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THE ROLE OF MOTORSPORTS INVOLVEMENT ON MOTORSPORTS MEDIA USAGE: AN ANALYSIS OF INDUSTRY-DEVELOPED MEASURES

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Molly Catherine Ziske

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The Role of Motorsports Involvement on Motorsports Media Usage: An Analysis of Industry-Developed Measures

By

Molly Catherine Ziske

A DISSERTATION

Submitted to
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ABSTRACT

THE ROLE OF MOTORSPORTS INVOLVEMENT ON MOTORSPORTS MEDIA
USAGE: AN ANALYSIS OF INDUSTRY-DEVELOPED MEASURES

By

Molly Catherine Ziske

The first area of inquiry of this study was to assess the reliability and validity of an involvement scale developed for industry research by an advertising agency. The second area of inquiry (using data from the same industry study) was to assess the impact of involvement and demographics on media usage. The data used was from a study of NASCAR fans and is NASCAR-specific in its scope.

Results indicated that the original 30-item scale, used to measure involvement, in fact measured a variety of concepts. However, six items from this original scale did measure the concept of involvement as put forth by the literature. Other concepts measured by the scale (as indicated by factor analyses) included technology transfer and social involvement. Since several variables measured involvement, social involvement, and technology transfer, new (composite) variables were created in an effort to have one variable for each of the concepts. These new variables were used in regression analyses to assess the effect of each concept on media usage. Involvement with racing had a small and positive influence on media usage. Social involvement had a mixed impact on media usage with a slight and negative impact on radio and cable television usage in particular. Technology transfer did not have a significant impact on respondents' media usage.

Demographic variables included gender, income, age, employment status, and occupation. The impact of these variables on media usage was assessed using Analysis of Variance. Age appears to be the only demographic variable that influenced radio listenership, with the highest radio listenership among 35- to 44-year-olds. Age also had an influence in that as age increases, respondents are less likely to look to cable television and specialty magazines and newspapers for motorsports information. Men tend to be more likely to use most of the media, including newspapers, cable television, and specialty magazines and newspapers, as well as the Internet.

The influence of income on motorsports media usage was interesting as well. In particular, respondents who fell into the higher income categories (i.e., more than $60,000 annually) had the highest average media usage for all motorsports media. Interestingly, in all of the media categories for which employment status was a significant differentiator, those respondents who fell into the category of *not employed* had the highest media usage. For example, the average Internet usage rate for those unemployed was 29 Internet "hits" over the past 5 months—considerably higher than students, who had the lowest average rate of .13 hits over the past 5 months.

The present study points to the need for better understanding of involvement and what it means to both consumers and marketers, as well as a continuing understanding of how consumers use media and what influences their media choices.

DEDICATION

To Emerson, Carter, and Claire. Thanks for helping me get to 100 pages.

For Matt. He'd have been proud.

ACKNOWLEDGMENTS

Completing a dissertation requires, more than anything else, a great support system. I have been fortunate to have such a support system, composed of all the people named here (and, I'm sure, some I've forgotten over the years). First and foremost I am eternally grateful to my dissertation chairman and committee members. In particular, Dr. Bruce Vanden Bergh motivated me in so many ways. It is difficult to find words to describe how Dr. Vanden Bergh was the perfect chairperson, giving guidance when needed, backing off when needed, and motivating me along the way. It would not be an overstatement to say that without his guidance, I would not have finished.

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CHAPTER 1

INTRODUCTION

Background

Each year, advertising agencies attempt to create communications that will target the right audiences with the right message. In an effort to reach the right audience, major advertisers spend millions of dollars[1] researching questions relevant to the demographics, psychographics, and involvement with the product, and the media usage habits of the intended audience.

This means that for any given product, many basic questions have to be answered about the audience and its intended media usage. For example, the following questions illustrate only some of those that must be answered by an advertising department or agency to begin the process of creating and disseminating effective advertising. First, who is the audience for the product or service to be advertised—can we create a profile of the "average" person in this audience demographically, psychographically, and so forth? Secondly, what media do these consumers use and what types of variables affect the target audience's media usage? Finally, are there promotional efforts in which we can participate that will increase our product's visibility? This last question is important because it assumes we know the target audience well enough at this point to begin to understand the particular lifestyles of our target audience, implying a deep understanding

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[1] The exact figure of what is spent on research is extremely difficult to ascertain. However, Nayyar (2001) cites the figure as $5.4 billion annually for 1999 market research spending.

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of the consumer of the particular product. This suggests that the advertiser's understanding of the consumer goes beyond demographic information and allows a more complete picture of the audience's hobbies and interests, for example, making the audience more of a "person" to whom the advertiser can talk.

Regardless of the product, in most instances, advertising is crucial for getting even the simplest message about one's product before the public. This is especially true for nationally distributed products whose audiences are widely dispersed and might vary in profiles. For example, how does a national advertiser communicate a benefit to West Coast car buyers who might be more inclined to purchase import vehicles while also appealing to Midwestern buyers who might have more of a propensity to purchase domestic vehicles? What is the common thread that ties the West Coast domestic buyer and the Midwest domestic buyer together?

To make the advertisers' job more difficult, the landscape of advertising is becoming increasingly cluttered. This is true not only because there are more actual ads in traditional media venues, but also because there are increasing opportunities for advertising placement. For example, a greater ratio of television air time is devoted to ads in most dayparts (with the exception of prime time) than was true even 5 years ago (American Association of Advertising Agencies/Association of National Advertisers, 2002). (Television *dayparts* are the segments of time broadcasters use for setting programming and advertising pricing, for example, morning, prime time, and evening.) Imagine a trip to the grocery store or to a ballpark only 10 years ago. It would have been difficult to imagine then what actually exists today: ads placed on virtually every

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available space, including store floors and public bathroom doors. It would not be an overstatement to argue that advertising is virtually everywhere (Stossel, 2001).

Given the proliferation of advertisements, then, how does an advertiser get a message across without irritating the consumer or allowing the consumer to block out the message? Some feel that one increasingly feasible way is to sponsor events of interest to the target audience, thereby becoming part of the environment these people have come to enjoy.

When the product to be advertised is one such as tires or oil filters (where the association with automobiles is integral to the product benefit) or an overnight delivery service (where speed is a relevant differentiating benefit), advertising is as crucial as for any other consumer product or service. However, these products and services also have the opportunity to tie their product in with the very relevant sport of auto racing. Auto racing allows corporations to not only have their names seen by audiences, both live and television, but to build an association between their product and a winning race team. For example, auto manufacturers and auto parts manufacturers might rely on their alliances with racing to promote technology transfer. (*Technology transfer* is the notion that participating in sporting events such as racing helps manufacturers build better products for consumers.)

While these promotional tie-ins are beneficial, advertisers must remember that sports consumers today are faced with what appears to be an almost limitless choice of media delivering professional sports such as baseball, basketball, golf, auto racing, tennis, and even bull riding in one day (Smith & Street, 2001). In addition, consumers appear to be taking advantage of the sports media choices. Interests are becoming so diversified

that less popular sports such as tennis and soccer are seeing gains in fan support while more popular sports such as professional hockey, basketball, and football continue to have a healthy fan base. It would appear, then, that fans are not switching from consuming traditional sports to less traditional sports, but are consuming more of all sporting events. That is, with the proliferation of choices, consumers are taking advantage of the opportunity to view relatively new sporting events (e.g., the WNBA) in addition to the traditional events (e.g., the NBA).

Many consumers are broadening their sports viewing habits to include less traditional sporting events. It is becoming more acceptable and feasible for sports fans to split viewing time across a variety of sports. This is obvious when we see cable channels dedicated solely to golf or racing.

Team sponsors and marketers must understand, in this fragmented sports viewership scenario, how various levels of involvement with sporting events translates into media usage. If a consumer is involved with a sporting event or type of sport overall, does this mean that he or she is inherently more likely to view this sport in mass media? In person? Will the involved consumer be more likely to read or view specialty media dedicated to the sport or to seek general information related to the sport? Even more basic questions have to do with levels of involvement: Would those sports fans who might not classify themselves as diehard fans, for example, still consume sports-related media? Would those people who are reluctant attendees of sporting events still be consumers of sports-related media? Each of these questions returns to the fundamental notion that it is important to understand and measure involvement. Is involvement merely participating by viewing (either in person or via media)? Or does involvement include more, such as

following the personal lives of the sport's players, talking about the sport with friends, or purchasing sports-related materials? For example, one might theorize that since the Internet offers easy accessibility to many people, reluctant fans of certain sports might be likely to search Web sites for information on particular sports professionals while having very little interest or involvement in the sport itself. The original study using the present data found that people who reported themselves as reluctant fans of auto racing tended to still seek information on the sport via the Internet. Of particular importance to advertisers and advertising agencies then, are some of the questions addressed in the present study. Perhaps foremost is how to best measure involvement. This is crucial when placing your product in the center of a specific event. The audience needs to have some level of involvement to even pay attention to the event and, thus, your product or message.

Advertising departments and agencies often find themselves in the situation of having to create questionnaires and surveys that measure concepts such as recall, attention to an advertisement, and even involvement (either with the product or the communication). Very rarely, if ever, are these concepts based on theoretical underpinnings in academic literature. In addition, industry-created survey questions are typically based on intuitive knowledge of the concepts (for example, recall of an ad is often based on whether the consumer can play back the sponsor for the ad, whereas recall of creative elements is not counted as recall). Again, it is very rare for these concepts to be tested statistically for reliability: Do the items consistently measure what they are purported to measure? Or for validity: Do the items measure the concept they are supposed to measure and not some other concept?

Just as important is the question of whether involvement is a good predictor of specific media usage. Manufacturers measure concepts such as involvement in an effort to best reach consumers (e.g., the assumption of those creating the 30-item involvement scale used for this study was that *highly involved* translated automatically into high media usage). This is, like so many aspects of consumer behavior, an assumption not to be taken for granted.

Finally, it is important for marketers to realize the differences between different media. Do people use certain media differently based on their involvement with the product, message, or event? Are visual media used differently than auditory media? How is the Internet used differently from other media? Also, what are the implications of demographic variables on media usage, if any?

Purpose of the Present Study

Given the factors and questions described above, the goal of the study reported here was to determine if:

- An intuitively based involvement scale, developed for use by a major advertiser, did in fact measure involvement.
- Involvement measures, when valid and reliable, can act as predictors for specific media usage.
- Demographic variables influence specific media usage.

The original *involvement scale* items from the survey were analyzed in the present study to assess if these items did in fact measure involvement according to the academic literature and statistical analysis. Once analysis confirmed the involvement items, these

items (and others) were used to assess the role of involvement in the respondents' media usage. The involvement variables and others of interest were employed in the regression analysis as the independent (or predictor) variables.

The impact of involvement on media usage is analyzed by looking at sports fans using a data set that was originally gathered to analyze a variety of attributes of motorsports (e.g., the NASCAR, Indy, and Lemans circuits) fans. In particular, the original study measured involvement and media usage, but never the effect of one on the other.

The importance of involvement as a concept in consumer behavior is apparent in the literature and in the attempts made over time to define what involvement truly consists of (see for example Krugman, 1965; Sherif & Cantril, 1947). Though still somewhat nebulous to researchers, the concept is important to advertising practitioners hoping to find key concepts that will drive interest in their products.

The leisure studies literature provides a good basis for looking at sports participation and involvement. In particular, specialization theory (based in recreation and leisure literature) has been developed in the leisure literature to analyze participants' involvement in certain leisure activities. Using specialization theory for a theoretical background and underpinning, the data were analyzed to assess if there is indeed a correlation or association between peoples' reported interest levels and their media usage.

Media usage variables were taken directly from the survey as straightforward self-reports of respondents' motorsports media usage (for example, respondents were asked "How many auto or truck races, if any, have you watched on TV in the past 5 months?"). Each of these media usage variables was treated as a dependent variable in a regression

and ANOVA to assess what factors contribute to the prediction of each specific type of media usage.

Chapter 2 presents an overview of involvement as it has evolved in the literature, outlining the difficulty in defining and measuring the concept. The concept is looked at from the perspective of psychology, consumer behavior, and recreation literature. In addition, chapter 2 gives a brief overview of NASCAR (the major motorsports circuits addressed in the study) as well as media usage.

Chapter 3 provides the methodology used for this study. Chapter 4 presents the results of analysis and Chapter 5 includes a discussion of the study's findings, conclusions, and next steps.

CHAPTER 2

LITERATURE REVIEW

This chapter reviews the literature relevant to the two main areas of interest in this study. First, the literature relevant to involvement is presented. Specifically, literature regarding involvement in consumer behavior and recreation are discussed at length. In addition, some background on NASCAR and a review of media usage and involvement are presented.

Involvement

The concept of involvement has evolved from the fields of psychology, social psychology, and consumer behavior. The concept is one that has been examined (albeit relatively infrequently) in the sports management and leisure fields, too. For purposes of this study, the discussion of involvement centers primarily on its introduction and evolution in the areas of psychology and consumer behavior, as well as its applicability in leisure studies (which applies more directly to the topic at hand).

Unfortunately, there still appears to be no agreed-upon definition of involvement across fields (Day, Stafford, & Camacho, 1995; Antil, 1984; Bloch, 1981; Beatty, Homer, & Kahle, 1988; Greenwald & Leavitt, 1984; Arora, 1982; Hupfer & Gardner, 1971; Havitz & Dimanche, 1997). Involvement can be looked at in a variety of ways, especially when one realizes that it is applicable to a variety of fields. Psychologists, for example, might think of involvement as something more introspective or thought-driven than consumer behaviorists. Consumer behaviorists might think of the concept as one of

action—what a person buys or talks about. In particular, marketers hope to create an involvement with a product or service and even involvement with an advertisement, the idea being that this will lead to a purchase and eventually to product loyalty. Leisure theorists also tend to put into operation the construct of involvement in behavioral terms, perhaps even more so than consumer behaviorists (e.g., Bryan, 1979; Donnelly, Vaske, & Graefe, 1986; McFarlane, 1994; McIntyre & Pigram, 1992; Schreyer & Beaulieu, 1986; Scott & Godbey, 1994; Williams, 1984). Involvement tends to be of interest to leisure studies researchers in particular when the focus is on time spent on the particular leisure activity or equipment owned.

Specifically, involvement can be thought of as "an individual, internal state of arousal with intensity, direction, and persistence properties" that affects the manner in which a consumer responds to some stimulus (Andrews, Durvasula, & Akhter, 1990, p. 28) or a process whereby there are distinct, discernable stages of analysis of the involved object (Greenwald & Leavitt, 1984). In particular, Andrews, Durvasula, and Akhter (1990) posited that the state of involvement is one that, once reached, is resistant to contrary communication. They further stated that those highly involved are more likely to seek out influences that are in agreement with their feelings regarding the object of involvement.

An alternate view is that involvement is a process whereby there are distinct, discernable stages of analysis of the involved object (Greenwald & Leavitt, 1984). Greenwald and Leavitt focused on the amount of lower to higher levels of processing of elaboration to discern the level of involvement with an object. (*Processing of elaboration is the creation of links between the object in question and already-known concepts.*) The

levels each have increasingly stronger effects on the viewer or listener with regard to involvement. One might think of their view, then, as involvement being defined by processing levels. That is, higher involvement equals higher processing of information. However, Greenwald and Leavitt acknowledged that, while the impact of communication at low levels of involvement is different than that at high levels of involvement, there are still communication influences. In particular, the authors note that the four levels of involvement (preattention, focal attention, comprehension, and elaboration) coincide with levels of processing. For example, communications processed at the preattention level might be thought of as background noise—communications that receive little, if any, attention. As the levels of involvement increase, the cognitive effects and attitudinal effects also increase or become more detailed.

Greenwald and Leavitt's explication of involvement into four stages might be thought of as an expansion of the ideas put forth by some communications researchers, for example, Krugman and Zaichowsky, who stressed the importance of *relevance* in their definition of involvement. However, the effect is the same—when a consumer finds something highly relevant, the intensity of attention is affected, as was implied by Andrews, Durvasula, and Akhter (1990). In particular, Greenwald and Leavitt posited that at the highest level of involvement, the message is seen as important to personal goals and elaboration of the message is based on its importance to the listener.

As noted above, involvement can be defined by relevance (Zaichowsky, 1985) or importance and interest (Antil, 1984). Antil and others discussed the idea of involvement being enduring or situational, the implication of this being that involvement need not always be high to be effective (especially with regard to communication). For example,

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after a recent purchase or newfound interest in an object or activity, involvement is high, but fleeting.

Obviously the discussion of involvement in various literature implies different definitions. This is illustrated in the following discussion of the concept.

An unobservable state of motivation, arousal or interest toward a

recreational activity or associated product. In other words, involvement

refers to how we think about our leisure and recreation, and it affects our

behavior as well. (Havitz & Dimanche, 1999, p. 122)

Both definitions offer insight into how involvement can be multifaceted (e.g., pertaining to arousal and relevance) and can easily affect behaviors. Involvement, for present purposes then, is not simply interest in a particular product, service, or event, but also the notion that this interest (or relevance) can be a direct influencer or cause of subsequent behavior.

This, of course, is problematic when one hopes to measure involvement. If relevance is the defining quality of involvement, how does one accurately define and measure relevance? The same might be said of perception—accurate measures of how one perceives different products or activities might be difficult to create.

With varying definitions of involvement come various measures of the concept. Part of the difficulty in defining and measuring involvement stems, perhaps, from the various fields to which the concept is being applied (e.g., Hupfer & Gardner, 1971; Laurent & Kapferer, 1985; McQuarrie & Munson, 1987; Sherif & Cantril, 1947). Again,

psychological involvement will most likely mean a very different thing than consumer or product involvement, implying that each will have different measures.

Academic research on the topic of involvement began in earnest from a psychological standpoint (Sherif & Cantril, 1947) and has since received treatment in a variety of fields. Sherif and Cantril's treatment of the concept is often cited (regardless of the field of study) as the basis for examination of involvement.

Sherif and Cantril's exhaustive look at ego-involvement discussed many interesting areas of involvement, including, for example, the potential changes individual involvement undergoes in a group setting. Perhaps the most important contribution of the authors is their discussion of (ego-involved) attitudes in which they stated that "[a]ll attitudes that define a person's status or that give him some relative role with respect to other individuals, groups, or institutions are ego-involved" (1947, p. 96). This involvement ultimately shapes our attitudes and helps to define who we are and where we belong.

The implication of this assertion is that involvement is at least partially comprised of factors that define us to others. It might be read then that ego-involvement is flexible, based on what status or outward appearances one hopes to project.

Sherif and Nebergall (1965) further refined the notion of involvement in their social judgment theory, which posits that highly involved consumers have a relatively narrow range of acceptable positions with respect to the issue being considered. They are likely to reject most communication messages as these messages "are more likely to fall within the unacceptable range of a person's implicit attitude continuum" (Petty, Cacioppo & Schumann, 1983, p. 137). This resistance to persuasive communication messages

implies a somewhat active communication consumer and one who is not easily influenced by mass communication. This implies an involvement that is based more on central values than on outward appearances.

Other researchers have taken this notion a step further by more explicitly linking involvement to a behavior. For example, Greenwald (1965, p. 3) defined position involvement as "adherence to a prior behavior," implying that the behavior will be repeated in the future.

Ostrom and Brock (1968) later extended the social judgment theory posited by Sherif and Nebergall (1965). The authors examined the idea that high involvement creates resistance to even high levels of discrepant communication. In other words, "Resistance to change is a direct function of the magnitude of ego involvement" (p. 379). More specifically, the authors argued that ego involvement stems from value centrality, relatedness (relevance) to a value and number of values engaged by the attitude in question. These components of the authors' model (based on cognitive theory beyond the scope of this paper) purported that the creation of high involvement in an experimental setting would bear out the idea of resistance to attitude change. It is interesting to note that their experiment was "effective in altering resistance to attitude change" (p. 382). Ostrom and Brock (1968) expanded the foundation of the idea of involvement to be more action oriented and experimentally testable.

Involvement in the Communication Literature

The research of Ostrom and Brock (1968) and Sherif and Nebergall (1965) was a virtual contradiction to the assertions made by Krugman (discussed below) in his analysis of communication and involvement, reiterating the differences in the role of involvement.

Perhaps the most influential authors in the area of involvement, from a communication perspective, are Krugman and Zaichowsky, both of whom contributed to the development and measurement of involvement. Krugman and Zaichowsky might be thought of as having created the foundation for the discussion and evolution of the concept of involvement as it pertains to communication. However, a variety of other communication and marketing researchers have worked to define or better measure involvement (see for example Arora, 1985; Beatty & Smith, 1987; Celsi & Olson, 1988; Bloch, 1981; Lastovicka & Gardner, 1979; Petty & Cacioppo, 1981; Wright, 1974).

Krugman began work in the 1960s developing the notion that it is essentially inappropriate to base consumer response to advertising (or packaging or new product) on a single exposure. He argued that, in fact, people are exposed to advertisements again and again, so to test response to one exposure was unrealistic.[2] Krugman also argued that learning is different for passive exposure versus active exposure to advertisements or products by consumers. He argued that, while learning can take place for those who are passively receiving messages, those highly involved will retain the message longer (Krugman, 1965). When the message is involving, attitudes and perceptions are more

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[2] Interestingly, testing advertising after one exposure is still commonplace today. However, some copy testing companies have realized the need to test ads not only in groups but also after repeated exposure, thus creating a more realistic testing environment.

likely to change. This makes sense if one thinks of a product category in which one is interested. If a consumer is in the beginning stages of new car shopping, for example, he or she pays more attention to automobile ads and most likely retains the details of those ads longer.

Later work by Krugman discussed how the role of involvement dictates at which exposure a consumer will actually pay attention to the message of an advertisement. In a 1972 article, Krugman noted that basically all consumers need are three exposures to an ad to learn its message. The fourth, fifth, sixth, and subsequent exposures are simply repetitions of the third exposure. The first exposure is curiosity ("What is it?"), the second exposure is recognition ("What of it?") and the third exposure is decision or reminder. What dictates when a person will go from one to two or from two to three working (or relevant) exposures is the point at which he or she becomes involved. This is the point at which the product or product category becomes important to the person—he or she is in shopping mode or is helping someone else with a shopping decision, for example.

Krugman argued that most commercial messages are filtered out in such a way that the first exposure (the "What is it?") is the end point. That is, even if the consumer sees the same commercial 25 times over the next few weeks, he or she will not get to the second working or relevant exposure ("What of it?") until he or she is involved with a (potential) purchase decision on that product category. Krugman noted, then, that advertising is only powerful when the consumer is involved—something "largely outside the control of television or advertising" (1972, p. 13).

While Krugman contributed greatly to the understanding of involvement (especially with regard to advertising), consumer behavior researchers spent many years measuring involvement in different ways. Zaichowsky noted that this might be due, at least in part, to "different applications of the term 'involvement' " (1985, p. 341). She proposed a scale that would be applicable to involvement with advertising, product, packaging, and so forth. Obviously, such a scale would need to incorporate psychological and behavioral aspects of involvement.

After extensive reliability and validity testing (see Zaichowsky, 1985), the resulting scale contained 20 semantic differential items. These items are, at their core, based on the notion of involvement defined by personal relevance. For example, in measuring involvement with an advertisement, the measures are linked to factors that make an ad relevant to the receiver (and hence motivating). For product research, involvement is measured by the relevance of the product to the consumers' wants and needs. This ties back nicely to Krugman's notion that people will become involved with an advertisement only when it is relevant to them—when they can make a connection with it.

The Zaichowsky involvement scale came to be known as the Personal Involvement Inventory (PII). The PII scale can easily be adapted to assess involvement with products, packaging, advertising, or purchase decisions. All that is required are slight changes in the instructions to the respondents. However, the items remain the same, regardless of what is being measured.

The PII shown in Table 2.1 consists of the complete scale used in the PII.

Table 2.1

Zaichowsky's Personal Involvement Inventory

[object or action to be judged inserted here]*

| Important _ _ _ _ _ _ _ Unimportant |
| Of no concern _ _ _ _ _ _ _ Of concern to me |
| Irrelevant _ _ _ _ _ _ _ Relevant |
| Means a lot to me _ _ _ _ _ _ _ Unimportant |
| Useless _ _ _ _ _ _ _ Useful |
| Valuable _ _ _ _ _ _ _ Worthless |
| Trivial _ _ _ _ _ _ _ Fundamental |
| Beneficial _ _ _ _ _ _ _ Not beneficial |
| Matters to me _ _ _ _ _ _ _ Doesn't matter |
| Uninterested _ _ _ _ _ _ _ Interested |
| Significant _ _ _ _ _ _ _ Insignificant |
| Vital _ _ _ _ _ _ _ Superfluous |
| Boring _ _ _ _ _ _ _ Interesting |
| Unexciting _ _ _ _ _ _ _ Exciting |
| Appealing _ _ _ _ _ _ _ Unappealing |
| Mundane _ _ _ _ _ _ _ Fascinating |
| Essential _ _ _ _ _ _ _ Nonessential |
| Undesirable _ _ _ _ _ _ _ Desirable |
| Wanted _ _ _ _ _ _ _ Unwanted |
| Not needed _ _ _ _ _ _ _ Needed |

* *Note:* As noted earlier, Zaichowsky envisioned a scale that would measure not only involvement with advertising but also the product category or product itself, as well as a purchase decision.

Ultimately, this scale measures involvement as a unidimensional construct by summing all 20 items to produce a single score. Since the PII is a 7-point scale, the highest score attainable is 140, while the lowest is 20. Zaichowsky (1985), in addition to validity and reliability testing, had respondents rate a variety of products to assess mean PII scores for scale distribution. Products that fell on the short end (low involvement) included instant coffee and bubble bath. Automobiles, laundry detergent, and calculators fell on the upper end of the scale as products with high consumer involvement.

At roughly the same time Zaichowsky was developing the Personal Involvement Inventory, Laurent and Kapferer (1985) were developing a multifaceted profile of involvement. The authors "argue that a consumer's involvement can not be expressed in a single score, because the type of involvement is as important as is its level" (McQuarrie & Munson, 1987). Laurent and Kapferer's Involvement Profile (IP) is also comprised of 20 items, but measures four dimensions of involvement, which include risk, pleasure, sign, and perceived importance. These Likert scale items underwent trait and discriminant validity testing as well as reliability testing. In the end, Laurent and Kapferer's regression analyses appeared to prove that all of the items contributed to the prediction of behaviors but that not all items influenced all types of behaviors. The authors noted that this gives a much richer look than previous research provided at involvement and hints at notions such as situational and enduring involvement. The implication of their discussion was that perhaps the theoretical notion of involvement had been oversimplified to that point. Perhaps not only are there different kinds of involvement but that involvement tends to influence consumers differently based on the situation.

The concept of situational and enduring involvement was discussed theoretically (e.g., Rothschild, 1979; Houston & Rothschild, 1978) and experimentally (Richins & Bloch, 1986). Enduring involvement changes only over long periods of time while situational involvement is fleeting, usually based on the period within which a purchase decision needs to be made. Higie and Feick (1989) attempted to measure enduring involvement with a reliable and valid scale. The authors' upfront discussion of enduring involvement is most interesting because it put the concept in proper perspective. For

example, they pointed out that product involvement should not be confused with product importance. They proposed instead that the concept should be defined mostly by the hedonic quality of a product, for example. They agreed that relevance is important but argued that other researchers have failed to measure relevance through the important notion of hedonism. "Specifically, with enduring involvement, personal relevance occurs because the individual relates the product to his self-image and attributes some hedonic qualities to the product" (p. 690). They found that their Enduring Involvement Scale (EIS) sufficiently measures enduring involvement among product categories. For example, they found that the hedonism component of enduring involvement was more important than self-expression in the category of personal computers.

Most authors agree that high enduring involvement is rare (Richins & Bloch, 1991). What is most common is a period of high situational involvement (SI) or concern for the product usually brought on by a purchase decision. Of course, there are other situations in which SI can be heightened, but to most researchers the purchase process is of interest (Houston & Rothschild, 1978; Parkinson & Schenk, 1980; Richins & Bloch, 1991; Rothschild, 1979). *Situational involvement* wanes after the purchase has been made and interest in the new product has subsided. *Enduring involvement,* on the other hand "is a stable characteristic and doesn't change much over time" (Richins & Bloch, 1991, p. 147). Of course, one must consider the context of involvement. Product involvement will certainly have a different life cycle than sports fans' involvement. Enduring involvement in NASCAR, for example, might be more enduring for fans who are members of fan clubs, attend events more often, or own a variety of NASCAR paraphernalia than for fans who do none of these things.

Richins and Bloch (1991) examined levels of involvement and satisfaction, hypothesizing that consumers with high EI tend to be more satisfied with their durable goods purchase over time than low EI consumers. Upon analysis of car purchasers longitudinally, the authors found support for this hypothesis. This could be due to the inherent risk involved with being EI and making a bad purchase decision or it could simply be that high EI consumers ultimately make better purchase decisions. This confirmed the findings of Oliver and Bearden (1983) who examined satisfaction and involvement as it related to an over-the-counter drug item.

The above review of involvement in academic research literature makes clear some important points. First, there seem to be varying definitions of involvement (relevance, interest, hedonism, etc.) that have been applied to a variety of different research situations (e.g., attention to an ad, purchase decisions, satisfaction with a purchase). Thought of another way, involvement has been used to mean a variety of things to a variety of researchers. Secondly, measurement of the concept remains uncertain. Part of the uncertainty regarding measurement comes back to the first point— how do we measure across disciplines what we cannot define? However, a great deal of work has been done to both define and measure involvement. One could argue that the concept has come a long way in its evolution. Finally, there seems to be a movement away from interest in involvement, at least academically (as illustrated by the lack of current literature assessing involvement). Perhaps this is due to the difficulty in measuring and defining it or perhaps due to the waxing and waning of interest in topics in academe.

Taken together, these three points are crucial from the standpoint of the advertising practitioner. Advertising agencies and their clients still maintain interest in how involved consumers are with their advertising, products (both existing and conceptual), and communication strategies. It is no surprise then that advertisers and their agencies create, based on intuition, scales to measure involvement. Unlike concepts such as attention to the ad, involvement was probably never clearly explicated for most advertising practitioners (even those in advertising research). That leaves those creating questionnaires to define involvement based on their own set of experiences and what, for them, constitutes involvement with the object at hand.

Involvement in Recreation Literature

The concept of involvement has been explicated in many contexts. In marketing and communication contexts, involvement with the advertising and the product are probably the most notable treatments. To date, relatively little literature exists that discusses spectators' involvement with sports or sporting events. The majority of existing literature regarding recreation involvement examines actual participation in a sport versus spectator involvement (see for example, Havitz & Howard, 1995; Snyder & Spriezter, 1974). Interestingly, none of the leisure involvement literature reviewed for this study discussed the idea of involvement as it affects media usage; that is, how involved with a sport or leisure activity one needs to be to use media for the purpose of learning more about that particular sport or activity.

This is an increasingly interesting area of review when one considers the plethora of television and radio stations dedicated to sports. For example, how involved does the

consumer need to be to watch tennis on a regular basis? A less-than-regular basis? Never? Are there intuitive differences in the level of media consumed based on involvement?

Involvement is examined for its effect on information search (exploring various sources for new knowledge on the topic of interest) for sports participants (see Havitz & Dimanche, 1999, or Shamir & Ruskin, 1984, for specific examples); event attendance (Ferrand & Pages, 1996; Laverie & Arnett, 2000); and even approaches to product consumption (Redden & Steiner, 2000). For example, Shamir and Ruskin looked at differences in involvement in sports participation and spectatorship. They found that the motivations (including levels of motivation) are different for sports participants and spectators. They confirmed many "intuitive expectations" (p. 19) when they find that involvement with participation in sports is related to health and wellness concerns, for example.

Laverie and Arnett (2000) perhaps provided one of the most comprehensive looks at involvement in their analysis of fan attendance. For example, they noted that leisure researchers tend to focus on either enduring or situational involvement, but not necessarily the idea that both might occur with one person. The authors also made apparent their knowledge of how involvement is defined in consumer behavior literature without mentioning directly the notion of relevance. In particular, they acknowledged that involvement might consist of "motivation, arousal, or interest toward a recreational activity or associated product" (p. 228). As noted previously, most recreation literature discusses involvement in participation or even spectatorship, but rarely in the associated products.

The general concepts of involvement discussed in consumer behavior literature certainly provide a viable foundation for this exploratory research and are obviously applicable to situations of leisure and recreation involvement studies.

As is the case with the concept of involvement in the communication literature, there seem to be a variety of definitions and uses—none of which are agreed on (Havitz & Dimanche, 1990). For example, Ellis and Witt (1994) measured depth of leisure involvement, concentrating on respondents' participation in a leisure activity. Selin and Howard (1988) used ego involvement to explain attachments to leisure activities. Mannell (1980) discussed involvement based on the level of interest one has in a product when looking at information-seeking in leisure pursuits. Laverie and Arnett (2000) noted that enduring involvement and situational involvement appear to be the ways involvement is described in leisure literature.

Havitz and Dimanche (1990) summarized best when they noted that "Attempts to measure involvement in the recreation and tourism literature have generally been limited to the antecedents or to the behavioral consequences of involvement" (p. 181). For example, they noted that Gunter and Gunter (1980) discussed involvement in terms of engagement (high involvement) and disengagement (low or nonexistent involvement). This is only one example of cases where involvement essentially equals participation or activity. In fact, Havitz and Dimanche noted that the concept of involvement, when studied in the leisure literature, is rarely explicated but somehow vaguely referred to and assumed to be understood by the reader.

Perhaps the broadest and most inclusive approach to involvement in the leisure literature comes from Bryan's (1977) attempt to understand involvement based on things

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such as time and money investment as well as kinds of equipment used to participate in sporting events. Bryan's Specialization Theory was used to better understand the differences in involvement among sports participants (versus viewers or fans), but still provides an excellent basis for analyzing how even the sports fan can be involved.

Bryan did not explicitly define involvement, but rather gave the reader an understanding of how involvement essentially comes to equal specialization. High specialization (involvement) is characterized by commitment, motivation to perform better, interest in the sport, and relevance, as noted by the pride in and knowledge of equipment, investment in time and equipment, and association with others who were also highly involved with the sport.

Given Bryan's discussion of specialization and involvement, as well as the definitions provided by consumer behavior literature, for purposes of this study, involvement has been defined as:

> A product, activity, or event that is highly relevant and meaningful and
> often motivates one to invest time, money, and effort in pursuing the
> activity, event, or product. In particular, high involvement creates a desire
> to invest more money, time, and effort in the pursuit of keeping current
> with the product, activity, or event.

For example, if a person is highly involved with a particular product he or she will invest the time to find a store that carries that product, invest the money necessary to acquire the product, and the effort to stay informed about the product's changes, specifications, and so forth. The same can be said for events (such as sporting events) or

sports participation. Interestingly, Bryan included not only money but also time as relevant investments in his discussion of anglers.

Specialization Theory

Specialization theory was first discussed in publication by Bryan in 1977 and expanded in various recreation publications (e.g., Backman & Crompton, 1991; Ditton, Loomis, & Choi, 1992). The theory states that recreation participants each have a degree of specialization based on their involvement in the activity. Specialization might be thought of as level of expertise (for example amateur to professional), which means not just how well someone performs at a given sport, but the degree to which he or she takes the sport seriously. Each level of specialization carries "distinctive behaviors and orientations [which] include equipment preference, type of experience sought . . . preferred social context, [etc.]" (Bryan, 2000, p. 18). Specialization theory does not strictly define involvement, but more loosely bases it on things such as equipment used and expertise in the activity. The implication of this is that as specialization in a leisure activity increases, so does the time spent with that activity, money spent on it, and grade of equipment used in it. In particular, it is defined as "a continuum of behavior from general to particular reflected by equipment and skills used in the sport and activity setting preferences" (Bryan, 1977, p.175).

Bryan proposed and developed specialization theory in the 1970s in an effort to explain what he had observed in sports enthusiasts, specifically anglers. Bryan began to notice the way various sports enthusiasts went about their chosen sport and the conflicts that arose. He noted that often the anglers would be in conflict with, for example, boaters.

Each group was participating in their sport of choice and wanted an area for their sport. The anglers, to continue the example, would desire an area free of distractions—to themselves and the fish—while boaters wanted an area free of hazards. This conflict was, to Bryan, one that could have been expected.

The conflict that Bryan did not expect was the one among the groups of sports enthusiasts themselves. He noted, "I was especially struck by conflicts within these groups, particularly trout fishermen, as they clashed among themselves over the appropriateness of 'catch and release' and 'fly-fishing only' regulations, stream etiquette, and a host of other issues" (Bryan, 2000, p.19). Bryan also noted that the differences seemed to stem from commitment to or involvement in the sport. Highly involved anglers differed greatly when compared with the less involved anglers. Perhaps the most obvious examples were the investments in equipment and observation of rules (stated and unstated). Bryan summarized the theory by saying that participants "can be placed on a continuum from general interest and low involvement to specialized interest and high involvement" (Bryan, 2000, p.18). General interest might be thought of as an interest and participation in fishing of any kind on a nearby lake, while specialized interest would be catch-and-release fishing on certain waterways, using more professional grade equipment and following more exacting rules. Of course, the notion of specialization can be applied to almost any sport. The more specialized the participant becomes, the more particular he or she becomes about the equipment and venues used to participate in that sport.

There are many implications of the theory. Most important of these is the idea that those highly involved are more likely to invest in equipment and time spent participating in the sport. For example, Buchanan (1985) and Backman and Crompton (1991)

characterized the concept of investment in recreation activity as "side bets." Interestingly, this term most commonly refers to activities held simultaneously with other competitive activities. In golf, the idea of "skins" between players of a game is often a monetary wager related to which person or team will perform better from hole to hole. This is a wager aside from the actual game of golf being played, hence a side bet.

However, in recreation literature, side bets are regarded as slightly different than the wagers between friends during a friendly game. These bets are the investments of one's own time or money in the activity.

Side bets are an important part of involvement in an activity, whether it be recreational or purely product or marketing related. For example, involvement with exercising on a regular basis and involvement with certain products or marketing communication (e.g., advertising) require certain investments. Side bets are the investments made in relation to participation in an activity or a product. The investment made when one is involved with exercise might be not only the investment of time, but of money (for gym membership, equipment, etc.) as well as the psychological investment of trying to make oneself better (e.g., motivation, positive thinking). The investments or side bets involved with communication are, again, the time and energy spent devoted to the message versus time spent doing something else or, in some cases, nothing at all.

These side bets have implications with regard to many things, the most interesting for present purposes being investment in the actual sport or activity and investment in media associated with the sport or activity. That is, how much of an investment does one make in watching, listening to, or reading about the particular sport of interest. The investment made can be that of actually attending a sporting event or of taking the time

(and perhaps money) to find the appropriate media outlets with information of interest on that particular sport.

Backman and Crompton (1991) analyzed involvement in recreation activities and the resulting loyalty. They looked specifically at attachment and consistency in behaviors related to the activity. They focused on the following side bets or investments when looking at loyalty and participation in leisure activities:

- Equipment

- Friendship

- Magazine subscriptions

- Money spent on the activity

Their findings were interesting, albeit somewhat intuitive. They found that there was a strong relationship between side bets and loyalty. In particular, high side bets related to high involvement. The authors' thinking on this point was that people were encouraged to keep participating in the sport (i.e., golf and tennis, in this particular study) because of their investment in things such as equipment and friendships.

Buchanan (1985) measured these investments based on scales developed by Bloch and Bruce (1984) and Bryan (1977). This scale, with an alpha of .86, measured items such as money spent on the game, equipment, magazine subscriptions, and time spent watching the game on television. These items were found to relate to involvement in the game as well.

Ditton, Loomis and Choi (1992) further developed Bryan's theory of recreation specialization (as well as that of side bets) in an attempt to provide support for some of the propositions set forth in the theory. The resulting article was an interesting look at

how various sporting participants are grouped into recreation social worlds and

subworlds based on recreation activity. This is somewhat of an explication of Bryan's

work in that it expands the notion of low specialization and high specialization into four

categories (strangers, tourists, regulars, and insiders) outlining each group's orientation,

experiences, relationships, and commitments. Perhaps the most interesting and relevant

notion put forth by the authors is the idea that highly specialized sports participants

(specifically anglers) exhibited a higher media interaction than did those who were less

specialized. In particular, the authors looked at specific radio shows, magazines, and

television shows and found that those who were categorized as highly specialized

interacted with (i.e., used) these media more often than those who were less specialized.

In addition, the authors found that specialized anglers exhibited higher resource

dependency. In particular, they found that specialized anglers tended to agree that the

more and bigger fish they caught, the better.

Ditton, Loomis and Choi (1992) noted that for many recreation activities, on-site

spectatorship or participation is not feasible for everyone. They pointed out that as people

become more widely dispersed, the need for information about a particular recreation

activity will increase. This idea is not new (see for example, Crane, 1972; Goode, 1957;

Katz, 1958; Mullins, 1973; and Shibutani, 1961) but it bears repeating as the notion of

fans (or even sports participants) is discussed in the current fragmented media

environment. McIntyre (1989) went a step further in linking enduring involvement and

specialization theory. He noted the need for enduring involvement to be put into

operation in recreation research to try to more fully understand recreation enthusiasts'

levels of specialization. McIntyre stated that "levels of enduring involvement would be

indicative of degrees of specialization" (1989, p. 170). His analysis of enduring involvement being comprised of enjoyment, importance, centrality, and self-expression introduced recreation researchers to the notion of involvement being multifaceted. McIntyre used items directly from the Involvement Profile (IP), as well as others. He was able, through his analysis of beachside campers, to validate such items for recreational involvement measurement.

Dimanche, Havitz, and Howard (1991) further developed the notion of involvement in recreation settings (versus consumer behavior settings). In addition, they noted the multidimensionality of involvement. It is this multidimensionality that they examined closely by using the IP in a recreational research setting. The authors looked at a variety of recreation and tourism situations and were able to measure involvement using Laurent and Kapferer's English translation of the IP. Not only did they support application of the IP to recreation literature, they also supported the opinion of other researchers (Havitz & Dimanche, 1990 and 1999; Higie & Feick, 1989; Iwasaki & Havitz, 1998; McIntyre, 1989; McQuarrie & Munson, 1987; Zaichowsky, 1985) that involvement is a multidimensional construct.

The implications of specialization theory are that:

- Fans can be placed in categories according to their sports specialization behavior and subsequent purchase and media usage behavior.

- High-interest recreation participants or fans will be the group consuming the most live sports events, mass-mediated sporting events, and sports-related products indicating more investment in their sports of interest.

Such implications are being tested by racing fans today, for example, who defy the traditional stereotypes about NASCAR fans (e.g., that they are less educated and have lower incomes than the general population). In addition, such implications assume that high-interest fans are those who consume the most sports-related media. With the diversity of fans emerging in motorsports, this might be a faulty assumption. More moderate fans might use certain race-related media more than diehard fans. For example, moderate fans might not watch races as religiously as diehard fans but might consume more follow-up stories in the media (e.g., newspaper, Internet) to learn race results.

Involvement Summary and Implications

The above review of involvement in research literature makes clear some important points. First, varying definitions of involvement (e.g., relevance, interest, hedonism) have been applied to a variety of different research situations (e.g., attention to an ad, purchase decisions, satisfaction with a purchase). Secondly, there is a lack of consensus in how to measure the concept. Third, some literature does not make clear whether involvement is enduring or situational, nor does it address the issue of whether the two need to be delineated. Finally, there seems to be decreasing interest in the topic of involvement, at least academically (as illustrated by the lack of current literature assessing involvement).

Taken together, these three points are crucial to the advertising practitioner. Advertising agencies and their clients still maintain a great deal of interest in how involved consumers are with their advertising, products (both existing and conceptual),

and communication strategies. It is no surprise, then, that advertisers and their agencies create, with little or no academic input, scales to measure involvement as they define it.

Changing Media Usage

Media choices have been growing and evolving rapidly over the past 25 years. Cable television, the Internet, niche magazines, and even increased programming choices within these media have created a more fragmented media landscape. This means more choices for consumers and a more difficult time for advertisers attempting to reach target markets in traditionally targeted media vehicles (Picard, 1999).

One might argue, then, that audiences are becoming less homogeneous as they become dispersed. For example, women might not only be watching daytime dramas but tuning in to sports specialty channels, creating a diverse audience for these channels. Consumers are more likely to be taking advantage of the media choices available to them and, hence, be consuming more media types in the time they have for such endeavors. In addition, they are likely to be almost constantly consuming (different) media with the availability of personal computers, personal digital assistants (PDAs), cellular telephones with Internet access, and so forth. So, the amount of time devoted to media consumption has increased, but so have the attractive media choices. Thought of another way, audiences have become more fragmented but people want to be constantly connected to others and to things in which they are interested.

How does this affect sports viewership? One example is the Super Bowl which, while still a great audience draw, is "showing signs of audience fragmentation" (McAdams 2001, p. 100). In 20 years, ratings for the Super Bowl have dropped 20%,

which could be partly due to the increased alternative offerings. Most of the alternative media vehicles are targeted to women (for example, see McAdams, 2001) and include other sporting options, such as figure skating. The result of audience fragmentation, greater time spent consuming media, and greater media offerings is more variety of all types of programming. Reality shows, for example, can coexist with traditional situation comedies just as golf and motorsports can each have their own channel. There is an audience for each and, sometimes, these audiences overlap.

Sports Growth in the United States

Sporting events are prime vehicles for the new media channels. For example, the Internet allows consumers to catch up on, or watch in their entirety, certain sporting events. According to Pastore (1999), the Internet challenges the traditional television media for presentation of sporting events. The Internet is making obvious inroads by offering league and team Web sites, although viewing an entire sporting event is also a possibility. The implication for marketers who work for sports with growing fan bases is that they must examine new media opportunities carefully and use them wisely. In addition, the traditional fan of such sports might not be the only kind of person to whom viewership is appealing. That is, the casual fan or observer of a sport might be just as important a target—considering how much of the particular sport's media is consumed and whether such a person has the potential to become an even bigger fan of the sport. With so many sports viewing options, consumers might easily tune to sports they had not had easy access to before. In addition, fans might find tuning into sporting events less expensive and more enjoyable than attending in person. This is especially true for sports

such as golf, tennis, and racing where the cost is high or a regional venue is not immediately accessible. These sports, in particular, have a history of having a very select audience. The audience for these sports is increasing, as is media coverage.

NASCAR is an excellent modern example of a sporting option that is experiencing growth in both popularity and fan base. What is more intriguing to marketers is the fact that with fan base growth comes fan base diversity. This is illustrated below in the discussion about the fans themselves. First, however, the basics of the sport itself are outlined to give the reader an idea of what NASCAR racing really is.

NASCAR

The National Association of Stock Car Racing (NASCAR) was founded more than 50 years ago. NASCAR is comprised of many divisions and series (see Table 2.2) and sanctions roughly 2,000 events each year. Divisions include major series such as Winston Cup, Busch Grand National, Craftsman Truck, and a variety of local and regional series. The major series differ by vehicles that are allowed to compete in them. For example, in the Winston Cup series, slightly modified street vehicles compete, with only the three most recent years' models allowed to race. Busch Grand National Division series cars are similar to Winston Cup cars but are lighter (by 100 pounds), shorter (by 5 inches) and less powerful. The Craftsman Truck series allows pickup trucks to race with modifications similar to those of the Winston Cup cars. The remaining series are typically local or regional and feature cars similar to Winston Cup, Busch Grand National, or Craftsman competitors, depending on the venue (Hagstrom, 1998).

Table 2.2

Overview of NASCAR Divisions

National Series—Premier Division

NASCAR Winston Cup Series
* NASCAR's premier division with events at 23 tracks nationwide
* The top racing series in the United States, with more than 6 million fans in attendance a year

NASCAR Busch Series Grand National Division
* The second most popular series with 32 events nationwide

NASCAR Craftsman Truck Series
* Races with full-sized pickup trucks
* 23 tracks nationwide

Local Series

NASCAR Weekly Racing Series
* Almost 100 short races in 10 regions

Regional Series – Touring Division

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* NASCAR Winston West Series
* Busch North Series
* Featherlite Modified Series
* Gatorade All-Pro Series
* Goody's Headache Powder Dash Series
* Featherlite Southwest Series
* Raybestos Brakes Northwest Series
* RE/MAX Challenge Series
* O'Reilly Auto Parts All-Star Series

NASCAR primarily differs from other organized racing in its car types. For example, while Indy racing uses the long, lean, bullet-shaped "open wheel" vehicles, NASCAR uses stock cars, which are modified street cars. A Chevrolet Monte Carlo driven on the NASCAR circuit might look like your neighbor's Monte Carlo, but it

differs in its internal equipment and its sponsorship decals.[3] While the original intention of NASCAR was to race "absolute showroom models like the ones folks drove to work every day" (Cotter, 2001), by the early 1960s these cars were being modified in the factory and included safety features in addition to speed-enhancing features.

NASCAR is the fastest growing professional sport in the United States (Parnell, 1999). This is evidenced by its growing fan base, and made more impressive when one looks at fan characteristics (see Table 2.3). Contrary to popularly held conceptions, NASCAR fans as a group are reflective of the general population. For example, NASCAR fans are just as likely as the general population to drink wine, own and use cellular phones, travel, and invest (Harris Interactive, 2001). They are also slightly more affluent than the U.S. population as a whole (NASCAR New York Corporate Marketing Office, 2001).

Weekly racing series fans are more avid fans and more likely to support sponsors, and feel that the sport is part of a family experience for them (NASCAR New York Corporate Marketing Office, 2001) when compared to moderate or reluctant fans. When one looks at fans more closely, other differences in types of fans become apparent. Hardcore or diehard fans differ from avid fans and casual fans and nonfans. What is perhaps most interesting among these fan groups is how the interest in the sport is demonstrated. For example, only "23% of diehard or avid NASCAR fans attended a NASCAR event" during the 2000 season (Harris Interactive, 2001, p. 1).

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[3] Interestingly, there is a movement currently to have all stock car vehicles appear the same with the exception of sponsorship decals on the vehicle's exterior.

Table 2.3

NASCAR Fan Characteristics

Weekly and Touring Racing Series Fans

* 72% are hardcore fans
* Average attendance is four NASCAR races in the past year
* Follow races on the radio and Internet more than other fans
* Purchase intent of these fans is more than double that of other fans
* 51% say they feel that they are part of the "NASCAR family"
* 90% see NASCAR drivers as positive role models for families
* Purchase more than $1,100 in NASCAR-related products each year
* Are more likely to be overall sports fans, attending professional or college sporting events
* Are more likely to be active in sports or outdoor recreational activities
* 55% regularly work on their cars

This means that marketing to fans only at racing events is perhaps only one way to reach fans of every level. Many diehard NASCAR fans regularly watch races at home on television or listen to them on the radio. This implies that sponsorship of events at the events alone might not be sufficient to reach these diehard fans. Additional media purchases might also be called for.

It is also important to acknowledge that sports and racing fans are also very active in other leisure pursuits. This gives rise to cross-entertainment marketing and, perhaps more importantly, a new way to view sports fans. In addition to viewing the diehard fan differently, it is perhaps advantageous to take a closer look at the casual and nonfan as well. For example, those people not interested in motorsports but viewing races for a variety of reasons (including time spent with significant others and a party atmosphere) might also be targets for advertisements about certain products and services.

The implication of casual or nonfans being significant targets for media communication flies in the face of specialization theory, which posits that highly

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involved fans or sports participants are the only fans with high interest levels. In fact, looking more broadly at the concept of involvement, one might argue that some less avid fans do indeed have high situational involvement. These fans might find the race highly relevant, motivating, and interesting on race day, but at very few other times, for example.

However, taking the notion of involvement and subsequent media usage one step back, it seems important to ask whether involvement does, in fact, have an effect on media usage. The present study examines this question—this is a first step in applying specialization theory to media usage. It would seem only logical for both manufacturers and researchers to assess whether involvement influences or predicts media usage— especially when message placement is under consideration.

Research Questions

The following research questions, then, are put forth for consideration. The analysis performed with the present data set attempts to answer these questions. Chapter 5 discusses the implications of the analysis and answers to these questions.

RQ1: Do any of the items from the original questionnaire measure involvement?

RQ2: If so, what items from the questionnaire measure involvement?

RQ3: What kinds of items measure involvement?

RQ4: Finally, do the involvement items measure involvement as it has been defined in the academic literature?

RQ5: Does involvement contribute to the prediction of media usage?

RQ6: What role do other concepts play in the prediction of media usage?

The next chapter describes the methods used for analysis of research questions 1 through 6. In addition, a discussion of the analysis done for the original study is presented, as well as a description of the variables used for the present study.

CHAPTER 3

METHODOLOGY

This chapter describes the research methods used to answer the questions put forth in chapter 2. This study relied on secondary analysis of data from another study to which the author had access. A description of the original study, including its sample, is provided, followed by a description of the analyses performed to investigate the present study's research questions.

Background

The data for this study came from a survey developed by a major Midwestern advertising agency and its automotive client, in conjunction with an independent research firm. A major portion of the survey itself (a grouping of 30 questions) was devoted to the measurement of consumers' involvement in motorsports.

This survey represented the second phase of a longitudinal look at motorsports interest among automotive consumers. The funding corporation has an enormous investment in sponsorship of motorsports, and annually there is concern regarding whether such sponsorship is fruitful for the company. The underlying question is whether these sponsorship dollars could be better spent elsewhere (e.g., in more advertising, or toward youth or women's initiatives).

The portion of the questionnaire that was developed to analyze respondents' involvement had never been tested for validity or reliability. Post-hoc reliability and validity testing of the scale are presented in this study.

Data were also collected on respondents' use of specific motorsports media; for example, the number of auto or truck newspaper articles read. These questions were used in the present analysis to determine whether involvement variables are predictive of media usage.

Sample

Consumers were selected for completion of a telephone interview based on several criteria outlined for the original study conducted by an independent research organization. To qualify for inclusion in the study, respondents must have owned an automobile from the 1996 to 2000 model years and also have been intending to purchase or lease another vehicle within the next 5 years. In addition, respondents had to be involved in the purchase or lease decision for the next vehicle. Finally, respondents could not work for an advertising agency, marketing firm or department, research company, or automotive manufacturer.

The original list of names was supplied by R. L. Polk's auto registration records and consisted of 13,283 consumers in the United States. Consumers from this list were randomly chosen. Of those called and screened, 1,380 respondents qualified and completed the telephone questionnaire.[4]

Telephone interviews were conducted between April 12 and 29, 2000. The purpose of this timing was to allow interviewing to coincide with the seasonal lull in

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[4] It should be noted that respondents' privacy was protected since respondents' names were not connected in any way with the resulting data responses. In addition, the research supplier adheres strictly to research guidelines regarding consumer privacy.

motorsports activity. The thinking was that respondents would not be inundated with motorsports-related messages (e.g., commercials with motorsports connections) and mistakenly report having viewed motorsports events. Attempted call-backs for respondents who were unavailable ranged anywhere from five to seven calls, depending on urgency (i.e., how close to completion of the study) and availability of calling staff.

Original Analysis

The original intent of the survey was twofold. The primary purpose was to assess the extent to which consumers expressed an interest in motorsports and the number of consumers at each level of interest. For example, are there more (or fewer) respondents who are avid fans of motorsports than who are nonfans?[5] The rationale behind this research objective was to justify the existence of motorsports sponsorship. If, for example, the findings concluded that there were more avid motorsports fans than in previous years, there was justification in that the dollars spent sponsoring auto racing were reaching more people.[6] If, in fact, the sheer number of people who reported being racing fans increased, there was felt to be justification in spending dollars to reach more people.

The second purpose of the study was to measure how, if at all, the funding corporation's name and the name of competitors were associated with motorsports.

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[5] The study findings are interesting in that they categorize respondents based on fan level ranging from diehard fans to reluctant attendees. These categories are of great interest to a motorsports sponsor.

[6] Of course, this assertion relies on direct comparison of fans' reported level of interest in motorsports from the previous study.

Again, the funding motorsports sponsor wanted to assess whether the money being spent on such sponsorship was worthwhile. The questions asked by the sponsoring company not only included those pertaining to association with the sport, but also the association of competitors who also sponsored motorsports. In essence, the hope was to get a better feel for what sponsoring company is best recalled as the top sponsor of the sport. For example, not only were respondents asked which sponsoring brands they were aware of, they were also asked to rate sponsors on their level of involvement in motorsports and whether each sponsor was viewed as "a winner" in the sport.

As mentioned above, this was the second phase of a longitudinal analysis regarding how consumers' interest in motorsports changes over time. Beginning in 2002, the study is to be conducted every 2 years for comparison purposes.[7]

Independent Variables

The original involvement variables were measured on a 5-point Likert scale ranging from *agree strongly* to *disagree strongly* with *neither agree nor disagree* as the center point. These items were created in concert with the research supplier and client based on intuition and knowledge of the target audience. Due to this, the items have several innate groupings. For example, it was the intent of the client to measure beliefs in technology transfer, the social aspect of the sport (how much it is shared with friends),

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[7] The original study was conducted in 1996. The study whose data is used in the present discussion, was conducted in 2000. The parent company of the funding corporation expects to continue conducting the same study every 2 years beginning in 2002.

and interest in the sports' participants (i.e., race car drivers), all of which were considered indicators of involvement.

Research Questions (RQs) 1 through 4 were designed to address the issue of whether involvement is truly measured by this industry-commissioned survey (see the Research Questions on p. 39). RQ1 was designed to simply assess whether any of the 30 items in this survey actually measured involvement. RQ2 and RQ3 were designed to help the researcher better understand—if in fact involvement was measured through any or all of these items—what kinds of items measure involvement. Put another way, it was hoped that RQ2 and RQ3 both would answer the question of which items measured involvement and how involvement was expressed in these items. Finally, RQ4 was designed to assess whether the items used in the survey that were found to measure involvement actually reflected involvement as it is defined in the literature. Answers to the research questions were ascertained using factor analysis to define what types of concepts were being measured in the original 30-item scale. RQ5 was designed to address the issue of the link between involvement and media usage variables (described below). Finally, RQ5 was designed to help researchers better understand if any of the other variables measured in the original survey might assist in better understanding motorsports media usage. In particular, demographic variables (including age, gender, employment status, occupation and household income) were used for this analysis. These variables are, taken together, a combination of ratio and nominal measures. Methodology is detailed below.

Dependent Variables

In the original survey, media usage questions were included to analyze simple frequencies and means (for example, "What is the average number of reported newspaper articles read in the past month by the sample?"). In addition, separate analyses were completed on respondents who reported themselves as "NASCAR only" fans.

Media usage questions allowed respondents to report usage of traditional media such as newspapers, television, and magazines. In addition, more contemporary media such as cable and Internet usage (as it related to motorsports) were also included. These questions allowed respondents to report approximate numbers of each media vehicle used within a specific time. The time frames used (3 and 5 months) were random, based on input from the funding client, research supplier, and advertising agency.

Current Study Variables and Methodology

The current study sought to analyze questions regarding industry questionnaire validity and reliability, as well as the role of involvement in media usage. These questions were addressed using factor analysis, reliability analysis, and regression analysis. These methods and their role in the present study are described below.

Reliability Analysis

Reliability analysis was performed via SPSS's reliability analysis function. The option of "scale if deleted" alpha was included. This allowed analysis of the 30-item scale's reliability if each item were to be deleted. This provides an accurate picture of how reliability might change when an item is not included in the total scale.

Factor Analysis

Factor analysis was performed to examine whether the 30 variables in the original questionnaire were in fact measuring a single concept—involvement. Exploratory factor analysis was done using a portion of the sample and confirmatory factor analysis was performed using the full sample. Principal components extraction was indicated as it extracts factors that account for less and less variance. In addition, varimax rotation was performed in an effort to minimize items loading highly on multiple factors. Also indicated, and reported in the next chapter, are the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's test of sphericity. KMO ranges from 0.0 to 1.0 and tests whether variables are measuring a common factor. When the KMO figure approaches 1.0 the variables are measuring a common factor and, conversely, a KMO figure near 0.0 indicates that the variables are not measuring a common factor. Bartlett's test of sphericity is a measure of whether all correlations, when tested together, are not statistically different than 0. In other words, Bartlett's test of sphericity tests whether the correlation matrix differs from the identity matrix (Pedhazur & Pedhazur-Schmelkin, 1991).

Regression Analyses

With the involvement variables better defined, analysis of the final research questions could take place. These research questions had to do with the effect of involvement on media usage. Given the nature of the data set, these questions specifically set out to answer whether interest in motorsports was a feasible predictor of specific

motorsports media usage. The statistical method used to answer this question was regression, which allows the researcher to answer the following questions:

- Is there a statistical relationship between the dependent and independent variables that affords predictability?

- How strong is the statistical relationship?

- Can a formula be derived that looks at each independent variable and its effect on the dependent variable? (This would, of course, be the regression equation.)

While correlation alone might be able to shed light on the first two points above, regression allows the researcher to formulate the effect of the independent variables, taken together, on the dependent variable (Hays, 1988). This is what makes regression unique and useful for the present study.

Linear regression was performed with the "enter" method specified. Stepwise regression was also performed, but found to not contribute much. Resulting output of interest included R^2, significance of F from the ANOVA test, beta coefficients, and significance of the t test for each of the variables. The R^2 measurement measures the proportion of variance in the dependent variable explained by variations in the independent variables. The ANOVA significance figure reported in the output allows one to answer whether the model worked to explain deviations in the dependent variable. Typically, the researcher is seeking a significance figure of less than .05 for significance at the 95% level (Gupta, 2000). Beta coefficients provide information regarding the effect of each variable on the dependent variable (e.g., negative, positive, strong, or weak). T test significance allows the researcher to assess the statistical strength of the contribution of each variable in the regression equation. These are reported and discussed in chapter 4.

Analysis of Variance (ANOVA)

Analysis of variance (ANOVA) allows the researcher to compare the means of one or more groups taking into consideration one independent variable. An example would be using the independent variable of age and the dependent variable of number of diet sodas consumed weekly. Using this example and the assumption that respondent's ages were categorized in such a way that there were distinct groupings (e.g., 12 to 17, 18 to 25, and 26 to 34), ANOVA allows comparison of these groups' means to determine whether each age group differs significantly from another in number of sodas consumed.

For the present study, ANOVA allows analysis of whether the demographic independent variables have an effect on media usage (dependent) variables. In particular, categorical analysis of responses gives the researcher a better picture of the possible effects on the dependent media variables.

In SPSS, one-way ANOVA was specified with descriptive statistics shown. Between groups, the F statistic and significance are also reported.

CHAPTER 4

RESULTS

This chapter presents the results of the two areas of inquiry. First, the analyses performed to assess reliability and validity of the involvement battery items are presented. This includes findings from the SPSS reliability analysis and the various factor analyses. These analyses are used to assess what items purported to be involvement variables in the original research survey actually do measure involvement given the literature on the topic. Once these analyses are performed and there is confidence regarding which variables measure involvement, the research question regarding involvement's role in media usage can be addressed. This is done by regressing the "true" involvement variables on media usage variables. These variables include traditional media such as newspaper and magazine readership in addition to Internet usage (see Table 4.1 for these variables).

Table 4.1

Media Usage (Dependent) Variables

Variable number	Variable wording
Q12.	About how many newspaper articles about auto or truck racing, if any, have you read in the past 3 months?
Q13.	About how many auto or truck racing magazines or newspapers, if any, have you read in the past 3 months?
Q14.	How many auto or truck races, if any, have you listened to on the radio in the past 5 months?
Q15.	How many auto or truck races, if any, have you watched on TV in the past 5 months?
Q16.	How many times have you used the Internet specifically to find information about auto or truck racing in the past 5 months?
Q18.	In the past 3 months, how many times have you watched cable TV shows about auto or truck racing, such as SpeedWeek on ESPN?

Reliability Analysis

The first part of the analysis involved measuring the reliability of the scale that summarized the 30 items in the survey that were supposed to measure involvement. The variables from the original questionnaire are presented in Table 4.2. This table also includes the mean and standard deviations for each variable.

Table 4.2

Original Involvement Variables

How much do you agree/disagree?	Mean	Standard deviation
Q30a. The only auto races that I watch are the major events like the Indy 500.	3.59	1.55
Q30b. I like to go to local auto and truck races in my area.	4.12	1.35
Q30c. I spend a lot of time watching auto or truck races on TV.	4.03	1.38
Q30d. I like to keep up-to-date with the careers of certain drivers.	3.93	1.44
Q30e. Knowledge that a car manufacturer gains from racing helps it build more durable street vehicles.	2.59	1.47
Q30f. My main interest in auto racing lies more with the drivers than with the cars.	3.58	1.43
Q30g. I know much more than average about the design and engineering of race cars.	4.20	1.24
Q30h. I follow auto or truck racing so I can keep up with the latest automotive technologies.	4.32	1.12
Q30i. When watching racing, I watch the drivers' skill and technique.	3.62	1.55
Q30j. The knowledge that a car manufacturer gains helps build vehicles with better performance and handling.	2.43	1.47
Q30k. I like auto and truck racing events for the party atmosphere.	4.22	1.18
Q30l. The best thing about going to auto or truck racing events is having a good time with my friends.	3.55	1.54
Q30m. I love the sound of roaring engines.	3.63	1.64
Q30n. The only reason I would go to an auto or truck race is if a friend or family member wanted to go.	3.02	1.60
Q30o. The knowledge that a car manufacturer gains helps build vehicles that are fun to drive.	2.69	1.49

Table 4.2

Q30p. I often fantasize about being a race car driver.	4.35	1.23
Q30q. My friends and I often talk about auto or truck racing.	4.07	1.38
Q30r. I often videotape auto or truck races on TV.	4.58	.95
Q30s. One of the best things about watching auto or truck racing is the crashes.	4.03	1.39
Q30t. Auto and truck racing are great entertainment for the whole family.	3.42	1.56
Q30u. I often buy products or services from companies that sponsor race teams.	3.50	1.54
Q30v. The knowledge that a car manufacturer gains helps build vehicles that are sporty.	2.69	1.48
Q30w. I pay a lot of attention to the brands of cars and trucks that participate in auto or truck racing.	3.89	1.46
Q30x. The brands of cars and trucks that win racing events are also the best ones on the road.	3.90	1.31
Q30y. If a brand that I was thinking about buying won a racing event, it would increase my interest.	4.14	1.26
Q30z. The knowledge that a car manufacturer gains helps build safer street vehicles for me.	2.43	1.43
Q30aa. Compared to others, I have a real passion about the vehicles I drive.	2.96	1.57
Q30ab. I like to think of ways to make my vehicle higher performance by buying performance parts or kits.	4.26	1.23
Q30ac. I view my own vehicle primarily as just a means of transportation.	2.46	1.53
Q30ad. I enjoy doing work on my car to enhance its performance.	4.36	1.19

Note: Valid N (listwise) = 1380

Reliability was assessed using the SPSS reliability method. This procedure includes a "scale if deleted" option that allows the researcher to view the corresponding alpha when a scale item is deleted, which provides a better picture of how each item "fits" with the other items in the scale. This analysis allows measurement of the extent to which reported responses correlate highly with each other. This is not, however, a measure of unidimensionality. Instead it is a measurement of the level of mean intercorrelation of the data. This is in contrast to the standardized item alpha. The results of the reliability analysis are discussed in the paragraphs that follow and are presented in Table 4.3.

Table 4.3

Reliability Analysis

Item	Scale mean item deleted	Scale variance if item deleted	Corrected item total correlation	Alpha if item deleted
Q30a.	102.7700	593.7142	.3163	.9269
Q30b.	102.2400	581.9014	.5831	.9233
Q30c.	102.4700	576.5951	.6034	.9229
Q30d.	102.6400	574.2529	.6054	.9228
Q30e.	103.8500	582.7146	.5146	.9241
Q30f.	102.9800	580.0602	.5381	.9238
Q30g.	102.2200	584.0117	.5762	.9234
Q30h.	102.1400	592.9903	.4729	.9247
Q30i.	102.9800	562.6865	.7088	.9212
Q30j.	103.8500	575.2803	.5801	.9232
Q30k.	102.1800	591.4218	.4899	.9245
Q30l.	102.9500	572.5530	.6022	.9229
Q30m.	102.9800	562.2420	.6818	.9216
Q30n.	103.1900	609.8524	.1059	.9298
Q30o.	103.6200	567.3693	.6991	.9215
Q30p.	102.1100	585.8363	.5102	.9241
Q30q.	102.4700	574.1102	.6306	.9225
Q30r.	101.9100	591.4767	.5078	.9243
Q30s.	102.3100	592.2565	.3884	.9257

Table 4.3 (cont'd)

Q30t.	103.0500	570.8157	.6323	.9224
Q30u.	102.8700	564.4981	.6888	.9215
Q30v.	103.9200	575.7309	.5558	.9235
Q30w.	102.7600	556.1236	.7919	.9200
Q30x.	102.6500	587.9066	.5031	.9243
Q30y.	102.3100	590.1151	.4134	.9254
Q30z.	103.9600	584.3620	.4858	.9245
Q30aa.	103.550	575.5429	.5425	.9237
Q30ab.	102.1300	587.9324	.4697	.9246
Q30ac.	103.8400	620.0752	-.0223	.9312
Q30ad.	102. 2100	580.7127	.5685	.9234

Descriptive scale statistics were specified, which allowed for the mean, standard deviation, and alpha for each item to be shown. In addition to reporting the overall alpha, the item deletion alpha was reported as well. This gives a better feel for what items fit in the battery of items tested. That is, when the item specified is taken out of the scale, how is the overall reliability of the scale affected?

Cases were included to filter 100 randomly from the first 500 cases. This partial sample analysis allows reliability testing on a smaller subset of the sample. This allows for analysis on part of the sample that will be used for final analysis (in this case, regression) with "essential variation" captured.

Before running the analysis, an alpha of .75 was chosen to be the cut-off point at which higher than .75 would be deemed acceptable alphas (for the scale overall and for items individually). In the social sciences, an acceptable level for the reported alpha is .70,[8] although some researchers report levels of anywhere from .60 (relatively liberal) to

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[8] That .70 is as low as one may wish to go is reflected in the fact that when alpha is .70, the standard error of measurement will be over half (0.55) a standard deviation.

.80 (rather stringent). The a priori cut-off point for the alpha levels was determined to be .75 for the 30 items used in this analysis. This was determined to be neither too stringent nor too liberal for a battery of items that had not been previously tested for reliability in any way.

The overall scale alpha was .9263, which signifies that the scale of 30 items has high internal consistency. As Schmitt (1996) noted, internal consistency is not the same as unidimensionality. Schmitt posited that internal consistency can be thought of as interrelatedness, while unidimensionality can be thought of as homogeneity. Obviously, one needs internal consistency for unidimensionality, but the idea of consistency among variables is not sufficient to define unidimensional constructs (Schmitt, 1996). This coefficient of reliability will be low when items have a multidimensional structure. That is, there are many different concepts or ideas being measured with the variety of variables. The alpha will be high (approaching 1) when there is higher inter-item correlation.

It is interesting to note that alpha will rise as the number of items input increases. However, this is not a concern in the present study because it only becomes truly problematic when the number of items nears the sample size. In this instance, the number of items used to measure reliability was 30—nowhere near the 1,380 sample size used for analysis.

Alphas remain fairly consistent for the scale even with items deleted. Perhaps the most notable contributing variable (when deleted) is variable 30ac ("I view my own vehicle primarily as just a means of transportation"). Interestingly, this item is negatively

correlated (although slightly) with the total scale and the overall scale alpha is highest when this item is deleted.

Validity Analysis

In an effort to test the validity of these variables, factor analyses were performed to validate which variables did, in fact, measure involvement. It is important to recall here that the 30 items from the questionnaire used for this analysis were developed intuitively to measure respondents' involvement with motorsports. All of the items were included based on brainstorming sessions and areas of interest to the end-user or client. That is, no a priori testing of any of the variables was done to assess if they did, in fact, measure involvement. Put another way, the research sponsors basically formed the variables by asking themselves what things people said, did, or felt to show they were involved in motorsports.

Validity testing was done in a series of phases to best understand the underlying structure of the scale items and their validity. First, an exploratory analysis was performed using all 30 of the involvement items as they appeared on the survey (see Table 4.2). This exploratory analysis (principal components extraction) extracted factors and reported those with eigenvalues over 1 (SPSS default). Varimax rotation was performed to minimize the likelihood that items would load highly on more than one factor. This also simplified the interpretation of the factors. Cases were excluded listwise

so as to not include missing values in the analysis. In addition, KMO and Bartlett's test of sphericity[9] were measured and reported.

From this analysis, the factor loadings were analyzed. Upon initial examination, it appeared that there were three distinct factors, a fourth rather nebulous factor, and another very poorly defined factor. These results are shown in Table 4.4. For example, the first factor had loadings from .586 to .848, the second factor had loadings ranging from .665 to .820, and so forth. While the cut-off point for variables' loadings to be attributed to a factor were set at .500, a closer inspection of the data revealed that some of these loadings, while at first appearing high and contributing only to one factor, were clearly shared across factors (e.g., having a loading of .586 on Factor 1 and .389 on Factor 3, as variable 30m does).

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[9] KMO measures the sampling adequacy via partial correlation among the variables. Bartlett's test of sphericity tests the appropriateness of the factor model.

Table 4.4

Exploratory Factor Analysis Results

Variable	Factor (loadings)				
	Factor 1	**Factor 2**	**Factor 3**	**Factor 4**	**Factor 5**
30a	.124	.171	6.714E-03	.452	8.215E-02
30b	.613	.162	.226	.207	-9.054E-02
30c	.848	.111	.152	8.890E-02	2.995E-03
30d	.767	.165	.111	.172	4.778E-02
30e	.196	.754	8.394E-02	6.503E-02	1.782E-02
30f	.478	.135	-3.168E-02	.408	.165
30g	.594	.170	.403	3.874E-02	3.109E.02
30h	.555	.179	.415	.102	7.683E-02
30i	.703	.219	.185	.258	-3.253E-02
30j	.148	.820	8.007E-02	.145	-3.372E-02
30k	.348	.104	.230	.504	-2.605E-02
30l	.370	.159	.208	.620	-.207
30m	.586	.205	.389	.262	-.182
30n	.217	.163	-3.984E-02	.459	.110
30o	.184	.729	.154	.215	1.691E-02
30p	.491	.138	.424	3.55E-02	-4.440E02
30q	.740	.154	.275	7.148E-02	7.279E-04
30r	.559	8.659E-02	.244	6.901E-02	.127
30s	.165	6.670E-02	8.275E-02	.467	5.069E-02
30t	.504	.308	.101	.413	-7.214E-02
30u	.487	.329	.246	.260	4.804E-02
30v	.119	.665	.143	.208	8.826E-02
30w	.639	.288	.351	.167	.184
30x	.323	.362	9.982E-02	.237	.401
30y	.309	.280	.343	.225	.353
30z	.161	.745	6.914E-02	.117	7.068E-02
30aa	.270	.292	.395	.188	-5.964E-02
30ab	.242	7.070E-02	.675	.129	8.724E-02
30ac	.148	-1.678E-02	-.334	5.807E-02	.285
30ad	.289	.147	.703	7.133E-02	2.577E-02

Table 4.5 shows further relevant results of this exploratory factor analysis, which helped to assess just how many factors were usable in this analysis. This analysis had a KMO measure of sampling adequacy of .95. This number can be thought of as very good if the goal is to assess whether the variables share a common factor with other variables (i.e., their partial correlation will be small, indicating the unique variance they share).

Table 4.5

Exploratory Factor Analysis (partial results)

Factor	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% variance	Cumulative %	Total	% variance	Cumulative %
1	11.153	37.176	37.176	10.717	35.722	35.722
2	2.703	9.011	46.188	2.278	7.594	43.316
3	1.710	5.699	51.887	1.158	3.861	47.177
4	1.341	4.470	56.358	.856	2.852	50.029
5	1.082	3.605	59.963	.545	1.816	51.845
6	.921	3.070	63.033			

Table 4.5 shows eigenvalues and variance for Factors 1 through 6 only, to illustrate how the value of the eigenvalues (and percent of variance explained) gradually decreases and then drops below 1.0 after Factor 5. In fact, there does not appear to be much more variance explained as one adds Factors 4 and 5. So, upon examination of this information, there are ostensibly four really useful factors. This information needs to be used in conjunction with the factor loadings (see Table 4.4) to assess which factors can be useful.

Upon closer inspection of the items and their loadings in the rotated factor analysis (see Table 4.4) the only factors that produce clear, highly loading items are Factors 1, 2, and 4. Only two items have loadings above .500 on Factor 3, and no items have high loadings on Factor 5. Factor loadings were again examined, and items were included in a factor if the loading was higher than .500 and also if there were no other relatively high loadings on other factors. For example, item 30h loads highly (.555) on Factor 1 but also relatively highly (.415) on Factor 3. Item 30h ("I follow auto or truck racing so I can keep up with the latest automotive technologies.") contributes to the composition of these two factors.

Factor 1 has the highest number of items loading (at .500 or higher with no "shared" relative loadings) on it. Factor 1 items clearly have to do with consumers' involvement in auto racing events, their sponsors, or drivers. In addition, most of them imply some action on the part of the respondent (e.g., "I like to go to local auto and truck races in my area," "My friends and I often talk about auto or truck racing," and "I like to keep up to date with the careers of certain drivers.").

These items appear to be about involvement as described in the academic literature reviewed in chapter 2 and were named *General Involvement*. However, as was noted in the literature, there are many facets to the construct of involvement, even with the items associated with Factor 1. For example, there are aspects of investment and socialization, as well as indirect and direct participation in the viewing process in the above items.

Factor 2 had the most clear high loadings (very few shared loadings). In fact, the lowest loading on the factor was .665. The items that loaded highly on Factor 2 are:

- The knowledge that a car manufacturer gains from auto racing helps it build more durable vehicles.

- The knowledge that a car manufacturer gains from auto racing helps it build vehicles with better performance and handling.

- The knowledge that a car manufacturer gains from auto racing helps it build vehicles that are more fun to drive.

- The knowledge that a car manufacturer gains from auto racing helps it build safer street vehicles for me.

These items do not represent the respondents' involvement, but rather their perceptions of the consequences of the car manufacturer's involvement in auto racing. Unlike the items in Factor 1, there is not direct action or participation on the part of the respondents for these items. The respondent is more of a third-party beneficiary of the actions taken in these items.

These items represent technology transfer, the notion that professional performance of a manufacturer's product helps make it better for the consumer. Technology transfer is important to manufacturers. If, for example, only a minority of consumers believed that professional auto racing helped build better cars, then there would be little payback on the investment of sponsoring such vehicles. While getting the manufacturer's name out in front of the buying public is important, some in the industry believe that technology transfer is the most important reason for allowing professional use of a consumer goods product in motorsports.

Upon examination of the literature and definitions of involvement, these items were thought to not capture the involvement concept. Rather than relating to how

consumers are interested in auto racing, these items measure how consumers feel about auto manufacturers' involvement. When the factor analysis was done forcing the results to three or four factors, the technology transfer items still clearly fall under one factor.

The third clear factor from the original factor analysis includes items that revolve around social issues related to racing (e.g., "I like auto and truck racing events for the party atmosphere" and "The best thing about going to auto or truck racing events is having a good time with my friends"). These items also illustrate involvement but in a different manner than Factor 1. While Factor 1 illustrates involvement with the event or racing itself, Factor 3 illustrates involvement with others (friends, family), with the race being the facilitator of involvement. Thus, this factor is labeled *social involvement.*

The next phase of factor analysis was performed using only those items that fell into Factor 1 and was done using the entire sample. While these items appeared to best capture the idea of involvement, further analysis was performed to be certain that these variables did, indeed, fall under one factor. Thirteen variables were put into this analysis. This included the eight highly loading and "unique" (not shared loadings) variables from the original factor analysis, in addition to those variables that shared loadings with another factor.

When this analysis was performed, the resultant KMO measure of sampling adequacy was .94 and, while two factors were shown, many loadings on the rotated factor matrix were often shared between the factors. Six variables were thought to best measure involvement in the racing (versus, for example, involvement with working on one's vehicle). These results are shown in Table 4.6.

Table 4.6

Final Variables Used to Measure Involvement

Variable	Description	Factor loading
30b	I like to go to local auto and truck races in my area.	.631
30c	I spend a lot of time watching auto or truck races on TV.	.820
30d	I like to keep up-to-date with the careers of certain drivers.	.804
30i	When watching auto and truck racing, I watch the drivers' skill and technique.	.734
30q	My friends and I often talk about auto or truck racing.	.743
30w	I pay a lot of attention to the brands of cars and trucks that participate in auto and truck racing.	.679

A reliability analysis was performed on these "final" variables to be certain that, as a scale, they represented a reliable measure of the concept. Table 4.7 provides the details of this analysis. However, the most important output of this analysis is the overall alpha of .9053. This indicates that the scale of six items has internal consistency.

Table 4.7

Reliability Analysis of Final Involvement Items

Item	Scale mean if item deleted	Scale variance if item deleted	Corrected item— total correlation	Alpha if item deleted
30b	19.5420	37.4000	.6487	.9011
30c	19.6319	34.8869	.8070	.8788
30d	19.7406	34.8928	.7605	.8853
30i	20.0478	33.9832	.7480	.8876
30q	19.5971	35.6664	.7533	.8865
30w	19.7739	35.2295	.7242	.8908

Note: Cases = 1380.0 N of Items = 6   Alpha = .9053

These variables were used to create a composite variable called NEWINVOL.[10] The variables that, in the exploratory analysis, measured involvement with the atmosphere of racing (e.g., "The best thing about going to auto or truck racing events is having a good time with my friends.") were not included. The thought in excluding these variables was to keep NEWINVOL truly a measurement of involvement with the sport itself and not of the surroundings.

Research Questions (RQ) 1 to 4 were posed to validate the ad hoc involvement scale put forth in the original national survey. The findings above clearly answer these research questions. In particular, RQ1 sought to determine if any of the original 30 items from the scale did, in fact, measure involvement. Clearly, not all of the items included measured involvement. However, a core of six items appear to measure involvement. These items (RQ2 and RQ3) are those that imply active viewing, discussing, and listening. In addition, the final involvement items imply motivation and relevance in that there is an importance about auto and truck racing that motivates respondents to watch, talk about, and pay attention to brands raced. In addition, the admission of respondents that they keep up to date with drivers and pay attention to the participating brands implies relevance—these things are important to the respondents. (Ascertaining the reasons for the relevance and motivation, however, is beyond the scope of this study.)

It would appear then, that—while less explicitly than might be desired—involvement as it is expressed in these final items does reflect involvement as it is

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[10] This is done using the transform function in SPSS, which allows the researcher to combine variables to create a single new variable.

presented in the academic literature. For example, the notion put forth by Andrews, Durvasula, and Akhter (1990) that highly involved people will seek out influences or communication in agreement with the object of involvement is reflected in the idea that respondents spend time conversing about racing with friends. They are seeking out not only the content but also the people who will agree with the importance of these discussions. Perhaps Havitz and Dimanche's (1999) discussion about how the motivation, arousal, and interest in an activity or product affect our behavior captures the essence of all six of the final involvement statements. Clearly, respondents who are highly involved are (more) motivated (than those not involved) to watch, discuss, pay attention to, and keep up-to-date on racing.

In addition, composite variables for social involvement (NEWSOC) and technology transfer (NEWTECH) were created to use in predicting media usage. Reliability and validity analyses of these two composite variables were performed and are reported below.

NEWTECH and NEWSOC Reliability and Validity

Reliability analysis was performed on the variables that were used to compose both NEWTECH and NEWSOC and was performed on the entire sample. The reliability analysis alpha for the combined four-item NEWTECH variable was .8763, indicating internal consistency. The alpha for the items used to comprise NEWSOC was .6558, indicating lower internal consistency. While this alpha can be considered of low or modest reliability, Pedhazur and Pedhazur-Schmelkin (1991) note that alphas of .50 or higher are adequate for research purposes.

Validity was assessed using factor analysis (principal components analysis) for each set of variables used to comprise NEWTECH and NEWSOC. For each of the sets of variables, the factor analysis revealed one component (factor). These are shown below with factor loadings, the KMO measure of sampling adequacy and Bartlett's test of sphericity. Since the KMO figure reported below approaches 1.0 (=.822) the variables are measuring a common factor.

Table 4.8

NEWTECH Factor Analysis

Item	Variable	Loading
30e.	The knowledge that a car manufacturer gains from auto racing helps it build more durable vehicles.	.854
30j.	The knowledge that a car manufacturer gains from auto racing helps it build vehicles with better performance and handling.	.889
30o.	The knowledge that a car manufacturer gains from auto racing helps it build vehicles that are fun to drive.	.840
30z.	The knowledge that a car manufacturer gains from auto racing helps it build safer street vehicles for me.	.833

Note: KMO = .822   Bartlett's test of sphericity significance = .000

Factor analysis was done for the variables that resulted in the composite variable NEWSOC. The results are reported in Table 4.9. It should be noted that the loadings for all of the variables fall within the range outlined above as *acceptable* (>.500) with the exception of 30n, whose loading is .453. This variable is still included because of rounding considerations. Therefore, the variables shown in Table 4.9 are those used for creation of the composite variable NEWSOC.

Table 4.9

NEWSOC Factor Analysis

Item	Variable	Loading
30a	The only auto races that I watch are the major events like the Indy 500 or the Daytona 500.	.601
30l	The best thing about going to auto and truck racing events is having a good time with my friends.	.798
30k	I like auto and truck racing events for the party atmosphere.	.759
30n	The only reason I would go to an auto or truck race is if a friend or family member wanted to go.	.453
30s	One of the best things about watching auto or truck racing is the crashes.	.636

Note: KMO = .822   Bartlett's test of sphericity significance = .000

Regression Analyses

The research questions put forth earlier laid the foundation for better understanding two areas of inquiry. First, does an intuition-based set of questions measure what it is purported to measure? This was answered above in the factor analyses, which found that some, but not all, of the variables put forth to measure involvement do in fact measure this concept as it is generally defined in the academic literature. The next area of interest is what, if any, effect involvement has on media usage with the specific sample of respondents interested in motorsports.[11] Media usage was measured using

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[11] While not all respondents were avid motorsports fans, the majority of the sample reported being moderate to avid fans. The results of analysis discussing levels of fanship were the focal point of the original study.

specific self-reported, open-ended questions for specific media (refer to Table 4.1 for a listing of these variables). Respondents were asked to fill in a number in response (e.g., "In the past 3 months, how many times have you watched cable TV shows about auto or truck racing, such as Speedweek on ESPN?").

As was the case with the involvement questions, these variables were formulated based on the opinions and interests of the researchers, not academic literature or previous research efforts.[12] The same holds true for the time periods designated within each question (e.g., "How many auto or truck racing magazines have you read in the past 3 months?).

Regression analysis was performed in the following manner. The independent variables used for the regression analysis were the newly formed involvement, social involvement, and technology transfer variables called NEWINVOL, NEWSOC, AND NEWTECH, respectively. While the research question of interest is how does involvement predict specific media usage, it also seemed feasible that these other variables, which measure association with motorsports in different ways, could also affect media usage.

Initially, all regressions were run using both the SPSS *enter* method, which tests the full regression model with all independent variables included in the analysis. Subsequently the *stepwise* method was used in the hope that it would provide insights into which independent variable, in fact, was best in predicting the particular media-usage-dependent variable and provide a more parsimonious model. However, upon inspection of both the enter and stepwise methods, it was evident that there was very little

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[12] It should also be noted that these questions were modified somewhat from the earlier study.

to be gained in performing the stepwise analysis. Results presented below, therefore, are those found in the regressions that used the full model.

The findings (below) are reported in the same manner in which the data were run. Regressions were performed by individual dependent variable. As noted previously, this allows for better analysis of, for example, the impact of social involvement on Internet usage versus that of newspaper usage. It was felt that, while somewhat laborious (compared to, for example, creating a composite media usage variable), this method of analysis creates a richer picture of this data and the impact of the independent variables on media usage. In addition, it might provide better answers to the question about the impact of involvement on traditional media versus the Internet. Finally, it should be noted that the scales for the independent variables are 5-point Likert scales with 1 as *agree strongly* and 5 *disagree strongly*. This affects the interpretation of the findings as noted below (for example, a seemingly positive beta indicates an actual inverse relationship between the strength of the independent and dependent variables).

Motorsports Newspaper Article Usage[13]

As noted above, respondents were free to specify any number of auto and truck racing newspaper articles they had read in the past 3 months. Upon inspection of the responses, it was noted that there were two respondents whose answers to this question were well outside the range of other respondents (e.g., 999 newspaper articles read). Of

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[13] It should be noted that the discussion for the first dependent variable, newspaper article readership, will include an explanation of the data points used. Such a discussion will not be included in subsequent discussion of dependent variables.

course, these data points could be attributed to such things as misunderstanding the question (those respondents reporting incredibly high numbers might have misread the instructions as "How many have you read within the past year," for example) or data entry error. Regardless of the cause, these responses were replaced with a value of 200, which was the upper end of the responses of the other survey respondents. Responses then fell between 0 and 200 newspaper articles read within the past 3 months.

Table 4.10 shows the output of interest in this analysis. Again, the independent variables were the composite variables of NEWINVOL, NEWSOC, and NEWTECH.

Table 4.10

Summary Regression Output: Newspaper Article Readership

Model Summary				
Model	**R**	**R^2**	**Adjusted R^2**	**Standard error of the estimate**
1	.370	.137	.135	14.679
ANOVA					
Model	**Sum of squares**	**Df**	**Mean square**	**F**	**Significance**
1	46900.430 (reg)	3	15633.477	72.556	.000
	296485.6 (res)	1376	215.469		
	343386.03 (total)	1379			
Coefficients						
1	**Unstandardized coefficients**		**Standardized coefficients**			
	B	**Standard error**	**Beta**	**T**	**Significance**	
(Constant)	22.602	1.499		15.077	.000	
NEWINVOL	-5.479	.484	.409	11.317	.000	
NEWTECH	.212	.370	-.016	-.572	.567	
NEWSOC	.701	.527	-.049	-1.331	.183	
Predictors: (Constant), NEWSOC, NEWTECH, NEWINVOL						
Dependent Variable: Q12. About how many newspaper articles about auto or truck racing, if any, have you read in past 3 months?						

An important first step in looking at the data above is to assess the significance of the model. This is shown in the significance figure under ANOVA. With this number being .000, we can say with confidence that the model fits the data or, put another way, that there is indeed a relationship between the independent variables and the dependent variable.[14] This tells us that the model can be accepted because of this relationship.

The R^2 shown under *Model Summary* is the next important data point to examine. The adjusted R^2 measures the proportion of the variance in the dependent variable that was explained by the variations in the independent variables.[15] Put another way, the adjusted R^2 then shows that 14% (.135) of the variation in newspaper article readership was explained by the model using NEWINVOL, NEWSOC, and NEWTECH. This is helpful as it allows us to now understand that the three variables—taken as a model—do in fact have some influence on the readership of newspaper articles related to motorsports. Involvement, technology transfer, and social involvement, taken together, have some predictive ability when looking at readership levels of newspaper articles specific to motorsports. Of course, we are interested in better understanding how each of these variables contributes to the predictability of the dependent variable.

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[14] With the significance figure at .000, the model is then significant at the 99% confidence level. If significance had been reported below .05, then the model would be significant at the 95% confidence level.

[15] The R^2 is the ratio of the explained or regression sum of squares (RSS) / total sum of squares (TSS). The TSS explains the total deviations in the dependent variable and the RSS is the amount of the TSS that could be explained by the model. Of course, then, the residual sum of squares is the amount of deviation that could not be explained by the model.

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Looking next at the coefficients gives us a good idea of how each of the independent variables contributes to the model, if at all. These coefficients, in particular the beta scores, provide information on the effect of each independent variable on the dependent variable. However, the first step before looking at the beta coefficients and what these mean, is to look at the significance provided for each independent variable. This allows understanding of the significance of the contribution of the specific independent variable in predicting the dependent variable. Of course, one is looking for a significance figure of .05 or less, indicating that the independent variable is significant in its predictive ability at the 95% confidence level.

In this particular analysis, it is clear that the only independent variable that is significant in its inverse contribution is NEWINVOL. It appears highly significant (.000 significance). The remaining independent variables are not significant in their predictive capabilities.

Now that it is understood that NEWINVOL is significant in its contribution to the level of motorsports newspaper article readership, the next question becomes how much does it contribute to predicting this dependent variable? Independent variables can be looked at individually to assess each variable's contribution to the final score of the dependent variable and also the model in its entirety can be assessed for its ability to influence the dependent variable. The regression equation[16] is fit to the data set in an effort to both describe the data and to assess the predictive ability of the independent variables. Put in its simplest terms, the result of this equation tells us how the dependent

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[16] The regression equation is $Y = b0 + b1Xi + ei$ where b indicates the beta coefficients and x indicates the ith variable.

variable will change due to the influence of the predictor variables. This gives insight into the relationship and the strength of that relationship.

In looking at the independent variables individually and the corresponding beta levels for each, it becomes easier to understand the relationship that exists between these variables and motorsports newspaper article readership. If one were to assume that each of the independent variables was significant in the regression equation, its contribution could be assessed as follows. NEWINVOL is seen as positively contributing to the level of motorsports newspaper articles read, but not highly (beta = 5.479). NEWTECH does not contribute much at all to the independent variable (beta =.212) and also contributes inversely. The same can be true for NEWSOC, whose beta coefficient is .701, indicating that this independent variable will inversely influence the number of motorsports newspaper articles read. In other words, as social involvement rises, respondents are less likely to read motorsports newspaper articles.

Motorsports Cable Usage

As was the case with reported newspaper articles read, there were a few respondents whose responses fell outside what might be considered the norm for such a question. For example, two respondents were shown to have viewed almost 1,000 cable television shows about motorsports in the past 3 months. This, obviously, could have been a result of data entry errors or misunderstanding on the respondents' part with regard to what the question was asking. In any event, these responses were deleted and replaced with the maximum reported response for other respondents on this variable in the survey (100). Once this step was taken, both stepwise and enter regressions were

performed. However, as noted above, only the results of the enter method of regression are reported here. The findings from this regression are reported in Table 4.11.

Table 4.11

Summary Regression Output: Cable Viewership

Model Summary				
Model	**R**	**R^2**	**Adjusted R^2**	**Standard error of the estimate**
1	.420	.177	.175	6.786
ANOVA					
Model	**Sum of squares**	**Df**	**Mean square**	**F**	**Significance**
1	13610.787 (reg)	3	4536.929	98.511	.000
	63372.011 (res)	1376	46.055		
	76982.797 (total)	1379			

Coefficients					
1	**Unstandardized coefficients**		**Standardized coefficients**		
	B	**Standard error**	**Beta**	**T**	**Significance**
(Constant)	11.807	.693		17.036	.000
NEWINVOL	-3.115	.224	.491	11.317	.000
NEWTECH	.111	.171	-.018	.651	.515
NEWSOC	.667	.243	-.098	2.739	.006
Predictors: (Constant), NEWSOC, NEWTECH, NEWINVOL					
Dependent Variable: Q18. In the past 3 months how many times have you watched cable TV shows about auto and truck racing, such as SpeedWeek on ESPN?					

The model, represented by the independent variables NEWINVOL, NEWTECH, and NEWSOC, does not perform well in explaining the variance in cable motorsports viewership. In fact, only 18% of the variance (as noted in the R^2) in the dependent variable is explained by this model. However, the model itself is significant or, put another way, fits the data well (as seen in the ANOVA significance).

In looking at the independent variables as they contribute to or influence cable motorsports viewership, the coefficients are quite telling. This variable is interesting in

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that not only is NEWINVOL a contributor to the influence of cable motorsports viewership, but NEWSOC (the social involvement or social aspects of being a motorsports fan) is, too. Interestingly, while NEWSOC is not a huge contributor to the prediction of cable motorsports viewership, it is notable due to its inverse (albeit small) effect. Thought of in its simplest terms, as NEWSOC increases, the amount of cable motorsports programs viewed decreases. (This relationship is inverse because coding for the newly created variables went from 1 to 5, with 1 being *strongly agree* and 5 being *strongly disagree.*) This makes intuitive sense when one thinks of the social atmosphere of races themselves and the notion that some people might attend these races simply for that party atmosphere, in addition to watching the race or drivers. The implication of this intuitive idea is that such people do not want to simply watch the race (e.g., on cable television); they want to experience the entire atmosphere of race day—the pre-race parties and socializing as well as the race itself. However, it is good to remember that this variable is not a large contributor (beta = .667).

NEWINVOL is also highly significant and, as is the case for NEWSOC, does not contribute greatly to the influence on cable television motorsports viewership. The inverse relationship (beta = 3.115) suggests that as involvement with motorsports increases, viewership of cable television shows about auto or truck racing will increase as well. This makes sense when looking at the definition of involvement used for the present study, which includes the desire and investment put into that which someone is involved—perhaps those more highly involved are more willing to expend time on television viewing of a race (perhaps even in addition to attending select races).

Motorsports Magazine and Newspaper Usage

Just as interest in motorsports has been increasing, so have the media choices available with which a fan can follow the sport. For example, current magazine titles on the topic include *Auto Racing Digest*, *NASCAR RFT* (Racing for Teens), *Motor Trend*, and *Stock Car Racing*.

When the three predictor variables are placed in a regression model equation, the model accounts for only 15% of the variance in racing magazine or newspaper readership. This and all summary numbers are shown in Table 4.12. While the model itself is significant, it does not account for much of the variance in readership of racing magazines and newspapers.

Upon looking at the independent variables individually, only NEWINVOL appears significant. While the beta coefficient for NEWTECH taken by itself appears to be a huge contributor to the influence of number of auto and truck racing magazines read, this number cannot be deemed reliable due to its .498 significance value. The implication of this seemingly contradictory pair of numbers is that the beta coefficient is not reliable due to too much variance.

As with other dependent variables analyzed, NEWSOC contributes to magazine and newspaper readership but is not a reliable predictor (significance = .224). However, NEWINVOL is reliable but contributes to the prediction of number of motorsports newspaper and magazines read. This contribution is not large, though, and should not be overstated (beta = 1.574).

Table 4.12

Summary Regression Output: Magazine and Newspaper Readership

Model Summary				
Model	**R**	**R^2**	**Adjusted R^2**	**Standard error of the estimate**
1	.390	.152	.150	4.159
ANOVA					
Model	**Sum of squares**	**Df**	**Mean square**	**F**	**Significance**
1	4259.547(reg)	3	1419.849	82.101	.000
	23796.580 (res.)	1376	17.294		
	28056.128 (total)	1379			

Coefficients					
1	**Unstandardized coefficients**		**Standardized coefficients**		
	B	**Standard error**	**Beta**	**T**	**Significance**
(Constant)	6.815	.425		16.047	.000
NEWINVOL	-1.574	.137	.411	11.477	.000
NEWTECH	-7.111E-02	.105	.019	.678	.498
NEWSOC	.181	.149	-.044	1.216	.224

Predictors: (Constant), NEWSOC, NEWTECH, NEWINVOL

Dependent Variable: Q13. About how many auto or truck racing magazines or newspapers, if any, have you read in the past 3 months?

Motorsports Television Usage

This analysis proved interesting in a couple of ways. First, the amount of variance explained by this model is roughly one-quarter (R^2 = .278). This is higher than any of the variance explained for the other media usage variables. The other interesting occurrence to note is the near significance (significance = .067) of NEWTECH in the regression equation for television viewership of auto or truck races (see Table 4.13). The implication of this is that with some reliability, NEWTECH might be thought to contribute inversely to the number of auto and truck races a fan watches on television. That is, if significant, as interest in technology transfer increases, motorsports television usage decreases. While

this is interesting and different from the contribution of NEWTECH to other media usage variables, it should be noted that the influence is very small (beta = .309).

Table 4.13

Summary Regression Output: Television Viewership

Model Summary				
Model	**R**	**R^2**	**Adjusted R^2**	**Standard error of the estimate**
1	.527	.278	.276	6.689

ANOVA					
Model	**Sum of squares**	**Df**	**Mean square**	**F**	**Significance**
1	23641.395 (reg)	3	7883.798	176.187	.000
	61571.446 (res.)	1376	44.747		
	85222.841 (total)	1379			

Coefficients					
1	**Unstandardized coefficients**		**Standardized coefficients**		
	B	**Standard error**	**Beta**	**T**	**Significance**
(Constant)	17.226	.683		25.216	.000
NEWINVOL	-3.472	.221	.520	15.736	.000
NEWTECH	.309	.169	-.048	-1.833	.067
NEWSOC	-.261	.240	.036	1.087	.277

Predictors: (Constant), NEWSOC, NEWTECH, NEWINVOL

Dependent Variable: Q15. How many auto or truck races, if any, have you watched on TV in the past 5 months?

Aside from the implications of NEWTECH's contribution, again it is notable that NEWINVOL contributes in the regression equation for television viewership of auto and truck races. As with previous analyses, this contribution is rather small, but noteworthy, especially in a relative sense.

Motorsports Internet Usage

Internet usage was assessed by having respondents report the number of times they accessed the Internet specifically to find information about racing. One specific research question was posed with the thought that the Internet is easy to access and available to many, not to mention new and interesting to use. This being the case, it was felt that even those who were not avid fans of motorsports might log on to the Internet to get information. Indeed, logging on to the Internet to get race results, information about drivers, or NASCAR products, for example, might not be something that is contingent on someone's involvement level with the sport.

Table 4.14 summarizes the findings of the regression of NEWINVOL, NEWTECH, and NEWSOC on the Internet usage dependent variable. As was the case with television viewership as the dependent variable, this analysis yielded some interesting results.

Table 4.14

Summary Regression Output: Internet Usage

Model Summary				
Model	**R**	**R^2**	**Adjusted R^2**	**Standard error of the estimate**
1	.291	.085	.083	8.081

ANOVA					
Model	**Sum of squares**	**Df**	**Mean square**	**F**	**Significance**
1	8316.211 (reg)	3	2772.070	42.451	.000
	89854.354 (res.)	1376	65.301		
	98170.565 (total)	1379			

Coefficients					
1	**Unstandardized coefficients**		**Standardized coefficients**			
	B	**Standard error**	**Beta**	**T**	**Significance**
(Constant)	9.007	.825		10.915	.000
NEWINVOL	-2.381	.267	.332	8.932	.000
NEWTECH	-1.304E-04	.204	.000	.006	.995
NEWSOC	.487	.290	-.063	-1.681	.093
Predictors: (Constant), NEWSOC, NEWTECH, NEWINVOL					
Dependent Variable: Q16. How many times have you used the Internet specifically to find information about auto or truck racing in the past 5 months?					

What is interesting is the small percentage of variance that this model accounts for when looking at Internet usage for auto or truck racing information. Obviously, there are other factors not tested here that contribute more to the variance of this dependent variable.

However, it is interesting to note that the model itself is significant and that NEWSOC, while contributing very little to the regression equation by way of beta (beta = -.487), has a significance which, while not proving reliability of this variable, hints that the social aspect could, perhaps be reliable and predictive of involvement. If this composite variable were made up of different social involvement variables (what those

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might be are beyond the scope of this section), perhaps this significance would be below .05. Of course, this is speculation and food for future thought.

Once again, NEWINVOL was shown to be a significant contributor in the regression equation. While its contribution is not large (beta = -2.381), it appears to be the only variable analyzed that contributes significantly to the number of times a person uses the Internet to find auto or truck racing information. As was the case with the previously reported media usage variables, it appears that as involvement increases, media usage also increases. Taken in the context of the questionnaire, as respondents reported less agreement with involvement variables (e.g., "My friends and I talk a lot about auto or truck racking."), Internet usage increased.

Motorsports Radio Usage

As shown in Table 4.15, the model that includes the predictor variables NEWINVOL, NEWTECH, and NEWSOC explains only 12% of the variance in the dependent variable radio usage. However, the model itself does work to explain deviations in the dependent variable (as seen in the ANOVA significance of .000). As noted for other dependent variable analyses, the model does fit the data given this significance figure.

When one looks at the specific independent variables used for this analysis, it becomes apparent that NEWINVOL is significant in its contribution to the explanation of radio listenership of motorsports. However, NEWSOC is also a significant inverse contributing variable in the regression equation. As has been the case in previous media usage variable analyses, this contribution is quite small. However, it is interesting that the

social involvement (NEWSOC) variable has a negative (or inverse) impact on radio

listenership. Perhaps, as might be the case with cable television, motorsports radio

listening is not seen as an ingredient in social events centered around motorsports.

The notion of technology transfer captured in NEWTECH is not significant in its

contribution to the prediction of motorsports radio listenership. This is evidenced by the

.564 significance figure.

Table 4.15

Summary Regression Output: Auto and Truck Racing Radio Listenership

Model Summary					
Model	**R**	**R^2**	**Adjusted R^2**	**Standard error of the estimate**	
1	.348	.121	.119	3.14	
ANOVA					
Model	**Sum of squares**	**Df**	**Mean square**	**F**	**Significance**
1	1869.901 (reg)	3	623.300	63.126	.000
	13586.473 (res.)	1376	9.874		
	15456.374 (total)	1379			
Coefficients					
1	**Unstandardized coefficients**		**Standardized coefficients**		
	B	**Standard error**	**Beta**	**T**	**Significance**
(Constant)	4.393	.321		13.690	.000
NEWINVO L	-1.124	.104	.396	10.848	.000
NEWTECH	-4.569E-04	.079	.017	.577	.564
NEWSOC	.259	.113	-.084	-2.294	.022
Dependent Variable: Q14. How auto or truck races, if any, have you listened to on the radio in the past 5 months?					

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Demographic Dependent Variables

Involvement, technology transfer and social involvement do not appear to be significantly large contributors to media usage. This will be discussed at length, along with the implications of the findings, in chapter 5.

Given that these variables do not explain the variance in media usage that was perhaps hoped for, demographic variables were analyzed to assess what impact these had. In particular, demographic variables were used in an effort to see if these better explain the variance in media usage variables. However, the demographic variable of state of residence was not included due to recoding done by the original research supplier, which cannot be changed.[17] Specifically, then, the demographic variables used for analysis were age, employment status, household income, occupation, and gender.

On initial analysis of the responses to the demographic variables, it was noted that respondents completed most of these demographic questions. This is not always the case in questionnaire research—especially with an instrument roughly 15 pages long (approximately 20 to 25 minutes over the telephone). Respondents get fatigued from having answered previous questions, and might not feel comfortable giving this somewhat personal information (especially income, for example, for fear that it might somehow be linked to the person's name). So, of course, it was to be expected that, while

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[17] In addition, the responses to "In which state do you live?" were recoded to account for regions of the country in which respondents reside. This recoding only took into account East, Central, and West regions, and left out the Southern region—a region of the United States where motorsports is especially popular.

respondents did supply answers most of the time, often there would be refusals.[18] These

refusals were changed in the coding schemata to reflect missing data, so as not to confuse

the findings of the subsequent analysis. The findings of the ANOVA are presented and

discussed below by independent variable.

Occupation and Media Usage

Occupation appears to have a significant effect on certain motorsports media

usage, as shown in the summary Table 4.16. There are significant differences between

occupational groups about how many specialty (auto or truck racing) magazines they read

and how many races they watched on television. Specifically, upon examination of the

means, those whose occupation is machine operator are more likely to read a higher

number of specialty racing magazines and newspapers, and public safety personnel

appear more likely to watch significantly more motorsports television than other

occupations listed. For both media, those who report their occupation as farming partake

in the least of these media. Interestingly, those whose occupation is farming appear to

consume the least of any motorsports media with the exception of newspaper articles, the

medium for which technical support personnel report the lowest consumption.

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[18] For demographic variables, refusals occurred for *occupation* (371 cases) and *household income*

(288 cases).

Table 4.16

Occupation and Media Usage

	Mean high, low & total	Between group statistics		
		Mean square	F	Sig.
Q12. Newspaper articles	Executive (mean=6.7) Tech support (mean=2) Total (mean=4.59)	293.205	.960	.472
Q13. Specialty magazines & newspapers	Machine operator (mean=3.9) Farming (mean=.13) Total (mean=1.25)	92.123	3.471	.000
Q14. Radio	Machine operator (mean=1.7) Farming (mean=0) Total (mean=.89)	14.224	1.030	.414
Q15. TV	Public safety (mean=10.22) Farming (mean=.25) Total (mean=3.51)	207.625	3.058	.001
Q16. Internet	Executive (mean=2.82) Farming & public safety (both mean=0) Total (mean=1.38)	62.452	1.358	.203
Q18. Cable TV	Machine operator (mean=3.33) Farming (mean=.13) Total (mean=2.23)	77.797	1.562	.122

Gender and Media Usage

With the exception of radio, there appear to be significant differences (see Table 4.17) between men and women in their consumption of motorsports media as measured in the present study. In each of these media types (newspaper articles, specialty magazines and newspapers, television, Internet, and cable television), men report a higher average of times using these media to gather motorsports information. The highest

average mean for males was reported for newspaper articles (6.65), whereas women had

a mean of 1.95 for newspaper article readership. Consumption of radio for motorsports

usage was quite low for both groups, with both groups reporting an average of less than

one incidence of listening to motorsports radio programming in the past 5 months.

Table 4.17

Gender and Media Usage

	Mean high, low & total	Between group statistics		
		Mean square	F	Sig.
Q12. Newspaper articles	Male (mean=6.65) Female (mean=1.95) Total (mean=4.12)	7586.834	31.134	.000
Q13. Specialty magazines & newspapers	Male (mean=1.75) Female (mean=.53) Total (mean=1.09)	516.243	25.831	.000
Q14. Radio	Male (mean=.91) Female (mean=.70) Total (mean=.80)	15.269	1.363	.243
Q15. TV	Male (mean=4.07) Female (mean=.2.75) Total (mean=3.36)	597.785	9.734	.002
Q16. Internet	Male (mean=2.69) Female (mean=.31) Total (mean=1.41)	1943.317	27.829	.000
Q18. Cable TV	Male (mean=3.76) Female (mean=.99) Total (mean=2.27)	2625.028	48.647	.000

Income and Media Usage

Table 4.18 shows the summary ANOVA results of influence of income on media

usage. The analysis of media usage when income is considered is an interesting one.

While there appear, on the surface, to be great differences between income groups with

regard to media consumed (e.g., the average specialty magazines consumed in the past 3

months for those whose income is under $20,000 is 0, while the average for those whose

income is between $40,000 and $59,999 is roughly 7) the only differences in

consumption of television and cable television are significantly different. Another

interesting observation is the mean of 0 for those earning under $20,000 for all

motorsports media measured.

Table 4.18

Income and Media Usage

	Mean high, low & total	Between group statistics		
		Mean square	F	Sig.
Q12. Newspaper articles	Under $20K (mean=0) $60,000 to $79,999 (mean=5.48) Total (mean=4.55)	258.934	.852	.530
Q13. Specialty magazines & newspapers	Under $20K (mean=0) $40,000 to $59,999 (mean=6.93) Total (mean=4.89)	31.215	1.307	.251
Q14. Radio	Under $20K (mean=0) $60,000 to $79,999 (mean=5.48) Total (mean=4.55)	21.904	1.759	.104
Q15. TV	Under $20K (mean=.84) $100,000 to $150,000 (mean=11.73) Total (mean=8.31)	150.499	2.196	.041

Table 4.18 (cont'd)

Q16. Internet	Under $20K (mean=0)			
	$60,000 to $79,999 (mean=14.79)			
	Total (mean=9.18)	148.778	1.774	.101
Q18. Cable TV	Under $20K (mean=0)			
	$80,000 to $99,999 (mean=11.30)			
	Total (mean=7.37)	123.630	2.289	.033

Employment Status and Media Usage

The examination of employment status and motorsports media usage, shown in Table 4.19, illustrates some of the intense media usage among respondents. In particular, Internet and cable television usage for motorsports events appear to be quite high for those unemployed (Internet average = 29 Internet "hits" over the past 5 months and slightly more than 19 cable television motorsports shows viewed in the past 3 months). However, aside from the sheer volume of some motorsports media being consumed, there appear to be significant differences between the employment groups with regard to motorsports media consumed. With the exception of newspaper articles and radio programming, there are significant differences based on employment status when looking at motorsports media consumption. It appears that students tend to consume the least amount of motorsports media and the unemployed, in most instances, consume the most.

Table 4.19

Employment Status and Media Usage

	Mean high, low & total	Between group statistics		
		Mean square	F	Sig.
Q12. Newspaper articles	Full time (mean=4.96) Student (mean=.25) Total (mean=4.12)	425.134	1.712	.129
Q13.Specialty magazines & newspapers	Not employed (mean=2.33) Student (mean=.00) Total (mean=1.09)	54.451	2.693	.020
Q14. Radio	Full time (mean=.94) Student (mean=.00) Total (mean=.80)	15.226	1.360	.237
Q15. TV	Not employed (mean=10.67) Student (mean=2.25) Total (mean=3.36)	187.439	3.056	.010
Q16. Internet	Not employed (mean=29.00) Student (mean=.13) Total (mean=1.41)	1949.772	30.298	.000
Q18. Cable TV	Not employed (mean=19.17) Part time (mean=.95) Total (mean=2.27)	754.223	14.155	.000

Age and Media Usage

There appear to be significant differences between age groupings in the consumption of motorsports media, as shown in Table 4.20, with the exception of television. Also, with the exception of television, the age group 35 to 44 appears to be the highest consumer of motorsports media—especially newspaper articles (mean = 7.78).

Table 4.20

Age and Media Usage

	Mean high, low & total	Between group statistics		
		Mean square	F	Sig.
Q12. Newspaper articles	35 to 44 (mean=7.78) 75+ (mean=1.37) Total (mean=4.59)	1103.787	4.500	.000
Q13.Specialty magazines & newspapers	35 to 44 (mean=2.06) 75+ (mean=.11) Total (mean=1.09)	89.448	4.463	.000
Q14. Radio	35 to 44 (mean=1.33) 55 to 64 (mean=.33) Total (mean=.80)	28.772	2.585	.017
Q15. TV	45 to 54 (mean=3.82) 75+ (mean=.74) Total (mean=3.36)	94.025	1.525	.166
Q16. Internet	35 to 44 (mean=2.91) 75+ and 65 to 74 (mean=.00) Total (mean=1.09)	213.138	3.020	.006
Q18. Cable TV	25 to 34 (mean=10.51) 75+ (mean=.11) Total (mean=2.27)	108.247	1.947	.070

Chapter 5 presents a further discussion of these findings, along with implications
and potential shortcomings of the study. In addition, suggestions for future research are
presented.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

Overview of Findings and Implications

This study was conducted to investigate two areas of interest. The first area explored the reliability and validity of an involvement scale developed by an advertising agency. Essentially, the question was whether such an intuitive based grouping of questions measures what it is purported to measure.

The second area of inquiry was to better understand how, if at all, involvement and demographic variables affect media usage. Using a survey developed to specifically measure motorsports interest and motorsports-related media usage, the findings are applicable to this sport in this instance.

The preceding chapter outlined the analyses put forth to better understand the implications of both areas of inquiry. Through reliability and factor analysis, a better understanding was gained of how the original scale reflected a variety of concepts (e.g., technology transfer and social involvement). These analyses aided in answering the first four research questions and revealed that the scale did, in fact, contain some items that measured involvement. In particular, the final involvement items related to the ideas of motivation and investment put forth in the definition used for this study. Clearly, the involvement scale could be improved on. This is discussed below.

The remaining research questions sought to better understand how involvement (once better defined) and demographics affected media usage. In particular, specific media usage variables were examined separately to better understand how involvement

affected each versus how involvement and demographics affected overall media usage. This allowed for explication of any differences that might appear, for example, between printed media and visual media or traditional media and the Internet.

Did the "Involvement Scale" Measure Involvement?

Reliability analysis illustrated that the 30-item scale does, in fact, have some shared meaning. Again, this does not mean that all of the items were measuring one single concept (i.e., involvement) but that the concepts being measured were intercorrelated. To further explore what specific concepts the 30-item scale was measuring, factor analyses were performed. These analyses found that the *major* or clearest areas being explored in this scale were technology transfer, social involvement, and involvement. As noted in earlier chapters, it is important to reiterate that social involvement and involvement were treated as separate concepts since social involvement was shown to be involvement with the atmosphere or friends during a race event, while involvement was shown as involvement with the sport itself. Thought of a different way, social involvement was not necessarily dependent on there being a NASCAR event, but more dependent on a gathering of friends or a party atmosphere.

In sum, then, the 30-item scale does not measure involvement per se. However, there are some very useful items within the scale that measure involvement. In particular, both the social involvement and involvement would interest NASCAR sponsors. Of course, the implications of these types of involvement might be different—those more socially involved might be less receptive to the sponsors' messages, for example. This issue is beyond the scope of this study, but certainly of interest to sports sponsors.

Recalling the definition of involvement used for this study, it is apparent that the final items used to measure involvement certainly reflect the definition, although perhaps less explicitly than they could have had the definition been used to guide questionnaire development. In particular, consider the definition and the final involvement items.

> **Involvement**—A product, activity, or event that is highly relevant and meaningful and often motivates one to invest time, money, and effort in pursuing the activity, event, or product. In particular, high involvement creates a desire to invest more money, time, and effort in the pursuit of keeping current with the product, activity, or event.

The final involvement items are:

- I like to go to local auto and truck races in my area.
- I spend a lot of time watching auto or truck races on TV.
- I like to keep up-to-date with the careers of certain drivers.
- When watching auto and truck racing, I watch the drivers' skill and technique.
- My friends and I often talk about auto or truck racing.
- I pay a lot of attention to the brands of cars and trucks that participate in auto and truck racing.

As noted above, these items do get at the notions of investment and motivation to keep current with the sport, as well as hint at the relevance of the sport (e.g., through friendships). However, to better measure involvement based on the definition put forth, additional questions might be included to more specifically get at the idea of monetary

investment (e.g., "I'll pay whatever the going price for admission to a racing event" and "I believe that NASCAR events are worth the cost of ticket prices") and relevance (e.g., "NASCAR events reflect part of who I am").

Do Involvement, Social Involvement, Technology Transfer, and Demographics Affect Media Usage

Chapter 4 outlines specifically the analyses done in an effort to better understand the implications of certain variables on media usage. Given the specifics of the original study, the real question became one of whether involvement with motorsports translates into a higher tendency to use motorsports-related media (e.g., race-related articles in newspapers or magazines).

As noted above, concepts other than involvement were included in the original 30-item involvement scale. Given that this was the case and that there was measurement of some demographic variables in the original study, it was decided to see if any of these concepts had an impact on media usage.

The first set of regressions analyzed the impact of technology transfer, social involvement, and involvement on media usage. The results of these analyses were presented previously in chapter 4 and are discussed below.

Involvement (with racing, not social involvement) had a small and positive influence on media usage. Thought of another way, those who reported themselves as highly involved were more likely to use motorsports-specific media. This was slightly truer for newspaper, cable television, television, and Internet, perhaps because these media (versus specialty newspapers and magazines or motorsports radio) are more

commonly used by consumers in general. Another reason might be that newspaper, television (cable and broadcast), and the Internet might provide more detail than other media, especially radio.

Interestingly, social involvement has a slight and negative impact on radio and cable television usage. Social involvement was shown as an insignificant contributor to media usage for the remaining media types. This makes intuitive sense because those who desire social interaction from racing would most probably want to be at the event itself, rather than partake of it through media.

The notion of technology transfer did not have a significant impact on respondents' media usage. Perhaps, as might be the case for those seeking social involvement, respondents who believe in the notion of technology transfer either like to be at races in person or don't have an interest in the sport but believe that the transfer of racing technology to street vehicles exists—even if they do not find the sport particularly interesting.

Demographically, there were many findings of interest. For example, only age influenced motorsports radio listenership. All other demographic variables did not appear to influence this medium. The age group with the highest radio listenership for motorsports events was 35- to 44-year-olds. Perhaps this group was more likely to grow up with radio as entertainment or perhaps they are more likely to listen as they drive (e.g., to and from work).

The findings regarding gender's influence on motorsports media were also interesting, although perhaps not surprising to some who feel that motorsports is appealing mostly to men. In particular, men were found to be more likely to use

newspaper, cable television, specialty magazines and newspapers, and the Internet to find information about motorsports. Certainly this could not be due to males' greater adeptness at using these media or their availability to men. Perhaps the disparity is simply one of overall interest in the sport—that is, women are less likely to use these media for motorsports-related news because they have less interest overall in the sport. This is an interesting supposition and worthy of tracking because motorsports are becoming more and more appealing to women, according to some sources (Hagstrom, 1998). When looking at specific media, it is also of interest to note that in many instances men had an average usage of double the motorsports media usage of women. For example, the number of motorsports' newspaper articles read in the past 3 months was roughly seven for men and two for women. The disparity exists for Internet usage in the past 5 months as well, where men report an average of roughly three and women report an average far less than one (.31).

Age's influence on Motorsports-related media usage was seen significantly only for cable television and specialty magazines and newspapers. That is, as age increases, respondents are less likely to look to these media for motorsports information. The explanations for this could be varied. In fact, it would be interesting to see if overall interest in the sport increases or decreases with age, which would, of course, have implications for media use as well. Perhaps older motorsports enthusiasts are less likely to spend their income on cable or specialty magazines, relying on things such as the local daily newspapers and broadcast television for motorsports information. However, the present analysis seems to point to an overall decrease in motorsports media use at the higher age ranges. The older age group (75 or older) has the lowest average use of all

motorsports media except radio (where the age group 55 to 64 has the lowest average use). The explanation for this might not be due to cost at all, but to interest in the sport. This age group might have the least amount of interest in the sport.

A finding of great interest to motorsports marketers is the influence of income on motorsports media. In many instances, higher income categories consume a higher average of motorsports media. In particular, people who fell into higher income categories (e.g., more than $60,000) had the highest average media usage for all motorsports media. The implications of this for marketers could prove far-reaching, as advertising for high-end products (e.g., jewelry, designer clothing, or sports cars) and services (e.g., interior decorating or real estate services) could be placed in these motorsports media. This data certainly counters stereotypes of motorsports fans as having low incomes. For example, the average number of races viewed on television by those whose income is between $100,000 and $150,000 was 12 over the past 5 months. This is significantly higher than those whose income is under $20,000 (mean = .84).

The income data is interesting in light of the employment status findings, which run counter (intuitively) to those of income. In all of the media categories for which employment status was a significant differentiator, those respondents who fell into the category of *not employed* had the highest average use. In fact, the average Internet use rate for those unemployed was 29 Internet hits over the past 5 months. Cable television for this same group averaged 19 programs viewed in 3 months. For these significantly different media categories, those employed full time had fewer than half of the media viewing averages compared with the unemployed respondents. This higher rate of media use might simply be due to time availability—that is, unemployed respondents might

have more time to spend with these media in general. In fact, these respondents might not be more avid fans but might have more time to consume such media.

What Next? Study Implications

This study proved interesting on several fronts, but perhaps none moreso than the implications it has for future research. Unfortunately, the variables used in the original study did not all measure involvement as intended. If involvement were the issue of importance, the scale used to measure the concept could have been expanded to include explicit measures of motivation, relevance, and investment, for example. Such items could be borrowed from scales such as Zaichowsky's involvement scale and modified specifically for motorsports. Of course, these would need to be tested for reliability and validity.

Perhaps of most importance to advertising practitioners and sponsors of events such as motorsports is the attention to and influences on media use. Further explication of involvement and how it affects media use is obviously called for. With better involvement measures, researchers can better understand how highly involved fans use (or do not use) media.

However, the present study does have some findings of interest on which to base future research. For example, if those respondents who are highly socially involved with motorsports do not use radio or cable television sources for motorsports events or information, are there ways to make these media appealing to them? Are there contests or events that could be done on radio or on cable television that would somehow replicate the social atmosphere these people seek? In other words, can the party atmosphere of the

race be replicated for fans who can not attend the actual race? Or, can these people be "turned into" motorsports enthusiasts, thereby getting them to use diverse media?

The idea of technology transfer also appears to have little impact on media use. This is an important fact for motorsports advertisers (especially auto manufacturers who sponsor the sport and tout the idea that racing results in better street vehicles). Technology transfer, it appears, is not a reason for people to tune into motorsports events. Motorsports sponsors need to assess where technology transfer falls in the scheme of marketing. That is, is it important for people to be heavy motorsports media consumers to believe in the notion of technology transfer or is it enough for the general population to understand and believe it?

Demographically, a better picture of who uses motorsports media is needed. Traditional stereotypes would say young, lower income males are the primary consumers of any motorsports media, but with the motorsports fan base increasing to include more affluent consumers and more females, advertisers need a measurement of how people differ demographically in their media usage. Future research should track how the motorsports enthusiast market changes (if at all). Questions of interest might include whether the market is including more females and more or fewer higher income people, and what members of what professions tend to follow motorsports, for example. More specifically, NASCAR claims its current fan base to be 41% female (NASCAR New York Corporate Marketing Office, 2001). Understanding whether the female fan base increases or decreases will be important for marketers as they create messages integrating motorsports. The same is true for the other demographics measures in the study, such as

income level and age. Understanding trends in fan demographics will help sponsors of the sport better reach audiences.

When looking at age, motorsports sponsors must understand how to appeal to an aging population. As baby boomers age, for example, motorsports sponsors will certainly want to appeal to them. Assessing the appeal of motorsports can be done through surveys and qualitatively in ways such as ethnographic interviews. Combining methodologies will give marketers a greater understanding of what motorsports means to this audience.

Further explication of the *not employed* category might interest motorsports marketers. Are these people searching for employment? Independently wealthy? Too young to be employed? Are they a market to which one might advertise—or not? These questions are important because, given the data in the present study, this group consumes an inordinately high amount of certain motorsports-related media (i.e., Internet and broadcast and cable television).

Finally, additional demographic variables not analyzed in the present study would be critical to the study of the motorsports market. Knowledge of the market's race and education would help complete the picture of who the motorsports fan really is. For example, current NASCAR data shows that roughly two thirds of NASCAR fans are white, 11% are Hispanic and 12% are African-American (NASCAR New York Corporate Marketing Office, 2001). Future research can be done to verify these figures, as well as to track the changes in minority fan levels and understand the appeal of racing to members of minorities such as Asians and Hispanics.

Study Limitations

This study, while using a large, national sample, did indeed have limitations. Perhaps most notable is the inability to measure involvement accurately given the items presented in the original scale. Obviously, a better picture of how involvement influences media usage might have been obtained with additional and more specific involvement items. Of course, this limitation is based on using a preexisting questionnaire. Perhaps if the final involvement variables were developed based on previous research (qualitative or quantitative), they would be better measures of involvement than the initial 30 items.

Also, demographic variables for the present analysis should have included race and education level to better understand the motorsports audience.

APPENDIX

APPENDIX

SURVEY BOOKLET: MOTORSPORTS INTEREST STUDY

Screener:

A. Are you over 16 years of age?

Yes (CONTINUE)

No (ASK TO SPEAK TO ADULT IN HOUSEHOLD, OTHERWISE
   TERMINATE)

B. Have you purchased or leased a NEW, NOT previously owned vehicle in the past 5
   years?

Yes (CONTINUE)

No (TERMINATE)

C. Do you intend to purchase or lease a NEW, NOT previously owned vehicle in the
   next 5 years?

Yes (CONTINUE)

No (TERMINATE)

When I refer to *street vehicles* in this survey, I mean vehicles that you would find at your
local dealer.

1. First, thinking of the next NEW, NOT previously owned, vehicle buying decision in
   your household, who will be involved in the decision as to what make and model to
   buy or lease?

   Self only   _____

   Self and other   _____

   Other only   _____ (ASK TO SPEAK TO OTHER PERSON, IF NOT HOME,
                             ARRANGE FOR A CALL BACK)

2. Now thinking of different makes and models of cars, trucks, and vans, which make and model comes to mind first? Which comes to mind next? Which others? (LIMIT TO 5)

3. If you were to buy or lease a new vehicle in the next 5 years, what make and model would you be most likely to consider? What others? (LIMIT TO 5)

4. You may have already mentioned this, but which <u>one</u> would you be most likely to buy or lease in the next few months? (IF TYPE OF "CAR" IS NOT MENTIONED, SKIP TO Q.6)

5. If you were to buy or lease (CAR MAKE/MODEL MENTIONED ABOVE), would it be a 2-door or 4-door?

2-door ❑₁

4-door ❑₂

CHECK QUOTAS, IF RESPONDENT QUALIFIES FOR MORE THAN ONE OPEN CELL, ASK ABOUT VEHICLE IN CELL THAT IS MOST IN NEED.

6. When do you think you will buy or lease your next <u>new,</u> not used, vehicle? (READ LIST)

In the next 12 months   _____

In 1–2 years   _____

In 3–5 years   _____

Now I'd like to know how familiar you are with these various vehicles. For each make and model I mention, can you tell me if you....(read scale)

Have owned one

Have driven one but never owned one

Have heard a lot of things about it but never driven one

Have heard a few things about it, or have

Just heard the name before.

7. Earlier, you said that you would consider a (QUALIFYING VEHICLE) for your next vehicle purchase. Please tell me which of these statements most applies to your familiarity with (make/model).

	Have owned one	Have driven one but never owned one	Have heard a lot about it but never driven one	Have heard a few things about it	Just heard the name before
First choice make/model					
Chevrolet make/model					
Ford make/model					
Pontiac make/model					
Dodge make/model					
BMW make/model					
Toyota make/model					

8. Overall, how would you rate the **2000** (VEHICLE MODEL)? Would you rate it as

	Excellent	Very good	Good	Fair	Poor	DK
First choice model						
Chevrolet (model)						
Ford (model)						
Pontiac (model)						
Dodge (model)						
BMW (model)						
Toyota (model)						

9. Now I'd like to know how likely you are to buy these various vehicles. For each make and model I mention, can you tell me if....

It's the only model you would consider

It's one of only two or three models you would consider

It's one of several

It's one that might get on your list of possibilities, or you

Would not consider at all

10. Thinking about the next time you buy a vehicle, how likely are you to buy a (make/model)?

	It's the only model you would consider	It's one of only 2 or 3 models you would consider	It's one of several	It's one that might get on your list of possibilities	Would not consider at all
First choice make/model					
Chevrolet make/model					
Ford make/model					
Pontiac make/model					
Dodge make/model					
BMW make/model					
Toyota make/model					

My next series of questions are specifically about auto and truck racing. By that I mean <u>any type of auto or truck racing.</u>

11. Please tell me your overall level of interest in each of the following types of auto and truck races. How interested are you in (READ EVENT)? Are you ...(READ SCALE)?

(ITEMS WILL BE RANDOMIZED)

	Extremely interested	Very interested	Somewhat interested	Not very interested	Not at all interested
Indy Car racing	1	2	3	4	5
NASCAR Winston Cup Stock car racing	1	2	3	4	5
NASCAR Busch Grand National stock car racing	1	2	3	4	5
NASCAR Craftsman truck racing	1	2	3	4	5
NHRA drag racing	1	2	3	4	5
Desert or off-road racing	1	2	3	4	5
Sports car racing	1	2	3	4	5
American Speed Association	1	2	3	4	5
LeMans	1	2	3	4	5
Formula One	1	2	3	4	5
World Road Rally	1	2	3	4	5
Other _____	1	2	3	4	5

11a. (If "NOT AT ALL INTERESTED" to all, skip to Q12) Which type of auto or truck racing are you most interested in? (READ LIST. RECORD ONE.)

Indy Car racing   _____

NASCAR Winston Cup stock car racing _____

NASCAR Busch Grand National stock car racing _____

NASCAR Craftsman truck racing _____

NHRA Drag racing _____

Desert or off-road racing _____

Sports car racing _____

American Speed Association _____

LeMans _____

Formula One _____

World Road Rally _____

Other type of racing (Specify) _____

12. About how many <u>newspaper articles</u> about auto or truck racing, if any, have you read in the <u>past 3 months</u>?

_____

13. About how many auto or truck racing <u>magazines or newspapers</u>, if any, have you read in the <u>past 3 months</u>? Please include racing magazines that you may subscribe to, as well as those you may have bought at newsstands.

_____

14. How many auto or truck races, if any, have you listened to <u>on the radio in the past 5 months</u>?

_____

15. How many auto or truck races, if any, have you watched <u>on TV in the past 5 months</u>?

_____

16. How many times, if any, have you used the Internet specifically to find information about auto or truck racing in the past 5 months? (IF 0, SKIP TO Q. 18)

_____

17. How many Web sites have you visited in the <u>past 5 months</u> related to auto or truck racing?

_____
b. What Web sites did you visit? _____

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18. In the past 3 months, about how many times, if ever, have you watched <u>any</u> weekly cable TV shows about auto or truck racing such as SpeedWeek on ESPN, or Racetalk on TNN, or SpeedVision?

_____

19. Have you <u>personally attended</u> any auto or truck races <u>in the past 12 months</u>?

Yes ☐₁   ➡   (CONTINUE)

No ☐₂   ➡   (SKIP TO Q. 22)

20. How many of those attended <u>in the past 12 months</u> were <u>national</u> auto or truck races? By _national_ races, I mean national events like Winston Cup Series races, Indy Car races and other major racing events.

_____

21. How many, within <u>the past 12 months</u>, were <u>local</u> auto or truck races?

_____

22. How many <u>specialty auto exhibits or shows</u>, if any, have you personally attended <u>in the past 12 months</u>? By _specialty shows,_ I mean those exhibiting hot rods, classic cars, etc. and <u>not</u> the annual new car auto shows.

_____

23. Are you currently a member of any auto racing car club or race car driver fan club?

Yes ☐₁   ➡   (CONTINUE)

No ☐₂   ➡   (SKIP TO Q. 25)

24. What auto racing clubs or driver fan clubs are you a member of? (DO NOT READ. RECORD ALL THAT APPLY)

National Hot Rod Association (NHRA)................................☐₁

Sports Car Club of America (SCCA)...................................☐₂

Any race car driver fan club...☐₃

National Street Rod Association ....☐₄

Other (Specify)...☐₅

27. Based on races you've recently seen or things you've recently read, how would you rate each of the following manufacturers in terms of "its level of involvement in auto

and truck racing"? Please use a scale from 1 to 10 where a 10 means *extremely involved* and a 1 means *not at all involved.* How would you rate (MANUFACTURER)? (NOTE: DO NOT PUSH FOR AN ANSWER. IF "DON'T KNOW", RECORD AS SUCH.)

	Extremely involved									Not at all involved
Chevrolet	10	9	8	7	6	5	4	3	2	1
Dodge	10	9	8	7	6	5	4	3	2	1
Ford	10	9	8	7	6	5	4	3	2	1
Honda	10	9	8	7	6	5	4	3	2	1
Mazda	10	9	8	7	6	5	4	3	2	1
Mercedes Benz	10	9	8	7	6	5	4	3	2	1
Nissan	10	9	8	7	6	5	4	3	2	1
Oldsmobile	10	9	8	7	6	5	4	3	2	1
Pontiac	10	9	8	7	6	5	4	3	2	1
Toyota	10	9	8	7	6	5	4	3	2	1

28. Based on anything you might have seen or heard, how would you rate each of the following manufacturers in terms of "being a winner in auto and truck racing"? Please use a scale from 1 to 10 where a 10 means *describes perfectly* and a 1 means *does not describe at all.* How would you rate (MANUFACTURER)? (NOTE: DO NOT PUSH FOR AN ANSWER. IF "DON'T KNOW", RECORD AS SUCH.)

	Describes perfectly									Does not describe at all
Chevrolet	10	9	8	7	6	5	4	3	2	1
Dodge	10	9	8	7	6	5	4	3	2	1
Ford	10	9	8	7	6	5	4	3	2	1
Honda	10	9	8	7	6	5	4	3	2	1
Mazda	10	9	8	7	6	5	4	3	2	1
Mercedes Benz	10	9	8	7	6	5	4	3	2	1
Nissan	10	9	8	7	6	5	4	3	2	1
Oldsmobile	10	9	8	7	6	5	4	3	2	1
Pontiac	10	9	8	7	6	5	4	3	2	1
Toyota	10	9	8	7	6	5	4	3	2	1

29. (Ask only if answered extremely, very, or somewhat interested in NASCAR car or truck racing in Q. 10) Which NASCAR vehicles are you aware of? (DO NOT READ LIST)
Grand Prix   _____
Intrepid   _____
Monte Carlo   _____
Taurus   _____
Thunderbird   _____

| | Indy Car racing | 1 | 2 | 3 | 4 | 5 |

30. Please tell me how much you agree or disagree with each of the following statements. (READ ROTATED STATEMENT, READ SCALE.)

	Agree strongly	Agree somewhat	Neither agree nor disagree	Disagree somewhat	Disagree strongly
The only auto races that I watch are the major events like the Indy 500 or the Daytona 500.	1	2	3	4	5
I like to go to local auto and truck races in my area.	1	2	3	4	5
I spend a lot of time watching auto or truck races on TV.	1	2	3	4	5
I like to keep up-to-date with the careers of certain drivers.	1	2	3	4	5
The knowledge that a car manufacturer gains from auto racing helps it build <u>more durable</u> street vehicles for me.	1	2	3	4	5
My main interest in auto racing lies more with the drivers than with the cars or trucks.	1	2	3	4	5
I know much more than average about the design and engineering of race cars and trucks.	1	2	3	4	5
I follow auto and truck racing so I can keep up with the latest automotive technologies.	1	2	3	4	5
When watching auto and truck racing, I watch the driver's skill and technique.	1	2	3	4	5
The knowledge that a car manufacturer gains from auto racing helps it build street vehicles with better performance and handling.	1	2	3	4	5

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I like auto and truck racing events
for the party atmosphere.　　　1　　　2　　　3　　　4　　　5

The best thing about going to auto or
truck racing events is having a good
time with my friends.　　　1　　　2　　　3　　　4　　　5

I love the sound of roaring engines.　1　　　2　　　3　　　4　　　5

The only reason I would go to an auto
or truck race is if a friend or family
member wanted to go.　　　1　　　2　　　3　　　4　　　5

The knowledge that a car manufacturer
gains from auto racing helps it build
street vehicles that are fun to drive.　1　　　2　　　3　　　4　　　5

I often fantasize about being a race
car driver.　　　　　　　1　　　2　　　3　　　45

My friends and I often talk about auto
or truck racing.　　　1　　　2　　　3　　　4　　　5

I often videotape auto or truck races
on TV.　　　1　　　2　　　3　　　4　　　5

One of the best things about watching
auto or truck racing is the crashes.　1　　　2　　　3　　　4　　　5

Auto and truck racing are great
entertainment for the whole family.　1　　　2　　　3　　　4　　　5

I often buy products or services from
companies that sponsor race teams.　1　　　2　　　3　　　4　　　5

The knowledge that a car manufacturer
gains from auto racing helps it build
street vehicles that are sporty.　　　1　　　2　　　3　　　4　　　5

I pay a lot of attention to the brands
of cars and trucks that participate
in auto or truck racing.　　　1　　　2　　　3　　　4　　　5

The brands of cars and trucks that
win racing events are also the best
ones on the road.   1   2   3   4   5

If a brand of car or truck that I was
thinking about buying won a racing
event, it would increase my interest
in buying it.   1   2   3   4   5

The knowledge that a car manufacturer
gains from auto racing helps it build
safer street vehicles for me.   1   2   3   4   5

Compared to others, I have a real
passion about the vehicles I drive.   1   2   3   4   5

I like to continually think of ways
to make my vehicle higher performance
by buying performance parts, kits,
or upgrade packages   1   2   3   4   5

I view my own vehicle primarily
as just a means of transportation.   1   2   3   4   5

I enjoy doing work on my car to
enhance its performance, such as its
speed and handling.   1   2   3   4   5

31. What impact do you think a car manufacturer's involvement and success in auto or
    truck racing has on your overall interest in the vehicles it makes? Does it increase
    your interest . . .
    _____ A great deal
    _____ Somewhat
    _____ Not very much
    _____ Not at all

32. How important is it to you that technology used on race cars is also used on street
    vehicles?
    Very important   _____
    Somewhat important   _____
    Neither   _____
    Somewhat unimportant   _____
    Very unimportant   _____
    Don't know   _____

33. Based on anything you have seen, heard, or experienced, how would you rate each of the following manufacturers in their ability to transfer successful race track technology from race cars to street vehicles?

	Excellent	Very good	Good	Fair	Poor	DK
Chevrolet)						
Ford						
Pontiac						
Dodge						
BMW						
Toyota						

34. Other than routine maintenance or repairs, during the past 3 years, have you done any work on your vehicle (either yourself or paid someone else) specifically to achieve higher performance or to enhance its appearance?
Yes _____
No _____ If no, skip to Q. 36

35a. Which of the following did you purchase?
Wheels, tires, suspension _____
Internal engine, drive train, ignition, exhaust, or fuel systems _____
Accessories and appearance (i.e., interior trim, specialty waxes, sunroof, spoiler)
_____
Other _____

35b. Did you install some or all of these parts yourself?
Yes - all parts myself _____
Some parts myself _____
None of the parts myself _____

35c. Approximately how much in total did you spend on these upgrades parts or packages whether they were installed by you or someone else? $_____

My next few questions are for classification purposes only.

36. What is the make and model of the vehicle that you, yourself, own and drive most often?
Make: _____ Model:_____
What other vehicle makes and models, if any, are in your household?
Make: _____ Model: _____

Make: _____ Model: _____

37. Which of the following categories best describe your age?
16–24
25–34
35–44
45–54
55–64
65–74
75 or older

38. Which of the following categories best describes your employment status?
Employed full time
Employed part time
Retired
Homemaker
Student
Not employed

39. Which one of the following categories best describes your occupation? (READ LIST)
Professional specialty
Executive, managerial, or business owner
Administrative support
Sales
Mechanics, repair, construction
Machine operator, transportation, warehouseman
Technical support for health, engineering or sciences
Public safety such as police, fire, etc.
Farming, forestry or fishing services
Or some other occupation

40. Which of the following categories includes your total household income last year before taxes?
Under $20,000
$20 to $39,000
$40 to $59,000
$60 to $79,000
$80 to $99,000
$100,000 to $150,000
More than $150,000

41. In which state do you live? _____

42. Record sex:
Male_____
Female_____

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