready.

APPENDIX 5

Study 2 Survey Instrument

Consumer Memory

Please recall the number you were asked to memorize during the Consumer Memory task. ENTER the number in the space below. Once you have done this, you will have no need to remember this number any longer. Remember, you want to do your best to **ACCURATELY** recall the number.

What does the advertisement tell you about ActionZone Eco-Tours? Please write down ALL of your thoughts no matter how simple, complex, relevant or irrelevant they may seem to you.

- How effective is the ad at conveying the benefits of going on an ActionZone Eco-Tour?

Not effective	1	2	3	4	5	6	7	Very effective
Not convincing	1	2	3	4	5	6	7	Very convincing

- Please indicate your agreement with the following statements about the **GENERAL** ad concept:

I dislike the general ad concept	1	2	3	4	5	6	7	I like the general ad concept
The general ad concept is a bad idea	1	2	3	4	5	6	7	The general ad concept is a good idea

- **Based on the ad you saw**, what is your impression of ActionZone Eco-Tours?

-4	-3	-2	-1	0	1	2	3	4
Dislike very much								Like very much
-4	-3	-2	-1	0	1	2	3	4
Very negative								Very positive
-4	-3	-2	-1	0	1	2	3	4
Very unfavourable								Very favourable

The following list consists of a number of words that describe different feelings and emotions. Read each emotion/feeling and then circle the number that best describes how you feel **right now**, in the present moment. Don't think too much about it, just go with your gut feeling.

Not energetic at all	1	2	3	4	5	6	7	Very energetic
Not satisfied at all	1	2	3	4	5	6	7	Very satisfied
Not aroused at all	1	2	3	4	5	6	7	Very aroused
Not positive at all	1	2	3	4	5	6	7	Very positive
Not excited at all	1	2	3	4	5	6	7	Very excited

- ***In general***, how much does playing video games appeal to you?

Not appealing at all	1	2	3	4	5	6	7	Very appealing
Dislike very much	1	2	3	4	5	6	7	Like very much
Do not enjoy at all	1	2	3	4	5	6	7	Enjoy very much

- ***In general***, how knowledgeable are you about video games?

Not familiar	1	2	3	4	5	6	7	Very familiar
Never played	1	2	3	4	5	6	7	Played very much
Not knowledgeable at all	1	2	3	4	5	6	7	Very knowledgeable

- In an average month, how often do you play video games?

_____ Never

_____ Once a month

_____ Once a week

_____ More than once a week

- ***In general***, how knowledgeable are you about Adventure Tour Companies?

Not knowledgeable at all	1	2	3	4	5	6	7	Very knowledgeable
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Not familiar	1	2	3	4	5	6	7	Very familiar
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- To what extent did you try to visualize the experience in the advertisement?

Did not visualize at all	1	2	3	4	5	6	7	Visualized very much
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- How much attention did you pay to the advertisement?

Very little	1	2	3	4	5	6	7	Very Much
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Gender: ____male ____female

Age: ____

What country were you born in? _____

If not born in Canada, how many years have you lived in Canada? _____

What is your major of study? _____

How many years of university have you completed? _____

Are you an exchange student? _____

What is your best guess about the purpose of this study?

Have you ever done a study similar to this before? _____YES _____NO

- How seriously did you take this study?

Not at all Seriously	1	2	3	4	5	6	7	Very seriously
----------------------	---	---	---	---	---	---	---	----------------

- How much had you heard about this study before participating in it today?

Nothing at all 1 2 3 4 5 6 7 Quite a bit

If you heard something what did you hear?

Thank you for participating! PLEASE do not talk to other students about this study, as the results of this study depend on you not discussing this research with other people. Thanks, again.

APPENDIX 6

Study 3 Experimenter Script

Part of the new product introduction process involves concept testing advertisement and product ideas, which is why the marketing department works in conjunction with several industry affiliates to collect data on how advertisements and products are viewed by consumers.

The advertisement that you are about to view is for a product that will soon enter the market. This study is being conducted because the product's parent company is interested in obtaining feedback on a VERY ROUGH IDEA that they may use in a future advertisement. Since the advertisement is in the concept testing phase, do not focus on the specific design elements of the ad. Instead, focus more on the GENERAL ad idea.

The advertising materials that you view in this study have been designed to simply give you a GENERAL IDEA about what the ad concept will look like, but by no means reflect what the final version of the ad may look like. So please keep in mind that the company is interested in your GENERAL impressions. You will view the ad for about 10 seconds and then have a few seconds to think about the ad before responding to the surveys.

APPENDIX 7

Study 3 Survey Instrument – Less Sound Analogy Condition

What does the advertisement tell you about the Bugatti Sportster? Please write down ALL of your thoughts no matter how simple, complex, relevant or irrelevant they may seem to you.

- How effective is the ad at conveying the benefits of the Bugatti Sportster?

Not effective	1	2	3	4	5	6	7	Very effective
Not convincing	1	2	3	4	5	6	7	Very convincing

- Please indicate your agreement with the following statements about the **GENERAL** ad concept:

I dislike the general ad concept	1	2	3	4	5	6	7	I like the general ad concept
The general ad concept is a bad idea	1	2	3	4	5	6	7	The general ad concept is a good idea

- Based on the ad you saw**, what is your impression of the Bugatti Sportster?

-4	-3	-2	-1	0	1	2	3	4
Dislike very much								Like very much
-4	-3	-2	-1	0	1	2	3	4
Very negative								Very positive
-4	-3	-2	-1	0	1	2	3	4
Very unfavourable								Very favourable

The following list consists of a number of words that describe different feelings and emotions. Read each emotion/feeling and then circle the number that best describes how you feel **right now**, in the present moment. Don't think too much about it, just go with your gut feeling.

Not energetic at all	1	2	3	4	5	6	7	Very energetic
Not satisfied at all	1	2	3	4	5	6	7	Very satisfied
Not relaxed at all	1	2	3	4	5	6	7	Very relaxed
Not aroused at all	1	2	3	4	5	6	7	Very aroused
Not positive at all	1	2	3	4	5	6	7	Very positive
Not lazy at all	1	2	3	4	5	6	7	Very lazy
Not very tired at all	1	2	3	4	5	6	7	Very tired
Not excited at all	1	2	3	4	5	6	7	Very excited
Not proud at all	1	2	3	4	5	6	7	Very proud
Not calm at all	1	2	3	4	5	6	7	Very calm
Not happy at all	1	2	3	4	5	6	7	Very happy
Not content at all	1	2	3	4	5	6	7	Very content

- *In general*, how much does a weekend at the cottage appeal to you?

Not appealing at all	1	2	3	4	5	6	7	Very appealing
Dislike very much	1	2	3	4	5	6	7	Like very much
Do not enjoy at all	1	2	3	4	5	6	7	Enjoy very much

- How often have you spent time at a cottage in the past?

_____ Never

_____ One to four times

_____ Five to ten times

_____ More than ten times

- *In general*, how knowledgeable are you about sports cars?

Not knowledgeable at all	1	2	3	4	5	6	7	Very Knowledgeable
Not familiar	1	2	3	4	5	6	7	Very familiar

- *In general*, what is your evaluation/impression of the sports car category?

Not favourable at all	1	2	3	4	5	6	7	Very favourable
Do not like at all	1	2	3	4	5	6	7	Like very much
Negative	1	2	3	4	5	6	7	Positive

- To what extent did you try to visualize the experience in the advertisement?

Did not visualize at all	1	2	3	4	5	6	7	Visualized very much
Did not imagine at all	1	2	3	4	5	6	7	Imagined a lot
Did not fantasize about at all	1	2	3	4	5	6	7	Fantasized a lot

- How much attention did you pay to the advertisement?

Very little	1	2	3	4	5	6	7	Very Much
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Gender: ____ male ____ female

Age: ____

What country were you born in? _____

If not born in Canada, how many years have you lived in Canada? _____

What is your major of study? _____

How many years of university have you completed? _____

Are you an exchange student? _____

What is your best guess about the purpose of this study?

Have you ever done a study similar to this before? _____ YES _____ NO

- How seriously did you take this study?

Not at all 1 2 3 4 5 6 7 Very seriously
Seriously

- How much had you heard about this study before participating in it today?

Nothing at 1 2 3 4 5 6 7 Quite a bit
all

If you heard something what did you hear?

Thank you for participating! PLEASE do not talk to other students about this study, as the results of this study depend on you not discussing this research with other people. Thanks, again.

APPENDIX 8

Research Ethics Certificate of Approval

The University of British Columbia
Office of Research Services

Darren Dahl | My Home | Logout

RLSE Welcome Page Help

Current State

Approved

I would like to create ...

New Post Approval Activity

Activities

Copy Application

PI and Staff Comments

Designate Signing Authority

Viewing/Printing

Application - Full

Application - Review/Print

Return to My Home

H06-80878 - This Experience is Like That Experience! The Effect of Experiential Analogies on New Prod...

(H06-80878) B06-0878 - This Experience is Like That Experience! The Effect of Experiential Analogies on New Prod...

Principal Investigator (PI):	Darren Dahl	Approval Department:	Marketing
Primary Contact:	Darren Dahl	Department Approver:	
Type of Study:	Behavioural	Review Board:	Behavioural Research Ethics Board
Minimal Risk:		Co-Investigators with Signing Authority:	There are no items to display
Initial Approved Date:	October 26, 2006	Date Expires:	October 31, 2008
Current Approval Certificate:	[View]	Version:	1.0
Type of Funding:	N/A		

Correspondence: **Provisos:** **Post Approval Activities:** **Application Changes:**

This contains all the correspondence and activities completed on this application before the initial approval. The table bar shows each activity that was completed, who completed it, and the date and time it was completed.

The query produced no results.