Appendix B
Variables and Constructs

These suggestions for variables and constructs have been provided by former statistics students who completed their own projects and by faculty who work in various statistics-intensive disciplines. These variables and answer formats are **suggestions only**. Recall that a construct is a variable that combines the responses to several questions.

Each section contains single-question variables first, followed by multi-item constructs.

Science, Health and Fitness

How many times in the last 12 months have visited the doctor?
0   1   2   3   4   5   6   7   8   9   10   11   12+

In the last 3 days how many hours of sleep have you gotten (including naps)?
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36+

In the last 2 days how many hours of sleep have you gotten (including naps)?
0 2 4 6 8 10 12 14 16 18 20 22 24+

In the last week, how many meals have you "eaten out"?
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   20   21+

In the last 7 days, how many hours have you spent working out (gym, group fitness classes, athletics practices, running, swimming, etc)?
0   ½   1   1½   2   2½   3   3½   4   4½   5   6   7   8   9   10   11   12   13   14   15   16   17   18   19   20+

How often do you use hand sanitizers per day?
0   1   2   3   4   5   6   7   8   9   10+

How many servings of alcohol have you consumed in the past 7 days (a serving is 10 oz of beer/wine, a shot or a mixed drink)? _____

Did you drink in high school?
☐   Never
☐   Once or Twice
☐   Often
☐   All the time

Approximately, at what age did you have your first alcoholic drink? _____

In the last 6 months, how many times have you been sick with a cold, the flu, etc.?
0   1   2   3   4   5   6   7   8   9   10+

How many hours of exercise have you gotten in the last week (including recreational sports and athletics practices/games)? _____

How many servings of junk food have you consumed in the past 3 days (candy, chips, fries, ice cream, etc?) _____

How many servings of candy or sweets have had in the past 3 days? _____

How many boxes of Girl Scout cookies did you purchase last month? _____

How many times in the last 3 days have you brushed your teeth? _____

As a nation, what do you think about the money we are spending on protecting the environment?

1	2	3	4	5
Far too Little	Too Little	About Right	Too Much	Far too Much

Body-Mass Index – BMI. Requires height, weight and a formula.
  How much do you weigh in pounds? _____
  How tall are you? ____ feet , ____ inches
  Formula in metric units: BMI = weight in kg / (height in meters)^2
  Formula in English units: BMI = weight in lbs * 703 / (height in inches)^2

How many total piercings do you have (count pairs of ear piercings as 2)? _____

How many total tattoos do you have (for large tattoos, count total number of sessions required to complete)? _____

How many 12 oz. servings of caffeine have you had in the last 48 hours?
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

Constructs

Dental Hygiene
How many times in the last 3 days have you…
    Brushed your teeth   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+
    Used mouthwash   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+
    Flossed your teeth   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+

The group who developed this construct noted that brushing and flossing are not equally hygiene-perfect. Because the typical recommendation was brush three times per day and floss once per day, they felt that flossing should count more. The formula they used for their inventory:

    Dental Hygiene Score = Brushings + Mouthwashes + 3 * Flossings

Their interpretation could be debated. An example might be using a multiplier of "2" instead of "3" for flossing. Use your own ideas, but explain your reasoning in your presentation and your write-up.

Social Life, Activities and Relationships

How many trips to Wal-Mart have you made in the last 2 weeks?
0   1   2   3   4   5   6   7   8   9   10   11   12+

How many times in the last two weeks did you attend a party where alcohol was served?
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

How many hours have you spent on fraternity/sorority activities in the last 7 days?
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

In the last 7 days, how many hours have you spent playing video games?
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50+

What is your current dating status (check one)?
_____ Single, not dating
_____ Single, dating around
_____ Dating exclusively – less than 3 months
_____ Dating exclusively – 3 to 12 months
_____ Dating exclusively – more than a year
_____ Engaged
_____ Married

On a scale of 1 to 10, 10 being perfect happiness, how happy are you with your social life?
1   2   3   4   5   6   7   8   9   10

How many total parties and social events have you attended in the last 7 days?
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

On a scale of 1 to 10, 10 being "very important," how important is it to you to have a big Valentine's Day celebration?
1   2   3   4   5   6   7   8   9   10

On a scale of 1 to 10, 10 being "very important," how important is it to you to wear a costume and attend parties for Halloween?
1   2   3   4   5   6   7   8   9   10

Going to parties is very important to me.

	1	2	3	4	5	6	7
	Strongly Disagree	Disagree		Neutral No Opinion		Agree	Strongly Agree

Being in athletics is very important to me.

	1	2	3	4	5	6	7
	Strongly Disagree	Disagree		Neutral No Opinion		Agree	Strongly Agree

On average, how many days per week would you say you spend 4 or more hours socializing with friends or going to parties?
0   1   2   3   4   5   6   7

How many close friends do you have? Please write the approximate number. _____

In the last 7 days, how many total movies have you seen (TV, cable, DVD or theater)?
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20+
In past 3 days, how many hours of TV have you watched?
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40+

In past 7 days, how many nights did you go out (social event with at least 3 people)?
0   1   2   3   4   5   6   7

In the last 3 days, how many hours have you spent on recreational Internet use (games, Facebook, surfing, etc.)? _____

How many times in the last week have you nodded off to sleep in class?
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

What is the total number of class meetings (lecture, lab, etc.) you have missed?
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

In the past 10 class meetings, how many times have you been at least 2 minutes late to class?
0   1   2   3   4   5   6   7   8   9   10

On a scale of 1 to 10, 10 being music addict, rate your level of music enjoyment.
1   2   3   4   5   6   7   8   9   10

How many songs have you ripped and/or downloaded to your iPod/MP3 player in the last month? _____

How often do you read the newspaper (check one)?
_____ Every day
_____ A few times a week
_____ Once a week
_____ Less than once a week
_____ Never

In the last 3 days, how many total hours have you spent on personal blog spaces
(MySpace, Facebook, etc.)? _____

In past week, how many hours have you spent with your significant other
(talking on phone, meals, dates, etc.)? _____

Constructs

Campus Involvement
How many hours did you spend last week on these extracurricular and co-curricular activities?

Honor Societies	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+
Greek Life	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+
Student Org (SGA, etc)	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+
Intramurals, Club sports	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+
Religious (BCM, etc)	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+
Military (ROTC)	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+
Other	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15+

Scoring: sum the total hours spent on extra- and co-curricular activities. Note that band, choir and theater groups are not specified – think about the activities that are popular at your university.

Binge Drinking

In the last month, how many times have you had more than 5 drinks or beers in one evening or day?	0 1 2 3 4 5 6 7 8 9 10+
In the last two weeks, how many times have you had more than 5 alcoholic drinks in one sitting?	0 1 2 3 4 5 6 7 8 9 10+
How many times in the last month have you had more than 5 alcoholic drinks in less than one hour?	0 1 2 3 4 5 6 7 8 9 10+
How often do you participate in drinking games?	0 1 2 3 4 5 6 7 8 9 10+
How many times in the last two weeks have you "beer bonged" a beer, "shot-gunned a beer", or taken a shot of alcohol?	0 1 2 3 4 5 6 7 8 9 10+

Sum the totals. Range is 0 to 50+, with large numbers indicating more frequent binge drinking.

Problem Drinking

☐ Yes ☐ No Do you ever drink alone?
☐ Yes ☐ No Do you ever drink during the day?
☐ Yes ☐ No Has a friend or family member ever told you that they are concerned about your drinking?
☐ Yes ☐ No Do believe your drinking has affected your GPA?
☐ Yes ☐ No Has your drinking ever affected a relationship you have had with someone in a negative way?
☐ Yes ☐ No Do you drink just about every day?
☐ Yes ☐ No Have you ever blacked out because of drinking alcohol?
☐ Yes ☐ No Do you sometimes crave alcohol?
☐ Yes ☐ No Can you drink a lot more than many of your friends or other people you know?
☐ Yes ☐ No Whenever you go out, do you almost always drink?

Score each "yes" response as "1" and each "no" response as "0." Sum them. Range is 0 to 10, with higher numbers indicating higher likelihood the individual has a drinking problem.

Academics and Education

What is the highest level of education you hope to obtain (check one)?
_____ Bachelors
_____ Masters
_____ Advanced Professional Degree (Medicine, Law, Pharmacy, etc)
_____ Doctorate

What is your current GPA (4.0 scale)? _____

On average, how many days per week would you say you spend 4 or more hours studying for school?
0   1   2   3   4   5   6   7

In the last 5 days, how many class meetings and/or labs did you miss?
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

Academic work is very important to me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree		Neutral No Opinion	Agree		Strongly Agree

On a scale of 1 – 10, how important is it for you to have a high GPA (10 being extremely important)?
1   2   3   4   5   6   7   8   9   10

How many credit hours are you taking this semester? _____

On a scale of 1 to 10, 10 being perfect, rate your study habits.
1   2   3   4   5   6   7   8   9   10

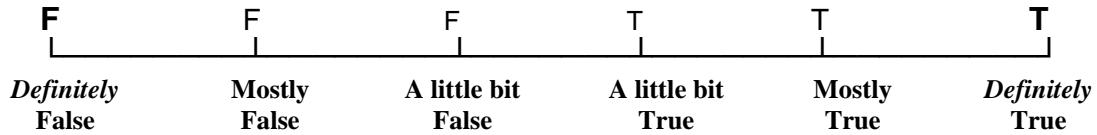On a scale of 1-10, how important do you think it is to have perfect class attendance (10 being extremely important)?
1   2   3   4   5   6   7   8   9   10

Constructs

Motivation
Please use the following scale to answer the statements below. Circle the letter that best describes how true or false each statement is for you.

F	F	F	T	T	**T**
Definitely **False**	**Mostly** **False**	**A little bit** **False**	**A little bit** **True**	**Mostly** **True**	*Definitely* **True**

1	I like mathematics assignments I can learn from even if I make a lot of mistakes. (I)	**F** F F T T **T**
2	The reason I do mathematics assignments is that I want to learn as much as I can about the subject. (I)	**F** F F T T **T**
3	An important reason I do my mathematics assignments is because I want to learn new things. (I)	**F** F F T T **T**
4	An important reason I do my mathematics assignments is because I want to become better at mathematics. (I)	**F** F F T T **T**
5	I do my mathematics assignments because I find them interesting. (I)	**F** F F T T **T**
6	I am in this class **only** because it is required for my major. (E)	**F** F F T T **T**
7	I am in this class because I enjoy the material. (I)	**F** F F T T **T**
8	I work hard in this class to avoid being punished by my parents. (E)	**F** F F T T **T**
9	I work hard in this class because I must maintain a high GPA. (E)	**F** F F T T **T**
10	I work hard in this class to avoid disappointing my parents. (E)	**F** F F T T **T**

The codes in parenthesis, (I) = Intrinsic Motivation, (E) = Extrinsic Motivation, should not be used on the actual survey. Assign the responses numerical values **F** = 1 through **T** = 6. Sum the responses with an (I) for the intrinsic motivation scale, and sum the responses with an (E) for the extrinsic motivation scale.

Religious Beliefs

How many times last month did you attend religious services and/or activities sponsored by religious organizations (BCM, Wesley, Newman, etc.)?
0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

On a scale of 1 to 10, 10 being very religious, rate the depth of your religious beliefs.
1   2   3   4   5   6   7   8   9   10

Religion is very important to me.

1	2	3	4	5	6	7
Strongly Disagree	Disagree		Neutral No Opinion		Agree	Strongly Agree

Which of these statements comes closest to describing your feelings about the Bible? Read statements and mark one answer.

- ☐ The Bible is the actual word of God and is to be taken literally, word for word.
- ☐ The Bible is the inspired word of God, but not everything should be taken literally.
- ☐ The Bible is an ancient book of fables, legends, history, and moral perceptions recorded by men.

Please mark which statement comes closest to expressing what you believe about God.

- ☐ I don't believe in God.
- ☐ I don't know whether there is a God and I don't believe there is any way to find out.
- ☐ I don't believe in a personal God, but I do believe in a Higher Power of some kind.
- ☐ I know God really exists and I have no doubts about it.

Constructs

Religious Conservatism

☐ Yes ☐ No Public prayer should be allowed in public schools.
☐ Yes ☐ No I believe homosexuality is morally wrong.
☐ Yes ☐ No I believe that a judge should be allowed to post the Ten Commandments in his courtroom if he wants to.
☐ Yes ☐ No I believe abortion should be illegal.
☐ Yes ☐ No I do not believe in evolution. I believe the Bible's version of creation.

Score each "yes" response as "1" and each "no" response as "0." Sum the totals. Range is 0 to 5, with "5" indicating an individual who is very conservative with regard to religion.

Religiousness

	Never	Occasionally	Weekly or more
How often in the last year have you attended church?	1	2	3
How often in the past year have you given money to your church?	1	2	3
How often in the past year have you gone to other church affairs, such as meetings, Bible study, or trips?	1	2	3
How often do you read the Bible?	1	2	3
How often do you pray?	1	2	3
In the last year, how often have you listened to or watched Christian programming on TV or radio?	1	2	3
How often in the past have you read a religious book other than the bible?	1	2	3

Sum the totals. Range is 7 to 21, with "7" indicating an individual with very little religious activity and "21" indicating immense religious activity.

Business, Economics and Personal Finance

How many hours have you worked in the last 7 days? _____

How many minutes is your commute to work (one-way)? _____

How much allowance money have your parents given to you in the last month? _____

What is your average weekly income? _____

What percentage of your annual educational expenses are paid through the university's financial aid office (scholarships, loans, grants)?

| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |

Constructs

Total Work-related Hours.
　　How many hours did you work in the past week? _____
　　How many minutes does it take you to commute to work one-way? _____
　　How many times did you commute to work in the past week? _____

Scoring: some arithmetic is required, which Excel can perform. The formula:

$$\text{Work Inventory} = \text{Hrs Worked} + 2 * \text{Times Commuted} * (\text{Commute Minutes} / 60)$$

Units are in hours.

Family Variables

Did your parents drink alcoholic beverages in front of you when you where growing up (mark one)?
☐ Never
☐ Rarely
☐ Sometimes
☐ Often
☐ Always

My family disapproves of alcohol use.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Strongly Disagree | Disagree | | Neutral No Opinion | | Agree | Strongly Agree |

Did both of your parents work when you were growing up?

How close would you say you are to your parents (check one)?
☐ Not too close
☐ Somewhat close
☐ Not close at all

In your opinion, what would be the ideal age for you to get married? _____

In your opinion, what would be the ideal number of children you would want to have?
0　1　2　3　4　5　6+

It is sometimes necessary to discipline a child with a good, hard spanking.

1	2	3	4	5	6	7
Strongly Disagree	Disagree		Neutral No Opinion		Agree	Strongly Agree

What is your father's (mother's) highest level of academic completion?
_____ Some High School
_____ High School
_____ Some College
_____ Associate's Degree (2 year degree)
_____ Bachelors Degree
_____ Some Graduate School
_____ Masters
_____ Advanced Professional Degree (Medicine, Law, Pharmacy, etc)
_____ Doctorate

Politics

On a scale of 1 to 10, with 1 being very conservative and 10 being very liberal, rate your political viewpoint.
1   2   3   4   5   6   7   8   9   10

Political Party
In politics today, do you consider yourself a (check one):
_____ Strong Republican (1)
_____ Republican
_____ Moderate Republican
_____ Independent
_____ Moderate Democrat
_____ Democrat
_____ Strong Democrat (7)

Do not include codes in parentheses. Scored as a 7-point Likert Scale. Please note that this is not quite the same as "conservative" vs. "liberal."

Constructs

Attitude towards Women
☐ Yes ☐ No   Most men are better suited emotionally for politics than men.
☐ Yes ☐ No   Women should take care of running their homes and leave running
              the country up to men.
☐ Yes ☐ No   A woman should not work if her husband is capable of supporting the family.
☐ Yes ☐ No   Women are not suited to serve in the Armed Forces.

Score each "yes" response as "0" and each "no" response as "1." Sum the responses. Range is 0 to 4, with "0" indicating an individual strongly opposed to women's rights, and "4" indicating strongly supportive.

Pornography (coding given in parentheses but *should NOT be included on survey!!*)
I think that laws against pornography in this country are (check one)
_____ too strict (2)
_____ just about right (1)
_____ not strict enough (0)

It should be legal for adults to buy sexually explicit DVD's to view in their homes.
_____ Agree (1)
_____ Disagree (0)

It should be legal for someone to set up a nude dance club in my neighborhood.
_____ Agree (1)
_____ Disagree (0)

Sum the coding values for the three questions. Range is 0 to 4, with "0" indicating an individual strongly opposed to pornography, and "4" indicating strongly supportive. This variable is hierarchical and can (with care) be used in a regression study – ask your professor. It is a great category variable for possible use in the group comparison project as a grouping variable.

Homosexuality
☐ Yes ☐ No   I believe homosexuality is morally wrong.
☐ Yes ☐ No   I believe marriages between homosexuals should not be allowed.
☐ Yes ☐ No   I believe homosexual couples should not be allowed to adopt children.
☐ Yes ☐ No   I believe that homosexuals should not be allowed to serve in the military.
☐ Yes ☐ No   I believe that sexual activity involving homosexuality should be against the law.

Score each "yes" response as "0" and each "no" response as "1." Sum the totals. Range is 0 to 5, with "0" indicating an individual strongly opposed to homosexuality, and "5" indicating strongly supportive.

Abortion
(You will need to format Likert Scale responses 1 to 5 ranging from
Strongly Disagree to Strongly Agree.   Options vary.)

Abortion is morally wrong.
More laws should be passed to make it more difficult for women to obtain an abortion.
Abortion should be illegal.

Score SD = 1, D = 2, N = 3, A = 4, and SA = 5. Sum the totals. Range is 3 to 15, with "3" indicating an individual strongly in favor of abortion rights, "9" indicating neutral/no opinion, and "15" indicating strongly opposed to abortion.

Legalization of Marijuana
☐ Yes ☐ No   The possession of small amounts of marijuana should not be a criminal offense.
☐ Yes ☐ No   People in the possession of small amounts of marijuana should be fined rather than sent to jail.
☐ Yes ☐ No   Marijuana should be legal for medical purposes.

Score each "yes" response as "1" and each "no" response as "0." Sum the totals. Range is 0 to 3, with "0" indicating an individual who strongly supports legalized marijuana, and "3" indicating strongly opposed. Answers can be formatted as Likert Scale responses (see abortion construct above).

Racism

How would it make you feel if a close relative of yours was planning to marry a minority (circle one)?

Uneasy   Somewhat Uneasy   Not uneasy at all

How would it make you feel if your supervisor at work was a minority (circle one)?

Uneasy   Somewhat Uneasy   Not uneasy at all

How would it make you feel if a minority moved into a house next to yours (circle one)?

Uneasy   Somewhat Uneasy   Not uneasy at all

Score "1" for each "uneasy response," "2" for each "somewhat uneasy" response and "3" for "not uneasy at all." Sum the totals. Range is 3 to 9, with higher scores indicating more open attitudes toward minority groups.

Law Enforcement

In the last two weeks, how many times have you parked illegally on campus?

0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

In the last two months, how many campus parking tickets have you received?

0   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15+

Do you favor or oppose the death penalty for person convicted of murder? (Asked on a nationwide 2006 survey with 1885 saying "favor" and 930 saying "oppose." Note this is a categorical variable, not a numeric one.)

How worried are you that you will become a victim of crime?

_____ Very worried
_____ Somewhat worried
_____ Not very worried
_____ Not worried at all

Do you favor or oppose a law which would require a person to obtain a police permit before she or he could buy a gun? (Note this is a categorical variable, not a numeric one.)

In the past five years, how many traffic accidents have you been in that, according to police/insurance, were **your fault**? _____

How many speeding tickets have you received in the past 5 years? _____

How strongly do you oppose or support a law that makes ownership of an automatic weapon illegal?

1	2	3	4	5
Strongly Oppose	Oppose	Neither Oppose nor Support	Support	Strongly Support

Constructs

Gun Control

☐ Favor ☐ Oppose   Do you favor or oppose a federal law banning assault weapons?

☐ Favor ☐ Oppose   Do you favor or oppose a federal law banning hand guns?

☐ Favor ☐ Oppose   Do you favor or oppose a federal law that requires anyone that buys a gun to register with the federal government?

Score each "favor" response as "1" and each "oppose" response as "0." Sum the totals. Range is 0 to 3, with "0" indicating an individual strongly opposed to gun control laws, and "3" indicating strongly supportive.

Answers can also be formatted as Likert Scale responses. For example:

Strongly Oppose = 1

Oppose = 2

Neutral = 3

Favor = 4

Strongly Favor = 5

Sum the totals. Range is 3 to 15, with "15" indicating an individual strongly in favor of gun control, "9" indicating neutral/no opinion, and "15" indicating strongly opposed to gun control.