VIABILITY OF WEATHER DISSEMINATION VIA SOCIAL NETWORK TECHNOLOGIES

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ABSTRACT

Social networks are a recent product of the ever-increasing advancement in online technology. Few studies have been conducted to determine the viability of disseminating weather information via social network technology. Instead, most of the studies that are currently available focus on weather information being distributed through radio, newspapers, TV stations, and the Internet. Social networks serve as a useful source for rapid weather communication, especially during the occurrence of severe weather phenomenon. This study depends on public perception toward using a social network as a medium for weather information distribution and determines whether it is feasible to do so. This purpose is fulfilled by conducting a web-based survey created through SurveyMonkey.com.

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[1]1. INTRODUCTION

Technology continues to evolve at an accelerating pace, and among the products of recent advancement in technology are social network sites such as Facebook and MySpace. For some, social networks play a pivotal role in everyday life. In fact, more and more private companies are recognizing the potential uses of social network sites as an excellent way to connect with their clients and receive their first-hand comments on what the companies or their products went well and what need to be improved upon. Another instance was the United States election of 2008 when the presidential candidates started using social network sites to reach out to the constituents, most particularly younger people who happen to be the least likely people to vote, and to encourage them to vote.

As of this writing, only one available example of disseminating weather-related information via social network technologies is the iMapWeather.com. However, few studies have been conducted regarding the feasibility of using social network systems as a medium for weather-related communication. According to DiMaggio et al. (2001), "…the medium's rapid growth offers a[n] once-in-a-lifetime opportunity for scholars to test theories of technology diffusion and media effects *during the early stages of a new medium's diffusion and institutionalization*." In other words, the time is now to test the usefulness of social networks, more so than ever when it comes to utilizing the new media in the weather field.

2. BACKGROUND

2.1 Social Network's Electronic Root: the Internet

When DiMaggio et al. (2001) said that "…the medium's rapid growth offers a[n] once-in-a-lifetime opportunity for scholars to test theories of technology diffusion and media effects *during the early stages of a new medium's diffusion and institutionalization*," the authors were referring to the Internet. Nonetheless, this quote can still easily apply to social networks, since

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social networks are considered a "new medium." Indeed, in order to access a social network, you would need an Internet connection. The Internet witnessed a rapid diffusion in a short amount of time: from 25 million American users in 1995 to 83 million American users in 1999 (DiMaggio et al. 2001). In 1994, 3% of the public schools in the United States offered access to the Internet; five years later, that number rose to 63% (DiMaggio et al. 2001). Additionally, the United States has become the top country in producing and hosting the most visited websites in the world (DiMaggio et al. 2001). As a result, English inadvertently became the principal language in the realm of the Internet (DiMaggio et al. 2001).

2.2 Social Network's History and Paradigm

Recall that social networks are regarded as a "new medium." Compared to other forms of communication, social networks are relatively new. In fact, the very first SNS, or social network site, to have been created was founded in 1997 (Boyd and Ellison 2008). That SNS was SixDegrees.com, which paved the way for later SNSs such as MySpace, Facebook, and Twitter (Boyd and Ellison 2008). The chronicle of SNSs can be seen in Figure 1.

"Social network" and "social networking" are often used interchangeably; however, I chose to use the word "social network" based on Boyd and Ellison's (2008) definition. Boyd and Ellison (2008) define "social networking" as "relationship initiation, often between strangers." In other words, they believe that "social networking" signifies starting a relationship with a person, most particularly someone whom you never met before. They feel that "social network" is a more appropriate word; it is a broader term that can be applied to a site where a person is communicating with someone whom he or she already knew.

Social networks are categorized as social media (Karjaluoto 2008). Karjaluoto (2008) defines social media as "media that users can easily participate in and contribute to," although there seems to be no official definition of "social media" as of yet (Wright and Hinson 2009). Social media is sometimes known as "consumer-generated media" or "user-generated content" (Wright and Hinson 2009). Other examples of social media include forums, message boards, blogs, photo and video sharing, search engines, and Wikis (Wright and Hinson 2009). Social media is found to be far more "dynamic" and "flexible" than traditional media, which includes radio, televisions, books, and newspapers (Karjaluoto 2008). Social media appears to be so important that Karjaluoto (2008) states that

"social media brings with it the power of every user on the planet."

2.3 New Media's Previous Surveys

Wright and Hinson (2009) study the influence social media imposes upon public relations. They measure the amount of impact by creating a survey. Wright and Hinson (2009) asked the participants two of the questions: "Do you agree or disagree that social media (including blogs) and mainstream traditional media (newspapers, magazines, radio, and television)…compliment each other?" and "…are in conflict with each other?" The result from these questions demonstrates that more people believe social media compliments with traditional media instead of contradicting each other in 2009 than those in 2008. The percentage of participants who believed social media and traditional media compliment each other raised from 75% in 2008 to 85% in 2009 while the percentage of those who viewed these media as conflicting with each other fell from 29% in 2008 to 26% in 2009 (Wright and Hinson 2009). However, the first four questions from Table 4, "Do you agree or disagree that social media (including blogs)…are more accurate than traditional mainstream media?" "…are more credible than traditional mainstream media?" "…are a more trusted information source than traditional mainstream media?" and "…tell the truth?" yielded not so favorable responses, drawing a conclusion that traditional media still trumps social media as a reliable source of news and information (Wright and Hinson 2009).

Social networks appear to be a very appealing form of communication among the younger users. 65% of the American teenagers use SNS compared to 35% of the American adults (Lenhart 2009). However, the percentage of American adults who have a SNS profile exploded from 8% in 2005 to 35% in 2009 (Lenhart 2009). When Lenhart (2009) broke down the adults who have SNS profile into several groups based on their age, she found that the youngest group of adults makes up the largest portion of the American adult population who has an online profile: 75% for those whose age is 18 to 24. The other results are 57% for 25 to 34, 30% for 35 to 44, 19% for 45 to 54, 10% for 55 to 64, and 7% for 65 and older (Lenhart 2009).

Which SNS has the greatest number of online users? According to Lenhart (2009), MySpace takes the crown, accounting for 50% of American adult SNS users who have SNS profile. Facebook comes in distant second, with 22% of those who have SNS profile (Lenhart 2009). Finally, LinkedIn comes in third, claiming 6% of them (Lenhart 2009).
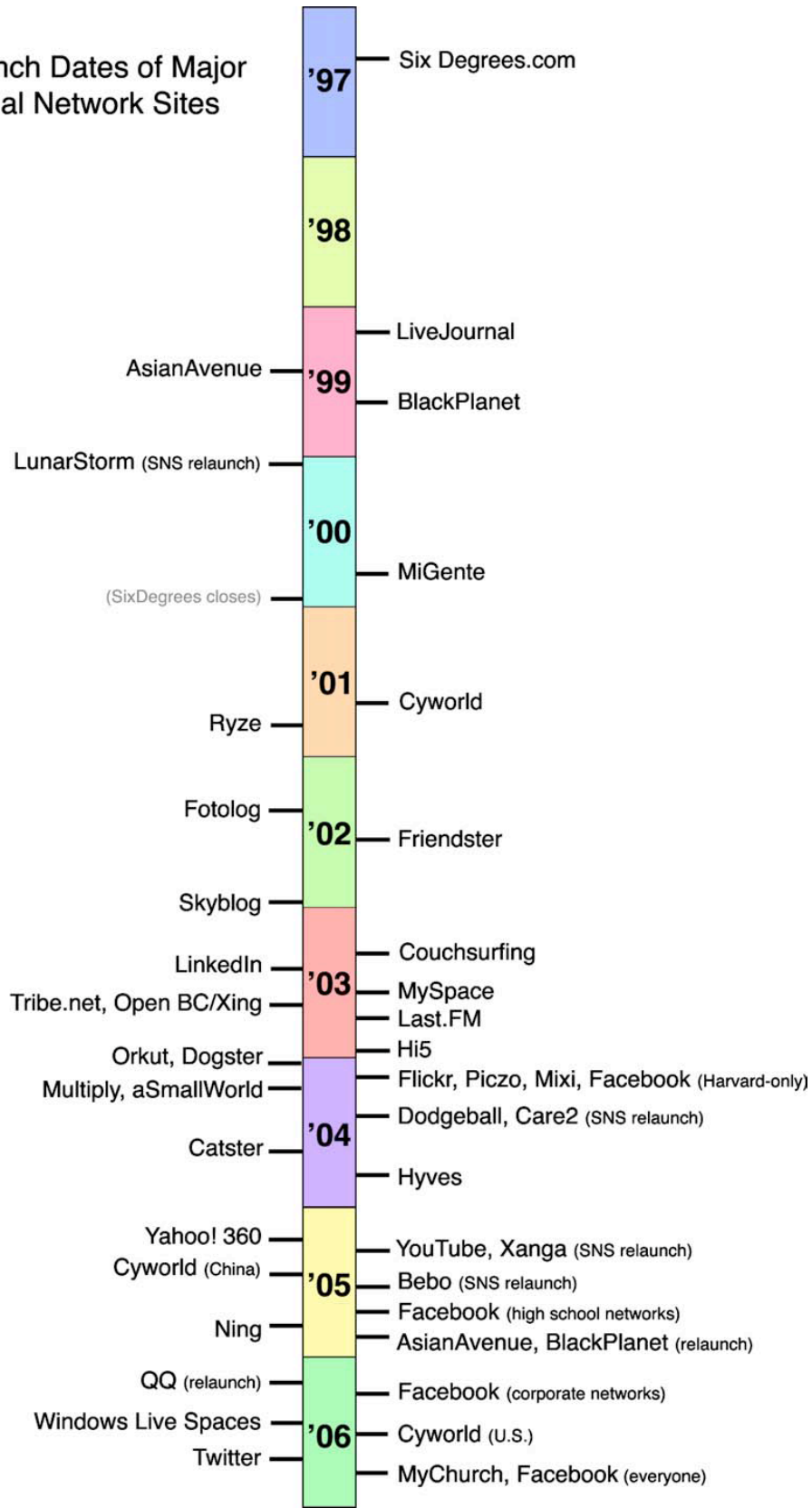
Launch Dates of Major Social Network Sites

Year	Left	Right
'97		Six Degrees.com
'98		
'99	AsianAvenue	LiveJournal
		BlackPlanet
'00	LunarStorm (SNS relaunch)	
	(SixDegrees closes)	MiGente
'01	Ryze	Cyworld
'02	Fotolog	Friendster
	Skyblog	
'03	LinkedIn	Couchsurfing
	Tribe.net, Open BC/Xing	MySpace
		Last.FM
	Orkut, Dogster	Hi5
'04	Multiply, aSmallWorld	Flickr, Piczo, Mixi, Facebook (Harvard-only)
		Dodgeball, Care2 (SNS relaunch)
	Catster	Hyves
'05	Yahoo! 360	YouTube, Xanga (SNS relaunch)
	Cyworld (China)	Bebo (SNS relaunch)
	Ning	Facebook (high school networks)
		AsianAvenue, BlackPlanet (relaunch)
'06	QQ (relaunch)	Facebook (corporate networks)
	Windows Live Spaces	Cyworld (U.S.)
	Twitter	MyChurch, Facebook (everyone)

Figure 1: The chronicle of SNSs (Boyd and Ellison 2008).

3. METHODOLOGY

The practicality of using SNSs as a medium for weather-related communication depends on how the public use the SNSs. The survey is the best mean of acquiring data, allowing the general perspective of disseminating weather-related information through SNSs to be brought under light. The web-based survey is constructed through SurveyMonkey.com. The survey is designed so that participants can skip any question.

The survey is broken down into seven pages. The first two pages are the Brief Overview and the Information Sheet for Consent. The Brief Overview summarizes what the survey is about and what it contains. The Information Sheet for Consent holds the consent form that the participants are expected to read and the first question that requires an answer before proceeding to the next question posted on the next page. It also declares that the participant must be between the age of 15 and 65 years old. If the participant selects the answer "No," then the survey takes him or her to the last page by skipping over the questions.

The Demographic Section marks the third page, containing such questions regarding the participants' gender, ethnicity, current status as a student, highest educational level or degree attained, and so on. Additionally, the participants are informed that this page is optional; they do not have to answer any of the questions displayed on that page if they do not want to.

The Social Technology and the Weather Source Section come next as the fourth and fifth page. In the Social Technology Section, participants are being asked about how often they use the Internet and the social network sites. Also the participants are asked where they have access to the Internet and list what social network accounts they have. The Weather Source Section looks into whether the participants have had any weather background such as storm spotter training, what the primary source they use for acquiring general and severe weather information, and whether or not they attempted to verify weather hazards, such as severe weather warning, if one was issued within their vicinity.

The final two pages, the Opinion and Comment Section, complete the survey. The Opinion Section is the crux of the survey; it ask the participants what they think about using a social network as a medium for obtaining general and severe weather information. Furthermore, it asks the participant to list what they think are the advantages and disadvantages of using social networks for weather information. In the Comment Section, the participants are given the chance to provide inputs and suggestions regarding the study.

The survey contains 26 questions; 21 of them are multiple-choice, 1 is fill-in-blank, and the remaining 4 are short-answer or essay. Of the 21 multiple-choice questions, 18 of them are single-answer and 3 of them are multiple-answer, where one can select more than one answer. Several questions include "Other" as a choice; if a participant selects that choice, he or she is asked to specify based on the question he or she is answering. The format for "Other" is fill-in-blank.

The link to the survey is posted on Facebook and several websites including these of the National Weather Center and Norman Chamber of Commerce. The link is also sent through the list serve of the University Corporation for Atmospheric Research's Unidata Program. The participation is voluntary, and the participants remain anonymous.

The survey received a total of 83 responses. Three of them were deleted because two of the respondents only answered the first question and the remaining one only answered the questions from the Demographic Section. Additionally, several short-answer responses such as "No," "None," and similar inputs were deleted, allowing the SurveyMonkey to count only the actual responses participants entered. This makes it easier to browse the responses in the Opinion and Comment Section.

The outline of the survey can be found in the Appendix.

4. ANALYSIS

Four questions from the Opinion Section include the following choices: Strongly Agree, Agree, Not Sure, Disagree, Strongly Disagree, and Don't Care. For every "Strongly Agree" response, the question is awarded five points. For every "Agree" response, the question is awarded four points. "Not Sure" is worth three points, "Disagree" is worth two points, and "Strongly Disagree" is worth one point. "Don't Care" is excluded from the mean and standard deviation, σ, calculations; when respondents choose "Don't Care," they don't care whether the suggestion from the question is going to happen or not.

"n" represents the # of responses a question received. Mean represents the average responses of a question. σ measures the departure from the mean.

$$(4.1) \quad \text{Mean} = \Sigma(x_i)/n$$

$$(4.2) \quad \sigma = \Sigma(x_i - \text{Mean})/(n-1)^{1/2}$$

Statistical significance testing cannot be applied to the survey results because the sampling size was too small.

The second question, "Select your gender," yielded 80 responses. 34 of them are males and 46 of them are females. The percentage can be seen in Figure 2 below.
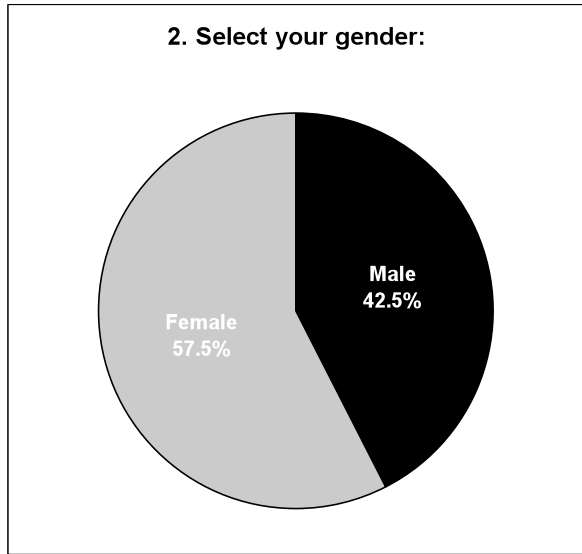

Figure 2: Percentage of respondents by gender.

The third question, "Indicate your age," drew 77 responses. The age range is found to be from 15 to 65 years old. They are broken down into the following groups:

- 15 – 24 = 17 responses
- 25 – 34 = 22 responses
- 35 – 44 = 13 responses
- 45 – 54 = 20 responses
- 55 – 65 = 5 responses

Figure 3 displays the percentage of each group.
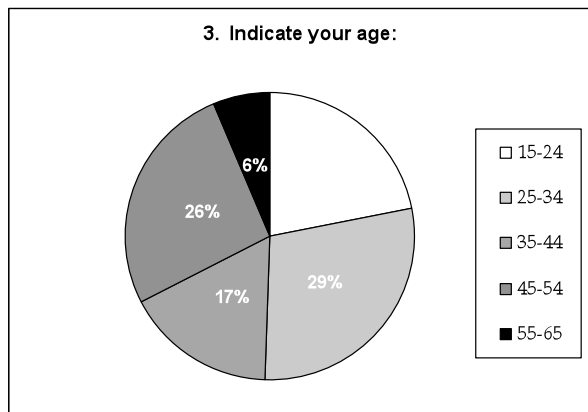
Figure 3: Percentage of respondents by age.

"Identify your race/ethnicity" is the fourth question. Figure 4 demonstrates the categories of respondents.

Caucasian non-Hispanic	73 (91.3%)
American Indian/Alaskan Native	3 (3.8%)
Other/Mixed	2 (2.5%)
African non-Hispanic	1 (1.3%)
Asian/Pacific Islander	1 (1.3%)
Hispanic	0 (0%)
Unknown	0 (0%)

Figure 4: Number and percentage of respondents by race/ethnicity.

Because the result from "Identify your race/ethnicity" is highly skewed, factors regarding race/ethnicity will not be used for comparison.

"What is the highest educational level or degree attained?" yielded 78 responses.

- High School = 10 responses
- Voc Tech = 1 responses
- Undergrad = 32 responses
- Graduate = 21 responses
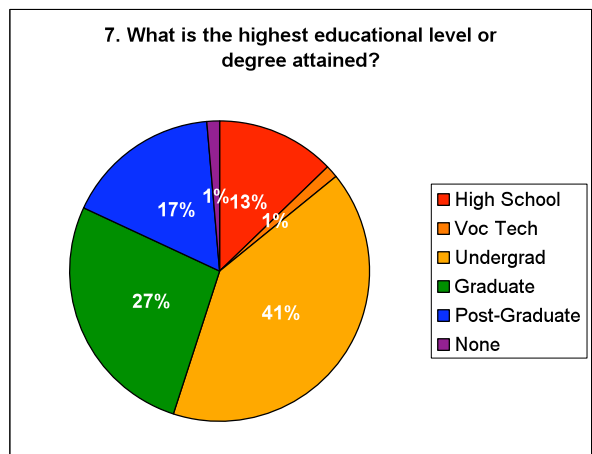- Post-Graduate = 13 responses
- None = 1 responses

Figure 5: Percentage of respondents by their highest educational level or degree attained.

"Have you had any formal training on weather related subjects (i.e., pilot, storm spotter, etc.)?" received 80 responses. 35 were "Yes," and 45 were "No."
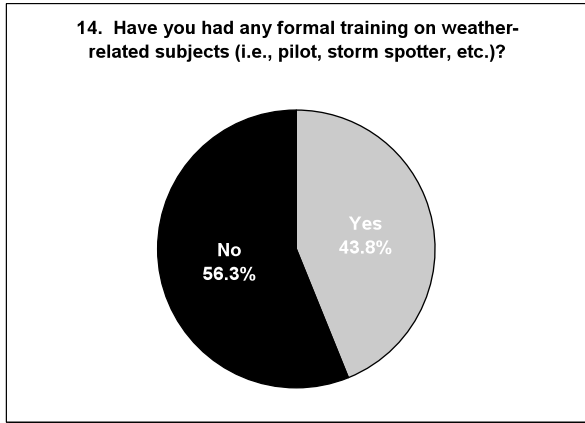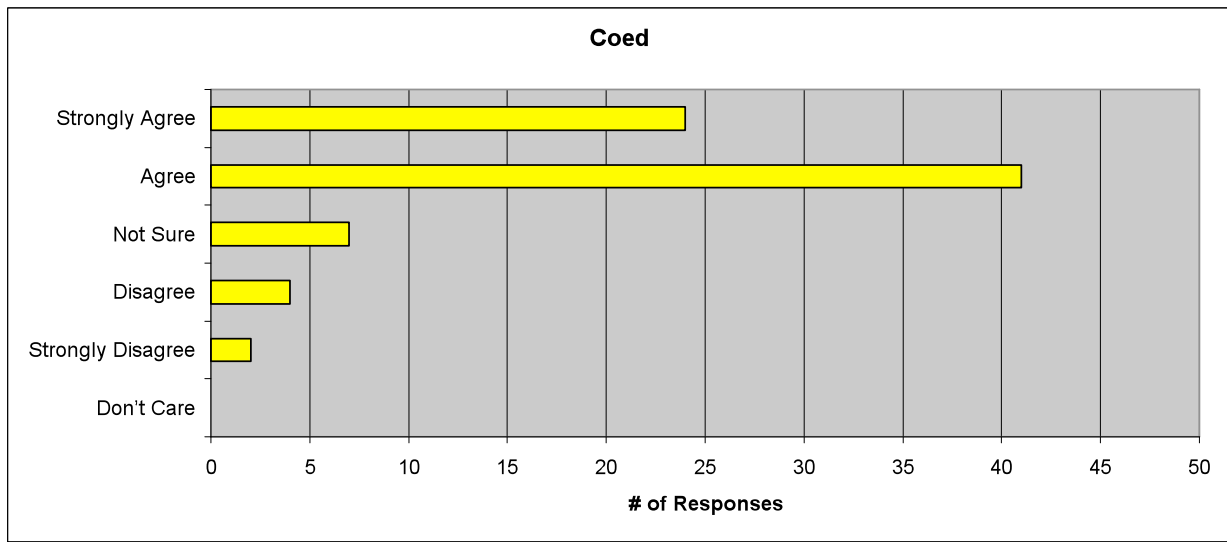
14. Have you had any formal training on weather-related subjects (i.e., pilot, storm spotter, etc.)?

No 56.3%
Yes 43.8%

Figure 6: Percentage of respondents by their weather background.

78 respondents answered this question: "Do you believe social networking would serve as a useful source for **general** weather information (e.g., what the weather is going to be like today)?" Figure 7 displays the overall

results. Figure 8, 9, and 10 shows the results by gender, age, and education respectively. Similar plots follow for "Do you believe social networking would serve as a useful source for **severe** weather information, such as severe weather warnings?" (Figure 11, 12, 13, and 14), "Do you believe social networking would be more useful if it has an option that lets you customize how **general** weather statements could be transmitted to you (e.g., receiving a message on your cell phone that notifies you of today's expected high temperature)?" (Figure 15, 16, 17, and 18), and "Do you believe social networking would be more useful if it has an option that lets you customize how **severe** weather statements could be transmitted to you (e.g., receiving a message on your cell phone only when a thunderstorm moves to within five miles of your present location)?" (Figure 19, 20, 21, and 22).

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| n | 78 | | Mean | 4.04 | | σ | 0.92 |

Figure 7: Number of responses for each choice.

Male vs. Female
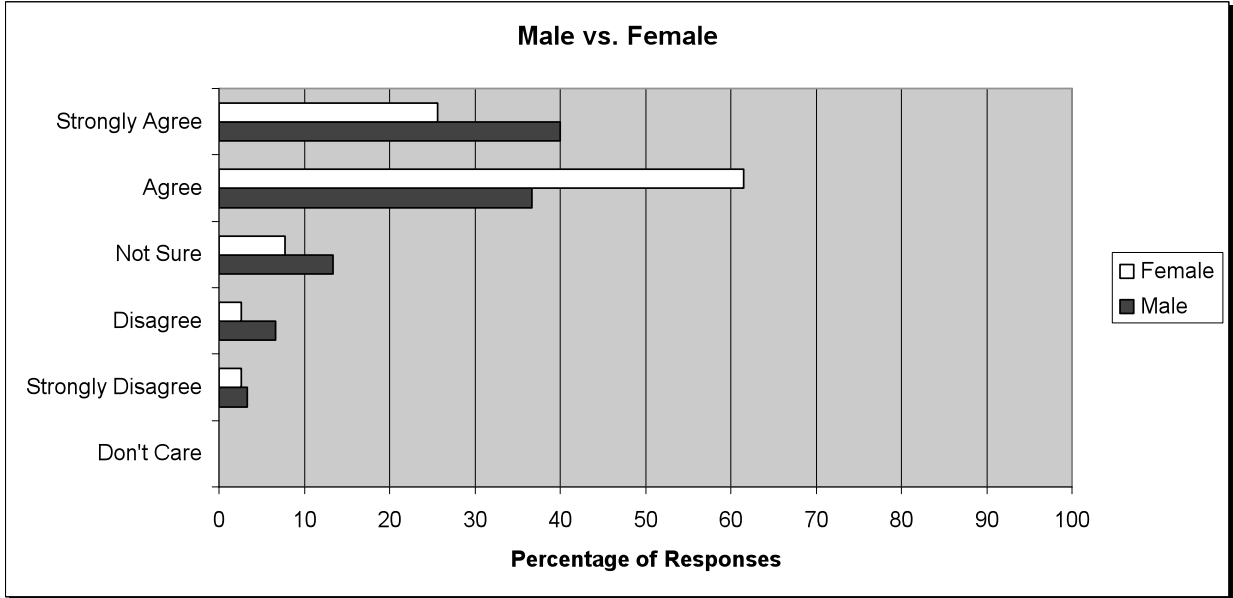
	Male		Female	
n	30	n	39
Mean	4.03	Mean	4.05
σ	1.07	σ	0.83

Figure 8: Percentage of responses for each choice.

Age Group
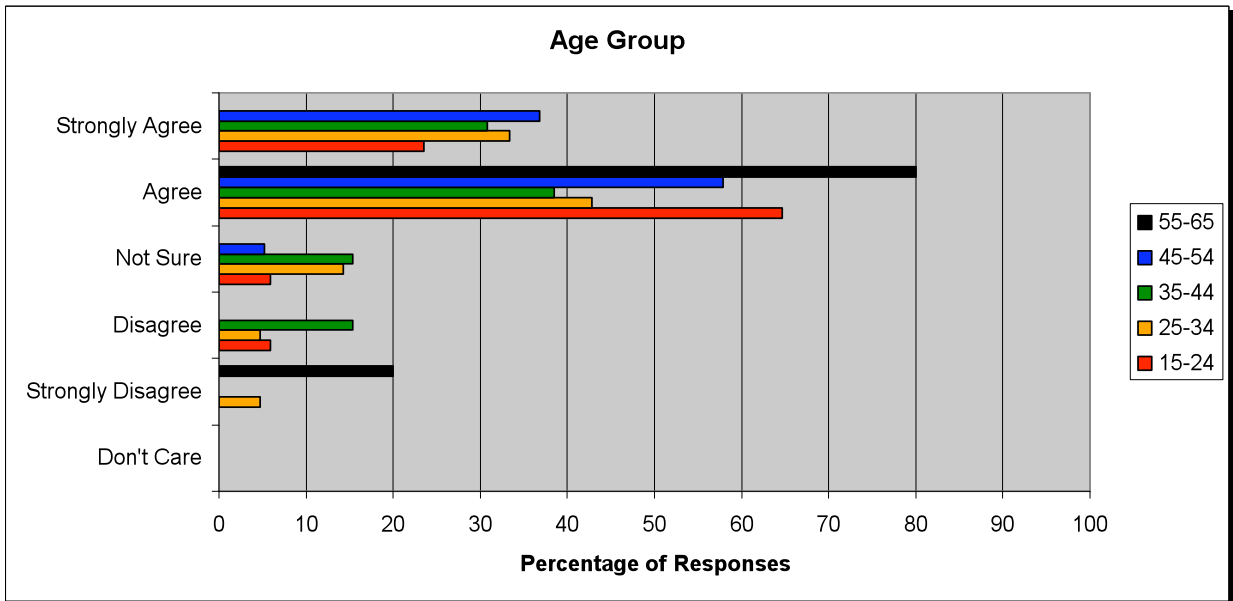
	15 – 24	25 – 34	35 – 44	45 – 54	55 – 65
n	17	21	13	19	5
Mean	4.06	3.95	3.85	4.32	3.40

| σ | 0.75 | 1.07 | 1.07 | 0.58 | 1.34 |

Figure 9: Percentage of responses for each choice.
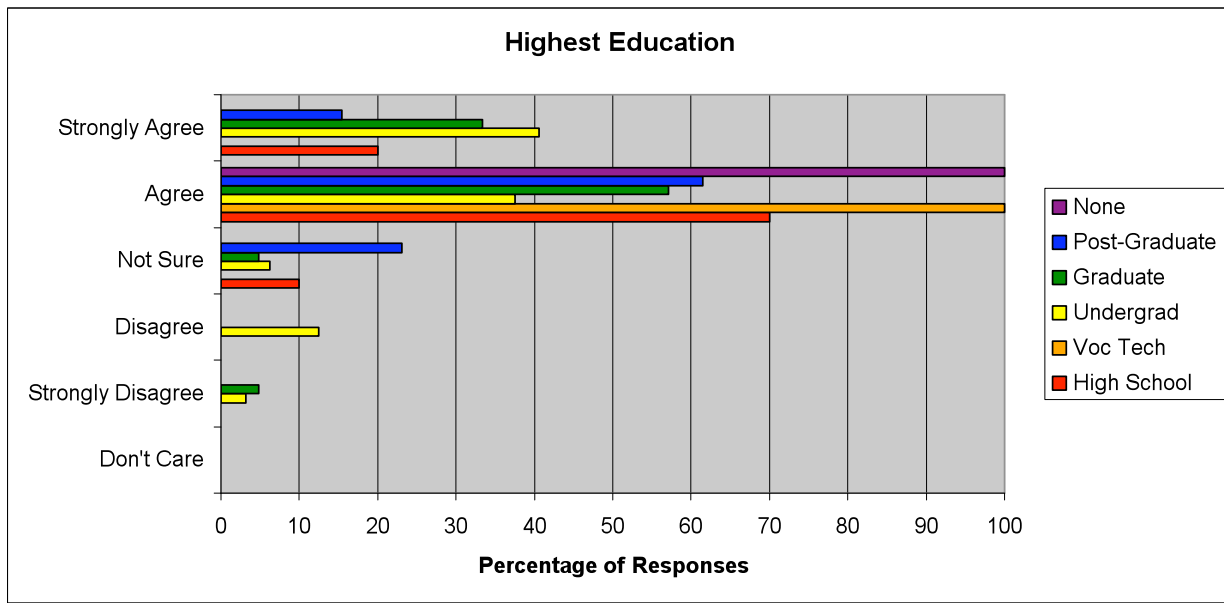
	HS	Voc	UG	Grad	Post-G	None
n	10	1	32	21	13	1
Mean	4.10	4.00	4.00	4.14	3.92	4.00
σ	0.57	0	1.14	0.91	0.64	0

Figure 10: Percentage of responses for each choice.
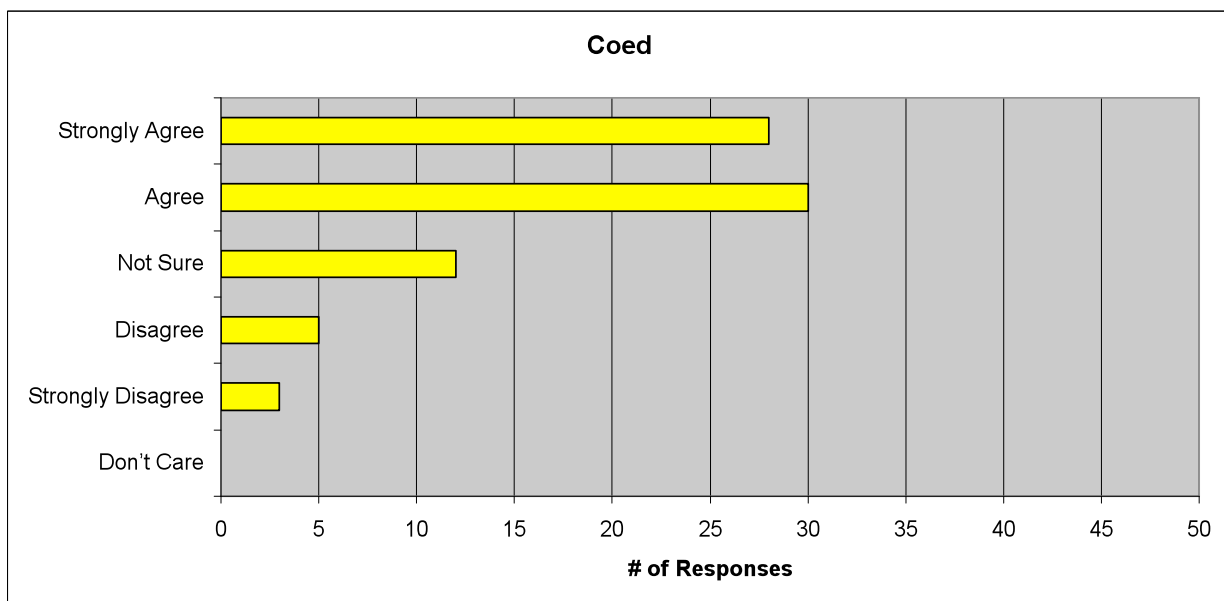
| n | 78 | Mean | 3.96 | σ | 1.06 |

Figure 11: Number of responses for each choice.

Male vs. Female
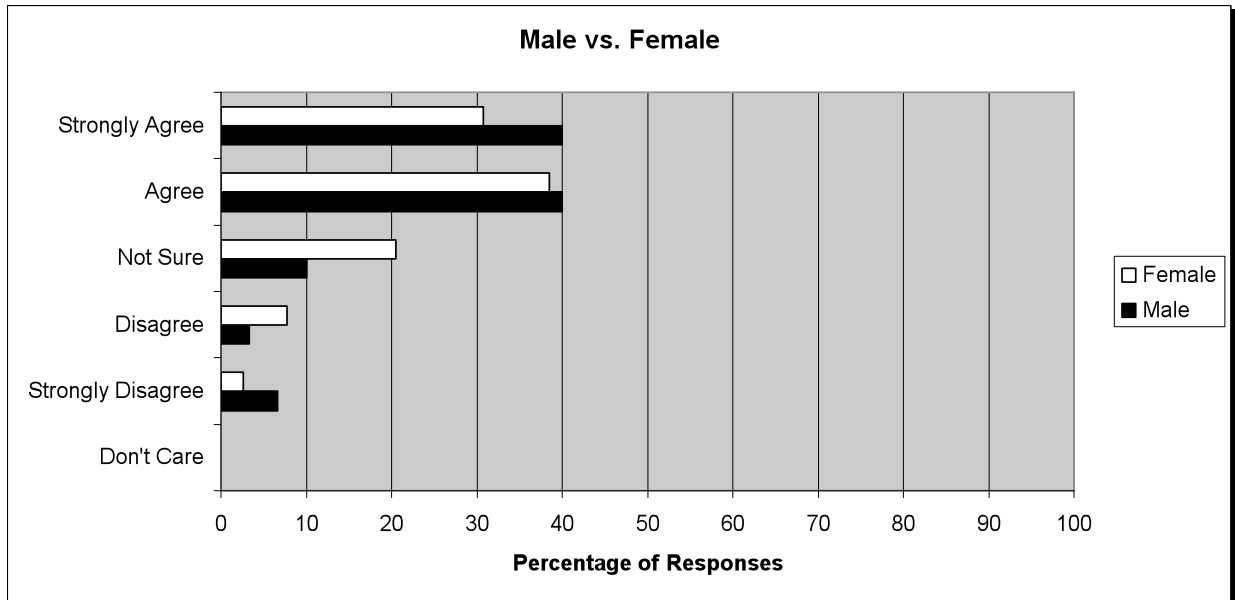
	Male		Female
n	30	n	39
Mean	4.03	Mean	3.87
σ	1.13	σ	1.03

Figure 12: Percentage of responses for each choice.

Age Group
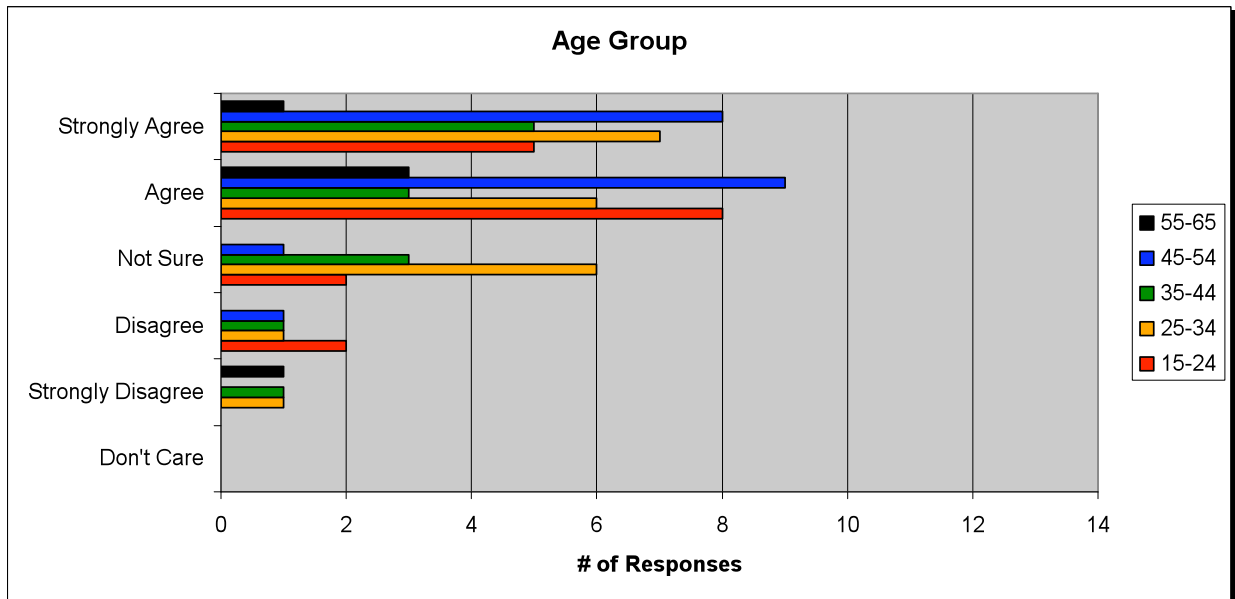
	15 – 24	25 – 34	35 – 44	45 – 54	55 – 65
n	17	21	13	19	5

Mean	3.94	3.81	3.77	4.26	3.60
σ	0.97	1.12	1.30	0.81	1.52

Figure 13: Percentage of responses for each choice.
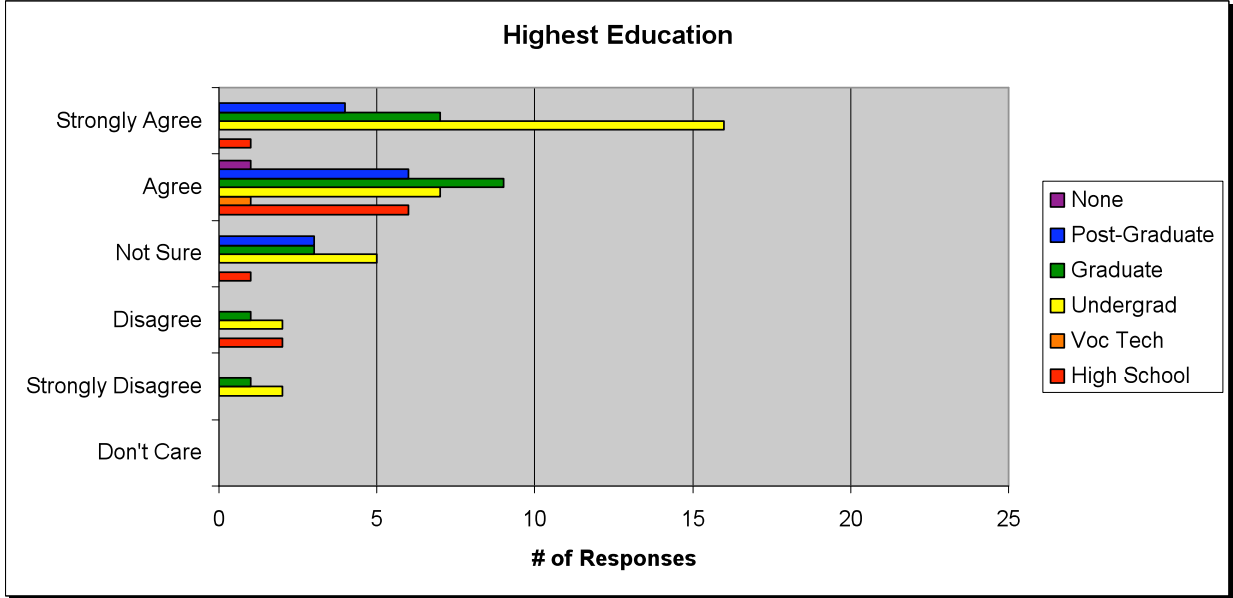
	HS	Voc	UG	Grad	Post-G	None
n	10	1	32	21	13	1
Mean	3.60	4.00	4.03	3.95	4.08	4.00
σ	0.97	0	1.23	1.07	0.76	0

Figure 14: Percentage of responses for each choice.
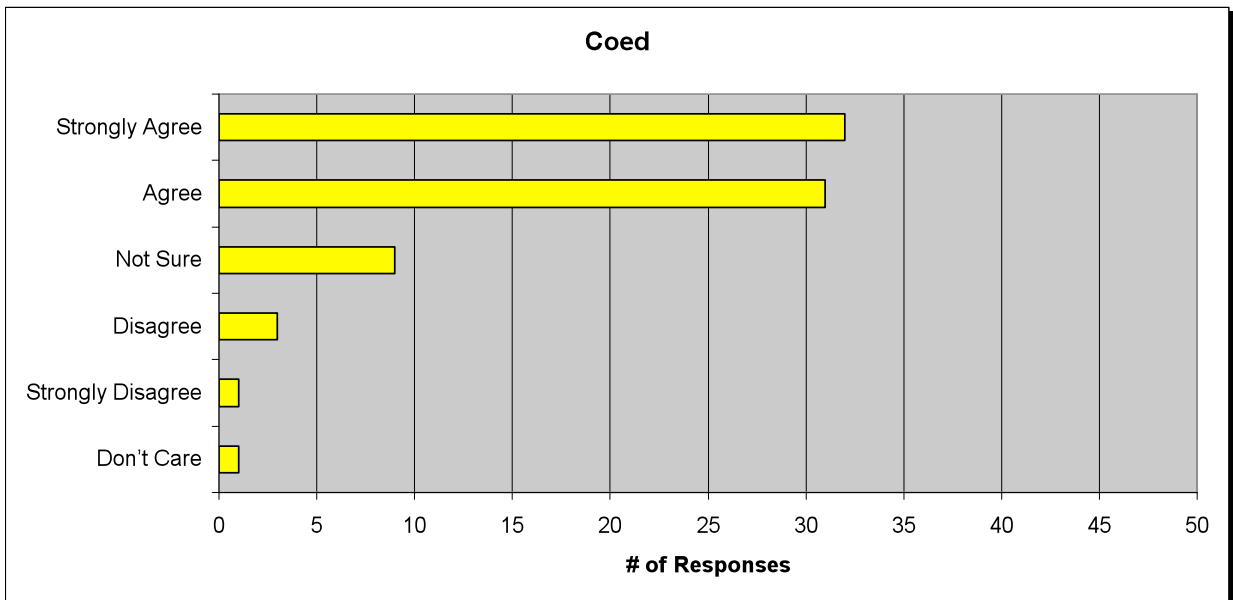
n	77		Mean	4.18		σ	0.89	

Figure 15: Number of responses for each choice.
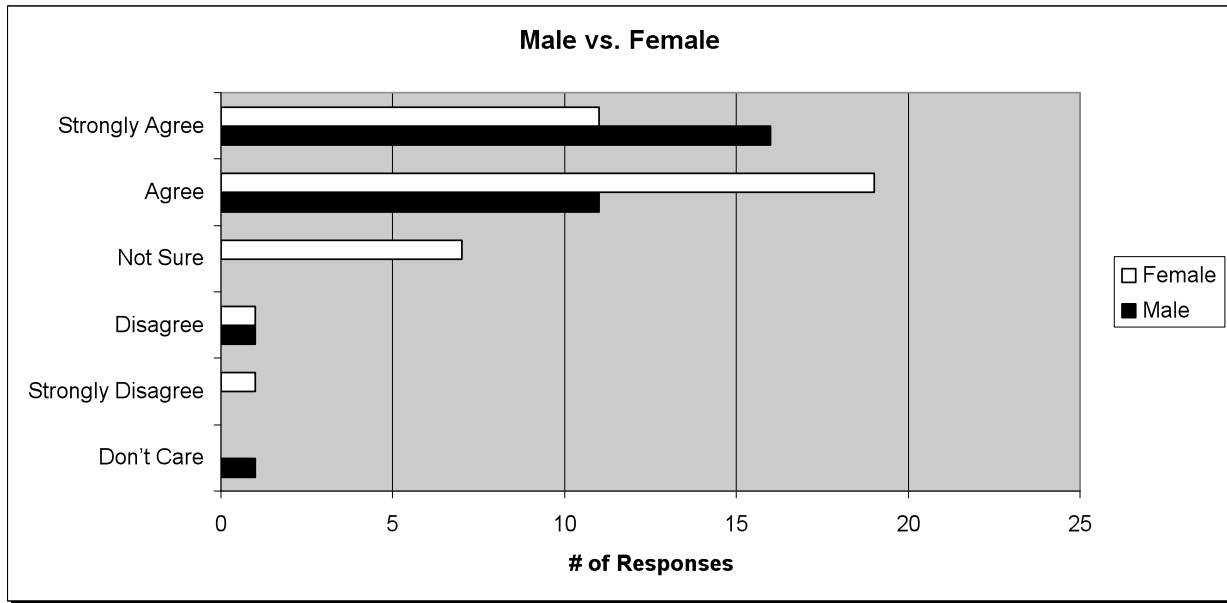
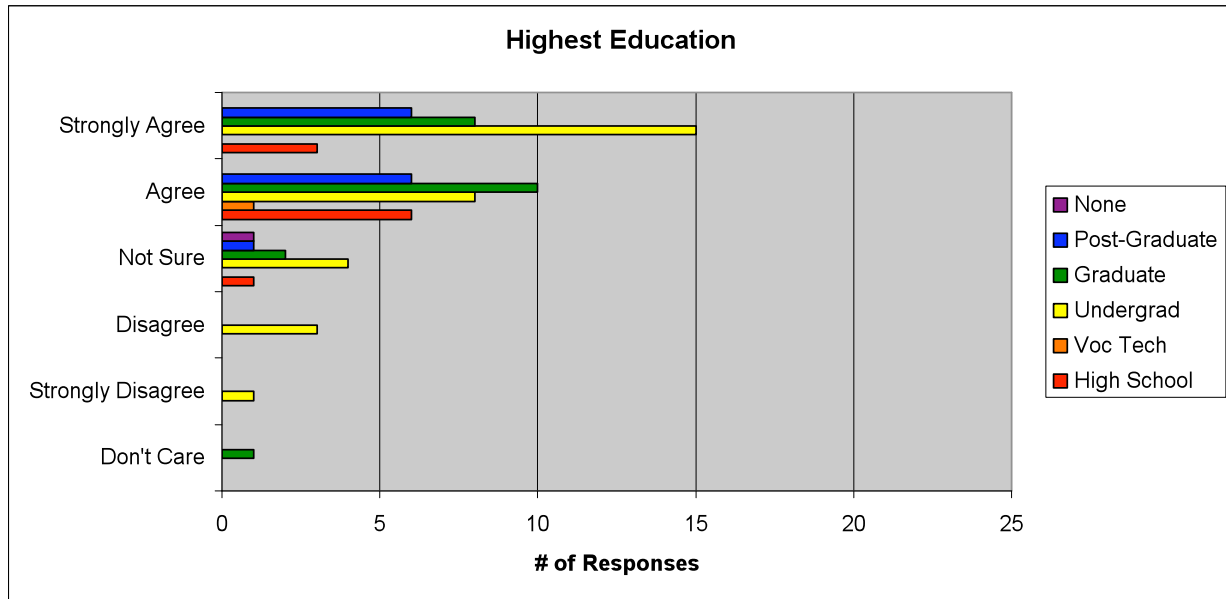|	Male		Female	
n	29	n	39
Mean	4.50	Mean	3.97
σ	0.69	σ	0.90

Figure 16: Percentage of responses for each choice.
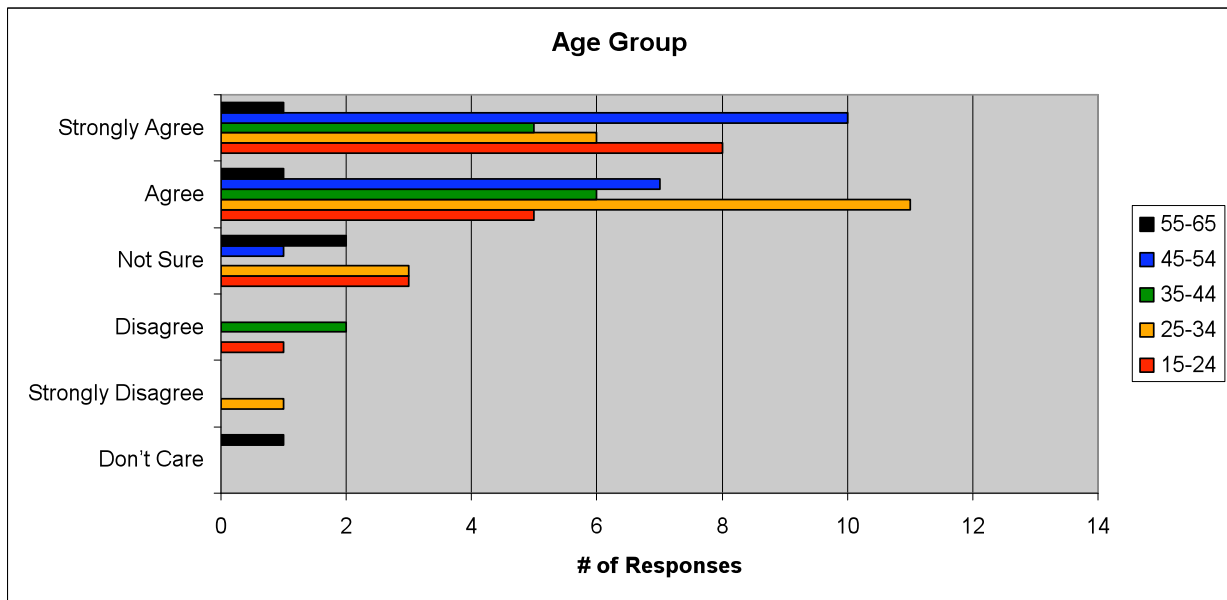
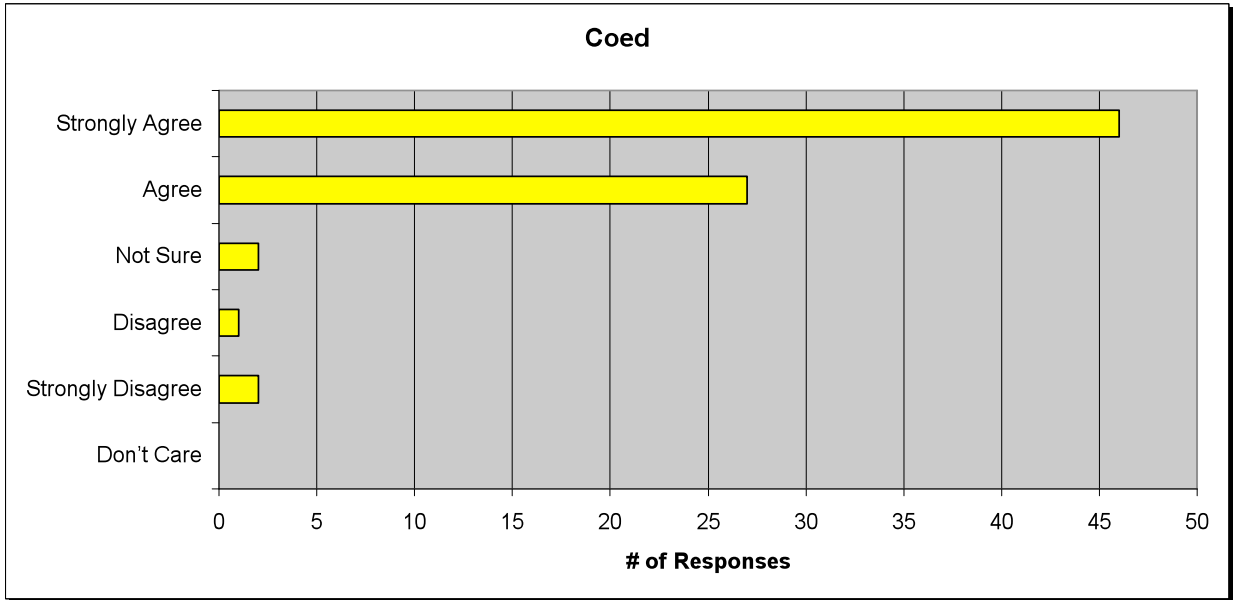|	15 – 24	25 – 34	35 – 44	45 – 54	55 – 65

n	17	21	13	18	5
Mean	4.18	4.00	4.08	4.50	3.75
σ	0.95	0.95	1.04	0.62	0.96

Figure 17: Percentage of responses for each choice.

	HS	Voc	UG	Grad	Post-G	None
n	10	1	31	21	13	1
Mean	4.20	4.00	4.06	4.30	4.38	3.00
σ	0.63	0	1.15	0.66	0.65	0

Figure 18: Percentage of responses for each choice.

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n	78		Mean	4.46		σ	0.83

Figure 19: Number of responses for each choice.

Male vs. Female
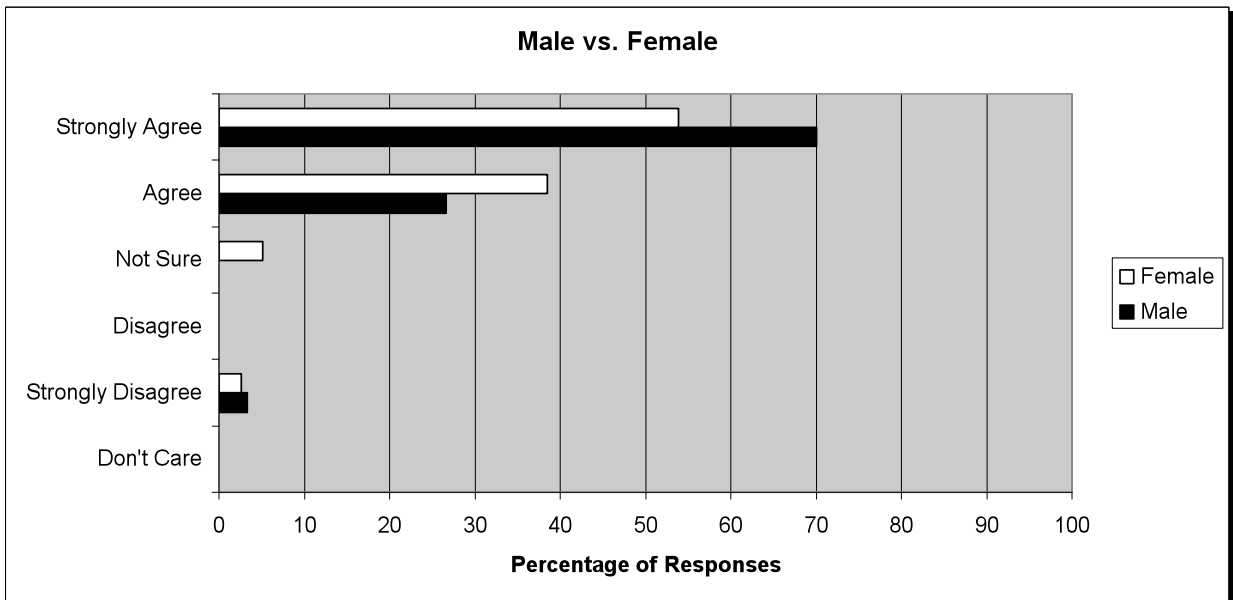
Male		Female	
n	30	n	39
Mean	4.60	Mean	4.41
σ	0.81	σ	0.82

Figure 20: Percentage of responses for each choice.

Age Group
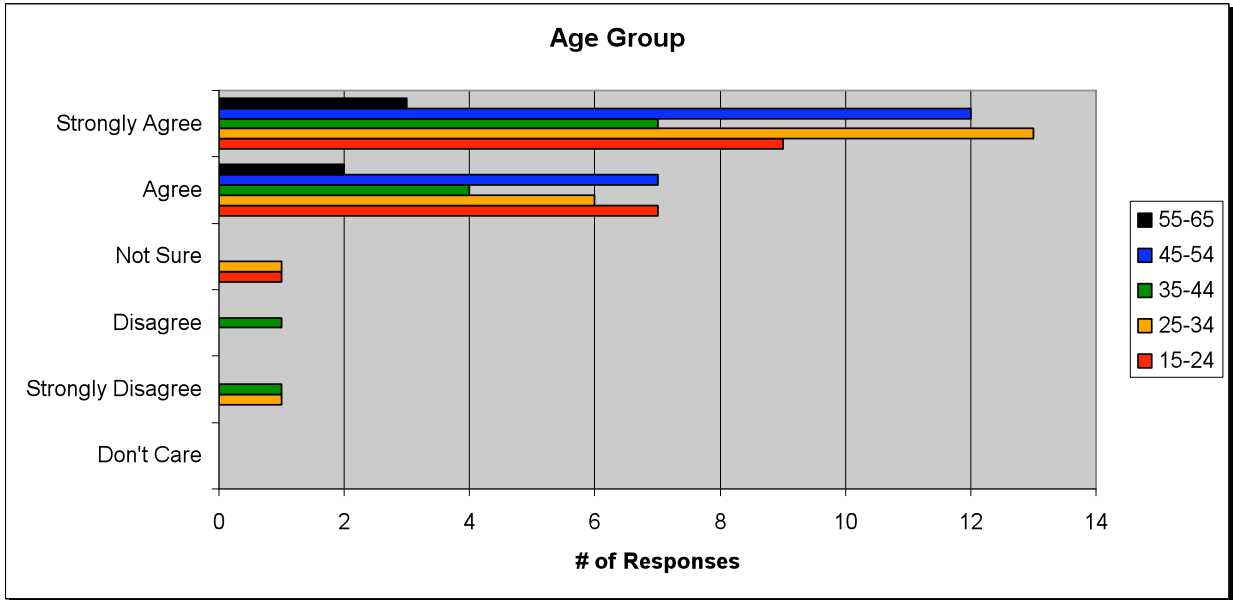
	15 – 24	25 – 34	35 – 44	45 – 54	55 – 65
n	17	21	13	19	5
Mean	4.47	4.43	4.15	4.63	4.60
σ	0.62	0.98	1.28	0.50	0.55

Figure 21: Percentage of responses for each choice.

Highest Education
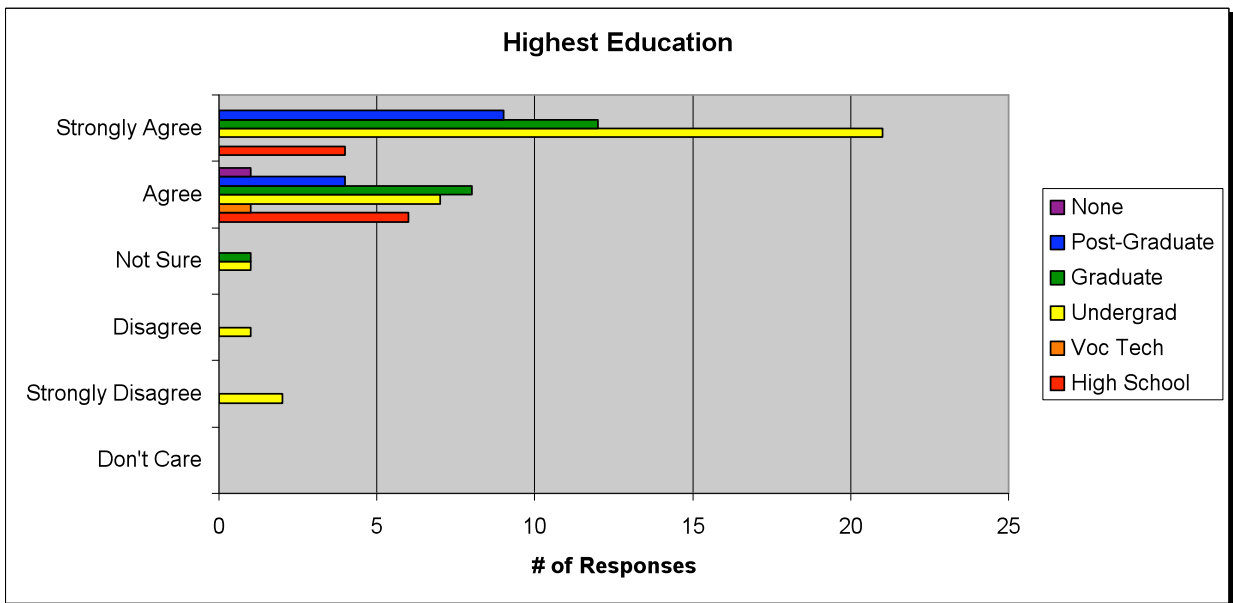
	HS	Voc	UG	Grad	Post-G	None
n	10	1	32	21	13	1
Mean	4.40	4.00	4.38	4.52	4.69	4.00

σ	0.52	0	1.13	0.60	0.48	0

Figure 22: Percentage of responses for each choice.

5. CONCLUSION

Based on the plots provided in the analysis, male respondents generally tend to have a stronger response than female respondents. In other words, males are more likely to choose "Strongly Agree" as compared to females. It is also found that responses generally weaken with increasing ages; the older the respondent is, the more likely he or she is to disagree. However, there appears to be an anomaly within that pattern: respondents aged 45 to 54 years old gave the strongest response as compared to other age groups and also are the most agreeable among themselves. Responses by "Highest Education or Degree" background show no clear pattern; therefore, educational background seems to be not a good factor in determining how a person responds based on this survey.

Based on the plots representing the responses to the question, "Do you believe social networking would serve as a useful source for **general** weather information (e.g., what the weather is going to be like today)?" more people responded "Agree" as compared to other choices, which indicate that they gave this question some thought. They more likely would say that this seem like a good idea but may be redundant as there are many other sources already available in providing general weather information.

The next question regarding disseminating severe weather information via SNS yielded a more balanced response between "Agree" and "Strongly Agree." Additionally, there is an increase in the percentage of responses in "Not Sure." This seems to indicate that although the general public does want the fastest way to be warned of impending severe weather, they may be unsure whether or not the information sent through the SNS is true; they perceive traditional media as more credible and legitimate when it comes to facts.

The plots that demonstrate the responses from the question "Do you believe social networking would be more useful if it has an option that lets you customize how **general** weather statements could be transmitted to you (e.g., receiving a message on your cell phone that notifies you of today's expected high temperature)?" show that "Strongly Agree" barely trumps "Agree." People like the idea of customizing how they will receive the weather information; in addition, they want a quick and easy access to what the weather will be like today or tomorrow.

The question that asks if an individual likes the idea of customizing how he or she will receive severe weather statements receives the strongest response. Over 45 respondents out of 78 chose "Strongly Agree." It is clear that the respondents love the idea of customizing how they would be alerted of a severe weather event.

Unfortunately, in the overall picture, the results are most likely biased as substantial numbers of respondents are most likely to have some weather background. Limited response numbers and lack of diversity also played a factor. If this survey receives sizeable number of responses, then statistical significance testing can be applied. Therefore, the pattern among the results would become clearer.

More studies and revised survey questions are needed in order to gain a clearer and less biased perception of how the public perceives social networks being used as a source for disseminating weather-related information.

6. ACKNOWLEDGMENTS

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8. APPENDIX

The outline of the survey can be viewed here:

I.   Brief Overview
The goal of this study is to gain insight into whether social networking would serve as a viable means of communicating weather-related information. This survey contains 26 questions; 21 of them are multiple-choice and 5 of them are fill-in-blank or short essay.

If you are under the age of 15 or over the age of 65, please do not take this survey.

A big thank you to Dr. Kelvin Droegemeier and Somer Erickson for their assistance in the research and to Daphne LaDue for making the National Weather Center Research Experiences for Undergraduates program possible. Also, a big thank you to the National Science Foundation for its financial contribution to the research program.

II.   Information Sheet for Consent
My name is Justin Wittrock, and I am an undergraduate meteorology major working with Dr. Kelvin Droegemeier in the School of Meteorology at the University of Oklahoma. I am requesting that you volunteer to participate in a research study titled "Viability of Weather Dissemination via Social Networking Technologies." You were invited as a possible participant because of your interest or active involvement in weather research and education, or as someone who now uses social networking systems including Facebook, Twitter or MySpace. Please read this information sheet and contact me to ask any questions that you may have before agreeing to take part in this study.

Purpose of the Research Study: The purpose of this study is to examine the potential for using social networking, such as Facebook and MySpace, as a means for communicating weather information, especially severe weather warnings. The primary research question is: "How is social networking now being used to convey information regarding threats to life and property, e.g., in the context of homeland security, and can it be effective in conveying information about hazardous weather?"

Procedures: If you agree to participate in this study, you will be asked to only complete an online survey (should take approximately 10 to 15 minutes).

Risks and Benefits of Being in the Study: This study involves no risks beyond those encountered in everyday life. If successful, the outcomes from this study may lead to additional technologies or methods for people to receive hazardous weather information. A better understanding of the feasibility of social networking as a means for conveying weather information may improve the ability of the public to respond to hazardous situations.

Compensation: You will not be compensated for your time and participation in this study.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not result in penalty or loss of benefits to which you are otherwise entitled. If you decide to participate, you are free not to answer any question or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

Length of Participation: approximately 10 to 15 minutes

Confidentiality: The records of this study will be kept private. In publications resulting from this study, no information identifying participants will be included. Research records will be stored securely. You will not be asked to identify yourself in any way while filling out the online survey. The computer that handles the data is password-protected. Only approved researchers will have access to the records.

Contacts and Questions: If you have concerns or complaints about the research, please contact my supervisor, Dr. Kelvin Droegemeier, at kkd@ou.edu and (405) 325-6561. In the event of a research-related injury, contact the researchers. You are encouraged to contact the researchers if you have any questions. If you have any questions, concerns, or complaints about the research and wish to talk to someone other than the individuals on the research team, or if you cannot reach the research team, you may contact the University of Oklahoma – Norman Campus Institutional Review Board (OU-NC IRB) at (405) 325-8110 or irb@ou.edu.

Please keep this information sheet for your records. By completing and returning this questionnaire, I am agreeing to participate in this study.

*1) Do you accept the term of condition and are willing to take a survey?
- A) Yes
- B) No

III. Demographic Section
This page is optional.

2) Select your gender:
- A) Male
- B) Female

3) Indicate your age: _____

4) Identify your race/ethnicity:
- A) Asian/Pacific Islander
- B) American Indian/Alaskan Native
- C) African non-Hispanic
- D) Caucasian non-Hispanic
- E) Hispanic
- F) Other/Mixed
- G) Unknown

5) Approximate population of the town/city in which you currently reside:
- A) less than 1,000
- B) 1,000 to 5,000
- C) 5,000 to 10,000
- D) 10,000 to 50,000
- E) 50,000 to 100,000
- F) more than 100,000

6) Are you currently a student?
- A) Yes
- B) No

7) What is the highest educational level or degree attained?
- A) High school
- B) Vocational tech
- C) Undergraduate
- D) Graduate
- E) Post-graduate
- F) None

8) What is your current profession?
- A) Aviation
- B) Construction
- C) Finance/Insurance
- D) Health/Social Services
- E) Manufacturing
- F) Professional/Scientific/Technical Services
- G) Other (please specify)

_____

IV. Social Technology Section

9) Mark the following locations where you have Internet access (check all that apply, or check none and skip to #11 if you don't have any Internet access):
- ___ Home
- ___ Workspace
- ___ School
- ___ Library
- ___ None
- ___ Other (please specify)

_____

10) How frequently do you use the Internet?
- A) More than once a day
- B) Once a day
- C) Less than once a day

11) Indicate which devices you use to communicate or receive information electronically (check all that apply, or check none if you don't have any devices):
- ___ Laptop
- ___ Cell phone
- ___ PDA
- ___ None
- ___ Other (please specify)

_____

12) If you use social networking, indicate which networks, listed below, that you access (check all that apply, or check none and skip to #14 if you don't have any social networking account):
- ___ Facebook
- ___ MySpace
- ___ Twitter
- ___ None
- ___ Other (please specify)

_____

13) How frequently do you access the social networking sites?
- A) More than once a day
- B) Once a day
- C) Less than once a day

V. Weather Source Section

14) Have you had any formal training on weather-related subjects (i.e., pilot, storm spotter, etc.)?
   A) Yes
   B) No

15) What is your primary source for <u>general</u> weather information (e.g., what the weather is going to be like today)?
   A) Radio
   B) TV
   C) Internet
   D) Newspaper
   E) Other (please specify)
   _____

16) What is your primary source for severe weather information, such as severe weather warnings?
   A) Commercial radio
   B) NOAA weather radio
   C) TV
   D) Internet
   E) Other (please specify)
   _____

17) Does your source of weather information require payment, such as through a subscription?
   A) Yes
   B) No

18) If you receive weather information that requires immediate action, such as a severe weather warning, do you attempt to verify that information (if no, skip to #20)?
   A) Yes
   B) No

19) How?
   _____
   _____
   _____
   _____
   _____
   _____

VI.   Opinion Section

20) Do you believe social networking would serve as a useful source for general weather information (e.g., what the weather is going to be like today)?
   A) Strongly Agree

   B) Agree
   C) Not sure
   D) Disagree
   E) Strongly Disagree
   F) Don't care

21) Do you believe social networking would serve as a useful source for severe weather information, such as severe weather warnings?
   A) Strongly Agree
   B) Agree
   C) Not sure
   D) Disagree
   E) Strongly Disagree
   F) Don't care

22) Do you believe social networking would be more useful if it has an option that lets you customize how <u>general</u> weather statements could be transmitted to you (e.g., receiving a message on your cell phone that notifies you of today's expected high temperature)?
   A) Strongly Agree
   B) Agree
   C) Not sure
   D) Disagree
   E) Strongly Disagree
   F) Don't care

23) Do you believe social networking would be more useful if it has an option that lets you customize how <u>severe</u> weather statements could be transmitted to you (e.g., receiving a message on your cell phone only when a thunderstorm moves to within five miles of your present location)?
   A) Strongly Agree
   B) Agree
   C) Not sure
   D) Disagree
   E) Strongly Disagree
   F) Don't care

24) What advantages do you believe are associated with the use of social networking to communicate weather information to the general public?
   _____
   _____
   _____
   _____

_____
_____

25) What disadvantages do you believe are
associated with the use of social
networking to communicate weather
information to the general public?

_____
_____
_____
_____
_____
_____

VII.   Comment Section

26) Do you have any additional comments or
suggestions?

_____
_____
_____
_____
_____
_____

* = question the participants are required to answer