

CREDIBILITY AND THE INTERNET: CAN CREDIBILITY LEVELS INDICATE  
NEWS MEDIUM CHOICE?

by

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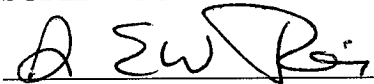
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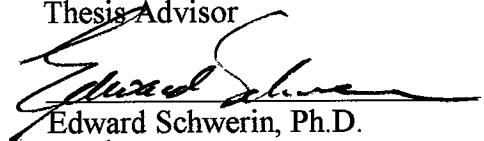
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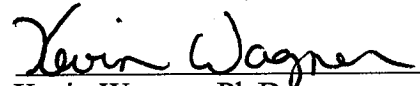


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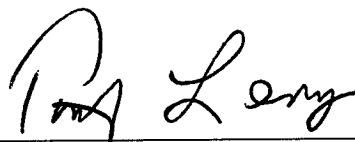
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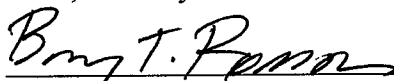
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## ABSTRACT

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The Internet has revolutionized the way in which people are entertained, communicate and collect information. As people increase their ability to connect with the outside world from inside their homes, they hold the power to become their own gatekeepers filtering information as they see fit. Many question whether this will weaken the power of the traditional media sources that are often seen as elitist and potentially biased. This researcher hypothesized that people who cite high credibility ratings of news media channels are more likely to use traditional media channels such as television and newspapers and people who cite low credibility ratings of news media channels are more likely to use alternate media channels such as the Internet. While the researcher was unable to reject the null hypothesis, a pattern of general mistrust of traditional news media was revealed when nearly three-fourths of respondents gave traditional media channels a 'not-credible' rating.

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## INTRODUCTION

The Internet has revolutionized the way in which people are entertained, communicate and collect information. This new and powerful technology as a media source can and will have far-reaching implications. As people increase their ability to connect with the outside world from inside their homes, they hold the power to become their own gatekeepers filtering information as they see fit. Many question whether this will weaken the power of the traditional media sources to deliver information that is often seen as elitist and potentially biased. How do individuals feel about the information provided on the net? Do they view it as more or less reliable? Is it more factual? Do they trust it more or less than traditional outlets? Although research has been grappling with these new questions in several ways, this paper seeks to examine whether individuals who use the Internet as a significant source of news see the media in general as being trustworthy, unbiased and reliable. Such information could indicate that people see the Internet as more credible and useful than more traditional forms of media such as television, newspapers, magazines and radio, and it may offer suggestions concerning who is attracted to using the Internet. Since the Internet has emerged as a new form of media, scientists have begun the process of analyzing the implications of this mass usage. Five main trajectories of research have emerged: 1) the shift from traditional sources to the Internet 2) user demography and rational choice theories such as ‘uses and gratifications’ 3) nurturing participation and activism 4) content differences and

information retention, and 5) credibility and reliability. The first, a shift from traditional sources to the Internet, can certainly be foreshadowed by a glance at basic statistics.

According to a report by the Pew Internet and American Life Project conducted in December of 2009, 74% of adults in the United States use the Internet. This means that approximately 163 million adults are logging on. While activities such as checking e-mail, using search engines and checking the weather are the most commonly cited activities, getting the daily news ranks sixth on the list of general Internet activities and third on the list of daily activities. This news gathering activity is conducted by a sizeable 72% of Internet users. In order to truly appreciate the significance of these numbers, one must look at the fairly short-term rate of growth of Internet users. In a Pew report conducted in August 2006 titled "Internet Overtakes Newspapers as News Outlet," 21% of the survey respondents cited using the Internet as their primary source for national and international news, while 37% cited using the newspaper and 74% cited using the television. By 2008, the Internet surpassed newspapers as the primary news source of respondents at 40% and 35% respectively, while television still dominated as the most commonly cited national and international news source even though it dropped to 70%. Interestingly, for young people surveyed (18-29), the Internet rivaled television as the most often cited news source with both being at 59% (the figures add up to more than 100% because multiple responses were allowed). One significant change that has occurred over that time is the number of Americans who have obtained the smoother and faster Internet connections known as broadband. In August of 2006, 40% of adult Americans claimed to have high-speed Internet connections in their homes, yet by December of 2009, the number of adults with high-speed Internet connections shot up to



60%. This innovation has clearly drawn more individuals to the Internet for their newsgathering activities. It also must be noted that 55% of all Americans have gone online by some wireless means as well. This type of penetration has caused many to suggest that the Internet could be a true threat to the traditional media channels.

The researcher hypothesizes that this shift in media channel usage can be partially attributed to perceptions of news channel credibility. Therefore, credibility levels should predict the media channel a respondent is more likely to use. Chapter one of this paper surveys appropriate literature in this field of study which shows an increasing focus on the importance of perceived credibility of news media sources, messages and media channels. In Chapter two, to test the hypothesis, a nonexperimental analysis is designed using Pew survey questions representing dimensions of credibility. In order to accurately measure the concept of credibility, a credibility index is created from these questions. In Chapter 3, the tests will be run and the results of the bivariate crosstabulations will be presented. The statistical values will indicate whether there is a relationship between credibility and media channel utilized. Finally, the conclusions in chapter 4, report the results and the study limitations will be discussed.

## I. LITERATURE REVIEW

As more Americans turn to the Internet to get their news, are they abandoning the traditional forms of news media such as television and newspapers? To what extent will individuals utilize this new media channel? Can the Internet entirely wipe out the traditional news outlets? Is the Internet to take away just a portion of the traditional market, but still leave room for competition? Or is the Internet to become an additional source for those who crave a constant supply and variety of news information? Finally, what criteria do users demand of their media channels? These are all questions relating to replacement, displacement, and complement theories of media channel usage. Researchers have looked closely at these areas of study to try to find the answers to these important questions.

Many studies essentially support the ‘displacement effect,’ which suggests that a number of consumers will switch from traditional media channels to the Internet for news gathering purposes. Dimmick’s (2004) telephone survey study of 211 adults in Columbus Ohio found clear indications of a ‘competitive displacement effect’ within the population studied. In addition, this study also looked at ‘niche theory’ as a contributor to this effect. Niche theory contends that new media will compete with old media for a consumer’s attention, preference, time and ultimately advertising dollars spent (Dimmick, Kline, and Stanford 2000). The term niche is used because a specific target market with unique needs is sought. In conjunction, ‘gratification opportunities’ are considered to be

attributes of a news medium that may also affect the ‘displacement,’ of a competing medium. “Gratification opportunities are defined as consumers’ beliefs that a medium allows them to obtain greater opportunities for satisfaction, more specifically, the perceived attributes of a medium relating to time use and expanded choice of content” (Dimmick et al 2000, 22).

The survey included eight gratification-opportunity questions which were presented in a four-point Likert scale rating the helpfulness of various media. The results of the data analysis indicate that there is a displacement effect for each of the traditional media. For example 33.7% of the respondents indicated that they used television less for news since they started using the Internet for that purpose, while 28% reported that they used newspapers less. The researchers also created a measurement for “niche breadth” using an exploratory factor analysis. They found that the Internet had the highest score for niche breadth, meaning that it fulfills a wider range of uses. Finally, the authors calculate the niche overlap using the eight factors derived from the previous factor analysis, and find “that in the domain of providing news, there is a moderately high degree of overlap or similarity between the niches of the Internet and the traditional media on the gratification-opportunities dimension” (Dimmick, Chen, and Li 2004, 31). However the overlap is not high and therefore the Internet and traditional media are not considered close substitutes on this dimension.

In a similar study, Lacy and Martin (2004) produced a report that looked at competition between news sources with respect to circulation and advertising. By surveying the literature, the researchers touched upon important theories that could explain certain patterns of consumption, such as the economic theory of ‘differentiation.’

This theory states that if firms can change or ‘differentiate’ their product enough from the competitor’s, they could lessen the chances of their product being substituted by the competitor’s, therefore limiting competition. There are many ways in which a firm could differentiate its product, for example political leanings, content focus, featured columnists, use of graphics, etc... Most people use many sources to fulfill their media needs, so it is accepted that no one medium can satisfy all consumer needs and desires. The researchers explain that the increasingly popular strategy of clustering newspapers could hurt papers in the long run. Clustering can cut short-term expenses, but a lack of competition can hurt penetration and quality while raising advertising costs. The researchers warn that if readers become increasingly unhappy with a newspaper, they could select an ‘imperfect’ substitute. The more the alternative resembles the original media, the more likely readers are to switch. With this in mind, website news pages could become increasingly attractive substitutes for newspapers.

Another study, by Douglas Ahlers (2004), looks at American news consumption habits, namely the hypothesized shift or mass migration away from the traditional news sources to the Internet. Using Harvard Business School Professor Michael Porter’s competitive forces model for the structural analysis of industries, Ahlers suggests that the Internet is not a “disruptive technology” which would displace traditional media sources but an “evolutionary technology” which would create healthy competition [and] then eventually parity” (Ahlers 2006, 30). According to Ahlers, the strength of the traditional media’s hold on advertising is an indicator of the source’s continued dominance and relevance. Also, consumers are unlikely to switch to a new media form unless there is an immediate gain and increasing returns, both of which Ahlers claims is lacking with

respect to the Internet. Based on a variety of data sets Ahlers concludes that “for only a small group, the online news media will act as a substitute for the traditional news media. For the majority, it will act as a complement,” and that “there is no indication that the industry is in free fall or that the doomsday talk is justified” (Ahlers 2006, 48).

The complementary nature of the Internet as a news media source is asserted by others as well. Stemple, Hargrove, and Bernt (2000) compared polls conducted by The Scripps Howard News Service and the E.W. Scripps School of Journalism in 1999 against their own findings in a survey they conducted in 1995. Although they have noted that the numbers of Internet users have been on the rise and the numbers of newspaper and television audiences have been shrinking, they believe that this is not a result of the loss of traditional news patrons because, according to their findings, Internet users and non-users watched a comparable amount of television. This would indicate that Internet users were engaging in both activities, not swapping one for another. They also found that people who use the Internet are more likely to be regular newspaper readers and radio listeners than those who do not use the Internet. This negates the argument that the Internet is stealing away news consumers from other media. To explain their findings, the researchers labeled the Internet users as ‘information seekers’ who look for information from a wide variety of sources as complements.

A survey of 520 undergraduate students from a large Midwestern university conducted by Scott Althaus and David Tewksbury in 1997 yielded similar results. Once again the uses and gratifications concept is central to the construction of these authors’ arguments and expectations. Since consumers are seen as active participants in this theory, they are expected to switch to a medium that is perceived to best fulfill their

needs. The researchers hypothesized that, after controlling for factors that would increase levels of surveillance and computer anxiety, the more frequently people use the web for the purpose of collecting information, the less they would use other media for the same purpose (Althaus and Tewksbury 2000). The Internet should excel in satisfying two major demands of the user: the need for information and the desire for control.

Unfortunately their findings did not support this hypothesis but instead supported the null hypothesis that using the Internet for surveillance is a supplement to the information gathered from the traditional news media. A weakness of this study, readily accepted by the authors, is that the population used is not representative of the greater population of news consumers in the United States. The use of young college students (79% of participants were freshmen), who perhaps view entertainment as more important than news gathering activity is possibly why they concluded that their respondents tend to see the web primarily as an entertainment medium and only secondarily as a medium for news (Althaus and Tewksbury 2000).

Arvind Diddi and Robert LaRose (2006) also conducted a study involving a survey of Midwestern college students. This study, however, looked at media in a new manner. Instead of viewing the news gatherers as active participants, making well-informed choices as the uses and gratifications theory would suggest, the authors put forth a 'new theory of media attendance' (LaRose and Eastin 2004), where it "suggests exactly the opposite: when confronted by a myriad of media choices, the consumer lapses into habitual patterns of media consumption in order to conserve mental resources, rather than repeatedly engaging in active selection" (Diddi and LaRose 2006, 194). The researchers were less interested in focusing on media displacement but instead intended

to shed light on possible emergent news consumption patterns. College students were seen as the first real generation of Internet users and therefore an interesting and useful population to observe. Some of the findings and conclusions were: 1) college students don't consume as much news as older people, 2) college students appear to be more interested in following sports and entertainment news, 3) college students are categorized as more of 'news grazers' who check the news sporadically without a set routine 4) Internet portal sights and the campus newspaper were the most frequently cited news source of college students and 5) that college students didn't appear to be foregoing traditional news media sources for Internet sources (Diddi and LaRose 2006).

Chi and Lasorsa (2002) conducted a telephone survey of Austin Texas residents to look at the response to paper and online versions of local, regional and national news. The new concepts of 'shovelware' and the 'cannibalization effect' are evaluated to explain the relationship between newspaper and online news sites. Shovelware is the use of a print version to supply the content of an online version of a paper. The researchers were interested in the effect of a newspaper launching a free online version that could potentially hurt sales - the cannibalization effect of stealing one's own customers. The researchers found in earlier studies that there was a great deal of confusion and disagreement when trying to sort out whether online and print versions of newspapers were substitutes for one another or not. This is why the study addresses questions such as 1) What is the penetration rate of print versions compared to online versions of papers? 2) Are readers of print and online versions of the same source mutually exclusive readers, or do the populations overlap? 3) Does the penetration of print papers increase or decrease among Internet users? and 4) What is the publics' preference and why (Chi and Lasorsa

2002)? By asking such questions, the researchers concluded that the relationship between online and print versions of papers appears to be complementary and that there is substantial overlap in usage. Also, print versions were preferred compared to online versions even by Internet users. In addition, the use of the web did not reduce print penetrations and readers of a particular online edition were more likely to read the corresponding newspaper version (Chi and Lasorsa 2002).

Papacharissi and Rubin (2000) conducted a study to examine how social and psychological attributes, perceptions of media, and Internet motives might predict Internet use. They surveyed 279 students from a large Midwestern college to obtain data to run multivariate analyses. In this study they “employed a uses-and-gratifications framework to examine how (a) social and psychological antecedents, (b) perceptions of media attributes, and (c) Internet motives influence behavioral and attitudinal outcomes of Internet use” (Papacharissi and Rubin 2000, 182). Social presence of the Internet was measured by asking respondents to rate the Internet on semantic differential scales including descriptive terms such as sociability, personalness, warmth etc... The analysis identified five motives for Internet use- information seeking, entertainment, convenience, to pass time, and interpersonal utility. The questions asked by the researchers included items such as: What are the motives for using the Internet? How do personal traits and perceptions relate to Internet motives? In addition, they asked, How do all of these variables predict behavioral and attitudinal outcomes of Internet use? Papacharissi and Rubin (2000) found evidence that more secure, satisfied, comfortable and social individuals utilized the Internet more for instrumental purposes such as the seeking of information, compared to those individuals who were less secure, satisfied, comfortable



and social. This latter group tended to use the Internet as an alternative to face-to-face interaction or as an activity to fill time. All of the studies surveyed so far seem to come to the same conclusion, that the Internet is not a perfect replacement for other news media channels, therefore it will not threaten traditional sources but may complement them.

Flavian and Gurrea (2006) examine the lack of research focusing on the specific goals of news seekers which led them to perform a variety of exploratory qualitative methods including in-depth interviews to identify some things that cause readers to consult various news media. After specifying the three main goals for news-seekers as the search for specific information, search for updated news, and leisure/entertainment, the researchers then focused on how these goals influence the decision to choose online news and the effects of the user experience on relationships between variables. The researchers found evidence supporting their hypotheses that the search for specific information has a positive effect on the reading of news online and that the search for up-to-date news has a positive effect on the reading of online news.

An Nguyen and Mark Western (2006) take yet a different angle on the uses and gratifications and displacement/replacement effect theories. They take a 'user-centered' approach as opposed to focusing on the attributes of the media form. Many studies have been based upon Maxwell McCombs' Principle of Relative Constancy, which essentially views media advertising money and allocation as a zero-sum game. In this framework, if a new form of media gains advertising revenue, that amount comes directly away from other existing forms of media. The researchers have found reason to believe that this theory is flawed. By demonstrating that there have been significant fluctuations in media industry expenditures and by contradicting the assertions of the functional equivalence of

different types of media, the authors present their argument for the complementary nature of the Internet. A survey of 4,270 randomly selected Australians was conducted. Questions involving frequency of use of various media sources as well as demographic information was collected. The researchers found a significantly positive association between traditional news and information and online news and information uses. However, general Internet usage was not found to be positively related to traditional news and information usage. This supports the idea that there is a group of ‘information seekers’ who, instead of trading traditional sources for the Internet, choose to utilize both. Therefore, the researchers concluded that it is unlikely that the Internet will replace other forms of information-providing media because individuals seeking information appear to prefer to consume from a variety of sources (Nguyen and Western 2006).

After surveying the numerous studies addressing the Replacement, Displacement, and Complement theories, we can see that most studies provide evidence that supports a complementary relationship between the traditional channels of news and the Internet. Some believe the reason is that the Internet is an imperfect substitute while others believe that the Internet is not a disruptive technology but an evolutionary technology. Still more find that many Internet users are ‘information seekers’ and finally others think that the onslaught of information causes users of media to revert to old habits. While evidence exists to support each of these hypotheses, one cannot dismiss the few studies that provide evidence for the displacement and replacement theories. In two of Dimmick’s studies (2000 and 2004), support was found for a competitive displacement effect. Also, it has been said that if the public becomes increasingly dissatisfied with newspapers, they may accept an imperfect substitute. So, if individuals are relying more and more on the

Internet for news as a complement or replacement, why exactly are they doing so? The researcher will address this question by looking specifically at credibility studies to find out how perceptions of credibility might influence media channel choice.

### Media Credibility

Clearly there is a great interest and concern on the part of the current mass media institutions and scholars about the emergence of the Internet as a new source. It appears that the general consensus is that a rapid replacement will not occur in the near future, and that a more gradual and complementary or supplementary relationship between traditional sources and the Internet is occurring. However, what if the Internet continues to gain momentum? How far can the influence of the Internet go? Will more and more people find reason to flock to the Internet for more diverse, dynamic and personalized news? Will the abundance of information and interactivity cause users to trust the Internet more than the traditional, elitist, corporate-run media institutions? Given these questions, can the Internet be seen as a more reliable, desirable and credible source for the general public's specific news information needs? In order to look to the future of the assessments of the credibility of the Internet, it is important to look back to the body of media credibility literature that has been amassed over the past 50 years.

### Source Credibility

Although the Internet is a dynamic and relatively new form of media to study, a wealth of information and studies dating back to the 1950's exists concerning the credibility of messages. The advent of television brought news and programming to the

masses, so naturally more interest developed in the area of the power of messages. Researchers looked at the reasons why people believe or discount the information presented to them by others.

A seminal study of source credibility took 223 undergraduate students from Yale University and presented material to them by perceived “trustworthy” and “untrustworthy” sources to see if there was a difference in the students’ retention and acquisition of the presented information (Hovland and Weiss 1951). This approach analyzed credibility or trustworthiness as a ‘receiver-based’ construct focusing the attention on the audience instead of the source. Although the evidence did not support a difference in the amount of facts learned by the sources, opinions did change over time. Hovland and Weiss conclude that there is support for the ‘sleeper effect’ where an individual resists accepting information presented by an untrustworthy source as described in an earlier paper written by Hovland, Lumsdaine, and Sheffield (1949). However, the receiver’s resistance, caused by mistrust in the source, may diminish with time more rapidly than the content of the message. Therefore an individual’s extent of agreement with an ‘untrustworthy’ source can increase as time passes (Hovland and Weiss 1951).

Greenberg and Miller (1966) focus on ‘low-credible’ sources and the effect that such sources could have on message acceptance. Following prior studies such as Hovland and Weiss’, the researchers acknowledge the empirically established belief that high-credibility sources are more persuasive than low-credibility sources. However, they go a step further to hypothesize that identifying a perception of the source’s level of credibility either before or after a presentation will affect the perception of credibility.

Low credibility sources, identified after the presentation, should have higher credibility ratings than if the source was identified up front. Conversely, a low-credibility source identified prior to the presentation will increase the level of audience resistance to persuasion (Greenberg and Miller 1966). The results of the experiments did seem to support this hypothesis, even though they admit to relatively unsuccessful attempts to induce a clear pre-determined judgment about the credibility of the source of information.

Some studies switched the focus to the actual evaluation or measurement of the concept of credibility. While Hovland and Weiss (1951) used the term ‘trustworthiness’ and ‘expertise’ to rate source credibility, others found the need to explore other possible definitions. McCroskey (1966) surveyed the literature and came up with thirty of the most commonly used terms to describe the construct of ethos, prestige, or credibility. A factor analysis was used to determine which factors were most significant. Only two main factors emerged accounting for more than three-quarters of the variance, ‘authoritativeness’ (47%) and ‘character’ (29%).

Unsatisfied with previous conceptualizations of credibility, one study sought to explore even more of the possible evaluative dimensions of this measure. “Typically, ‘credibility’ is implicitly assumed to be unidimensional, dichotomous (either high or low), and specifiable in terms of objective characteristics of the source such as social status. Such a stipulation implies that the variable is a more or less static attribute of a source...” (Berlo, Lemert and Mertz 1970, 563). Utilizing a pre-experiment interview of a sample of residents of Lansing Michigan, the researchers were able to use their survey group to determine the most often-cited attributes of credible sources. This information, in addition to information drawn from a literature review, was used for the construction

of a semantic differential test. After conducting factor analyses, three main factors, which accounted for 62% of the total variance of the scales, emerged as possible meaningful dimensions that can be used in evaluating sources. Safety, which was determined by the scales- 'safe-dangerous,' 'open-minded-closed-minded,' 'just-unjust,' and 'honest-dishonest,' accounted for 27.8% of the variance. Qualification, which accounted for 24.0% of the variance, was determined by whether the source is considered to be trained, experienced authoritative, informed, educated etc... Finally, dynamism which was characterized as being energetic, bold, aggressive, confident, active etc..., accounted for 8% of the variance (Berlo Lemert and Mertz 1970).

Furthering the efforts to determine appropriate factors to describe and measure source credibility, Whitehead (1968) attempted to verify some of the previously identified dimensions of source credibility and the scales useful for measuring it. He attempted this by using some new scales and through a separate analysis of the high and low sources of credibility, and found that while 'trustworthiness' and 'competence' reemerged as significant factors, the additional factors of 'dynamism' and 'objectivity' also appeared to be relevant.

Noting that prior studies utilizing factor analyses had produced two or three principal factors, Singletary (1976) believed that news source credibility was dependent on not just a few but many factors. Among the prior factors revealed were "evaluative," "dynamism," "competence," "trustworthiness," "safety" "qualification," "authoritative" and "character." His factor analysis produced 16 factors that represented the first 61% of the total variance. The results suggested that credibility is a highly complex and somewhat differentiated system of factors" (Singletary 1976, 318). Other early studies

delved further into the rhetorical theories of persuasion, ethos, prestige, and source credibility. For example, the concept of ethos is explored as an independent theoretical concept to try to come to a better understanding of its dimensions. Ethos is deemed a “complete and distinct type of persuasion—one of two basic genres—which [has been] termed *personal* as opposed to non-personal” (Rosenthal 1966, 126). In other words, either personality or the message of a speaker becomes the primary object of value response. Credibility evaluations, which originally were focused on the source’s perceived characteristics, then could be shifted to the evaluation of the actual message being put forth.

In sum, it has been of interest to researchers over the past half-century how a source’s credentials could affect the audience’s perceptions of the value of information being presented. The earliest studies focused on the ‘trustworthiness’ of the source (Hovland, Lumsdaine and Sheffield 1949; Hovland and Weiss 1951), while others observed levels of source ‘credibility’ (Greenberg and Miller 1966). Then some researchers sought to better define the actual characteristics the audience attributed to a source for a source to be considered good (McCroskey 1966; Berlo Lemert and Mertz 1970; Whitehead 1968; Singletary 1976). New dimensions of the concept of credibility emerged such as expertise, authoritativeness, character, and dynamism. However, when trying to determine the credibility of information presented, it is not only the source’s integrity that comes into question. The next logical step is to focus on the message itself.

## Message Credibility

Message credibility is another realm of research that has elicited a considerable amount of attention. As previously mentioned, the concept of source credibility or ethos can be separated, albeit very carefully, from the actual content or quality of the message. Slater and Rouner (1966) describe what they believe are the three of the main influences on the perception of credibility; 1) receiver's prior knowledge and beliefs, 2) the receiver's perception of the source's credentials or expertise and 3) the message or message quality itself. Using a *message quality evaluation*, the researchers focus on the assessment of the message's stylistic quality. This would include qualities such as organization, creativity, style and an overall perception of a well-written, well-presented product. The researchers contend that an individual can perceive a message as well-put-together and competently argued even if they do not necessarily agree with the position and that this positive perception can boost the overall assessment of the message or source. Ultimately, they found that certain message qualities could predict belief change and that the evaluation of 'message quality' was an important contributor to this change (Slater and Rouner 1996).

A similar study looks not only at source credibility but also the *apparent reality of message* to determine the level of news believability. The 'reality' of a message is evaluated as an "apparent reality assessment (ARA), and defined as the degree to which an individual believes media portrayals of issues or people reflect reality" (Austin and Dong 1994, 974). The researchers see this type of assessment as paralleling the studies of source credibility. Using factor analysis, they showed three indices emerge, comprised of 1) source truthfulness or message accuracy 2) source expertise or message



representativeness, and 3) source bias or personal perspective (Austin and Dong 1994). The first descriptor of each pair listed above applies to the source evaluation while the second to the reality of the message evaluation. The results of the study supported the hypothesis that assessments of the '*apparent reality of a message*' make a significant difference. However, contrary to the findings in other studies about the importance of source reputation (see Hovland and Weiss 1951; Greenberg and Miller 1966; Slater and Rouner 1996), this experiment suggested that the source had no effect on the assessment of believability of the message.

In addition to reality assessments and style assessments of messages, other potential factors of message credibility have been studied as well. For example, Sharp and McClung (1966) found that message organization affected the feelings of an audience toward a speaker. Experiments revealed that although students thought less of a speaker after hearing a disorganized speech, after hearing an organized speech, students' assessments of a speaker didn't really change (Sharp and McClung 1966). Other researchers have looked at language intensity to rate message credibility. The intensity and use of opinionated language has also been the focal point of message credibility studies. Hamilton and Hunter (1998) conducted a meta-analysis where he found that a speaker's intensity raised evaluations of dynamism. However, there was a negative effect on the speaker's ratings of expertise and trustworthiness.

Prior views and biases also play roles in a subject's assessments of credibility. The difference between the perceived position of the message source and the position of the subject prior to exposure to the message is a significant factor in determining message credibility. Hamilton (1998) called this difference 'message discrepancy.' Studies have

concluded that when message discrepancy is low, evaluations of credibility tend to be higher (Hovland and Weiss 1951; Slater and Rouner 1996). Message discrepancy is closely tied to the Theory of Congruity which “suggests that if the message content is inconsistent with audience members’ existing beliefs, they tend to denigrate the source as a way to protect those existing beliefs” (Slater and Rouner 1996, 978). The *illusory truth effect* is another theory closely related to message discrepancy. According to this theory, people are expected to be more prone to believing messages that reaffirm what they already know or believe and to reject messages that contradict their pre-existing knowledge (Bacon 1979). Familiarity and repetition can create a sense of knowing the truth. It is explained that “the variables that make statements ring true have their source in the recent past, but they are experienced as effects of the stimulus, and the apparent truth is illusory” (Begg, Anas and Fainacci 1992, 456).

We can see that many qualities of the message appear to be a vital component of assessing overall credibility. However, it is not only individual source or message quality that can affect one’s view of credibility. Studies too have focused on the various media channels such as radio, television, magazines and most recently the Internet and how the audience views the credibility of such organizations as institutions.

### Medium Credibility

The abundance of credibility studies that investigate the media channel or medium of transmission attest to its importance in the literature. In the past, the traditional competing media included newspapers, magazines, radio and television. Today, of course, we must pay close attention to the Internet as a source of news media

information too. Nevertheless, it is useful to review the body of medium credibility literature to understand the contextual framework within which the Internet is emerging. As early as the 1930's, the newspaper industry began to take note of the rising numbers of people listening to the radio to get their news. By the 1950's, the popularity of the television began to displace both radio and newspapers as a major source for the news. At this time the Roper Public Opinion Poll added a question to its national survey concerning the use of news media. The question probed about the news source respondents would be most apt to believe if differing reports were presented by radio, newspapers, magazines or television (Metzger et al. 2003). As one might expect, the survey showed that newspapers were considered to be the most credible form of news media. However, in 1961, television surpassed newspapers, and since then has remained the top-rated credible source of news (Gaziano and McGrath 1986). Many pundits, writers, intellectuals and professionals seemed bewildered by the fact that the general public viewed television as the best and most credible source of news. It was thought that newspapers had a great advantage in being able to go into more depth with their stories. There was also more time to check facts and people could read at their own pace or go back to review the information. Media experts such as Doris Graber have explained this unexpected turn of events by offering that "[I]n a nutshell, most people find that [television] is the easiest, quickest and most pleasant way for them to keep abreast of current political information" (Graber 2001, 3). She further explains that the audio-visual format is more conducive to engaging the human brain to efficiently process information. Adding support to her statements is the American Society of Newspaper

editors (1985) who echo that the ease of obtaining information via television has translated to higher ratings of favorability as well as credibility (Metzger et al. 2003).

Many studies since then have been conducted that help to buttress the argument that the medium of television is the most relied-upon and credible news source in the public's eyes. For example, a 1978 study involving a survey of 232 residents of London, Canada found that citizens overwhelmingly perceived television as being more accurate than other forms of mass media: a solid 51% of respondents selected television as giving the most accurate news story, followed by 31.9% for newspapers and only 13.4% for radio (Wilson and Howard 1978).

Four major surveys in the mid-1980's, the American Society of Newspaper Editors (ASNE), The L.A. Times Poll, one by the Times Mirror and another by the Gannett Center were conducted amid growing public sentiment that there was a huge problem with the credibility of the media. Each study, with differing but overlapping foci, utilized different scales, definitions and methodologies. The ASNE report concluded that 75% of adults have some problem with the media's credibility and 20% deeply distrust the media while the Times Mirror declared that if credibility could be defined as believability, it would be one of the media's major strengths (Gaziano 1988). When the ASNE and Times Mirror produced seemingly contradictory results, some controversy ensued. As a result, these surveys prompted many additional studies utilizing new sources of nationally collected data.

According to Gaziano, "despite the appearance of conflicting results in these specific statements, these two surveys actually are complementary, and each fleshes out gaps in previous research" (Gaziano 1988, 269). Areas of similarity were 1) concern

about media bias 2) too much attention to 'bad' news 3) the media's mistreatment of certain groups (housewives, young people, senior citizens) and also the average person 4) support for the 'watchdog' role of the media 5) higher ratings of trust in media than political institutions and 6) identifying the kinds of people most critical of the media (Gaziano 1988). The few areas of inconsistencies are attributed to different measurement, indicators, and question wording.

Relying on the dataset from the ASNE study, another study looked at public perceptions of media credibility and the way that credibility should be measured. When the Roper believability question was asked, respondents were twice as likely to believe television over newspapers (52% vs. 25%). When asked to expound on this belief, respondents answered with comments such as "seeing is believing," "you can see their eyes...you can tell if they are lying" (Gaziano and McGrath 1986, 456). Contrary to this finding, the credibility scores were related to choice of medium. For example, a large portion of respondents who scored high on newspaper credibility chose to believe television over newspapers in the Roper-style question. All in all, the study finds that regardless of high credibility scores for newspapers, many respondents were more likely to select television when asked to choose among different media.

One study, by Rimmer and Weaver (1987) again using the data generated by the ASNE report, looks at the oft-reported positive correlation between media use and media credibility. Researchers have provided evidence to link frequency of the use of a medium with credibility. The researcher evaluates media use using behavioral measures, which are typified by questions such as "Did you use yesterday?" Then, affective measures are utilized, as are typified by questions such as "What is your preference?" The researchers

find that behavioral measures do not indicate a relationship between use and credibility, but when affective measures are utilized, some correlations appear.

Another study explores the argument that the Roper question does not accurately measure medium usage (Miller Singletary and Chen 1988). Since there has been some support for the argument that frequency of use could affect credibility ratings, this is a relevant topic to explore. The wording of the question has been a subject of controversy as it has been reported since the early sixties that television is the primary source for American's news information. On the survey the question reads: "First, I'd like to ask you where you get most of your news about what's going on in the world today – from newspapers, or radio, or TV, or magazines ,or talking to other people, or where?"

One of the main problems that had been raised regarding the question is that the question is ambiguous and could be interpreted in several different ways. For example, the question may seem biased toward international news as opposed to national, state and local news. Also, the question does not distinguish between frequency and preference of use. In addition, some criticize the way that the multiple responses are tallied (Miller, Singletary and Chen 1988).

Critics of the question have insinuated that the Roper Organization and other sources relying on its data are not correctly reporting on frequency of use. Many cite instances where the frequency of newspaper use was rated higher than television (Stempel 1973; Weaver and Buddenbaum 1979). After conducting a survey on 339 randomly selected Knoxville, Tennessee residents and a frequency and cross-tabulation analysis, Miller Singletary and Chen (1988) found that their results did mirror those of the most recent Roper report; that television rated higher on media preference and

frequency of use. In addition, they concluded that preference for a medium is associated with the frequency of exposure to that medium. Finally, the study indicated that preference for using television to get the news was associated with lower levels of knowledge of local and state public affairs.

Amidst all of the credibility studies of 1988 (ASNE, Times Mirror etc...) came one in which the definition of credibility was slightly altered to see if perceptions might change. The concept of credibility was narrowed to the single definition of 'believability' (Robinson and Kohut 1988). The survey question read, "Please rate how much you think you can believe each organization (the following people) I name on a scale of 4 to 1. On this 4-point scale, '4' means you can believe all or most of what they say and '1' means you can believe almost nothing of what they say" (Robinson and Kohut 1988, 176). Also, the researchers presented specific news personalities or organizations to represent the medium to be rated for credibility. For instance, individuals such as 'Walter Cronkite' were listed as well as groups of organizations such as 'national newspapers.' Three major conclusions were drawn from the findings. First, the American public tends to believe most of what is presented to it in the nation's press and media. Second, demographic variables that traditionally divide public opinion were not closely related to evaluations of believability. Third, the public tends to group media in terms of the level of believability. For example, 'soft' news either in print form (People magazine) or television programs (Phil Donahue) tended to rate lower in credibility than 'hard' news sources (news anchors and national newspapers). Moreover, these divisions did not follow the traditional separation of television and newspaper credibility.

To conclude, credibility studies have extended from source to message and then to medium. It appears that according to the literature surveyed source credibility matters; message attributes can affect the audiences' acceptance or perceptions of message credibility, and certain media channels are often deemed more credible than others. If perceptions of credibility matter, then how should we define and measure the concept of credibility with validity, accuracy and reliability?

### Measuring Credibility

According to Newhagen and Nass (1989), the way in which many researchers have chosen to conceptualize, evaluate and measure the credibility of television and newspapers has been flawed. First, they point out that many studies fail to distinguish between dimensions of 'actual' credibility as opposed to 'perceived' credibility. They also note that many prior studies have failed to distinguish media source from media channel by initiating cross-media credibility comparisons. For instance, television sources are often perceived to be the *individuals* who present the news while newspapers as sources are identified as impersonal *institutions*. One is judged as an individual 'source' and the other as a 'medium.' In this type of study there is no fixed level of analysis. It is the contention of these researchers that these types of studies fail to recognize that people may judge different types of sources utilizing different criteria.

By creating two separate credibility scales, the researchers examined if there was support for their hypothesis that television and newspapers are evaluated by differing criteria. The results did indeed indicate that there was a significant difference; "newspaper credibility variables representing the institutional dimension entered the



stepwise equation first, followed by the variables representing the personal dimension. For television, credibility, as expected, just the opposite was the case” (Newhagen and Nass 1989, 281). In addition to those findings, the researchers also identified a relationship between the size of the newspaper circulation and its evaluation criteria. As the circulation decreases, personal dimensions of confidence standards and trustworthiness rise to the level of televisions evaluations on this level. Conversely, as circulation increases, the institutional dimension increases.

Gunther (1988) focused on the receivers of the information of the different media channels to see if receiver characteristics determine the perceived levels of media choice and credibility. He recognizes that past studies have often looked to credibility as the dependent variable in experiments. Borrowing two popular behavioral theories and using attitude extremity as his experimental dependent variable, he finds a new way to conceptualize and evaluate trust in media. According to the Cognitive Response Theory, low-interest individuals not involved with an issue will pay more attention to peripheral cues such as credibility and likeability, while high-interest individuals would be more likely to “take heed” of the information presented and less likely to pay attention to the peripheral qualities (Gunther 1988). On the other hand, the Social Judgment Theory focuses on “latitudes” of acceptance and rejection. Following this theory, low-interest individuals would have a narrower latitude of rejection. High-interest individuals, with pre-existing points of view, would then be more likely to reject information presented and therefore would have a wider latitude of rejection.

Gunther (1988) finds a way to unify these seemingly contradictory theories by presenting three involvement levels where the lowest-involvement individuals would rate

low on credibility (exemplifying the cognitive response low-involvement group). Then, medium-level interest individuals would be more accepting and interested in obtaining information (exemplified by the cognitive response high-involvement group), and therefore giving higher trust and credibility ratings. Then, the medium-interest group (exemplifying the social judgment low-involvement group) would be more accepting of the peripheral cues such as credibility. Finally, the highest involvement group (exemplified by the social judgment high-involvement group) would be resistant to new ideas since views are already solidified and the individual is less open to change (Gunther 1988). These “attitude extremity” values when plotted should form a curvilinear pattern. Gunther puts his theory to the test using a survey of 268 San Francisco residents. He employs a trend analysis and finds support for this hypothesis.

Following this study, Gunther again looked to the message receiver as the study focal point. He explains, “mass media credibility has been defined and studied largely as an attribute of message sources. This article argues that trust in media can be better understood as a relational variable - an audience response to media content” (Gunther 1992, 147). Receiver-oriented research then looks at what the receiver does with the message as opposed to what the message does to the receiver. Gunther looks at group membership as a measure of “ego involvement” or the sense of self or identity one may get from identifying with the needs, beliefs and concerns of a larger group. It is theorized that the more involved, polarized or partisan an individual is, the more likely he is to be skeptical of mass media (Gunther 1992).

By conducting a comparative analysis including measures of rival explanations such as medium characteristics, personal dispositions and demographics, a clearer

indicator emerges. Evidence supports the hypothesis that group membership plays a significant role in the perceptions of the credibility of mass media while the other more traditional indicators predominantly did not.

In 1994, two studies further attempted to explore the different conceptualizations of media credibility. The first, conducted by West (1991) looks to prior standards of credibility measurement, namely the Gaziano and McGrath and Philip Meyer scales, and attempts to cross-validate these to see if they hold up. The scales were tested for reliability, empirical validity, and the suitability of the scales. Students from the University of North Carolina were given a semantic-differential test utilizing bipolar adjectives derived from Gaziano and McGrath's study. Then the Meyer subset of scales was reanalyzed by utilizing the confirmatory factor analytic model. The Meyer scale had acceptable goodness-of-fit, marginal but acceptable empirical validity and a low, but satisfactory individual item reliability. The Gaziano and McGrath scale had high overall reliability measures, but the model had insufficient goodness-of-fit. Based upon the tests run in this study, the five items constituting the Meyer scale which included trust, accuracy, unbiased, whole-story, and fairness seem to be the more accurate measure of news credibility.

In the second study path analysis was employed by Wanta and Hu (1994) to detect a causal relationship between credibility and reliance of media. The model sequence they propose is "based on the assumptions that if individuals perceive the media to be highly credible, they will rely on the media for information, will increase their exposure to media messages, and in turn will become more susceptible to agenda-setting effects" (Wanta and Hu 1994, 90). A survey of randomly selected residents of Jackson

County Illinois was conducted. A content analysis of the major news networks and major local newspapers determined what stories were prominent in the news. In addition respondents were asked to rate their level of concern on a number of issues in order to gauge the agenda setting effects, while another set of questions was used to assess perceived news credibility. Items such as “getting facts straight” and “dealing fairly with all sides involved in an issue” were covered. While other questions regarding media reliance and exposure were asked, results were consistent with the proposed model.

We can see that researchers have attempted to better define and conceptualize credibility before attempting to actually test credibility levels. They also have chosen to look toward the information receivers and not just the information providers. This has opened up new avenues for the study of credibility which may seem more appropriate. The natural progression of credibility studies would be to attend to new media channels such as the Internet.

### Internet Credibility

The college students that many Internet credibility studies use as survey participants are essentially the first generation of people that have grown up using personal computers with Internet access. Adults now, just in their thirties, saw the introduction of the Internet and the World Wide Web in its much less user-friendly form in their college years. Individuals in their forties and up most likely did not use personal computers at all during their educational years. It is important to keep in mind that this is still a relatively new and developing technology that still has not completely saturated society.

We must use past studies to guide us in studying the Internet's relevance and credibility, but should also treat it as a new category all together. This new technology has combined many facets from older media forms such as the reading aspect (newspapers), the audio aspect (radio), and the visual aspect (television) and even added some new ones such as participation (writing) and interactivity (communicating). As we have seen in the past, scholars have had some difficulty in assessing preference and credibility for media channels that offer different attributes and uses in different situations. Experts in the field warn, "as this shift [to the Internet] occurs, researchers must be careful in using prior findings on traditional media credibility- which are based exclusively on assessments of news information- to new media that carry a much broader array of information" (Metzger et al 2003, 311). Others also point out that, as in the past, problems have arisen when it is difficult to distinguish between source and medium (Newhagen and Nass 1989; Metzger et. al. 2003; Sundar and Nass 2001).

In the past ten years, numerous studies have already been conducted to assess Internet use and credibility. One of the most prolific research teams on the subject, Johnson and Kaye (1998), conducted an online survey of politically interested Web users to test the Internet's credibility compared to the traditional forms of news media, and they found that none of the information sources rated particularly high on credibility, while most received ratings of being only "somewhat" credible. Surprisingly, Internet sources were judged as being significantly more credible than the traditional sources. Also, reliance appeared to be a stronger indicator of credibility than frequency or amount of use.

In 2000, Johnson and Kay conducted another online survey of politically interested Internet users. More than half of the 308 respondents said that they either rely upon or “heavily” rely upon the Internet as a political news source. Credibility was rated by assessing on a five-point Likert-style scale the degree of believability, accuracy, fairness, and depth of source. Using a hierarchical regression analysis, they looked at the relationships between reliance on traditional media and the Internet and how they may be able to predict media credibility. Again, they found support for the argument that reliance on online information was a strong predictor for credibility. Additionally, they found that reliance on traditional media was an even stronger predictor of online credibility.

Then, in a follow up study in 2002, Johnson and Kay, utilized a path model to see how convenience and reliance could predict online credibility. Once again, the respondents were politically-interested Web users. This time some of their results contradicted those of prior studies. For example, in this study, radio news rated highest in online credibility (as opposed to the Internet as in their 1998 study). Also, they did not find evidence to support earlier findings that reliance on the Web influences credibility. The reasons for these inconsistencies could be attributed to the different types of analysis employed, the change in the demographics of Internet users over time or possibly the similarity of radio and Internet users. However, there is still evidence that supports the contention that reliance on traditional media is the best predictor of online credibility (Johnson and Kaye 2002).

A seminal study, conducted by Flanagan and Metzger (2000) looks at the perceived credibility of different categories of information on the Internet as opposed to

traditional news sources. They are quick to warn that “the relative newness of the Internet, the lack of clearly established genres, and the scarcity of explicit editorial policies for most web sites suggest that information obtained via the Internet might be dubious or difficult to appraise” (Flanagin and Metzger 2000, 517). They also explain that the few prior studies done on Internet credibility have produced conflicting results. For example, while Johnson and Kaye (1998) had found that the information on the Internet is perceived (by politically-interested users) as more credible than traditional sources, the Pew Research Center found that people only slightly considered the Internet to be more credible than traditional news sources (Pew Research Center 1999). However, this was contradictory to what Mashek found which was that traditional sources were considered to be more fair and unbiased when compared to the Internet (Mashek 1997).

In the study conducted by Flanagan and Metzger (2000), 1,041 undergraduate students as well as non-college age respondents were surveyed to answer research questions such as “What is the relative perceived credibility of modern mass communication media?” In addition, other questions included “To what extent do users of the Internet verify the information they receive through this medium?,” “Does the perceived credibility of media vary depending on the type of information sought?,” and “Do users of the Internet apply different levels of verification to the information they receive, according to the type of information sought” (Flanagin and Metzger 2000, 518)? The researchers created scales to measure the level of perceived credibility and the verification strategies employed by users. They also presented different types of information such as news, entertainment, reference, or advertising information, and

examined Internet experience and demographics. While they found that newspapers were considered by the sample as the most credible source of all types of information, they also noticed that, aside from newspapers, the credibility ratings were not shown to vary across medium type; the Internet was presumed to be as credible as magazines, radio and television. In the end, the authors note that people are perhaps too uncritical when it comes to the least-checked and edited source of information - the Internet.

Interestingly a survey study of Austin, Texas residents by Kioussis (2001) produced similar results. Based on the findings of previous studies, in addition to the technological advantage of the visual nature of television, the researcher hypothesized that television would receive higher credibility ratings than newspapers. This researcher also believed that prior studies had shown that people seek media channels that contain similar content to support and reinforce information they have already learned (Chaffee 1982; Wanta 1997). Because of these findings, Kioussis also hypothesized that news credibility perceptions would be positively correlated across media channels. Finally, drawing from the results of earlier studies by Chaffee (1982) and Himmel and Swift (1976), he hypothesized that the amount of interpersonal communication would be negatively correlated with credibility perceptions. For example, credibility perceptions would be lower for individuals who had higher levels of interpersonal communication. This could indicate that more discussion about the news may foster more critical feelings about the sources. The five indicators that Kioussis (2001) chose to gauge the perception of credibility were 1) how factual is the information provided, 2) how motivated by money is the medium, 3) whether privacy is invaded, 4) the level of concern for the community and 5) whether it is trustworthy. These were individual indicators that had



consistently emerged in prior research (Gaziano and McGrath 1986; Johnson and Kaye 1998; Meyer 1988; and West 1994). An ANOVA analysis was run and the means were found to be significantly different. Newspapers were rated with the highest credibility followed by online news and then television, which did not support the assertions of the first hypothesis that television would receive higher credibility ratings than newspapers. Next, the data tested with Pearson-r correlations, showed that a robust positive relationship existed when looking at peoples' perception of media credibility across all three channels. This gave support to the researcher's second hypothesis that news credibility perceptions would be positively correlated across all three media channels. Lastly, for the final hypothesis, interpersonal discussion about news was negatively correlated with credibility of television only. There was no notable relationship between interpersonal discussion about news and the perceived credibility of newspapers or online news. Hence, hypothesis three was only partially supported.

In contrast to the public's seemingly high level of trust in the Internet as a source of information, journalists' views of the Internet as a news source have been quite harsh. Ruggiero and Winch (2005) conducted a rhetorical and qualitative analysis on journalists' views of the Internet by evaluating 67 electronic mail messages posted on popular listservs (Computer-Assisted Reporting and Society for Professional Journalists). These messages were pulled between November 96' - April 97' in order to get relevant responses to the controversial reporting of news personality Pierre Salinger. Admittedly using information directly from an Internet source, Salinger suggested that the crash of TWA flight 800 was possibly the result of a hostile missile attack. Over time, the journalists' on the listservs commentary became more and more derogatory of Salinger

and the Internet. According to the researchers, journalists apparently felt the need to assert ‘cultural authority,’ or protect the integrity of their profession by treating Salinger as an outcast. This wariness of the Internet as a credible news source is not just a view of American Journalists, as it has been cited in a German study that German journalists feel similarly in that “the Internet as an information source is seen as controversial: some call it an informational rubbish bin, others call it a medium for pure gossip. The majority regard the Internet as a valuable and necessary tool - that you should never trust” (Schweiger 2000, 46).

Another study examined the levels of mistrust of the news media by specifically looking for a possible association between media skepticism and medium exposure patterns. By adopting a rational choice model, the researchers “hypothesized that when people trust the mainstream media, they consume more mainstream news. When they mistrust the media, they seek alternatives” (Tsfati and Cappella 2003, 504). In order to operationalize the concept of skepticism, the researchers borrowed some items from other reliability scales used in earlier studies like those found in Gaziano and McGrath (1986) such as, is the story fair, accurate, trustworthy, and does it ‘tell the whole story?’ Also, they asked the respondents questions such as whether they think the media care more about being first to report a story or about story accuracy, and whether the media helps or hurts society in solving problems. In addition, the respondents were asked about their levels of confidence in the people running the media institutions and the degree to which they trust the media to report news fairly. Finally, questions regarding frequency of usage and medium choice were asked. The researchers were able to find support for their main hypothesis - media skepticism was positively associated with some non-mainstream

channels (radio programs, Internet) and was positively associated with some of the mainstream media channels (national television news and local newspapers). The results also showed that political interest was positively and significantly associated with both media channel types and that political knowledge and extremism were significantly associated with non-mainstream media exposure.

While other researchers have looked to past studies to create indices for the measurement of Internet credibility, Sundar (1999) takes a different approach by looking into the psychological framework of receivers to help measure more general perceptions of news content. For example, when choosing a particular medium or source, distinctions between advertisements and news as well as entertainment value and information-gathering value may be blurred. "Receivers could very well be perceiving a great deal of entertainment value in news and a great deal of informational value in entertainment. This perception, and not the researchers' criteria, could indeed be dictating their ratings of news and entertainment" (Sundar 1999, 373). For this reason, Sundar used an exploratory analysis to look to the receivers for the generation of criteria variables. A common method of obtaining such variables involves using a semantic differential test or Likert-style ratings. Because such tests prompt certain answers, an open-ended pre-test was utilized to elicit receiver-generated information. Sundar then combined the frequently-cited adjectives (from most-often cited to least-often cited including terms such as: informative, short, interesting, boring, biased, detailed, incomplete, brief, confusing, incomplete, objective, pleasant, sensational, terse, well-written) with measures of past research represented as well, to cover inherent attributes and descriptors that the respondents may have taken for granted. The results then became the list of measures.

Synonyms were combined to shorten the extensive list from 92 to 21. Respondents were then asked to rate newsprint or online stories using a Likert-style scale for the story adjectives. Utilizing exploratory factor analyses, four factors emerged as ideally differentiated - credibility, liking, quality and representativeness. It is suggested that these factors could be useful for future studies of news perception.

In a later study, Sundar (2001) switches his psychological focus from general receiver perceptions of the quality of news stories to the perceptions of stories as determined by sources. It has been remarked in the media research literature that the conceptualizations of source and medium have not been well-differentiated. Some researchers have even included individual sources (eg. Walter Cronkite) and media channels (local newspapers) within a single experiment (Robinson and Kohut 1988), while numerous others compare different media channels altogether. In order to better conceptualize media perceptions, the researcher proposes three conceptions of sources: “1) source as the visible gatekeeper-presenter of content, 2) source as the media technology that delivers the content, and 3) source as the receiver or audience choosing content for consumption” (Sundar 2001, 58). These conceptions of sources are used to create a typology of communication sources. The typology categories are visible sources, technological sources and receiver sources. Receiver sources are broken down into self as source and audience as source. The researcher constructs an experiment to test his identified source types to see if they are psychologically distinct. Using a between-participants test, participants were given identical stories with different source attributions. The researcher found evidence that source attribution did play a role in the differing perceptions of news media. Although news credibility was not affected by

source, there were significant differences in ratings of quality, liking and representativeness.

A previous study conducted by Sundar (1998) looked at the psychological effect of quoted statements within news articles presented on the Internet. The researcher wished to find out whether Internet users behave similarly to traditional medium users when it comes to determining credibility based upon certain source cues. It has been a recent concern that individuals using the Internet for news information are not as critical as they should be when it comes to scrutinizing sourcing and taking unsubstantiated information as fact. Sundar explains that this has resulted in “a gradual decline in the psychological importance of sources in online news stories. While sources constitute the backbone of a news story in traditional media like print or broadcast, they may not be as important to users’ judgment of the veridicality of online news stories” (Sundar 1998, 55).

A within-subjects repeated-measures experimental design was employed to see if evaluations would differ. All of the participants were given identical stories with the only difference being that one contained quotations while the other did not. Subjects rated with a Likert-type scale the following: credibility, liking, quality and representativeness of the story. By running a repeated-measures analysis, the researcher did find that the participants perceived news stories with quotes as being significantly more credible and of higher quality than the identical news stories without quotes.

In a similar vein, Tseng and Fogg (1999) define a new set of credibility standards to apply to the Internet as a new information medium. Credibility is first described as perceived ‘believability.’ Trustworthiness and expertise are also identified as important

dimensions of credibility. Then four types of credibility are introduced: 1) presumed credibility - based on pre-conceived general assumptions of perceivers about how much they believe someone or something, 2) reputed credibility - based on how much perceiver believes something when a third-party has reported it, 3) surface credibility - based on perceivers belief in something utilizing simple inspection, and 4) experienced credibility - perceivers level of belief based on first-hand experience. Next, the authors explore credibility as a gained, possibly lost, then regained attribute. Although the Internet has often been recognized as a fairly credible source, there have been challenges to and skepticism about the quality of the information obtained online. The researchers give some examples of the varying views of how credibility is gained and lost over time. Some researchers believe that “once users perceive a computer product lacks credibility, they are likely to stop using it, leaving no opportunity to regain its credibility” (Tseng and Fogg 1999, 42). Other researchers have noted that when error rates were as high as 30% for a computer system, users still continued to use it. In another study serious errors and small errors both seemed to cause a drop in the perception of credibility, but not in proportional amounts. The smaller errors had a disproportionately large effect on credibility ratings. According to the authors, there are two ways that credibility can be regained 1) by providing consistently good information over a period of time or 2) by repeating the mistake over and over again so that it is anticipated and compensated for (Tseng and Fogg 1999).

Finally, Tseng and Fogg turn their focus to the user and his attributes. They list four user variables that could affect credibility evaluations. First, the *level of user expertise* could affect the appraisal of the information obtained online. Then *user*

*understanding*, meaning how the computer system arrives at its conclusions, for example, computer computations, could affect credibility perceptions. Also, the *users' need for information* may cause them to accept information obtained online more readily out of necessity. Lastly, lack of experience could cause *evaluation errors*, where a person is unable to recognize a problem with the information provided.

The study of Internet media credibility has been steadily widening and has been pushed into many new directions. Researchers now look at how the use of the Internet is becoming not just more routine, but also more complex. One researcher expanded the concept of focusing on competing news media to combining news media. An Internet behavior that has been growing in popularity is surfing the web while watching television, which has been termed 'telewebbing.' Erik Bucy (2003) decided to look at 'telewebbing' to see if simultaneous Internet and television usage would create a synergistic effect where credibility would be enhanced as stories could be compared and independently confirmed. An experiment was conducted to test this hypothesis. A four media channel (television, net, television and net, and neither), two age group (college undergrads and older adults), between-subjects, factorial experiment was utilized. Participants answered pre- and post-test questionnaires containing items concerning demographic information, media use patterns, evaluative measures and open-ended questions. Media credibility was measured by asking participants to rate news information presented as believable, fair, accurate, informative, and in-depth on a seven-point scale. It was found that younger audience members tended to give higher credibility scores to both television and the net than older members. However, when looking within groups, the adults seemed to rate net news as being more credible than

television, while students rated television as more credible than the net. The results also provided support for the congruence effect, which is the preference or favorable evaluation of the media used most recently as opposed to the media, which one has not recently been exposed to. For example, if in the experiment a group was asked to watch a news broadcast then read a newspaper article, the newspaper article would be rated more favorably since that was the most recent item exposed. Finally, some support is found for the synergy effect as subjects exposed to the two media simultaneously rated television and net news credibility higher than subjects exposed to just the net news or the control group.

Another constantly developing and improving feature of the Internet is modality, which is “defined as the use of text, graphics, sound and video on a single communication platform” (Kiousis 2006, 350). Television had long been a preferred media format because of its power to visually engage the viewer. The Internet with greater speed and the ability now to produce quality streaming video has essentially become the embodiment of all media types rolled into one - written content (newspapers), audio (radio), video (television) with the added features of participation and interactivity. For these reasons, researchers such as Kiousis believe that certain attributes, such as increased modality, can positively affect the users’ perceptions of Internet credibility (Kiousis 2006). One of the bases of this assumption is that the more mentally engaging activity of participation, as opposed to passive observation, will cause the user to perceive the source as more credible.

In order to test this hypothesis, Kiousis conducted an experiment where participants were randomly assigned to one of three conditions: low modality with text



only, moderate modality with text and pictures, and high modality with text, pictures and video. The questionnaire included questions involving the actual use of the multimedia items available on the website stories in the moderate and high modality conditions. Several of the most commonly cited dimensions of credibility were used - accuracy, bias, objectivity, believability, fairness and sensationalism. Also, source and message credibility were treated as two separate dependent variables in order to identify possible variances in evaluation according to different attributions. By running an ANCOVA model, the researcher found that there was no significant change in perceptions of source or message credibility when multimedia content was offered. However, those actually using the multimedia content did show higher levels of perceived credibility of the media source.

As the computer and information technologies become more sophisticated and pervasive, experts in the field of mass communication are realizing that this could dramatically change the field of mass media studies and the mass media industry itself. In a paper titled “The End of Mass Communication,” Chaffee and Metzger (2001) explore some of the evidence for and against the purported demise of mass communication as we know it. The Internet has been seen as a great threat to mass communication as it tends to decentralize information sources that traditionally have been large and few. There are three core mass communication theoretical areas that have been reevaluated in this article: agenda-setting, cultivation, and critical theory/cultural studies.

In the *agenda setting theory*, a small number of highly influential professional gatekeepers produce a unified nationwide media agenda. The threat to this “mass media” system may come from the increasing number of news outlets and a decreasing number

of audience members per outlet, which results in more competition and fragmentation. According to the *theory of cultivation* “mass media content forms a coherent system, a worldview that is limited to certain themes (e.g. violence) due to economic constraints such as the use of lowest common denominator programming to appeal to a mass audience” (Chaffee and Metzger 2001, 375). This system can begin to disintegrate as the number of outlets increases, content diversifies, audiences become more selective, and different worldviews are offered. Finally, the critical theory/cultural studies of the elite domination of media will need to be adjusted to account for the increasing competition from Internet options. The authors conclude that even though the scene for mass media studies is changing rapidly, elites and mass media forms as we know them will be forced to adapt to the changing environment and will maintain some power and influence.

What exactly are the implications of the tremendous growth of the popularity of the Internet and the increasing level of dependence people have on the wealth of information it provides at one’s fingertips? Is there a major shift of media use coming in the near or distant future? Uses and gratification theory has described the attributes of different media channels and the ability each has at fulfilling a user’s choices and needs. Credibility studies have helped to illustrate why people may prefer one information provider over another. Since it has been an accepted view that people tend to use information sources they can trust, examining the media environment today and the levels of perceived media credibility they engender may help to effectively address some of these important questions.

## II. METHODOLOGY

Since audiences' perceptions of news credibility seem to have support in the literature as a criterion for media channel choice, this researcher would like to test this idea. From the 1960's there has been an ever-growing public mistrust of the news media. Deemed as problematic, studies such as those conducted by the LA Times and ASNE in the 1980's were conducted to delve deeper into the 'crisis' and analyze the public's feelings about the news media. The results appeared to be mixed although the use of different analysis methodologies could have contributed to the varying outcomes. However, time and again, evidence of the perception that the news media is not entirely credible surfaces. Because people have growing doubts about the traditional media channels, there could be a movement away from such news sources. Some have hypothesized that, if the public is not satisfied with traditional media channels they will seek out alternative news sources. If the television news organizations and newspapers are too influenced by the corporate interests of making money over substance, perhaps the public would recognize this and flock to alternate sources not controlled by large corporations focused on the bottom line.

One study that explored the relationship between trust and media channel use was conducted by researchers who hypothesized that "skepticism will be associated with news media diets: the higher the skepticism, the higher the nonmainstream component in audiences' media diets" (Tsfati and Cappella 2003, 510). They believe that news media

consumers are rational thinkers who will choose to get information from the most trustworthy channel available. If a channel is perceived to be untrustworthy, then an alternative choice will be sought. The Internet provides the opportunity to gather news specific to the interests of the consumer and multiple sources can be evaluated in one sitting.

This researcher would like to focus on the relationship between media channel choice and credibility ratings where it is assumed that choice of media channel depends on the levels of credibility by the consumer. Thus media channel will be treated as the dependent variable while credibility ratings will be treated as the independent variable because the latter may affect medium choice. From this strain of thought, the following hypotheses have been formulated:

H<sub>1</sub>: People who cite high credibility ratings of news media channels are more likely to use traditional media channels such as television and newspapers and people who cite low credibility ratings of news media channels are more likely to use alternate media channels such as the Internet.

H<sub>0</sub>: Peoples' credibility ratings have no influence on choice of news media channels.

Looking at the null hypothesis it is possible that credibility levels do not have any influence on the choice of news media channels. If this is so, there may be other ways to explain the behaviors of those who use traditional forms of news media and those who have been utilizing in increasing numbers the Internet as a news source. For example, certain demographic variables could affect one's ability to utilize the Internet, therefore such groups will tend to stay with traditional media sources. There are a number of recognized barriers to Internet use, which are typically referred to as the 'digital divide.' This divide is identified as the gap between those who have access to new technologies,

such as the Internet, and those who do not. It has been more specifically defined as “inequalities in access to the Internet, extent of use, knowledge of search strategies, quality of technical connections and social support, ability to evaluate the quality of information, and diversity of uses” (DiMaggio et al. 2001, 310). The demographic groups that are often cited as lagging behind in this new technology adoption tend to be low income, minority, and those with low education. These barriers hinder these groups from being able to utilize the abundance of information that is available at one’s fingertips online. In addition “[C]ritics have expressed fear that the digital age with all its unique informational and civic benefits could elude some segments of the population based on gender, race, age and geography (Dupagne and Salwen 2005). This tide of thought emphasizes the difficulties that the “have-nots” have in getting and utilizing new technologies. Those without money may not be able to afford a computer with an Internet provider service to pay every month. These individuals also may not have the education and confidence to learn a new technology. Family members and friends of such individuals with similar demographic backgrounds may be in the same situation, so they might not be able to turn to those closest to them for help and guidance. This inability would then not allow a certain segment of society, and perhaps the one most in need of more information, to be able to seek alternate news media channels. An interesting study looked at Internet voting to find evidence of this phenomenon. The researchers hypothesized that “Internet voting lowers the cost of voting for certain voting demographics based upon race, age and income [and they] further contend[ed] that this electoral advantage may crystallize the growing turnout disparity between demographic groups” (Gainous and Wagner 2007, 19). These researchers did find evidence to support

their contentions by using data collected from the 2000 Democratic Presidential Primary in Arizona to measure and analyze the participation levels of various demographic groups. It must also be acknowledged that there are many who would argue that this 'digital divide' has been over-hyped and is no longer a factor hindering or affecting Internet access (Samuelson 2002; Compaine 2001). The current researcher will test the demographic variables to see if there is a notable relationship which could confound or mediate the relationship between levels of credibility and news media channels.

### Nonexperimental Design

Since it is difficult for political scientists to construct experimental designs that can test behavioral phenomena, many develop and utilize alternate research designs. In order to get to the bottom of the question, "can credibility levels indicate news medium choice?," this researcher chose to employ a nonexperimental research design. The definition of a nonexperimental design is that one of the following characteristics must be present: 1) the inability to randomly assign subjects to control and experimental groups, 2) there is only a single experimental group, 3) a lack of control over the introduction of the independent variable, or 4) an inability to collect pretest scores of the dependent variable before introduction of the independent variable.

The type of nonexperimental design often used by political scientists in survey research is also employed by this researcher, and it is the cross-sectional design. In this type of design, measurements of the independent and dependent variables are taken at one point in time. Statistical methods and data analysis are relied upon to draw conclusions about the effects of the independent variable on the dependent variable.

Although this research design is not ideal for looking at evidence of causal relationships, it does have the advantage of providing a more natural, real-life setting. In this type of research design, internal validity is sacrificed to some extent for external validity.

This researcher will use a secondary data source collected for a social science survey conducted in 2006 by the Pew Research Center for the Pew Internet and American Life Project. The survey contains questions that the researcher can use to look at the respondents' feelings of credibility and the relationship between credibility and media channel used for news. This cross-sectional snapshot can provide the current researcher with valuable information necessary to create a credibility index which will serve as the independent variable while media channel choice will serve as the independent variables in this 'experiment.'

The data was collected by Princeton Survey Research International for the Pew Research Center. From June 8 to June 12 of 2005 telephone interviews were conducted with a sample provided by Survey Sampling International, LLC (SSI). Respondents were chosen to represent all continental U.S. households. The sample was drawn using standard *list-assisted random digit dialing* (RDD) methodology. Sampled numbers were dialed up to as many as 10 times at different times of the day and different days of the week to maximize the chance of contacting the specific household. For each contacted household, the youngest adult male in the residence currently home was requested. If no male was available, the interviewer would rotate asking for either the youngest or oldest adult female. This technique has been shown to produce a sample that closely mirrors the national population. Weighting was also used to attempt to minimize any bias in the results regarding possible patterns of non-response. The response rate for this survey was

29% resulting in a nationally representative sample of 1,464 adults. The margin of error was  $\pm 2.9\%$ .

The reason for using a secondary data source is due to resource limitations of time and money. The secondary data source used in this study comes from the Pew Research Center. This institution has sufficient funding to conduct large-scale nationally representative surveys, as well as a reputation for being independent of partisan influence. “The Pew Research Center is a nonpartisan "fact tank" that provides information on the issues, attitudes and trends shaping America and the world. It does not take positions on policy issues” (Pew 2007). The dataset comes from a 2005 study, which produced a report titled “Public More Critical of Press, But Goodwill Persists - Online Newspaper Readership Countering Print Losses.” From the summary of results, it is clear that this study focused on answering questions such as Is the news media viewed more favorably than political institutions? and Does the public make distinctions between fact-based and opinion-oriented news outlets? and How do public favorability and believability ratings of the news media compare?

The data provided in this study can also be used to address a slightly different question - “Can credibility levels indicate news medium choice?” Several questions in the original survey can be used to explore this question. The survey identifies media channels used and it also addresses issues surrounding news credibility. In the literature, similar dimensions of credibility seem to surface. For instance, a variety of indicators have appeared in prior research such as Gaziano and McGrath (1986); Johnson and Kaye (1998); Meyer (1988); and West (1994). Since there is a certain level of repetition, the



following dimensions of the concept of credibility will be used to measure levels of credibility: accuracy, fairness, influence, bias, and newsworthiness.

‘Accuracy’ can be defined as freedom from mistake or error in reporting facts or actual occurrences. This concept will be measured by the PEW question “In general, do you think news organizations get the facts straight, or do you think that their stories and reports are often inaccurate?” While this question has been chosen by the present researcher to represent story accuracy, the wording could have been constructed more carefully for present purposes. The concepts of ‘getting the facts straight’ and ‘accuracy’ are not synonymous. A story could be considered factual but not accurate and vice versa. For example, a witness to an incident may give false information in an interview (not factual or merely a stenographic observation), but the story containing this interview could still be an accurate reporting of the information presented. Conversely, factual information could be collected by a journalist, but the presentation of such information could contain interpretive inaccuracies. The wording imperfection, while limiting, will not prevent the usage of such questions for the present study. The researcher will assume that the errors associated with the use of these types of questions will be randomly distributed. Such questions can still be considered valuable for gauging the respondents’ general perceptions of news media.

The next dimension of credibility is ‘fairness,’ which can be defined as marked by impartiality and honesty: free from self-interest, prejudice or favoritism. The Pew question “In presenting the news dealing with political and social issues, do you think that the news organizations deal fairly with all sides, or do they tend to favor one side?” will be used to measure the ‘fairness’ dimension of credibility. The interpretation of this

question should be unambiguous since the word ‘fair’ appears in the question. The third dimension of credibility is ‘influence,’ which can be conceptualized as the power or capacity of causing an effect in indirect or intangible ways, attributable to actions of powerful people and organizations. Influence will be measured by the Pew question “In general, do you think news organizations are pretty independent, or are they often influenced by powerful people and organizations?” which is not clearly constructed for present purposes. Being independent and being influenced by powerful people or organizations may not be two mutually exclusive concepts. Consider that a news organization could potentially be independent and simultaneously be influenced by powerful people or organizations. This question is potentially double-barreled.

Nonetheless, these question wording problems arise for a number of reasons. Some of the most common pitfalls of question wording are: 1) multiple stimuli-more than one concept introduced in a question, 2) framing effects- respondents tend to try to maintain continuity when answering questions, 3) unbalanced arguments-question wording biased in favor of certain response, 4) the middle position- respondents tend to choose the middle ground when offered among extremes, 5) response acquiescence- tendency of respondent to blindly agree with the topic being questioned, 6) and filter questions- questions tend to lead respondent into a certain response (Erikson and Tedin 2001). In addition, organizations such as the Pew institute probably try to avoid boring question wording to keep the interviewee engaged in an attempt to seem more dynamic. For clarity, the question could have read “In general do you think news organizations are often influenced by powerful organizations or not?” Although the question is imperfect, as an indicator of influence, it will suffice.

The question “In general, do you think news organizations pay too much attention to GOOD NEWS, too much attention to BAD NEWS, or do they mostly report the kinds of stories they should be covering?” represents the ‘newsworthiness’ dimension of credibility. The concept of ‘newsworthiness’ can be defined as with sufficient importance and relevance to the general public to warrant reporting, the opposite of which would be sensationalistic (BAD NEWS) or ‘feel good’ (GOOD NEWS) to contribute to the growing popularity of infotainment ‘news’ programs. This question wording could be deemed problematic because it causes the respondent to make a choice between options that could all be answered in the affirmative; however the researcher will assume that if there are interpretive errors made by respondents, they will be randomly distributed.

The final dimension of credibility is ‘bias.’ Bias can be defined as an inclination of temperament, outlook or partisanship. This concept of bias will be measured by the Pew question “Which one phrase do you feel better describes news organizations generally... Politically biased in their reporting, OR careful their reporting is NOT politically biased?” Since the dimension being measured is directly identified as ‘bias’ in the original question, the question is well-suited for present purposes.

Each of the five questions drawn from the Pew survey will represent a dimension of credibility in an index. “Some concepts are just too complex to be operationalized in one question. No one question quite captures the concept, but several taken together do approximate it” (Brooker and Schaefer 2006, 45). This researcher will construct a credibility index in the SPSS program based upon the five above-mentioned and often cited dimensions of credibility - accuracy, fairness, influence, newsworthiness, and bias,

which are positively and significantly related. It should also be noted that, “methodologically, the use of a multiple-item index can lessen the harmful effects of the random measurement error that is present in survey data” (Asher 2004, 61). Looking at the credibility perceptions of users of different media, will provide some insights into why individuals choose the media they do.

Respondents were able to answer the first three (Q9-Q11) of the five Pew questions used for this analysis in the affirmative, the negative, or ‘don’t know/refused.’ Each of the affirmative answers, which represent feelings of credibility were coded as +1. In SPSS one would select ‘transform’ then ‘recode into different variables’ then choose the question number you wish to recode and assign new recoded values to a newly labeled question. Negative answers, which are indicative of low credibility, were recoded from the original value of 2 to a -1. This was done to enable the researcher to measure or quantify the feelings about the credibility of traditional media. The ‘don’t know/refused’ responses were recoded, from an original value of nine, to ‘system missing’ so that the values would be effectively eliminated from the analysis. The researcher is only interested in measuring clear opinions and not omissions. The three questions were presented and recoded as follows:

Q.9 In general, do you think news organizations get the facts straight, or do you think that their stories and reports are often inaccurate?

- 1 Get the facts straight -> coded +1
- 2 Stories often inaccurate -> recoded -1
- 9 Don’t know/Refused -> recoded system missing

Q.10 In presenting the news dealing with political and social issues, do you think that news organizations deal fairly with all sides, or do they tend to favor one side?

- 1 Deal fairly with all sides -> coded +1
- 2 Tend to favor one side -> recoded -1
- 9 Don't know/Refused -> recoded system missing

Q.11 In general, do you think news organizations are pretty independent, or are they often influenced by powerful people and organizations?

- 1 Pretty independent -> coded +1
- 2 Often influenced by powerful people and organizations -> recoded -1
- 9 Don't know/Refused -> recoded system missing

For the fourth question (Q12), the first two responses were collapsed into a low credibility score of -1 (instead of the original scores of 1 and 2 respectively). This was done because if one thinks that the news organizations pay too much to good news or too much to bad news, they are acknowledging that the news organizations are not doing their job properly, which is indicative of feelings of low credibility. While the third response choice was indicative of credible feelings about news organizations, so +1 score was assigned instead of +3. The 'don't know/refused' category again was recoded to 'system missing.' The question was presented and recoded as follows:

Q.12 In general, do you think news organizations pay too much attention to GOOD NEWS, too much attention to BAD NEWS, or do they mostly report the kinds of stories they should be covering?

- 1 Too much attention to good news -> recoded -1
- 2 Too much attention to bad news -> recoded -1
- 3 Report the kinds of stories they should be covering -> recoded +1
- 9 Don't know/Refused -> recoded system missing

Finally, the fifth question (Q13i) was a series of pairs (a-j) of opposite phrases. Only the pair contained in section ‘i’ dealing with ‘bias’ was selected. If the respondent agreed with the first statement, which is indicative of low credibility, she was originally assigned a score of +1. This score was recoded to a -1. If the respondent agreed with the second statement, indicative of credibility, the original score would be a +2. This score was recoded to a +1. An additional response category of ‘neither applies’ was originally coded a value of 3. This response was recoded to a zero because the researcher would like to indicate this as a neutral response instead of eliminating it entirely. Finally, the ‘don’t know/refused’ category was recoded to ‘system missing’ so that such responses could be eliminated from the analysis. The question was presented then recoded as follows:

Q.13 I’m going to read you some pairs of opposite phrases. After I read each pair, tell me which ONE phrase you feel better describes news organizations generally. If you think that NEITHER phrase applies, please say so.

i.F2 Politically biased in their reporting, OR  
Careful that their reporting is NOT politically biased?

**RESPONSE CATEGORIES:**

- 1 FIRST statement -> recoded -1
- 2 SECOND statement ->recoded +1
- 3 Neither applies -> recoded 0
- 9 Don’t know/Refused -> recoded system missing

Once all of the original questions were recoded to give ‘credible’ responses a score of +1 and ‘not credible’ responses a score of -1, while leaving the ‘don’t know/refused’ responses a ‘system missing’ value, and ‘neutral’ responses a 0, the data

could then be analyzed. If a respondent consistently rates the news organizations as being credible across all five indicator-questions, she will receive a score of 5. If the respondent consistently rates the news media as being ‘not credible’ across all five questions, she will receive a score of -5. A score of zero will be considered neutral. Increasing positive scores (1, 2, 3, 4, 5) will indicate increasing feelings of credibility and increasing negative scores (-1, -2, -3, -4, -5) will indicate rising levels of dissatisfaction with the credibility of news organizations. By adding the scores of all five questions, which represent the dimensions of the concept of credibility, for each respondent the researcher is effectively creating an ‘index of credibility.’

Next, the type of media channel used by the respondents will be compared to the credibility index via cross-tabulation. Question 3 (First) of the Pew Survey addresses type of medium used. The original question is stated as:

Q.3 How have you been getting most of your news about national and international issues? From television, from newspapers, from radio, from magazines, or from the Internet? [ACCEPT TWO ANSWERS: IF ONLY ONE RESPONSE IS GIVEN, PROBE FOR ADDITIONAL RESPONSE] {12-04}

- 1 Television
- 2 Newspapers
- 3 Radio
- 4 Magazines
- 5 Internet
- 6 Other (VOL.)
- 9 Don't know/Refused (VOL.) – recoded as ‘system missing’

Since this question initially asks the respondent for the most relied upon media channel, the first set of responses will be used. The question then probes for an additional response, however the researcher will not use this information for her analysis.

It will be assumed that the first answer indicates the respondent's top choice. The last possible response "Don't know/Refused" was recoded as a 'system missing value' since this category is not useful for the current analysis. This is because the categories specified were considered to be a complete list of channel alternatives. With this type of analysis, the varying degrees of association of credibility can be compared to the type of medium used by individuals. It is expected that there will be similar perceptions of credibility within the two groups, Internet users versus traditional users and that the difference will become apparent across the two groups when applying the five dimensions of the credibility index. This could indicate that there is indeed a relationship between credibility ratings and choice of media. When respondents are asked about news media channels' credibility, they will think predominantly about the traditional channels, as all but one of the questions uses the phrase 'in general' when asking about opinions of the news media. It is hypothesized that people who are dissatisfied with the credibility of the traditional channels will turn to non-traditional sources such as the Internet to get their news. If people are content with traditional sources, they will tend to stick with them and not seek out alternate channels such as the Internet. This is why the researcher has put forth the following main hypotheses:

H<sub>1</sub>: People who cite high credibility ratings of news media channels are more likely to use traditional media channels such as television and newspapers and people who cite low credibility ratings of news media sources are more likely to use alternate media channels such as the Internet.

H<sub>0</sub>: Peoples' credibility ratings have no influence on choice of news media channels.

In addition to credibility, other independent variables will be tested to see if there is any relationship with the dependent variable media channel. The demographic



variables income, education, age and race were used as controlling variables to layer into the crosstabulations to see if there were any notable differences in the relationships with credibility and media. One of the questions used for demographic statistics by Pew inquires about the income level of respondents. The original data were recoded since the category responses were too numerous for present purposes. See Table 2.1- Frequencies of Income Categories below for original categories and figures. In order to simplify the responses, the nine response categories were collapsed into just four by looking at the distribution and dividing it into smaller similar-sized quartiles. The 'Don't know/Refused' was recoded as system missing as the researcher was interested in measuring clear answers and not omissions. The original question read:

Last year, that is in 2004, what was your total family income from all sources, before taxes? Just stop me when I get to the right category. [READ]

- |    |                                       |
|----|---------------------------------------|
| 1  | Less than \$10,000                    |
| 2  | 10 to under \$20,000                  |
| 3  | 20 to under \$30,000                  |
| 4  | 30 to under \$40,000                  |
| 5  | 40 to under \$50,000                  |
| 6  | 50 to under \$75,000                  |
| 7  | 75 to under \$100,000                 |
| 8  | 100 to under \$150,000                |
| 9  | \$150,000 or more                     |
| 10 | (VOL. DO NOT READ) Don't know/Refused |

Table 2.1- Frequencies of Income Categories

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Less than \$10,000	101	6.9	6.9	6.9
10 to under \$20,000	120	8.2	8.2	15.1
20 to under \$30,000	159	10.9	10.9	26.0
30 to under \$40,000	153	10.5	10.5	36.4
40 to under \$50,000	143	9.8	9.8	46.2
50 to under \$75,000	223	15.2	15.2	61.4
75 to under \$100,000	151	10.3	10.3	71.7
100 to under \$150,000	127	8.7	8.7	80.4
\$150,000 or more	98	6.7	6.7	87.1
(VOL. DO NOT READ) Don't know/Refused	189	12.9	12.9	100.0

The five new groups were recoded as follows to give a more general indication of financial standing:

- 1 0 to under \$30,000
- 2 30 to under \$50,000
- 3 50 to under \$150,000
- 4 150 or more
- 5 Don't know/refused-> recode to system missing

The new categories and frequency figures can be noted below in Table 2.2 below.

Table 2.2- Frequencies of Income Categories after Recoding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 to under 30	380	26.0	29.8	29.8
	30 to under 50	296	20.2	23.2	53.0
	50 to under 100	374	25.5	29.3	82.4
	100 or more	225	15.4	17.6	100.0
	Total	1275	87.1	100.0	
Missing	System	189	12.9		
Total		1464	100.0		

The next independent variable, age, also elicited an extremely wide range of responses. The Pew organization collapsed and recoded the individual responses into age categories that were appropriate for the present researcher’s purposes. The chosen categories also have appeared in numerous other studies, so they are accepted as a standard. The original question read as follows:

AGE            What is your age?  
                      \_\_\_\_\_ years  
                      97     97 or older  
                      99     Don’t know/Refused [VOL.]

However, the age categories were divided into the following groups by Pew for recoding:

- 1    18-24
- 2    25-34
- 3    35-44
- 4    45-54
- 5    55-64
- 6    65+
- 9    Don’t know/Refused

The only item changed for the age question was the value assigned to the Don’t

Know/Refused category. It was changed from 9 to a system missing value. As for the demographic question regarding education, the original Pew question read:

EDUC           What is the last grade or class that you completed in school? [DO NOT READ]

- 1       None, or grade 1-8
- 2       High school incomplete (Grades 9-11)
- 3       High school graduate (Grade 12 or GED certificate)
- 4       Technical, trade, or vocational school AFTER high school
- 5       Some college, no 4-year degree (including associate degree)
- 6       College graduate (B.S., B.A., or other 4-year degree)
- 7       Post-graduate training or professional schooling after college (e.g., toward a master's Degree or Ph.D.; law or medical school)
- 9       Don't know/Refused (VOL.)

However, Pew recoded the information from this question to just four categories:

- 1       Less than high school
- 2       High school graduate
- 3       Some college
- 4       College and post-graduate
- 9       Don't know/Refused (VOL.)-> recoded to system missing

In addition the 'Don't know/Refused category was recoded, instead of a value of 9, this response was recoded as a system-missing value.

The final independent demographic variable was race. The categories used in the original question were standard among questionnaires so the question categories were retained. The original PEW question read:

[INTERVIEWER: IF RESPONDENT ANSWERED 1 'HISPANIC' IN HISP, ASK: Are you white Hispanic, black Hispanic, or some other race? IF NON-HISPANIC ASK:]  
RACE           What is your race? Are you white, black, Asian, or some other?

- 1 White
- 2 Black
- 3 Asian
- 4 Other or mixed race
- 9 Don't know/Refused (VOL.) -> recoded to system missing

The only item recoded was the 'Don't know/Refused category. It was recoded from a value of 9 to a system-missing value.

### III. RESULTS

Table 3.1 Frequencies of Variables for Standard Statistical Tests

	Mean	Median	Mode	Std. Dev.	Skew.	Kurtosis	Range
Index	-2.323	-3.000	-5.00	2.848	0.908	-0.105	10
Medium	-	-	T.V.	-	-	-	-
Age	49.91	49.00	50	17.88	0.327	-0.359	81
Income*	2.35	2.00	1.00	1.08	0.107	-1.3	3
Educ**	2.93	3.00	4.00	0.97	-0.281	-1.174	3
Race	-	-	WHITE	-	-	-	-

\* Income levels were divided into four categories: 1= 10 to less than 30 thousand, 2= 30 thousand to less than 50 thousand, 3= 50 to less than 100 thousand and finally, 4= 100 thousand and above.

\*\* Education levels were divided into four categories: 1= less than high school, 2= high school graduate 3= some college, 4= college or greater

The first type of analysis conducted on the dataset was a frequencies table of the various variables and a few basic univariate statistics. Items such as the mean, median, mode, standard deviation, skewness, kurtosis, and range had been calculated in order to analyze specific qualities of the variables. For instance, the mean, median and mode can

be used to find the “average” of a particular set of data. The mean, also known as the arithmetic mean, is the sum of a list of numbers divided by the actual number of observations in the list. The median is the middle number in an ordered list. The mode is the value with the most occurrences on the list. A standard deviation gives us a statistical dispersion or measure of the spread of values. Skewness measures the asymmetry of the distribution, while kurtosis is a measure of the “peakedness” of the distribution. These last two measures are important when trying to determine whether a distribution is normal or not. Many statistical tests rely on distributions that are normally or symmetrically dispersed. The kurtosis value was -0.105, which indicates a distribution slightly more peaked than normal. Since this value is somewhat close to zero, this indicates a shape that is close to normal. The skewness value was 0.908 which is in the range that is excellent for most psychometric purposes (between  $\pm 1.0$ ). The positive skewness value indicates a greater number of smaller values in the distribution.

From Table 3.1 one can ‘at a glance’ get some important information about the data. For instance, we could state that on average the respondents in this survey have a more negative than positive perception of the credibility of the news media. This is indicated by the value of -2.323 at the intersection of index and mean, on the table. To reinforce this measure of the average, we could look at the median, or middle score, to see if it is close in value to the mean. At -3.0, we see that the values are not far apart. Furthermore, we could look at the mode to see the score that was most common, which was -5, indicating the typical person on this measure has a very negative perception of the news media, as this was the most often tallied score.

Next, we could look at the demographic variables such as income, age, and education. From the information provided we notice that the respondents tended to be above middle age because the mean was 49.91, the median was 49 and the mode 50. Also, we could say that more of the respondents were white than any other race, since 'white' was the most often cited race.

Education levels were recoded and divided into four categories: 1) less than high school, 2) high school graduate 3) some college, 4) college or greater. Table 3.1 shows that the typical level of education of the respondents was at least some college in that mean was 2.93; the median was 3.0; and the mode was 4.0. Income categories were arranged as follows: 1) 10 to less than 30 thousand, 2) 30 thousand to less than 50 thousand, 3) 50 to less than 100 thousand and finally, 4) 100 thousand and above. The mean was 2.35, the median 2.0 and the mode was 1.0 indicating that most of the respondents probably made an annual income of less than 50 thousand dollars a year. Finally, we know that most of the respondents chose T.V. as their main mode of news media. In sum, the frequency information collected from the data and displayed in Table 3.1 is what would have been expected from the literature; that most respondents were white, middle-aged, middle-income, with an education level of mostly high school and above, and a healthy mistrust of the news media.



Table 3.2 Measures of Association of Variable Crosstabulations

	Index	Medium	Age	Income	Educ	Race
Index	1	.307 <sub>1</sub> *	NS	-.125 <sub>2</sub> *	-.048 <sub>2</sub> *	.254 <sub>1</sub> *
Medium	.307 <sub>1</sub> *	1	.231 <sub>1</sub> *	.220 <sub>1</sub> *	.225 <sub>1</sub> *	.171 <sub>1</sub>
Age	NS	.231 <sub>1</sub> *	1	-.106 <sub>2</sub> *	-.118 <sub>2</sub> *	.297 <sub>1</sub> *
Income	-.125 <sub>2</sub> *	.220 <sub>1</sub> *	-.106 <sub>1</sub> *	1	.504 <sub>2</sub> *	.157 <sub>1</sub> *
Educ	-.048 <sub>2</sub> *	.225 <sub>1</sub> *	-.118 <sub>2</sub> *	.504 <sub>2</sub> *	1	.153 <sub>1</sub> *
Race	.254 <sub>1</sub> *	.171 <sub>1</sub> *	.297 <sub>1</sub> *	.157 <sub>1</sub> *	.153 <sub>1</sub> *	1

<sub>1</sub> reports Phi, <sub>2</sub> reports Gamma  
 \* significant to the level of .05 or less

The frequency distributions was able to produce the distribution of only a single variable but the bivariate crosstabulation displays the joint distribution of two variables, and it is reported in Table 3.2. A bivariate crosstabulation was conducted to determine whether the variables could be associated with or were contingent upon one another.<sup>1</sup>

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<sup>1</sup> To run a bivariate crosstabulation in SPSS the researcher simply opened the data set and chose from the toolbar ‘analyze’, then ‘descriptive statistics’ from the drop down menu, and finally ‘crosstabs’ from the sub-menu that appears. From the crosstab dialogue box the researcher chose ‘income’ from the variable list by highlighting it and clicking on the arrow. Then for the second variable tested, the researcher selected ‘age’ from the variable list by highlighting it and then clicked on the arrow. Since the two variables are at the nominal level of analysis, the researcher chose the appropriate statistical tests under the ‘statistics’ tab.

One of the limitations of this type of analysis is that the data collected was at the nominal and ordinal levels. Higher levels of analysis such as interval or ratio can generate more specific information about data. However, the bivariate crosstabulation is capable of revealing to us some important relationships between the selected variables.

When looking at Table 3.2 Measures of Association of Variable Crosstabulations, several of the results would seem quite obvious to any social scientist. First, when one looks at the income and age crosstabulation, the statistic is a  $-.106$  gamma. The researcher has chosen to report the highest values of association in order to try to avoid any possible problems with the collinearity of variables. If any variables were to be too closely related, one would have to be eliminated. The figure indicates that the two variables have a negative association which also happens to be significant. From this one can surmise that as an individual's age goes up, the levels of income go down and vice versa. We all know that as each successive generation goes out into the workforce, they are typically better educated and more technologically experienced than prior age cohorts. This results in older individuals not earning as much as the younger, more competitive generations.

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Finally, the researcher clicked 'ok' to view the results. The same process was repeated for each set of variables.

Table 3.3 Income and Age Bivariate Crosstabulations

		agerec						Total
		18-24	25-34	35-44	45-54	55-64	65+	
0 to < 30	Count	48	51	42	61	58	120	380
	% within incomerecode	12.6%	13.4%	11.1%	16.1%	15.3%	31.6%	100.0%
	% within agerec	49.5%	27.9%	16.7%	20.1%	27.8%	53.6%	30.0%
	% of Total	3.8%	4.0%	3.3%	4.8%	4.6%	9.5%	30.0%
30 to < 50	Count	26	43	56	72	47	50	294
	% within incomerecode	8.8%	14.6%	19.0%	24.5%	16.0%	17.0%	100.0%
	% within agerec	26.8%	23.5%	22.3%	23.7%	22.5%	22.3%	23.2%
	% of Total	2.1%	3.4%	4.4%	5.7%	3.7%	3.9%	23.2%
50 to < 100	Count	10	63	93	105	61	38	370
	% within incomerecode	2.7%	17.0%	25.1%	28.4%	16.5%	10.3%	100.0%
	% within agerec	10.3%	34.4%	37.1%	34.5%	29.2%	17.0%	29.2%
	% of Total	.8%	5.0%	7.3%	8.3%	4.8%	3.0%	29.2%
100 and up	Count	13	26	60	66	43	16	224
	% within incomerecode	5.8%	11.6%	26.8%	29.5%	19.2%	7.1%	100.0%
	% within agerec	13.4%	14.2%	23.9%	21.7%	20.6%	7.1%	17.7%
	% of Total	1.0%	2.1%	4.7%	5.2%	3.4%	1.3%	17.7%
Total	Count	97	183	251	304	209	224	1268
	% within incomerecode	7.6%	14.4%	19.8%	24.0%	16.5%	17.7%	100.0%
	% within agerec	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	7.6%	14.4%	19.8%	24.0%	16.5%	17.7%	100.0%

This can be seen in Table 3.3. For example, 31.6% of the under 30 thousand group were 65+, which was the largest proportion by age group. While the over 100 thousand category had only 7.1% of 65+ year olds, only second to the 18-24 year old category at 5.8%.

Table 3.4- Education and Age Bivariate Crosstabulation

Edureco		agerec						Total
		18-24	25-34	35-44	45-54	55-64	65+	
less than hs	Count	10	8	8	14	11	42	93
	% within edureco	10.8%	8.6%	8.6%	15.1%	11.8%	45.2%	100.0%
	% within agerec	8.7%	4.1%	2.9%	4.2%	4.6%	14.7%	6.4%
	% of Total	.7%	.6%	.6%	1.0%	.8%	2.9%	6.4%
hs grad	Count	43	53	75	96	79	111	457
	% within edureco	9.4%	11.6%	16.4%	21.0%	17.3%	24.3%	100.0%
	% within agerec	37.4%	27.5%	27.2%	28.7%	33.1%	38.9%	31.7%
	% of Total	3.0%	3.7%	5.2%	6.7%	5.5%	7.7%	31.7%
some college	Count	48	41	60	83	66	58	356
	% within edureco	13.5%	11.5%	16.9%	23.3%	18.5%	16.3%	100.0%
	% within agerec	41.7%	21.2%	21.7%	24.9%	27.6%	20.4%	24.7%
	% of Total	3.3%	2.8%	4.2%	5.8%	4.6%	4.0%	24.7%
college +	Count	14	91	133	141	83	74	536
	% within edureco	2.6%	17.0%	24.8%	26.3%	15.5%	13.8%	100.0%
	% within agerec	12.2%	47.2%	48.2%	42.2%	34.7%	26.0%	37.2%
	% of Total	1.0%	6.3%	9.2%	9.8%	5.8%	5.1%	37.2%
Total	Count	115	193	276	334	239	285	1442
	% within edureco	8.0%	13.4%	19.1%	23.2%	16.6%	19.8%	100.0%
	% within agerec	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	8.0%	13.4%	19.1%	23.2%	16.6%	19.8%	100.0%

Age and education are also similarly related. When we look at Table 3.2 of the bivariate crosstabulations, the statistical value is  $-.118$  gamma. This is another significant negative association. Although the association is rather weak, it is still significant. As

age goes up, the level of education goes down as can be seen in Table 3.4 Education and Age Bivariate Crosstabulation. The age group that has the highest numbers of ‘less than a high school education’ is the 65+ group at 45.2%. Then when we look at ‘college graduates and beyond’ category, the highest percentage groups are the 35-44 year olds at 24.8% and the 45-54 at 26.3%. After those cohorts, the percentages decline. For example, 55-64 year olds drop to 15.5% and then the 65+ group drops further to 13.8%. We know that successive generations have produced more and more educated members. The number of college graduates in the 1960’s or 1970’s has been dwarfed by the number of college graduates today. So we see that the univariate and contingent distributions of this dataset conform to expectations that are widely recognized in the literature.

Table 3.5 Income and Education Bivariate Crosstabulations

			edureco				Total
			less than hs	hs grad	some college	college +	
incomerecode	0 to < 30	Count	54	163	106	55	378
		% within incomerecode	14.3%	43.1%	28.0%	14.6%	100.0%
		% within edureco	73.0%	42.1%	32.7%	11.3%	29.7%
		% of Total	4.2%	12.8%	8.3%	4.3%	29.7%
	30 to under 50	Count	13	106	88	89	296
		% within incomerecode	4.4%	35.8%	29.7%	30.1%	100.0%
		% within edureco	17.6%	27.4%	27.2%	18.3%	23.3%
		% of Total	1.0%	8.3%	6.9%	7.0%	23.3%
	50 to under 100	Count	4	91	90	189	374
		% within incomerecode	1.1%	24.3%	24.1%	50.5%	100.0%

	% within edureco	5.4%	23.5%	27.8%	38.8%	29.4%
	% of Total	.3%	7.2%	7.1%	14.9%	29.4%
100 or more	Count	3	27	40	154	224
	% within incomerecode	1.3%	12.1%	17.9%	68.8%	100.0%
	% within edureco	4.1%	7.0%	12.3%	31.6%	17.6%
	% of Total	.2%	2.1%	3.1%	12.1%	17.6%
Total	Count	74	387	324	487	1272
	% within incomerecode	5.8%	30.4%	25.5%	38.3%	100.0%
	% within edureco	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	5.8%	30.4%	25.5%	38.3%	100.0%

It follows that as individuals become more educated their income levels will rise. Looking at Table 3.2 Measures of Association of Variable Crosstabulations support for this presupposition is suggested by the data. For instance, the gamma statistic .504 indicates a moderate-to-very strong positive association between these two variables. Clearly, an individual's education level will make him more qualified for a wider range of higher-paying careers. Conversely, an uneducated individual will have a much narrower range of jobs that he is qualified to perform. Such jobs typically pay lower wages. We can clearly see this pattern in Table 3.5 Income and Education Bivariate Crosstabulations. Only 14.6% of the individuals who make under 30 thousand dollars a year are college graduates, while 68.8% of the individuals making 100 thousand or more a year are college graduates.

Table 3.6 Education and Race Bivariate Crosstabulations

			racerec				Total
			White	black	hispanic	other	
Edureco	less than hs	Count	67	13	9	5	94
		% within edureco	71.3%	13.8%	9.6%	5.3%	100.0%
		% within racerec	5.8%	9.8%	8.9%	8.1%	6.5%
		% of Total	4.6%	.9%	.6%	.3%	6.5%
	hs grad	Count	362	55	36	6	459
		% within edureco	78.9%	12.0%	7.8%	1.3%	100.0%
		% within racerec	31.4%	41.7%	35.6%	9.7%	31.7%
		% of Total	25.0%	3.8%	2.5%	.4%	31.7%
	some college	Count	284	29	29	15	357
		% within edureco	79.6%	8.1%	8.1%	4.2%	100.0%
		% within racerec	24.6%	22.0%	28.7%	24.2%	24.7%
		% of Total	19.6%	2.0%	2.0%	1.0%	24.7%
college +	Count	440	35	27	36	538	
	% within edureco	81.8%	6.5%	5.0%	6.7%	100.0%	
	% within racerec	38.2%	26.5%	26.7%	58.1%	37.2%	
	% of Total	30.4%	2.4%	1.9%	2.5%	37.2%	
Total	Count	1153	132	101	62	1448	
	% within edureco	79.6%	9.1%	7.0%	4.3%	100.0%	
	% within racerec	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	79.6%	9.1%	7.0%	4.3%	100.0%	

Another result that comes as no surprise is the relationships between race, income and education. It has become clear that different races typically obtain different levels of education. Minorities such as Hispanics and African Americans, because of systemic and cultural hindrances, have not ‘caught up’ with their Caucasian counterparts when it

comes to the levels of education accomplished. Barriers such as language, poverty and inequities can make educational goals more difficult or even unobtainable. The relationship between race and education is a strongly significant association as reflected in the phi value of .153 with a significance level of .000. By looking at the cell figures in the bivariate crosstabulation this relationship becomes clearer. When we look at the percentages of individuals who have less than a high school education 5.8% of whites do, while 9.8% of blacks do and 8.9% of Hispanics do. When looking at those who have accomplished just a high school diploma, 31.4% of whites have, 41.7% of blacks have and 35.6% of Hispanics have. The 'some college' category shows that 24.6% of whites fall into this category as do 22% of blacks have and 28.7% of Hispanics. Finally, when we look at the individuals who have more education, we find that 38.2% of whites have post-graduate schooling as well as 26.5% of blacks and 26.7% of Hispanics. While not a perfect positive relationship, we still can see that whites tend to have higher levels of education than minorities. It also would make sense that minorities would earn less income because they have not accomplished levels of education as high as Caucasians (or the majority) have. Less education means fewer job opportunities for high paying jobs with specific educational criteria.



Table 3.7 Income and Race Bivariate Crosstabulations

			Racerec				Total
			white	black	hispanic	other	
Incomerecode	0 to under 30	Count	280	52	32	16	380
		% within incomerecode	73.7%	13.7%	8.4%	4.2%	100.0%
		% within racerec	27.7%	45.6%	36.0%	27.1%	29.9%
		% of Total	22.0%	4.1%	2.5%	1.3%	29.9%
	30 to under 50	Count	226	29	24	16	295
		% within incomerecode	76.6%	9.8%	8.1%	5.4%	100.0%
		% within racerec	22.4%	25.4%	27.0%	27.1%	23.2%
		% of Total	17.8%	2.3%	1.9%	1.3%	23.2%
	50 to under 100	Count	311	27	22	13	373
		% within incomerecode	83.4%	7.2%	5.9%	3.5%	100.0%
		% within racerec	30.8%	23.7%	24.7%	22.0%	29.3%
		% of Total	24.4%	2.1%	1.7%	1.0%	29.3%
100 or more	Count	194	6	11	14	225	
	% within incomerecode	86.2%	2.7%	4.9%	6.2%	100.0%	
	% within racerec	19.2%	5.3%	12.4%	23.7%	17.7%	
	% of Total	15.2%	.5%	.9%	1.1%	17.7%	
Total	Count	1011	114	89	59	1273	
	% within incomerecode	79.4%	9.0%	7.0%	4.6%	100.0%	
	% within racerec	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	79.4%	9.0%	7.0%	4.6%	100.0%	

As we can see when we look at the value for the individual crosstabulation of race and income, a similar result emerges. We can see that the relationship is very similar to that of race and education with a phi value of .157 at a significance level of .000. To understand this significant positive relationship between race and income we can look at

the actual percentages in the individual race and income crosstabulation. As we move up the income levels larger percentages of whites fall into the higher income categories. For instance, 27.7% of whites earn less than thirty thousand a year while 45.6% of blacks do and 36% of Hispanics do. When you move up to between thirty and fifty thousand dollars per year, 22.4% of whites fall in this category while 25.4% of blacks and 27% of Hispanics do. Then when we look at the upper income levels the disparity becomes more obvious as 30.8% of whites earn between fifty and one hundred thousand, while 23.7% of blacks do and 24.7% of Hispanics do. Finally, in the over one hundred thousand category, 19.2% of whites fall in this category while only 5.3% of blacks and 12.4% of Hispanics fall here. This clearly follows a pattern of minorities consistently earning lower levels of income than Caucasians. As for Index and Medium, the variables that will help to either support or reject the null hypothesis of this paper will be analyzed now.

Table 3.8 Index and News Medium Bivariate Crosstabulations

NEW Q3	NEWINDEX											Total
	-5	-4	-3	-2	-1	0	1	2	3	4	5	
T.V. Count	112	8	70	4	46	4	46	3	21	0	13	327
% within NEWQ3	34.3%	2.4%	21.4%	1.2%	14.1%	1.2%	14.1%	.9%	6.4%	.0%	4.0%	100.0%
% within index	51.6%	72.7%	54.7%	57.1%	51.7%	57.1%	75.4%	100.0%	65.6%	.0%	61.9%	56.6%
% of Total	19.4%	1.4%	12.1%	.7%	8.0%	.7%	8.0%	.5%	3.6%	.0%	2.2%	56.6%
paper Count	34	2	30	1	24	1	7	0	8	1	4	112
% within NEWQ3	30.4%	1.8%	26.8%	.9%	21.4%	.9%	6.2%	.0%	7.1%	.9%	3.6%	100.0%

% within index	15.7%	18.2%	23.4%	14.3%	27.0%	14.3%	11.5%	.0%	25.0%	50.0%	19.0%	19.4%
% of Total	5.9%	.3%	5.2%	.2%	4.2%	.2%	1.2%	.0%	1.4%	.2%	.7%	19.4%
radio	34	1	13	0	4	1	3	0	1	0	0	57
% within NEWQ3	59.6%	1.8%	22.8%	.0%	7.0%	1.8%	5.3%	.0%	1.8%	.0%	.0%	100.0
% within index	15.7%	9.1%	10.2%	.0%	4.5%	14.3%	4.9%	.0%	3.1%	.0%	.0%	9.9%
% of Total	5.9%	.2%	2.2%	.0%	.7%	.2%	.5%	.0%	.2%	.0%	.0%	9.9%
mag	1	0	2	1	0	0	0	0	0	0	0	4
% within NEWQ3	25.0%	.0%	50.0%	25.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	100.0
% within index	.5%	.0%	1.6%	14.3%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.7%
% of Total	.2%	.0%	.3%	.2%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.7%
Inter	35	0	13	1	14	1	4	0	2	1	4	75
% within NEWQ3	46.7%	.0%	17.3%	1.3%	18.7%	1.3%	5.3%	.0%	2.7%	1.3%	5.3%	100.0
% within index	16.1%	.0%	10.2%	14.3%	15.7%	14.3%	6.6%	.0%	6.2%	50.0%	19.0%	13.0%
% of Total	6.1%	.0%	2.2%	.2%	2.4%	.2%	.7%	.0%	.3%	.2%	.7%	13.0%
other	1	0	0	0	1	0	1	0	0	0	0	3
% within NEWQ3	33.3%	.0%	.0%	.0%	33.3%	.0%	33.3%	.0%	.0%	.0%	.0%	100.0
% within index	.5%	.0%	.0%	.0%	1.1%	.0%	1.6%	.0%	.0%	.0%	.0%	.5%
% of Total	.2%	.0%	.0%	.0%	.2%	.0%	.2%	.0%	.0%	.0%	.0%	.5%
Total Count	217	11	128	7	89	7	61	3	32	2	21	578
% within NEWQ3	37.5%	1.9%	22.1%	1.2%	15.4%	1.2%	10.6%	.5%	5.5%	.3%	3.6%	100.0
% within index	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% of Total	37.5%	1.9%	22.1%	1.2%	15.4%	1.2%	10.6%	.5%	5.5%	.3%	3.6%	100.0%

Table 3.9 Credibility Index and News Medium Crosstabulation Statistics

<b>Chi-Square Tests</b>	Value	Degrees of Freedom	Asymp. Standard Error <sup>b</sup>	Asymp. Sig (2-sided)
Pearson Chi-Square	69.957 <sup>a</sup>	50	-	.033
Likelihood Ratio	63.036	50	-	.102
Linear-by-Linear Assoc.	5.659	1	-	.017
N of Valid Cases	578	-	-	-
<b>Directional Measures (Credibility Index Independent)</b>				Approx. Significance
Lambda	.003	-	.005	.317
Goodman and Kruskal tau	.027	-	.006	.005 <sup>c</sup>
Uncertainty coefficient	.046	-	.007	.102 <sup>d</sup>
N of Valid Cases	578	-	-	-

a. 46 cells (69.7%) have expected count less than 5. The minimum expected count is .01.

b. not assuming the null hypothesis

c. based on chi-square approximation

d. likelihood ratio chi-square probability

The dimensions of credibility accuracy, fairness, influence, bias and newsworthiness, represented by questions from the Pew Research Center, was used to create an index of credibility. The concept of accuracy was represented by the question “In general, do you think news organizations get the facts straight, or do you think that their stories and reports are often inaccurate?” Fairness was represented by the question “In presenting the news dealing with political and social issues, do you think that the news organizations deal fairly with all sides, or do they tend to favor one side?” The concept of influence was represented by the question “In general, do you think news organizations are pretty independent, or are they often influenced by powerful people and organizations?” Bias was represented by the question “In general, do you think news

organizations pay too much attention to good news, too much attention to bad news, or do they mostly report the kinds of stories they should be covering?” Finally, the concept of bias was represented by the question “Which one phrase do you feel better describes news organizations generally... Politically biased in their reporting, or careful their reporting is not politically biased?” When respondents answered in a way that indicated a negative credibility response a, -1 was scored and conversely, when an answer indicated a positive credibility response, it was assigned a +1 score. Once all five questions were answered, the index score could be assessed.

Because the original credibility index created spread the values across many categories (e.g. -5,-4 -3,-2,-1, 0, 1, 2, 3, 4, 5), it was difficult to extract any real meaningful patterns. If we were to look to the values from the bivariate crosstabulation we would see that across all media, the respondents tended to view the traditional forms of news media as not very credible. When we look at the group with the most negative view of traditional media (-5 index score) we see that 51.6% of these scores come from the respondents who use television as their primary media channel. Newspaper readers and radio listeners were each only 15.7%, magazine and others were .5% each while the Internet only comprised of 16.1% of the most negative group. From these figures it would appear that most people with a very negative view of traditional media still use it as their main media channel.

If we look at the highest credibility group (+5 index score) we can see that this group is comprised of 61.9% television viewers, 19% newspaper readers and 19% Internet users. There were no radio listeners or magazine readers in this group and only .5% ‘other.’ These numbers may lead one to think that since the group with the most

credible perceptions of media are television viewers, that most television viewers would have a positive view of traditional media, however when one looks at the cell count in this category, the overall number of respondents with positive ratings are very low.

Therefore, in Table 3.9 we can see that the Pearson chi-square value is very high and the degrees of freedom, which indicate the number of variables that are free to vary, is also high. Also, almost 70% of the cells had an expected count of less than 5. As a result, many cells were left with a value of zero. Although the Pearson chi-square test, as well as the Goodman and Kruskal tau test, indicated a significant relationship, the researcher is not confident that these results are dependable. The researcher acknowledges the fact that these results are likely the effects of an artifact resulting from flaws in the research design or perhaps in the specification of the variable relationships. For example, the 'N' or number of scores may not be high enough for this analysis. The researcher was conservative with the use of the individual responses and deleted any respondent who did not answer a question (system missing) or who chose the 'don't know/refused' category when creating the index. Since this information was not fully usable, the researcher chose to remove it from the data set.

For this reason the 11 levels of credibility were collapsed into three main categories. All negative values were tallied and placed in the 'not credible' column, all positive values were tallied and placed in the 'credible' column and the zero values were placed in the neutral column. By doing this, the number of empty cells was reduced, as one can see in Table 3.10. Also, this brought the Pearson chi-squared value down to 14.772 and the degrees of freedom to 10, which can be seen in Table 3.11. With this test there were 10 cells (55.6%) that had an expected count of less than 5.

Table 3.10 Collapsed Index and Medium Bivariate Crosstabulations

			NEWINDEXCOLLAPSED			Total
			"not credible"	"neutral"	"credible"	
NEWQ3 How have you been getting most of your news about national and international issues?	T.V.	Count	240	4	83	327
		% within NEWQ3	73.4%	1.2%	25.4%	100.0%
		% within collapsed index	53.1%	57.1%	69.7%	56.6%
		% of Total	41.5%	.7%	14.4%	56.6%
	papers	Count	91	1	20	112
		% within NEWQ3	81.2%	.9%	17.9%	100.0%
		% within collapsed index	20.1%	14.3%	16.8%	19.4%
		% of Total	15.7%	.2%	3.5%	19.4%
	radio	Count	52	1	4	57
		% within NEWQ3	91.2%	1.8%	7.0%	100.0%
		% within collapsed index	11.5%	14.3%	3.4%	9.9%
		% of Total	9.0%	.2%	.7%	9.9%
Magazines	Count	4	0	0	4	
	% within NEWQ3	100.0%	.0%	.0%	100.0%	
	% within collapsed index	.9%	.0%	.0%	.7%	
	% of Total	.7%	.0%	.0%	.7%	
Internet	Count	63	1	11	75	
	% within NEWQ3	84.0%	1.3%	14.7%	100.0%	
	% within collapsed index	13.9%	14.3%	9.2%	13.0%	
	% of Total	10.9%	.2%	1.9%	13.0%	
other	Count	2	0	1	3	
	% within NEWQ3	66.7%	.0%	33.3%	100.0%	
	% within collapsed index	.4%	.0%	.8%	.5%	
	% of Total	.3%	.0%	.2%	.5%	
Total		Count	452	7	119	578

% within NEWQ3	78.2%	1.2%	20.6%	100.0%
% within collapsed index	100.0%	100.0%	100.0%	100.0%
% of Total	78.2%	1.2%	20.6%	100.0%

Table 3.11- Collapsed Credibility Index and Medium Crosstabulation Results

Chi-Square Tests	Value	Degrees of Freedom	Asymp. Standard Error <sup>b</sup>	Asymp. Sig (2-sided)
Pearson Chi-Square	14.772 <sup>a</sup>	10	-	.141
Likelihood Ratio	17.235	10	-	.069
Linear-by-Linear Assoc.	7.309	1	-	.007
N of Valid Cases	578	-	-	-
Directional Measures (Credibility Index Independent)				Approx. Significance
Lambda	.000	-	.000	. <sup>c</sup>
Goodman and Kruskal tau	.010	-	.005	.001 <sup>d</sup>
Uncertainty coefficient	.012	-	.005	.069 <sup>e</sup>
N of Valid Cases	578	-	-	-

- a. 10 cells (55.6%) have expected count less than 5. The minimum expected count is .04.
- b. not assuming the null hypothesis
- c. cannot be computed because the asymptotic standard error equals 0
- d. based on the chi-square approximation
- e. likelihood ratio chi-square probability

The new set of values showed a similar pattern. Once again the figures indicate an overall lack of feeling of credibility for traditional news media across all of the sources. For example, only 20.6% of respondents across all media sources cited a favorable perception of traditional news media, while 78.2% had a negative perception and 1.2% a neutral perception. Even after collapsing the index, the group with the highest number of ‘not credible’ ratings of traditional media was television at 53.1%.



Newspapers followed at 20.1% while radio and magazines were 11.5% and .9% respectively. Internet users were only 13.9 of the negative group and the 'other' category only .9%. This means that of all the respondents that cited an unfavorable credibility perception of traditional news media, over 70% were traditional media users. If we look at the group of respondents that cited a favorable credibility perception of traditional news media we see that 69.7% were television watchers, 16.8% were newspaper readers, and 3.4% radio listeners. In addition, there were 9.2% Internet users, only .8% 'other' and no magazine readers in this group. Again, these numbers might lead one to believe that there are a large number of traditional media users that believe that their channel of choice is credible, however the numbers in the 'credible' category are quite low.

Again, many of the cells contained very low counts. When looking at the test results from this crosstabulation the Pearson Chi-Square value at 14.772 was reduced as well as the Degrees of freedom value which was lowered to 10. It was also noted that 10 cell (55.6%) have an expected count of less than 5, while the minimum expected count was .04. For example, out of 18 available cells, 11 contained values less than 5. The original statistical significance level of the Pearson Chi-Square test disappeared with a value of .141 by collapsing the index. However, the Goodman and Kruskal tau value of .010, indicating a weak correlation was significant to the .001 level. Once more, the researcher must acknowledge the possibility that the results of these tests may not be dependable due to flaws in the methodology (e.g. the use of sysmis) and specification artifact that deflate the 'N' too low to extract any meaningful patterns.

Since this researcher sought to utilize the data set to the fullest extent, another test was run by collapsing the categories to see if additional information could be drawn from

the data set. This time the media channels were collapsed into two main categories: alternative media and traditional media. The alternative media group consisted of the Internet, radio, magazines and 'other.' The 'other' category was considered an alternative to the traditional media since the traditional media channels in this analysis consist exclusively of television and newspapers. Any other type of media source would be an alternative to these two sources. Radio can be considered a traditional source since it is one of the oldest sources of news media, however, in prior studies, it was considered an alternative source because alternative sources "present themselves as alternatives to the mainstream media institutions," and they "attempt to present alternative information and a different point of view from the mainstream media," and "they are also often cynical about mainstream media" (Tsfati and Cappella 2003, 509).

Finally, nonmainstream sources often invite participation with the audience and appear to be accessible to the average person. Many radio and news magazines fit this definition. The researcher does acknowledge that his distinctions are gross ones and should be interpreted as "fuzzy" sets. The present researcher will acknowledge the same limitations. A portion of the original researchers' hypothesis will be borrowed from this study which states- "we expect people who are skeptical toward the mainstream media to have less mainstream news as a part of their media diets. Rather, we should expect media skeptics to seek more alternative news sources than their trusting counterparts (Tsfati and Cappella 2003, p 507).

To collapse the media channel categories, the researcher recoded the values cited in question 3<sup>2</sup>, which asked the respondent to tell how they have been getting most of their news about national and international issues. The resulting bivariate crosstabulation values can be seen in Table 3.12. From the new crosstabulation figures we can see that the values appear to be further accentuated compared to the prior tests focusing on Internet users. The alternative media users did give high negative credibility scores with 87.1% citing a negative perception of traditional news media channels. However, the traditional media users also gave high negative credibility scores also with 75.4% citing a negative view of traditional news media channels. This would indicate that across media channels people generally have a negative view of the credibility of traditional news media even if that is their news media channel of choice. When looking at the totals, 78.2% of all respondents cited a negative credibility score while only 20.6% cited a positive credibility score. With this test only 1 cell (16.7%) had expected count less than 5 and the minimum expected count was 1.68. Looking at the results in Table 3.13 the Pearson Chi-squared value was significant at the .010 level with a value of 9.236 and only 10 degrees of freedom. The Goodman and Kruskal tau value showed significance at the .010 level and a low value of .016 indicating a fairly weak but significant correlation. As with the prior tests the researcher is not confident that these results are not merely a product of an artifact or error in the experiment design because the number of responses

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<sup>2</sup> Magazines, radio, the Internet, and other were all assigned a value of -1 while television and newspapers were given a value of 1. In SPSS, one would select 'transform' then 'recode into different variables' from the drop-down menu. When the dialogue box appears one would choose 'old and new values' and then assign the new codes. Once the codes are reassigned then a new variable name and label is assigned. This new variable, 'collapsed medium', was selected along with the 'collapsed index' variable in the bivariate crosstabulations to run the new test.

was not high enough. However, since the values in each cell were fairly large, this test might be the most likely to indicate valid results.

Table 3.12- Collapsed Index and Collapsed Credibility Index Crosstabulations

COLLAPSED Q3		NEWINDEXCOLLAPSED			Total
		"not credible"	"neutral"	"credible"	
Alt. media	Count	121	2	16	139
	% within COLLAPSEDQ3	87.1%	1.4%	11.5%	100.0%
	% within INDEXCOLLAPSE	26.8%	28.6%	13.4%	24.0%
	% of Total	20.9%	.3%	2.8%	24.0%
trad media	Count	331	5	103	439
	% within COLLAPSEDQ3	75.4%	1.1%	23.5%	100.0%
	% within INDEXCOLLAPSE	73.2%	71.4%	86.6%	76.0%
	% of Total	57.3%	.9%	17.8%	76.0%
Total	Count	452	7	119	578
	% within COLLAPSEDQ3	78.2%	1.2%	20.6%	100.0%
	% within INDEXCOLLAPSE	100.0%	100.0%	100.0%	100.0%
	% of Total	78.2%	1.2%	20.6%	100.0%

Table 3.13 Collapsed Index and Collapsed Credibility Index Results

<b>Chi-Square Tests</b>	Value	Degrees of Freedom	Asymp. Standard Error <sup>b</sup>	Asymp. Sig (2-sided)
Pearson Chi-Square	9.236 <sup>a</sup>	10	-	.010
Likelihood Ratio	10.178	10	-	.006
Linear-by-Linear Association	8.951	1	-	.003
N of Valid Cases	578	-	-	-
<b>Directional Measures (Credibility Index Independent)</b>				Approx. Significance
Lambda	.000	-	.000	. <sup>c</sup>
Goodman and Kruskal tau	.016	-	.009	.010 <sup>d</sup>
Uncertainty coefficient	.016	-	.009	.006 <sup>e</sup>
N of Valid Cases	578	-	-	-

a. 1 cell (16.7%) has expected count less than 5. The minimum expected count is 1.68.

b. not assuming the null hypothesis

c. cannot be computed because the asymptotic standard error equals 0

d. based on the chi-square approximation

e. likelihood ratio chi-square probability

Given that the data allowed for further testing, the researcher decided to layer variables to see if there were any further notable relationships. For example, could education and credibility levels affect news media choice? The researcher used the SPSS bivariate crosstabulations to perform this test.<sup>3</sup> For this particular combination of education, index and medium, the ‘high school graduate’ category indicated a significant correlation when looking at the Pearson Chi-Square test. Table 3.14 reports a value of

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<sup>3</sup> The researcher went into the data set in SPSS and chose ‘analyze’ from the toolbar menu, then ‘descriptive statistics’ from the drop down menu and ‘crosstabs’ from the sub-menu. Once the ‘crosstabs’ dialogue box appeared the researcher selected ‘media’ for the row, ‘index’ for the column and ‘education’ for layer 1 of the crosstabulation. After that the appropriate statistical tests were checked off under statistics and she then selected ‘continue’ and ‘OK’ to run the tests.

21.612 with 10 degrees of freedom and a .017 significance level. The likelihood ratio figures were very similar at 21.804 with 10 degrees of freedom and a .016 significance level. Based on the chi-square approximations, Table 3.15 reports the Goodman and Kruskal tau figure was .044 when the medium is dependent with a significance level of .000. Unfortunately, the relationship indicated was not clear. At a glance, one may think that ‘high school graduates’ who view television as their primary news media channel comprise a high percentage of the ‘credible’ category with 83.8%. Yet, the number of television viewers in the ‘not credible’ category was more than half at 55.5%. It must be noted that the number of respondents in the ‘not credible’ category was only 76 and the ‘credible’ category less than half at 31. Since there are 72 available cell categories with this three-layered test, most of the cell counts were very low or zero. Since none of the other categories or statistical tests showed significance, and the fact that the ‘N’ value was relatively low (N= 578 which was only 39.5% of the original 1464 before 886 or 60.5% of the missing values were removed), the researcher was not confident that she could reject the null hypothesis. The significant values indicated were possibly a result, to an unknown degree, of an artifact of the data manipulation.

Table 3.14 Chi Square Test for Variables Media, Index and Education

Education		Value	df	Asymp. Sig (2-sided)
Less than hs	Pearson Chi-Square	.656 <sup>a</sup>	2	.720
	Likelihood Ratio	.634	2	.728
	Linear-by-Linear Assoc.	.000	1	1.0
	N of valid cases	24		
Hs grad	Pearson Chi-Square	21.612 <sup>b</sup>	10	.017
	Likelihood Ratio	21.804	10	.016
	Linear-by-Linear Assoc.	3.946	1	.047
	N of valid cases	175		
Some College				

	Pearson Chi-Square	10.619 <sup>c</sup>	8	.224
	Likelihood Ratio	14.028	8	.081
	Linear-by-Linear Assoc.	2.292	1	.130
	N of valid cases	152		
College +	Pearson Chi-Square	4.805 <sup>d</sup>	8	.778
	Likelihood Ratio	6.513	8	.590
	Linear-by-Linear Assoc.	.883	1	.347
	N of valid cases	227		

- a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 1.33  
b. 12 cells (66.7%) have expected count less than 5. The minimum expected count is .01.  
c. 8 cells (53.3%) have expected count less than 5. The minimum expected count is .01.  
d. 8 cells (53.3%) have expected count less than 5. The minimum expected count is .02.

Table 3.15 Directional Statistics for Variables Media, Index and Education

Education		Value	Asymp. Std. Error <sup>a</sup>	Approx. T <sup>b</sup>	Approx. Sig.
Less than hs	Lambda	.000	.000	. <sup>c</sup>	. <sup>c</sup>
	Goodman and Kruskal tau	.010	.029	-	.787 <sup>d</sup>
	Uncertainty Coefficient	.015	.038	.395	.728 <sup>e</sup>
Hs grad	Lambda	.015	.015	1.003	.316
	Goodman and Kruskal tau	.044	.015	-	.000 <sup>d</sup>
	Uncertainty Coefficient	.053	.017	3.050	.016 <sup>e</sup>
Some college	Lambda	.016	.016	1.003	.316
	Goodman and Kruskal tau	.026	.010	-	.049 <sup>d</sup>
	Uncertainty Coefficient	.041	.013	3.058	.081 <sup>e</sup>
College +	Lambda	.000	.000	. <sup>c</sup>	. <sup>c</sup>
	Goodman and Kruskal tau	.010	.003	-	.324 <sup>d</sup>
	Uncertainty Coefficient	.012	.006	2.045	.590 <sup>e</sup>

- a. Not assuming the null hypothesis.  
b. Using the asymptotic standard error assuming the null hypothesis  
c. Cannot be computed because the asymptotic standard error equals zero.  
d. Based on chi-square approximation.  
e. Likelihood ratio chi-square probability.

The next set of layered variables was age, index and medium. The same steps were taken in SPSS to run the tests, but with a new third variable (age) in the last layer.

This set of results indicated significance in the Chi-Square tests for only Linear-by-Linear associations. The age group of 45-54 showed a value of 3.773 with 1 degree of freedom and a significance level of .052. The next age group up, 55-64 showed a similar result. The Linear-by-Linear Association value was 3.807 with 1 degree of freedom and a significance level of .051. None of the other Chi-Square tests or directional measures tests showed any significant values. No discernable pattern was recognized by the researcher when comparing crosstabulation figures. Again the researcher would not have a great deal of confidence in the validity of these results since only one test showed a possible association.

Race index and medium were the next set of variables to layer. Again, the same steps were taken to run the tests in SPSS. Race was chosen under 'layer 1' in the crosstab dialogue box. When these tests were run, whites appeared to display some significant association with the other two variables, medium and index. It is not clear what the association was, however when comparing the percentage of 'not credible' responses for blacks who watch television, compared to the percentage of 'not credible' responses of whites who watch television, blacks appear to have a higher percentage than whites. Of whites who watch television as their primary news medium channel, 52% cited a 'not credible' view of traditional news media, while of blacks who watch television as their primary news media channel, 69% cited a 'not credible' view of traditional news media. Unfortunately the number of black respondents was low, and the overall numbers in each cell were also low. The only tests that showed a significant association for whites were the Chi-Square statistics; Likelihood Ratio and Linear-by-Linear Association. The Likelihood Ratio figure was 19.178 with 10 degrees of freedom



at .038 significance, while the Linear-by-Linear association was 10.028 with 1 degree of freedom at a .002 significance level. Again, low cell counts, a relatively low 'N' value and high degrees of freedom most likely rendered these tests unreliable.

Finally, the last variable to be layered was 'income.' In the crosstabs dialogue box 'income' was selected as 'layer 1' after medium was selected as the row and the index as the column. The only income category with a significant association was the '0 to under 30 group.' The Goodman and Kruskal tau value was .061 with a significance level of .036 when the index was the dependent variable. However, once again, from looking at the crosstabulations it was unclear what this association might have been. Most likely, as with the prior tests, the significance indicated was an artifact of the data manipulation because most of the tests showed no significance, the crosstabulation figures didn't reveal any obvious patterns and the 'N' value was relatively low.

#### IV. CONCLUSIONS

Credibility of media has been an area of increasing interest since the 1950's. Early media scholars such as Hovland and Weiss in 1951 looked to different criteria to determine the credibility of an individual source. After the focus on source came an examination of both message and medium. In the 1980's the general feelings of mistrust in the media prompted numerous studies. Others had extended the evaluation of media to the choices the public makes between different media. Can one medium displace, replace or complement another? Now with the advent of the newest medium, the Internet, we needed to reexamine the way in which we determine credibility of media to see if there is a relationship between media choice and credibility.

The literature of media credibility covers a wide range of studies. However, some common streams of thought do appear. For example, evidence is found supporting the importance and significance of the integrity of the individual source as well as the way in which the source presents the message. It is important to note that credibility levels have been found to be both low and high with the utilization of the same datasets by different groups, which illustrates the importance of analytic techniques of analysis. Also, credibility has been measured in many different ways, but similar indices have been recognized. Finally, the Internet with its vast sources of information, presents a new medium which must have its credibility scrutinized as the traditional sources have been.

When looking at media usage, there are several different theories that could explain the behaviors of news media consumers. One hypothesis is that a ‘digital divide’ prevents certain segments of society from benefitting from the abundance of information available on the Internet. This group usually includes minorities such as African Americans and Hispanics. Barriers such as income and education are purported to be the reason for this gap or lag in usage. Another proposition is the null hypothesis of this theory - that there is no significant difference in the usage rates amongst different races. The conjecture explored here concerns whether individuals who deem the Internet as a more credible news medium will flock to it instead of staying with the traditional news media channels of television and newspapers.

There is evidence to support the theory of the digital divide. It has been shown that African American and Hispanics tend to utilize the Internet less than whites, even holding socio-economic factors constant (Wilson et al. 2003). However, other studies have claimed that the ‘gap’ is quickly closing and is not as significant as often cited. Compaine’s book, *The Digital Divide: Facing a Crisis or Creating a Myth?* provides numerous essays attempting to dismiss the significance of such differences in usage. This researcher looked for evidence of any of these theoretical assertions because such effects could provide an intervening variable that should be taken into account when testing for evidence supporting the main hypothesis - that people who have high credibility ratings are more likely to use traditional media channels such as television and newspapers and people who have low credibility ratings are more likely to use alternate media channels such as the Internet.

A secondary data source and a nonexperimental design was utilized for the current analysis. While a primary source analysis may have been desirable, the time and monetary requirements of a full-blown nationally representative survey would have been too great. Survey questions from the Pew Organization appropriately represented the concepts addressed in this study. Questions were re-coded and used to create a news media organization credibility index. The questions covered different dimensions of the concept of news media organization credibility. The dimensions were: accuracy, fairness, influence, bias, and newsworthiness.

The Pew questions were utilized to correspond to different dimensions of the concept of credibility. By attaching new values to the individual responses, a +1 for the support, a -1 for the rejection or a zero for neutral choices, an index was created. Once combined, scores ranging from +5 (very credible) to -5 (very non-credible), the researcher could get a more precise measure of the feeling of credibility of the respondent. The researcher used this index along with other independent variables such as race, age, income, and education to examine respondents' choice of medium. The analysis of such variables should indicate the support or rejection of the researcher's main hypothesis.

The researcher first looked at the frequency table for the collected data. The conclusions drawn from this table were consistent with the literature in that 1) on average the respondents in this survey have a much more negative than positive perception of the news media 2) the average age of the respondents was above middle age 3) most of the respondents were white, 4) most of the respondents had an education level of high school

graduate or above, 5) most of the respondents made less than \$50 thousand a year and, 6) most use the television as their primary news source.

Then the researcher looked at the bivariate crosstabulations of the independent variables to determine whether the problem of collinearity could have rendered a variable duplicative and therefore unnecessary. All of the variables, race, age, income and education were determined to be relevant for testing. The highest statistical value was .504 for the relationship between education and income, where a 0 denotes no relationship whatsoever and a 1 denotes a perfect relationship. After the tests were run, the preconceived notions of the relationships between the independent variables of age, race, income and education held up. It was confirmed that income is somewhat inversely related to age, as one's age goes up, the income level goes down since each new generation has been better educated. As education levels go up so does one's income. Clearly the more education and skills one acquires, the more and better career choices become available. Finally race is related to income and education. The educational and income levels for minorities (Blacks and Hispanics) appear to be lower than for whites.

Once the researcher ran the bivariate crosstabulations for the main independent and dependent variables, credibility index and medium, it became obvious that the index created divided into eleven different credibility scores produced too many categories to confidently draw conclusions. While there was support for the rejection of the null hypothesis when looking at statistical results, the low 'N' value, along with low cell counts rendered such support problematic. So the researcher decided to collapse the credibility index into just three scores; -1 representing low credibility, a 0 for neutrality and a +1 for high credibility. The new collapsed index was expected to produce more

robust results, yet it failed to detect any significant associations through the Chi-square measures, while the only test that indicated significance was the Goodman and Kruskal tau with a very modest .010 value. There did not appear to be support for the researcher's hypothesis that people who have high credibility ratings are more likely to use traditional media channels such as television and newspapers and people who have low credibility ratings are more likely to use alternate media channels such as the Internet. The researcher determined that the results were potentially an artifact or flaw of the experimental design or dearth of data points. The main reason for these doubts are the low and missing numbers falling in the bivariate crosstabulation cells representing each index category.

The final bivariate crosstabulation test between two variables was the collapsed medium category, which included traditional media channels such as television and newspapers, and the alternative media channels such as radio, magazines and the Internet. These results were the most robust of the three tests run. Across the different statistical tests weak but strongly significant values appeared. Of the three tests, the researcher would be most confident with the results of this analysis because the number of responses in each cell were the highest of all of the test run, furthermore when looking at the crosstabulation figures, the patterns observed did not support the hypothesis and resulted in the inability to reject the null hypothesis that people's credibility ratings have no influence on news medium channel. However, an interesting pattern of negative credibility scores across the two media indicated that in general people do not have very positive feelings of credibility for the news media they choose to use.

Finally, the researcher decided to add one extra variable to the crosstabulation tables to see if any other relationships could be identified. Could race, income, age or education affect the nature of the relationship between credibility and news medium choice? While each layered crosstabulation produced at least one significant test result, the lack of significance across all of the relevant statistical tests made the researcher reticent about drawing any inferences. Unfortunately, once all of the ‘don’t know/refused’ responses were removed from the available dataset, the ‘N’ values dramatically decreased.

Since the researcher was limited by the use of a pre-existing data set, the conclusions that could be drawn were somewhat limited. Most of the analyses were conducted at a nominal or ordinal level, which cannot produce results as specific or clear as those conducted with interval or ratio data. Future studies could better address credibility questions by creating a more specific set of indexing questions targeting perceptions of credibility and media channels utilized. With a better constructed index, addressing each dimension specifically and additionally posing questions directly pitting old media channels vs. newer ones could produce clearer more robust and unambiguous results. Then confidence levels might be raised using interval or ratio measures.

Another limitation to this study is the lack of specificity regarding the actual sites Internet users are utilizing as their news media diet. Certainly, the hypothesis of this paper would not hold up very well if Internet users were simply logging on to online versions of traditional media providers. For example, if an Internet user is simply logging in to read the New York Times online, she may be using the Internet for purposes other than a dissatisfaction with the credibility of traditional sources. However, if more

obscure, independent and critical news blogs and forums are utilized, perhaps there would be evidence of a rejection of the credibility of the traditional media channels. One thing that is clear is that the future content of the entire news media industry is going to be dependent on consumer behavior which very well may be affected by perceptions of credibility. For this reason, this area of study remains significant and demands more attention.



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