

ALTRUISM AND FORGIVENESS AT HUMBOLDT STATE UNIVERSITY

A Survey of Student Attitudes and Actions

Fall 2004



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Introduction

Humboldt State University students are known for their commitment to the environment and to issues of social justice. After September 11, 2001, it appeared that many members of American society grappled with issues of faith and forgiveness. As sociologists, we wanted to further explore how local people felt about some of these topics. As a result, a survey was developed to examine H.S.U. student attitudes on the topics of forgiveness, altruism, faith and spirituality and the environment. We wanted to determine if significant differences in attitude and/or actions between social science and natural science majors might exist at Humboldt State University. The results of the study are presented in this report.

In Spring 2003, a total of 305 Humboldt State University students completed a survey that examined student attitudes and experiences regarding faith, spirituality, forgiveness, terrorism, and altruism. Upper-division classes were randomly selected from classes taught in the natural and social sciences. We deliberately chose upper division classes because we thought they would have a greater number of students of a specific major. Professors were approached through e-mail to see if they would be willing to allow their classes to be surveyed. In total eleven classes were surveyed, five from the natural sciences, and six from the social sciences. The specific classes that were surveyed came from the fields of psychology, philosophy, social work, sociology, political science, theatre arts, oceanography, wildlife, fisheries, and forestry.

Study Site Background

Humboldt State University (HSU) is part of the 23-campus California State University (CSU) system. HSU is the California State University's northernmost campus, located in Arcata, just 100 miles south of the Oregon border and 270 miles north of San Francisco. The campus is set between the Pacific Ocean and the towering redwoods on 144 acres of land.

Humboldt State University was founded during the Progressive Movement (1897-1917) in United States history-a time when the importance of education was brought to a national level. Humboldt State began as the Humboldt State Normal School in 1913. California Governor Hiram Johnson signed the law on June 16, 1913 establishing the Normal School for the training and education of teachers and others in the art of instruction and governing the public schools of this state.

HSU Student Background

This section provides some basic background information on Humboldt State students such as geographic origin, age group, ethnicity, class standing, and college enrollments. Table 1 shows the breakdown of HSU students by geographic origin.

Table 1: Geographic Origin of HSU Students		
Geographic Region	Frequency	Percent
Humboldt County (CA)	1898	24.9
Northern CA	1025	13.5
Bay Area (CA)	1163	15.3
Central CA	859	11.3
Los Angeles (CA)	1010	13.3
San Diego (CA)	360	4.7
Other State	1238	16.3
Foreign	57	0.7
Unknown	1	0.0
Total	7611	100.0

Source: Humboldt State University Analytic Study, Office of Enrollment Management & Academic Affairs, Fall 2002.

Almost a quarter of the total HSU student population originates from Humboldt County (24.9%) while 16.3% of students come from another state besides California. Only 0.7% of students come from somewhere outside of the United States. Overall the majority of students that attend Humboldt State are from California (83.0%).

Table 2 presents the HSU student population by various groups age. The majority of students are between the age of 20 and 24 (3,608), while 1,631 students are 20 years old or younger and 1,229 students are between the age of 25 and 29. The remaining students (1,143) are 30 years or older.

Table 2: Age Group of HSU Students

Age Group	Frequency	Percent
<20	1631	21.4
20-24	3608	47.4
25-29	1229	16.2
30-34	415	5.5
35-39	199	2.6
40-44	150	2.0
45-49	130	1.7
50-59	110	1.4
>60	139	1.8
Total	7611	100.0

Source: Humboldt State University Analytic Study, Office of Enrollment Management & Academic Affairs, Fall 2002.

The following table shows the breakdown of the HSU student population by ethnicity. Most students reported their ethnicity as White (63.0%). The second most common answer was Unknown at 17.4% followed by Hispanic at 7.9%.

Table 3: Student Ethnicity

Ethnicity	Frequency	Percent
Asian	222	2.9
Black	191	2.5
Hispanic	603	7.9
Native American	199	2.6
Pacific Islander	28	0.4
White	4796	63.0
Other	250	3.3
Unknown	1322	17.4
Total	7611	100.0

Source: Humboldt State University Analytic Study, Office of Enrollment Management & Academic Affairs, Fall 2002.

Table 4 illustrates the student population of HSU by class standing. Seniors are the highest populated class with 2,467 students and sophomores are the least populated class with only 946 students. The majority of students who attend HSU are undergraduates.

Table 4: HSU Enrollment by Class Standing

Class Standing	Male	Female	Part-time	Full-time	Totals
Freshman	596	824	160	1260	1420
Sophomore	415	531	76	870	946
Junior	814	919	163	1570	1733
Senior	1143	1351	358	2109	2467
Total Undergrads	2968	3598	757	5809	6566
Graduate	442	603	371	674	1045
Totals	3410	4201	1128	6483	7611

Source: Humboldt State University Analytic Study, Office of Enrollment Management & Academic Affairs

HSU offers a variety of major choices for students. Each major is part of one of three colleges. These colleges include the College of Arts, Humanities and Social Sciences (CAHSS), the College of Natural Resources and Sciences (CNRS), and the College of Professional Studies (CPS). Table 5 shows the average annual student enrollment by college.

Table 5: HSU Average Annual Student Headcount by College

College	98/99	99/00	00/01	01/02
CAHSS	1982	2028	2014	2068
CNRS	3186	3093	3006	2907
CPS	1420	1444	1423	1375
All University	821	875	871	928
Total	7409	7440	7314	7278

Source: Humboldt State University Analytic Study, Office of Enrollment Management & Academic Affairs, Fall 2002.

The following sections of this report feature data collected from a study conducted at Humboldt State University that examines student attitudes regarding spirituality, forgiveness, terrorism, and altruism.

Sample Description

Table 6 provides a description of our sample on the following characteristics: sex, ethnicity, age and class standing.

Table 6: Sociodemographic Characteristics of the Sample		
Characteristics	Frequency	Percent
SEX		
Female	135	44.6
Male	167	55.1
Other	1	0.3
Total	303	100.0
ETHNICITY		
White/Anglo	250	82.5
Latino/Latina	15	5.0
African American	1	0.3
Other	37	12.2
Total	303	100.0
CLASS STANDING		
Freshman	6	2.0
Sophomore	24	7.9
Junior	94	31.0
Senior	157	51.8
Graduate Student	16	5.3
Other	6	2.0
Total	303	100.0
AGE		
<20	3	1.0
20-24	174	58.6
25-29	80	26.9
30-34	17	5.7
35-39	12	4.0
40-44	5	1.7
45-49	2	0.7
50-59	3	1.0
>60	1	0.3
Total	297	100.0

As Table 6 summarizes, a greater number of males (55.1%) than females (44.6%) completed our survey. The majority of respondents (82.5%) reported their ethnicity as White/Anglo. This number follows the pattern indicated in the Humboldt State

University Statistical Profile on student's ethnicity (see Table 3), which reports the majority of HSU students (63.0%) identify as White. In terms of class standing, Table 6 shows that most respondents characterized themselves as being in their Junior (31.0%) or Senior (51.8%) year, which is not surprising due to the fact that the classes we selected to survey were upper division courses.

To gain a better understanding about students' backgrounds we asked respondents to identify their parent's level of education as well as their parent's occupation. Table 7, on the following page, summarizes responses to these questions.

Table 7: Education and Occupation of Parents

Characteristics	Frequency	Percent
MOTHER'S HIGHEST LEVEL OF EDUCATION		
Less than High School	13	4.3
High School Graduate	73	24.1
Some College	86	28.4
College Graduate	92	30.4
Master's Degree	33	10.9
More than a Master's Degree	6	2.0
Total	303	100.0
FATHER'S HIGHEST LEVEL OF EDUCATION		
Less than High School	13	4.4
High School Graduate	58	19.8
Some College	82	28.0
College Graduate	87	29.7
Master's Degree	34	11.6
More than a Master's Degree	19	6.5
Total	293	100.0
MOTHER'S OCCUPATION		
Teacher/Professor	35	12.0
Homemaker	67	23.0
Clerical	29	10.0
Sales	16	5.5
Professional	67	23.0
Self-Employed/Business Owner	11	3.8
Service Industry	42	14.4
Construction/Labor	6	2.1
Transportation	2	0.7
No Work	6	2.1
Retired	2	0.7
Other	8	2.7
Total	291	100.0
FATHER'S OCCUPATION		
Teacher/Professor	24	8.7
Homemaker	1	0.4
Sales	17	6.1
Professional	93	33.6
Self-Employed/Business Owner	20	7.2
Service Industry	46	16.6
Construction/Labor	50	18.1
Transportation	11	4.0
No Work	4	1.4
Retired	1	0.4
Other	10	3.6
Total	277	100.0

We asked respondents their state of origin as well as the type of geographic location they grew up in (e.g. rural, urban). Table 8 presents these results.

Table 8: Student Birthplace and Residence N=303		
Characteristics	Frequency	Percent
BIRTHPLACE		
California	204	67.3
U.S. (Excluding CA)	86	28.4
Other	13	4.3
Total	303	100.0
TYPE OF AREA		
Rural Area	116	38.8
Suburban Area	116	38.8
Urban Area	61	20.1
Other	10	3.3
Total	303	100.0

Respondents were also asked to classify their major as Natural Science, Social Science, Undeclared, or Other. We have listed this information in Table 9 under Area of Study. Additionally Table 9 also indicates students' individual majors.

Table 9: Area of Study and Major of Students		
Characteristics	Frequency	Percent
GENERAL AREA OF STUDY		
Natural Sciences	155	51.5
Social Sciences	100	33.0
Undeclared	6	2.0
Other	40	13.3
Total	301	100.0
MAJOR		
Wildlife	69	23.1
Political Science	26	8.7
Forestry	22	7.4
Psychology	22	7.4
Fisheries	22	7.4
Art/Film/Theater	16	5.4
Sociology	16	5.4
Philosophy	15	5.0
Social Work	12	4.0
Biology/Zoology	10	3.3
Environmental Science	9	3.0
English/Journalism/Comm.	9	3.0
Natural Resources Planning	8	2.7
Oceanography	7	2.3
Rangeland Resource Science	6	2.0
Business/Economics	5	1.7
Kinesiology	3	1.0
Other	22	7.4
Total	299	100.0

Most (82.5%) of our sample reported their ethnicity as White/Anglo and over two-thirds (70.4%) of our sample claimed to be between the ages of 18 and 25. More than half (51.8%) of our sample reported their class standing as Senior and 70.4% stated that they are from California. The large percentage of seniors is not surprising since we sample upper division classes. The same percentage of respondents reported growing up in a rural area (38.8%) as growing up in a suburban area (38.8%). More than one-half (51.5%) of respondents majored in the natural sciences while one-third (33.0%) reported being in the social sciences.

The next section of this report features data provided by students on the subject matter of spirituality, religion, harmony, belief, and faith. Respondents were asked

questions on these topics in order to get an idea of how students think, believe, and feel about these topics.

Spirituality and Faith

Respondents were asked several questions regarding spirituality, faith, and religion. These questions attempted to measure respondent's personal experiences and convictions with these topics. The following tables summarize the results of these questions.

Table 10 shows the results to three questions regarding spirituality and harmony. Students were asked if they consider themselves a spiritual person and then they were asked "Why or why not?" Respondents were also asked the frequency at which they feel deep inner peace or harmony.

Table 10: Spirituality		
Characteristics	Frequency	Percent
SPIRITUAL?		
Yes	221	74.9
No	74	25.1
Total	295	100.0
EXPLANATION FOR SPIRITUALITY		
Belief in a Higher Power	34	19.2
Belief in God and/or Afterlife	31	17.5
Feel Connection to all things	9	5.1
Feel Connection to the Environment	11	6.2
Other	92	52.0
Total	177	100.0
EXPLANATION FOR NO SPIRITUALITY		
Rational Being	8	14.3
Believe Only in Physical Reality	6	10.7
Conflicting Beliefs	2	3.6
Never Thought About it Before	2	3.6
Other	38	67.9
Total	56	100.0
HARMONY AND PEACE IN LIFE		
Never or almost never	11	3.7
Once in a while	90	30.0
Most days	132	44.0
Everyday	42	14.0
Many times a day	25	8.3
Total	300	100.0

Table 11 summarizes the responses from questions regarding faith. Students were asked if they “believe in a God who watches over them” and whether or not “the events of September 11, 2001 renewed their faith in some way.” Finally, respondents were asked if they have ever had a significant gain in their faith. Students were given a five point Likert-scale set of response categories for the first two questions that ranged from strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree. The remaining question was asked in yes or no form. Table 11 summarizes the answers to these questions.

Table 11: Faith		
Responses	Frequency	Percent
BELIEF IN GOD		
Strongly Disagree	66	22.0
Disagree	31	10.3
Neither Agree nor Disagree	90	30.0
Agree	59	19.7
Strongly Agree	54	18.0
Total	300	100.0
EXPERIENCE WITH GAINS IN FAITH		
Yes	141	48.5
No	150	51.5
Total	291	100.0
SEPT 11, 2001 RENEWED FAITH		
Strongly Disagree	99	33.2
Disagree	64	21.5
Neither Agree nor Disagree	115	38.6
Agree	18	6.0
Strongly Agree	2	0.7
Total	298	100.0

In order to gain a better understanding of respondent’s experiences with spirituality and faith, we asked respondents two questions regarding the role of religion in their life. The first question asked students to specify their religion. Table 12 indicates the religious preferences of respondents in our sample.

Table 12: Religious Faith N=283		
Responses	Frequency	Percent
RELIGION		
No Religion	146	51.6
Protestant	22	7.8
Catholic	33	11.7
Jewish	4	1.4
Islamic	1	0.4
Buddhist	5	1.8
Mormon	5	1.8
New Age	2	0.7
Other	65	23.0
Total	283	100.0

Table 12 shows that an overwhelming 51.6% of respondents reported having “no religion.” Many respondents (23.0%) chose “other” as their religion. We realized, as researchers, that the percentage for “other” is so high because we failed to include the response category of Christian on our list of choices. Many respondents that chose “other” wrote-in that they are Christian.

Next, students were asked what their religion is and then asked to rate the strength of their religious belief on a four-point scale ranging from very, somewhat, not very, and not at all.

Table 13: Strength of Religious Belief N=285		
Responses	Frequency	Percent
STRENGTH OF RELIGIOUS BELIEF		
Not at all	112	39.3
Not very	69	24.2
Somewhat	75	26.3
Very	29	10.2
Total	285	100.0

About three-quarter (74.9%) of respondents reported being spiritual. One-fifth (19.7%) of respondents “agreed” that there is a God who watches over them while another one-fifth (22.0%) “strongly disagreed” that there is a God who watches over them. Almost half (44.0%) reported feeling peace and harmony “most days” while another one-third (30.0%) reported feeling peace and harmony only “once in a while.”

Over one-half (51.6%) of respondents reported having no religious affiliation. About one-fourth (26.3%) of respondents reported being “somewhat” religious, another one-fourth (24.2%) reported being “not very” religious, and 39.3% reported being “not at all” religious.

Personal Forgiveness

Respondents were asked many questions regarding their personal experiences with forgiving others. These questions attempted to measure the general reasons why people choose to forgive or not to forgive someone. Additionally, respondents were asked a question regarding their own potentially “hurtful” behavior towards others. The following four tables present the results to these questions.

Table 14 is the first of two tables that reports the results to questions regarding forgiving behavior. Students were asked about their ability to forgive people who have hurt them and the ease of making up with people who have hurt them. Additionally, respondents were asked whether or not they think that apology and forgiveness could help to resolve or heal the relationship between a victim (hurt person) and a victimizer (person that caused the hurt).

Table 14 shows that the largest number of respondents “almost always” (44.0%) forgive those that hurt them. One-fourth (25.0%) of students reported that they “often” forgive and 18.3% “always” forgive those that have hurt them.

Table 14: Personal Experience with Forgiveness

Responses	Frequency	Percent
ABILITY TO FORGIVE THOSE THAT CAUSE HURT		
Sometimes	38	12.7
Often	75	25.0
Almost always	132	44.0
Always	55	18.3
Total	300	100.0
ABILITY TO MAKE-UP WITH OTHERS		
Strongly Disagree	2	0.7
Disagree	22	7.3
Neither Agree nor Disagree	75	24.8
Agree	149	49.2
Strongly Agree	55	18.2
Total	303	100.0
OPINION TOWARDS APOLOGY/ FORGIVENESS IN RESOLVING RELATIONSHIPS		
Yes	162	62.3
No	24	9.2
Depends on Situation	74	28.5
Total	260	100.0

Table 15 is the second of two tables dealing with forgiving behavior. Respondents were asked if they had personally forgiven someone in the last week and if so to explain why they forgave the person. Students were also asked if anyone had asked them to forgive them within the last month. If students answered “yes” they were asked to explain further.

Table 15: Personal Experiences with Forgiveness

Responses	Frequency	Percent
FORGAVE SOMEONE WITHIN LAST WEEK		
Yes, forgave someone	197	65.7
No, did not forgive someone	103	34.3
Total	300	100.0
WHY THEY FORGAVE THEM		
Small things are forgivable	21	11.9
They care/love them	38	21.5
They wanted to move past the issue	28	15.8
People make mistakes	21	11.9
Miscommunication	3	1.7
Other	66	37.3
Total	177	100.0
SOMEONE ASKED FOR FORGIVENESS WITHIN LAST MONTH		
No	181	59.7
Yes	122	40.3
Total	303	100.0
DID THEY FORGIVE THIS PERSON		
No	8	6.6
Yes	114	93.4
Total	122	100.0

Table 15 shows that 65.7% of respondents reported forgiving someone within the last week. Respondents gave several reasons as to why they forgave this person. Some respondents (21.5%) reported forgiving someone within the last week because they “care about and/or love them.” One-tenth (11.9%) of respondents reported forgiving someone because “small things are forgivable” and another one-tenth (11.9%) reported that they forgave someone because “people make mistakes (See Table 15). Respondents also answered questions regarding whether or not anyone had asked them to forgive within the last month. Table 15 presents the answers to these questions.

Respondents were asked about their experiences with not being able to forgive. Students were asked if they had ever not been able to forgive someone for some action

that they had done. If they answered “yes” students were asked to explain why they were unable to forgive this person. The following Table 16 summarizes the results to these questions.

Table 16: Unforgiving Behavior		
Responses	Frequency	Percent
NOT ABLE TO FORGIVE SOMEONE		
No	137	46.0
Yes	161	54.0
Total	298	100.0
WHY UNABLE TO FORGIVE PERSON		
Some things unforgivable	37	26.6
Treated too badly	45	32.4
Broke trust	11	7.9
They are mean	4	2.9
Other	42	30.2
Total	139	100.0

Since respondents had been asked about their experiences with forgiving others, we thought it would be interesting to examine respondents’ experiences regarding their own hurtful behavior. Students were asked if they had done or said anything in the last month that could have hurt someone and if they answered “yes” they were asked to explain further. The following Table 17 presents the results to this inquiry.

Table 17: Hurting Behavior within Last Month		
Responses	Frequency	Percent
HURT SOMEONE WITHIN LAST MONTH		
Yes, hurt someone	228	77.0
No, did not hurt someone	68	23.0
Total	296	100.0
IF YES, HOW DID THEY HURT THIS PERSON		
Hurtful remark/behavior	88	47.8
Having an argument	15	8.2
Wasn't thinking clearly	14	7.6
Honesty is the best policy	11	6.0
Other	56	30.4
Total	184	100

Almost one-half (44.0%) of respondents reported “almost always” forgiving those that have caused hurt and another one-fourth (25%) reported “often” forgiving those that have caused hurt. About one-half (49.2%) of respondents reported “agreeing” that they have the ability to make-up with others easily. Another one-fifth (18.2%) reported “strongly agreeing” that they have the ability to make-up with others easily. Almost two-thirds (62.3%) of students sampled reported that forgiveness and apology can help to resolve or heal a relationship while 28.5% reported that it would “depend on the situation.” Two-thirds (65.7%) of students sampled reported that they forgave someone within the last week and out of that 65.7% one-fifth (21.5%) reported that they did so because they care or love the person they forgave. Two-fifths (40.3%) of the sample reported that they were asked to forgive someone within the last month. Of that group almost all (93.4%) of them chose to forgive the person. Over three-quarters (77.0%) of the sample reported that they hurt someone within the last month. Almost one-half (47.8%) of that group reported that they hurt them by saying a hurtful remark or by engaging in a hurtful behavior.

Public Forgiveness

This section on public forgiveness highlights student’s responses to several non-personal questions regarding forgiveness. Students were asked many questions related to public issues and forgiveness. Respondents were asked questions surrounding the issue of when forgiveness should be asked for and when it should be granted. The two areas of public forgiveness that this study focused on are environmental issues and terrorism.

Environmental Issues and Forgiveness

Respondents were asked questions about issues related to environment and forgiveness because such issues have been known to generate conflict in the local community. Respondents were asked three questions regarding different environmental issues and forgiveness. These questions attempted to measure how respondents feel about the environment. The following table is a summary of these three questions.

Table 18: Opinion Towards Environmental Issues and Forgiveness

Responses	Frequency	Percent
ENVIRONMENTAL ACTIVISTS SHOULD ASK FOR FORGIVENESS		
Strongly Disagree		
Disagree	112	37.5
Neither Agree nor Disagree	58	19.4
Agree	101	33.8
Strongly Agree	23	7.7
Total	5	1.7
	299	100.0
TIMBER INDUSTRY SHOULD ASK FOR FORGIVENESS		
Strongly Disagree		
Disagree	67	22.3
Neither Agree nor Disagree	85	28.2
Agree	108	35.9
Strongly Agree	25	8.3
Total	16	5.3
	301	100.0
TIMBER MILLS SHUT DOWN FOR DESTROYING NATURE		
Strongly Disagree		
Disagree	46	15.4
Neither Agree nor Disagree	99	33.2
Agree	99	33.2
Strongly Agree	38	12.8
Total	16	5.4
	298	100.0

Terrorism and Forgiveness

Since the events of September 11, 2001 had such a major impact on American society we asked HSU students about their attitudes on forgiveness and responsibility relative to the events of September 11, 2001. A main goal of this study was to examine student attitudes on forgiveness in a post-September 11, 2001 environment. Therefore a series of questions were developed to measure both general and specific attitudes towards forgiveness. Respondents were asked many questions regarding their opinion towards who should ask for forgiveness for 9/11 as well as whether or not they could personally forgive the actual September 11th attackers. The following two tables summarize the results to these questions.

Table 19: Sept.11, 2001 Terrorist Attacks and Forgiveness

Responses	Frequency	Percent
TERRORISTS NEED TO ASK FOR FORGIVENESS		
Strongly Disagree	27	9.1
Disagree	52	17.4
Neither Agree nor Disagree	89	29.9
Agree	73	24.5
Strongly Agree	57	19.1
Total	298	100.0
AMERICANS NEED TO ASK FOR FORGIVENESS		
Strongly Disagree	24	8.0
Disagree	27	9.0
Neither Agree nor Disagree	92	30.7
Agree	88	29.3
Strongly Agree	69	23.0
Total	300	100.0
PERSONALLY FORGIVING 9/11 ATTACKERS		
Strongly Disagree	37	12.3
Disagree	43	14.3
Neither Agree nor Disagree	96	32.0
Agree	92	30.7
Strongly Agree	32	10.7
Total	300	100.0
SOMEONE NEEDS TO BE FORGIVEN FOR 9/11		
Strongly Disagree	31	10.5
Disagree	41	13.9
Neither Agree nor Disagree	131	44.6
Agree	62	21.1
Strongly Agree	29	9.9
Total	294	100.0

Respondents were asked, “based on Sept.11, who needs to ask for forgiveness?” and then they were asked “why?” and to “explain.” Table 20 presents the results to these questions.

**Table 20: Forgiveness Regarding Sept. 11, 2001:
Who and Why?**

Responses	Frequency	Percent
WHO SHOULD ASK FOR FORGIVENESS		
No one	44	18.6
Everyone	42	17.7
The United States	38	16.0
Osama bin Laden/The Terrorists	10	4.2
The U.S. and the Terrorists	50	21.1
Those Responsible	15	6.3
Not Sure	6	2.5
Other	32	13.5
Total	237	100.0
WHY SHOULD THEY ASK FORGIVENESS		
The United States deserved the attacks	25	12.4
The Terrorists killed innocent people	17	8.5
Both sides have committed wrongs	43	21.4
Can't blame just one entity	3	1.5
Other	113	56.2
Total	85	100.0

The largest number of respondents reported either “strongly disagreeing” (37.5%) or “disagreeing” (19.4%) with the statement that “environmental activists need to ask for forgiveness because their protest actions have put many people out of business” (Table 18). Slightly over one-fifth (22.3%) of respondents reported “strongly disagreeing” and another 28.2% reported “disagreeing” that “people who work in the timber industry need to ask the public for forgiveness because they participate in an industry that involves cutting down trees” (Table 18).

About one-fourth (24.5%) of respondents “agreed” that “the terrorists who attacked the United States need to ask for forgiveness because their actions against America resulted in the death of many people” (Table 19). Almost one-third (29.3%) of

respondents reported “agreeing” with the statement “Americans need to ask for forgiveness because we bombed Afghanistan and killed innocent people” while another 23.0% reported “strongly agreeing” with this statement (Table 19). Almost one-third (30.7%) of respondents reported that they could “forgive those who attacked the United States on September 11, 2001,” while another 10.7% “strongly agreed” that they could forgive (Table 19). When asked about who should ask for forgiveness for the events of September 11, 2001 the largest amount (21.1%) of respondents reported that both the “United States and the terrorists involved in 9/11” need to ask for forgiveness (Table 20).

Altruism

Altruism refers to the notion that people may act selflessly on behalf of others. In our current globalized world acts of altruism seem to be declining while acts of self-interest seem to be on the rise. A goal of this study was to measure the frequency of altruistic behavior among respondents. Therefore, respondents were asked questions about the frequency of altruistic behavior practiced in their lives as well as whether they feel a sense of responsibility for reducing pain and suffering in the world. Tables 21 and 22 present the results to these inquiries.

Table 21: Responsibility for Reducing Pain and Suffering in the World		N=298
Responses	Frequency	Percent
Strongly Disagree	12	4.0
Disagree	33	11.1
Neither Agree nor Disagree	121	40.6
Agree	89	29.9
Strongly Agree	43	14.4
Total	298	100.0

Table 21 on the previous page illustrates that the largest amount (40.6%) of respondents reported that they “neither agree nor disagree” that they “feel a deep sense of responsibility for reducing pain and suffering in the world.” Almost one-third (29.9%) reported “agreeing” that they “feel a deep sense of responsibility for reducing pain and suffering in the world” and 14.4% “strongly agreed” with this statement.

Next, respondents were asked how frequently they participated in each of ten altruistic situations using a five point Likert-scale set of response categories that ranged from never (1), once (2), more than once (3), often (4), and very often (5).

Table 22 on the following page shows that the largest amount (40.6%) of respondents reported that they “neither agree nor disagree” that they “feel a deep sense of responsibility for reducing pain and suffering in the world.” Almost one-third (29.9%) reported “agreeing” that they “feel a deep sense of responsibility for reducing pain and suffering in the world” and 14.4% “strongly agreed” with this statement. More than one-half (58.7%) of students sampled reported that they have “given money to a charity more than once” and one-half (55.1%) of respondents also reported that they have “given money to a stranger who needed it (or asked for it) more than once.”

Almost half (44.9%) of respondents reported that they have “often” allowed someone to go ahead of them in line and another 36.4% reported that they have allowed someone to go ahead of them “more than once.” One-third (35.6%) of respondents reported helping an elderly person across the street “more than once” while another one-third (31.1%) reported having “never” helped someone across the street. Over one-half (51.2%) of students reported they have bought something unnecessary “more than once” because they knew it was for a good cause.

Table 22: Frequency of Altruistic Behavior Among Respondents																								
	NEVER		NEVER		ONCE		ONCE		MORE THAN ONCE		MORE THAN ONCE		OFTEN		OFTEN		A LOT		A LOT		TOTAL		TOTAL	
Altruistic Situation	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
#1 %Given Money to Charity	29	10.1	21	7.3	169	58.7	54	18.8	15	5.2	288	100.0												
#2 %Given Money to Stranger	17	5.7	21	7.1	163	55.1	75	25.3	20	6.8	296	100.0												
#3 %Volunteered for Charity	34	11.8	46	15.9	128	44.3	51	17.6	30	10.4	289	100.0												
#4 %Allowed Stranger to Go Ahead of them in Line	3	1.0	3.0	1.0	107	36.4	132	44.9	49	16.7	294	100.0												
#5 %Offered Their Seat to a Stranger that was Standing	36	13.0	25.0	9.0	114	41.2	70	25.3	32	11.6	277	100.0												
#6 %Told Clerk that they were Undercharged for an item	42	15.3	57	9.9	129	47.1	57	20.8	19	6.9	274	100.0												
#7 %Helped Someone Move	11	3.8	20	6.9	127	44.1	89	30.9	41	14.2	288	100.0												
#8 %Helped Classmate with Homework Assignment	15	5.1	12	4.1	132	45.2	96	32.9	37	12.7	292	100.0												
#9 %Offered Help to Elderly or Disabled Person Crossing the Street	84	31.1	31	11.5	96	35.6	39	14.4	20	7.4	270	100.0												
#10 %Bought Unnecessary Product to Benefit a Good Cause	36	12.8	33	11.7	144	51.2	48	17.1	20	7.1	281	100.0												

Results

Student's general area of educational study (natural science or social science) was correlated with independent variables from our survey. We correlated student's general area of educational study with the following concepts: altruism, spirituality and faith, personal forgiveness, public forgiveness (which includes issues related to the environment and terrorism). Statistical analysis of the results was conducted using t-tests and chi-square.

Spirituality and Faith

Students were asked two questions about their spirituality and faith. Responses were measured by a simple "yes" or "no." The following Table 23 shows a chi-square for social science and natural science students on these two spiritual and faith variables. No significant difference was observed between these two groups. A relatively equal percentage of social science (78.1%) and natural science (73.5%) students consider themselves to be spiritual. Additionally, a relatively equal percentage of social science (44.3%) and natural science (48.6%) students reported having had a significant gain in their faith at some point in their lives.

Table 23: Spirituality and Faith by General Area of Educational Study					
Question	Response	General Area of Educational Study		Chi-Square	Level of Significance (two-sided)
		Natural Science N=151	Social Science N=96		
Do you consider yourself to be a spiritual person?	Yes	111 (73.5%)	75 (78.1%)	0.672	0.412
	No	40 (26.5%)	21 (21.9%)		
Have you ever had a significant gain in your faith?	Yes	N=148 72 (48.6%)	N=97 43 (44.3%)	0.439	0.508
	No	76 (51.4%)	54 (55.7%)		

Respondents were asked three questions about their religious and spiritual attitudes. Responses were measured on a five-point scale, with 1 representing strongly disagreeing and 5 representing strongly agreeing with the statement. For all three

variables a two-sample t-test was used. Table 24 compares the means for natural science and social students. As the two-sample t-test indicates, the means of natural science students did not differ significantly from the means of social science in regards to the three variables listed below.

**Table 24: A Comparison of Means of Religious and Spiritual Attitudes
By General Area of Educational Study**

Question	Means (Range 1-5)				t	Level of Significance (two-tailed)
	Natural Science N=150		Social Science N=100			
	Mean	SD	Mean	SD		
Do you consider yourself to be religious?	3.06	1.015	3.04	1.026	0.131	0.896
I believe in a God who watches over me	3.01	1.307	3.12	1.465	0.591	0.555
I feel deep inner peace or harmony	2.92	0.966	3.01	0.953	0.769	0.443

Personal Forgiveness

Respondents were asked many questions relating to forgiveness that involves interpersonal interactions. These questions attempted to measure whether students have chosen to forgive or not to forgiven someone. Additionally, students were asked a question regarding their own potentially “hurtful” behavior towards others.

Table 25 on the following page indicates that natural science and social science students significantly differed in personal forgiveness on one variable; whether or not they had personally hurt someone within the last month. A significantly higher percentage of social science students (85.7%) reported in the last month that they have done something that could have hurt someone compared to the percentage of natural science students (70.7%) that reported the same experience ($p\text{-value}=.006$). As Tables 25 shows, natural science and social science students did not differ on any other variables dealing with personal forgiveness.

Table 25: Personal Experiences with Forgiveness by General Area of Educational Study

Question	Response	General of Educational Natural Science N=150	Area Study Social Science N=98	Chi-Square	Level of Significance (two-sided)
In the last month have you done anything that could have hurt someone?	Yes	106 (70.7%)	84 (85.7%)	7.491	0.006
	No	44 (29.3%)	14 (14.3%)		
In the last week have you forgiven someone for something that they have done?	Yes	N=153 99 (64.7%)	N=98 67 (68.4%)	0.358	0.55
	No	54 (35.3%)	31 (31.6%)		
In the last month has anyone asked you to forgive them?	Yes	N=154 58 (37.7%)	N=100 46 (46.0%)	1.743	0.117
	No	96 (62.3%)	54 (54.0%)		
If someone did ask you to forgive them within the last month, did you forgive them?	Yes	N=58 56 (96.6%)	N=46 42 (91.3%)	1.299	0.236
	No	2 (3.4%)	4 (8.7%)		
Have you ever not been able to forgive someone for something they have done?	Yes	N=151 80 (53.0%)	N=98 52 (53.1%)	1.551	0.461
	No	71 (47.0%)	46 (46.9%)		
Do you think that apology and forgiveness can help to resolve or heal a relationship between a victim and victimizer?	Yes	N=132 82 (62.1%)	N=86 55 (64.0%)	2.438	0.296
	No	10 (7.6%)	11 (12.8%)		
	Depends	40 (30.3%)	20 (23.3%)		
I am able to make-up pretty easily with people who have hurt me in some way	Agree/ Strongly Agree	N=154 101 (65.6%)	N=100 68 (68.0%)	0.376	0.828
	Neither Agree Nor Disagree	39 (25.3%)	25 (25.0%)		
	Disagree/ Strongly Disagree	14 (9.1%)	7 (7.0%)		
I have forgiven those who have hurt me	Always	N=153 28 (18.3%)	N=98 18 (18.4%)	1.626	0.653
	Almost Always	66 (43.1%)	42 (42.9%)		
	Often	43 (28.1%)	23 (23.5%)		

Public Forgiveness

The area of public forgiveness includes issues that are relevant to all of society and are larger than the individual. In our study the area of public forgiveness included questions on the environment and terrorism.

Environmental Issues and Forgiveness

Environmental issues are very charged in Humboldt County. In our survey we asked students a variety of questions related to the timber industry and environmental activism. These two topics were chosen because they often generate local controversy. Table 26 indicates students' general area of educational study (natural science or social science) had a significant relationship with two environmental variables. The majority of natural science majors (65.4%) disagree or strongly disagree with the notion that the timber mills should be closed down because they involve the destruction of nature, while only 36.7% of social science students felt this same way.

This difference between natural science and social science students was found to be statistically significant. The second question that was examined also revealed a significant difference between natural science and social science students. A majority of natural science students (58.8 %) disagree or strongly disagree that people in the timber industry need to ask for forgiveness because their industry involves the destruction of trees, while only 44.0% of social science students felt this same way. A majority of both social science (53.5%) and natural science students (57.5%) disagree or strongly disagree that environmental activists need to ask for forgiveness because their protest actions put many people out of business.

Table 26: Environmental Issues and Forgiveness by General Area of Educational Study

Question	Response	General Area of Educational Study		Chi-Square	Level of Significance (two-sided)
		Natural Science N=153	Social Science N=98		
The timber mills should be closed down because they involve the destruction of nature	Agree/ Strongly Agree	21 (13.7%)	19 (19.4%)	20.777	0.001
	Neither Agree Nor Disagree	32 (20.9%)	43 (43.9%)		
	Disagree/ Strongly Disagree	100 (65.4%)	36 (36.7%)		
People in the timber industry need to ask the public for forgiveness because they participate in an industry that involves cutting down trees		N=153	N=100	7.458	0.024
	Agree/ Strongly Agree	13 (8.5%)	18 18.0%)		
	Neither Agree Nor Disagree	50 (32.7%)	38 (38.0%)		
	Disagree/ Strongly Disagree	90 (58.8%)	44 (44.0%)		
Environmental activists need to ask for forgiveness because their protest actions have put people out of business		N=153	N=99	0.586	0.746
	Agree/ Strongly Agree	15 (9.8%)	9 (9.1%)		
	Neither Agree Nor Disagree	50 (32.7%)	37 (37.4%)		
	Disagree/ Strongly Disagree	88 (57.5%)	53 (53.5%)		

Terrorism and Forgiveness

The following Table 27 presents natural science and social science mean scores on a variety of questions relating to terrorism and forgiveness. Responses were measured on a five-point scale, with 1 representing strongly disagreeing and 5 representing strongly

agreeing with the statement. For all three variables a two-sample t-test was used. As Tables 27 shows, natural science and social science students did not differ on any variables dealing with terrorism and forgiveness.

**Table 27: A Comparison of Means of Attitudes on Terrorism and Forgiveness
By General Area of Educational Study**

Question	Means (Range 1-5)				t	Level of Significance (two-tailed)
	Natural Science N=152		Social Science N=100			
	Mean	SD	Mean	SD		
Terrorists need to ask for forgiveness because they attacked America and killed many people	3.36	1.195	3.24	1.231	0.774	0.44
Americans need to ask for forgiveness because we bombed Afghanistan and killed people	3.50	1.215	5.54	1.146	0.255	0.799
I can forgive those who attacked the U.S. on Sept. 11, 2001	3.06	1.169	3.16	1.204	0.658	0.511
Based on the events of Sept. 11, 2001 someone needs to be forgiven	2.99	1.067	3.09	1.063	0.775	0.439

Altruism

Table 28 presents natural science and social science mean scores on a variety of questions related to altruism. Responses were measured using a five point Likert-scale set of response categories that ranged from never (1), once (2), more than once (3), often (4), and very often (5). Table 28 indicates that social and natural science students differed in altruistic behavior for three variables: volunteer work, giving money to a stranger, and buying a product for a good cause. Table 28 indicates that social science students (mean=3.27) have done volunteer work for charity significantly more than natural science students (mean=2.83), ($t=3.038$, $p=0.003$). Social science students (mean=3.40) have also given money to a stranger who needed it or asked for it significantly more than natural science students (mean=3.05), ($t=3.081$, $p=0.002$) and social science students (mean=3.12) have also bought a product that they didn't need

because it was for a good cause significantly more than natural science students (mean=2.83), ($t=2.008$, $p=0.046$).

Question	Means (Range 1-5)				t	Level of Significance (two-tailed)
	Natural Science N=145		Social Science N=90			
	Mean	SD	Mean	SD		
I have done volunteer work for charity	2.83	1.143	3.27	1.049	3.038	0.003
I have given money to a stranger who needed it or asked for it	3.05	0.885	3.40	0.886	3.081	0.002
I have bought a product that I didn't need because it was for a good cause	2.83	0.922	3.12	1.163	2.008	0.046
I have given money to charity	3.01	0.860	3.09	1.028	0.565	0.573
I have allowed someone to go ahead of me in line	3.78	0.682	3.69	0.916	0.821	0.413
I have offered my seat on a bus or train to a stranger who was standing	3.12	1.151	3.14	1.123	0.142	0.888
I have helped a class-mate with a home-work assignment	3.54	0.850	3.37	1.016	1.361	0.175

Discussion

In regards to spirituality, religion, and faith, social science and natural science students did not differ significantly in their attitudes or experiences. An explanation for this could be because these topics are not controversial amongst social or natural science students and therefore no difference would be expected between these groups.

Next, social science and natural science students differed significantly on the personal forgiveness variable that asks whether respondents have hurt someone within

the last month. Almost two-thirds (70.7%) of natural science students reported hurting someone while 85.7% of social science respondents reported hurting someone within the last month.

Social science and natural science students differed significantly on two environment and forgiveness variables. The first question that came up significant asked respondents if they think that the timber mills should be shut down because they involve the destruction of nature. A majority of natural science majors (65.4%) disagreed or strongly disagreed with this statement, while only 36.7% of social science majors felt this same way. The second question that came up significant asked students if they think that people in the timber industry need to ask for forgiveness because they are involved in an industry that involves cutting down trees. Once again a majority of natural science majors (58.8%) disagreed or strongly disagreed with this statement, while only 44.0% of social science majors felt this same way. These significant differences between social science and natural science majors in regards to the environment and forgiveness can best be explained by the fact that natural science majors have a more direct relationship with the environment than social science students. Due to this closer relationship with the environment, natural science majors have a better understanding of the timber industries function in society. Most natural science students felt that the timber mills should not shut down and the people who work in them should not have to ask for forgiveness.

In regards to terrorism and forgiveness, social science and natural science students did not differ significantly in their attitudes. The terrorism and forgiveness variables used asked students about September 11th, the U.S. invasion of Afghanistan, and terrorists attacking our country without reference to 9/11.

Finally, social science and natural science students differed significantly in regards to three altruism variables. The first question that was found to be significant asked students how frequently they had done volunteer work. It was found that social science students volunteer more frequently than natural science students at the $p=0.001$ level. The second question that was found to be significant asked students how frequently they had given money to a stranger. Our independent-sample t-test found that social science students give money to strangers significantly more than natural science students at the $p=0.002$ level. The third question that was found to be significant asked students how frequently they had bought a product they didn't need because they knew it was for a good cause. The t-test showed that social science students bought a product

they didn't need significantly more frequently than natural science students at the $p=0.046$ level.

These differences between natural science and social science majors in regards to altruism can perhaps be explained by the fact that many social science majors study concepts such as social inequality and social change. Perhaps social science majors volunteer more and give more of their money to strangers than natural science majors because they see it as a small form of social change being used to help combat social injustice.