

# Appendix 1: Experimental Design

## Methodology

Our methodology is adapted from several papers (e.g., Chen 2011; Chen and Schonger 2013) and we provide a generic description. We recruit workers through a labor market intermediary (LMI), Amazon Mechanical Turk. The LMI is designed to recruit a large number of workers in a short amount of time. Through an interface provided by the LMI, buyers post tasks and registered workers perform the tasks for money.<sup>1</sup> The tasks are generally simple for humans to do yet difficult for computers. Common tasks include captioning photographs, extracting data from scanned documents, and transcribing audio clips. The LMI also allows a researcher to implement randomization although randomization is not inherent to the LMI.

The LMI can be used to implement anything from a natural field experiment to a laboratory experiment. In the LMI, workers come to the marketplace naturally and are unaware they are in an experiment at the time of arrival. The behavior of subjects in the LMI is comparable to the behavior of subjects in a laboratory and may be comparable to subjects in a real labor market (Horton, Rand, and Zeckhauser 2011).

Although most buyers post tasks directly on the LMI website, they are also able to host tasks on an external site. On the LMI, we post a single placeholder task containing a description of the work and a link to an external site for workers to follow if they want to participate. On the external site, we ask all workers to transcribe paragraphs of scanned texts consisting of a Tagalog translation of Adam Smith’s *The Wealth of Nations* as well as English paragraphs of dictionary definitions. This “lock-in” task is tedious so that no one is likely to do it “for fun,” and it is simple enough so that all market participants can do the task. The source text was machine-translated to prevent subjects from finding the text elsewhere on the Internet. Time and money are the most cited reasons for participation in Mechanical Turk.<sup>2</sup> If subjects are unaware of an ongoing experiment, researchers worry that differential attrition may arise at the time treatment is revealed. The lock-in data entry serves as an effective commitment mechanism to minimize attrition from the experiment; the attrition rate after this task was 1%.

All workers were asked to transcribe three-paragraph length, scanned texts (lock-in text paragraphs) into a text box (Appendix 2). On completion, workers were randomized into three experimental groups:

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<sup>1</sup> Amazon Mechanical Turk has several measures that prevent a worker from entering the experiment more than once. A worker ID may not accept the same task twice. It also prevents a single person from generating multiple worker IDs by using e-mail addresses, IP addresses, and in some cases, bank accounts.

<sup>2</sup> <http://behind-the-enemy-lines.blogspot.com/2008/03/mechanical-turk-demographics.html>. Some workers do it out of need. A disabled former United States Army linguist became a Turk Worker for various reasons and in nine months he made four thousand dollars (New York Times, March 25, 2007). Some drop out of college to pursue a full time career with these disaggregated labor markets (Web Worker Daily, October 16, 2008, Interview with oDesk CEO). For more information about the motivation and demographics of Mechanical Turk workers, see Paolacci, Chandler, and Ipeirotis (2010).

1. Arm 1:
  - i. Workers were asked to transcribe a fourth paragraph – one of eight different paragraphs randomly assigned (Appendix 3).
  - ii. They proceeded to answer several questions on their own sexual attitudes and behaviors (Appendix 4 and Appendix 6).
  - iii. Workers are asked about their perceptions of U.S. sexual behaviors (prevalence of same-sex relationships, extramarital relationships, and STDs) (Appendix 7).

A few workers were randomized into a group such that they did not transcribe a fourth paragraph. They proceeded from the three lock-in paragraphs directly to the questions on sexual attitudes, behaviors, and perceptions of U.S. sexual behaviors.
2. Arm 2:
  - i. Once the workers complete the three lock-in paragraphs, they answer four questions on sexual attitudes (Appendix 4, Questions 1-4).
  - ii. Workers are asked about their perceptions of U.S. sexual behaviors (prevalence of same-sex relationships, extramarital relationships, and STDs) (Appendix 7).
  - iii. On completion, they are randomized into one of eight groups, as in Arm 1, where each group gets a different paragraph for a total of six treatment groups and two control groups. (Appendix 3).
  - iv. Workers are then asked more questions on their own sexual attitudes (Appendix 4 Questions 5-11), and behaviors (Appendix 6).
  - v. Finally, workers are again asked about their perceptions of U.S. sexual behaviors (prevalence of same-sex relationships, extramarital relationships, and STDs) (Appendix 7).
3. Arm 3: Similar to Arm 2 except that there were additional incentive-based questions on getting a close approximation to how other people answered.
  - i. Once the workers complete the three lock-in paragraphs, they answer four questions on sexual attitudes (Appendix 4, Questions 1-4).
  - ii. Workers are asked about their perceptions of U.S. sexual behaviors (prevalence of same-sex relationships, extramarital relationships, and STDs) (Appendix 7).
  - iii. Workers are then asked to estimate what other workers would say about their perceptions of U.S. sexual behaviors and are offered a payment incentive for accuracy (Appendix 8).
  - iv. On completion, they are randomized into one of eight groups where each group gets a different paragraph (Appendix 3).
  - v. Workers are then asked more questions on their own sexual attitudes (Appendix 4 Questions 5-11).
  - vi. Workers are asked how other workers would answer the attitude questions and are offered a payment incentive for accuracy (Appendix 5).
  - vii. They are asked questions on their own sexual behavior (Appendix 6).

- viii. Workers are again asked questions on their perceptions of U.S. sexual behaviors (prevalence of same-sex relationships, extramarital relationships, and STDs) (Appendix 7)
- ix. Workers are then asked to estimate what other workers would say about their perceptions of U.S. sexual behaviors and are offered a payment incentive for accuracy (Appendix 8).

Workers were assigned one of the three groups above randomly, and once they had answered questions in the order specific to their groups, they proceeded to answer questions on the percentage of the US population, they thought:

- Regularly have same-sex relations
- Have sexually transmitted disease (STD)
- Have had or currently having an extramarital affair

Workers in Groups 2 and 3 answered the above questions twice – before and after they had transcribed the fourth paragraph that elaborated on certain sexual behaviors through US court rulings, which were either conservative (censuring such behavior) or liberal (did not criminalize such behavior).

After answering questions on the sexual behavior of people in the US, the workers then took a short survey that asked their gender, age, state of residence in the US, religious preference (Protestant, Catholic, Jewish, Latter-Day Saints, None, Others – specify), how often they attend services (never, once a year, once a month, once a week, or multiple times a week), race/ethnicity (White, Hispanic, Asian/Pacific Islander, Native American, Black), and political affiliation (Strong democrat, Not so Strong Democrat, Independent – Near Democrat, Independent, Independent – Near Republican, Not Strong Republican, Strong Republican, Other Party, Don't Know).

The last question was on their work experience – Very satisfied, Satisfied, Slightly satisfied, and Not at all satisfied.

After work was completed according to the original expiry date listed on the LMI, bonuses were calculated and workers were notified of their earnings.

## Appendix 2. Placeholder Task at Amazon Mechanical Turk

### **Transcribe Text**

Instructions:

- After you have read the instructions, go to this site to begin work: **Please Right Click Here** (to open job in a new window)
- Copy text exactly as it appears in the scanned image.

Payment:

- You will receive 10 cents for completing each paragraph.
- You will receive an additional 50 cents for completing the survey.

When you complete the survey at the end, you will receive a completion code, which you must enter at the end of this survey AND on the Mechanical Turk website, in order to receive payment.

You MUST keep this window open in order to enter the completion code. Bonuses will be paid after the HIT expires or after the work has been completed.

Enter completion code here:

### Appendix 3. Data Entry Paragraphs

**1 of 3 Lock-in Tasks:** Kaya sa isip o diwa na tayo ay sa mga ito, excites ilang mga antas ng parehong damdamin, sa proporsyon ng kasiglahan o dulness ng kuru-kuro. Ang labis na kung saan sila magbuntis sa kahirapan ng mga wretches nakakaapekto sa partikular na bahagi sa kanilang mga sarili ng higit pa sa anumang iba pang; dahil sa takot na arises mula sa kathang isip nila kung ano ang kani-kanilang mga sarili ay magtiis, kung sila ay talagang ang wretches kanino sila ay naghahanap sa, at kung sa partikular na bahagi sa kanilang mga sarili ay talagang apektado sa parehong miserable paraan. Ang tunay na puwersa ng mga kuru-kuro na ito ay sapat na, sa kanilang mga masasaktin frame, upang gumawa ng na galis o hindi mapalagay damdam complained ng.

**Treatment 1 (Conservative obscenity decision):** A federal court has ruled that the North Carolina legislature may ban the sale of hardcore pornography in bookstores. The North Carolina legislature had enacted the ban as a nuisance abatement measure. The legislature considered adult bookstores to be nuisances. Adult bookstore owners had challenged the North Carolina statute as unconstitutional. They argued that the statute would be restricting expression before they reach the public and before they are deemed obscene or not. In general, prior restraints on speech are unconstitutional under the First Amendment. However, the First Amendment does not protect obscene speech. The Fourth Circuit court said that statute's prior restraints on explicit photographs and films are acceptable, because they applied only to films and photos sold in hardcore pornography stores. The speech was not completely limited since other stores, such as regular newsstands, could still sell the material.

**Treatment 2 (Conservative obscenity decision, gay content):** Jack and Nirvana Zuideveld and thirty-seven others were charged with running a smut club in the Chicago area, and mailing obscene material by a District court. The Zuidevelts published two magazines, Vim and Gym that featured muscle displays and body culture articles. They also served as a vehicle for promoting membership in the Adonis Male club and the International Body Culture association, through which men could swap letters with each other. The magazines were sold on newsstands and sent through mail. While some content was not sexual in nature, many of the articles and photographs in these magazines dealt with the subject of homosexuality. The dominant theme of the magazines was to appeal to the interest of the homosexual male. Under Title 18 USC 1461 obscene material is not mailable. The court alleged that the club catered to exchange of pornography through mail, and convicted the accused.

**Treatment 3 (Conservative obscenity decision, lesbian content):** Harold G. Childs, an operator of a cigar store in Portland, Oregon, was convicted by a district court for disseminating obscene matter. He had sold a copy of the paperback book, Lesbian Roommate, to a Portland police officer. Childs contested that this was in violation of the First and Fourteenth Amendments. The Supreme Court of Oregon however, held that the obvious purpose of the book was to stimulate the reader sexually. It also said that the entire book was for the purpose of inciting lascivious thoughts and arousing lustful desires, and upheld the conviction.

**Treatment 4 (Liberal obscenity decision):** A North Carolina sheriff who went on a crusade to stop all Adults only movie screenings was found to violate the First Amendment by a district judge. The sheriff had promised that no one in Rutherford County was going to see a movie labeled R or X as long as he was in office, and that all movies except those rated for general audiences were considered by him to be obscene. He proved such an effective censor that the theatre-owners discontinued entirely showing adult rated films. The judge found evidence that the public, faced with a string of G rated movies, stayed away in droves, and would have driven the theatre-owners out of business. The district judge believing that the conduct of the sheriff however well intentioned was unconstitutional as it violated the First and Fourteenth Amendments of the Constitution.

**Treatment 5 (Liberal obscenity decision, gay content):** The Boys of Cocodorm – Snow Bunni, J Fizzo, et al – are staying put, after a federal judge ruled that the gay porn website has a right to film out of its Edgewater home. Cocodorm.com features black and Hispanic men, known as dorm dudes, who share a webcam-filled house together and have sex on schedule. For that they are paid at least \$1,200 a month, plus free room and board. Miami has tried to shut the house down, arguing it constitutes an adult business illegally operation in a residential area. The city’s Code Enforcement Board in 2007 agreed, but Cocodorm responded to the code enforcement proceedings by suing in federal court. From the outside, the Cocodorm house looks like any other residence. Those who want to see Cocodorm’s hottest and horniest do so via the Internet, with a credit card.

**Treatment 6 (Liberal obscenity decision, lesbian content):** A company may transport obscene magazines as long as the magazines have enough literary content and social value, according to the Fifth Circuit. Michael Travis and the Peachtree News Company appealed to the Fifth Circuit after prosecutors in a federal trial court convicted them of twelve counts transporting obscene magazines across state lines. The government may constitutionally regulate the interstate transport of materials that are defined as obscene. The First Amendment protects speech generally, making it harder for the government to

regulate constitutionally protected speech. However, obscenity is excluded from First Amendment protections. According to the Fifth Circuit ruling, the magazines' pictures alone would be obscene. But six of the magazines also had short stories and discussions of lesbianism, homosexuality, nudity, censorship, photography, marital sexual problems, and fine art. These gave them enough social value to merit constitutional protection.

**Control 1 (English paragraph):** By the early 1800s, the mechanically operated semaphore telegraph lines were used extensively in Europe, although only a few simple links were ever built in the United States. However, these visual telegraphs were slow, could be used over limited distances and their usability was limited to times when there was good visibility. Inventors tried to develop a way to send signals electrically along wires, which would transmit signals instantaneously over great distances and in every kind of weather. But the nature of electrical fluid as electrical currents were then known, was not very well understood. In 1838, William Cooke and Charles Wheatstone developed the first commercial electric telegraph. Like earlier mechanical telegraphs, the electric telegraph used visual signaling. Other inventors were also working in the meantime on electric telegraphs based on different principles. Samuel Morse, in the United States, developed a single wire system that imprinted dots and dashes on a moving paper tape.

**Control 2 (Tagalog paragraph):** Tungkol sa mga bagay na kung saan ay itinuturing na walang anumang ugnayan sa alinman sa mga katangi-tangi sa sarili o sa tao na ang mga sentiments namin ng mga hukom; saan ang kanyang sentiments buong lumihang sa aming mga sarili, ascribe namin sa kanya ang mga katangian ng lasa at mabuti paghuhusga. Ang kagandahan ng isang payak na, ang kadakilaan ng isang bundok, ang mga burloloy ng isang gusali, ang pagpapahayag ng isang larawan, ang mga sangkap ng isang panayam, ang pagsasagawa ng isang ibang tao, ang proporsyon ng iba't-ibang dami at numero

## Appendix 4. Questionnaire on Individual Standards

### Questions on Sexual Attitudes

1. Are you for or against sex education in the public schools?

For

Against

Don't Know

Refuse to Answer

2. Should divorce in this country be easier or more difficult to obtain than it is now?

Easier

More Difficult

Stay as is

Don't Know

Refuse to answer

3. There's been a lot of discussion about the way morals and attitudes about sex are changing in this country. If a man and woman have sexual relations before marriage, do you think it is always wrong, almost always wrong, wrong only sometimes, or not wrong at all?

Always wrong

Almost always wrong

Wrong only sometimes

Not wrong at all

Don't know

Refuse to answer

4. What if they are in their early teens, say 14 to 16 years old? In that case, do you think sexual relations before marriage are always wrong, almost always wrong, wrong only sometimes, or not wrong at all?

Always wrong

Almost always wrong

Wrong only sometimes

Not wrong at all

Don't know

Refuse to answer

5. What is your opinion about a married person having sexual relations with someone other than their marriage partner—is it always wrong, almost always wrong, wrong only sometimes, or not wrong at all?

Always wrong

Almost always wrong

Wrong only sometimes

Not wrong at all

Don't know

Refuse to answer

6. What about sexual relations between two adults of the same sex--do you think it is always wrong, almost always wrong, wrong only sometimes, or not wrong at all?

Always wrong

Almost always wrong

Wrong only sometimes

Not wrong at all

Don't know

Refuse to answer

7. Sexual materials lead to breakdown of morals.

Agree  
Disagree  
Don't Know  
Refuse to Answer

8. Sexual materials provide an outlet for bottled-up impulses and reduce the likelihood of mischief.

Agree  
Disagree  
Don't Know  
Refuse to Answer

9. Which of the following statements comes closest to your feelings about pornography laws?

There should be laws against the distribution of pornography, whatever the age  
There should be laws against the distribution of pornography to persons under 18  
There should be no laws forbidding the distribution of pornography  
Don't know  
Refuse to answer

### **Questions on Negative Externalities**

10. Sexual materials lead people to commit rape.

Agree  
Disagree  
Don't Know  
Refuse to Answer

11. Do sexual materials lead to a greater prevalence of any sexually transmitted disease?

Yes  
No  
Don't know  
Refuse to answer

## **Appendix 5. Questionnaire on Perceived Community Standards**

1. What percentage of people taking this survey, do you think, would say they are in favor of sex education in public schools? Type in a number between 0 and 100.



You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

2. What percentage of people taking this survey, do you think, would say that it should be easier to obtain divorce in this country than it is now? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

3. What percentage of people taking this survey, do you think, would say that it is always wrong if a man and woman have sexual relations before marriage? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

4. What percentage of people taking this survey, do you think, would say that it is always wrong if people in their early teens (14-16 years old) have sexual relations before marriage? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

5. What percentage of people taking this survey, do you think, would say that it is always wrong if a married person has sexual relations with someone other than their marriage partner? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

6. What percentage of people taking this survey, do you think, would say that it is always wrong for two adults of the same sex to have sexual relations between them? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

7. What percentage of people taking this survey, do you think, would agree that sexual materials lead to breakdown of morals? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

8. What percentage of people taking this survey, do you think, would agree that sexual materials lead people to commit rape? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

9. What percentage of people taking this survey, do you think, would agree that sexual materials provide an outlet for bottled-up impulses and reduce the likelihood of mischief? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

10. What percentage of people taking this survey, do you think, feel that there should be laws against the distribution of pornography, whatever the age? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

11. What percentage of people taking this survey, do you think, would agree that sexual materials lead to a greater prevalence of any sexually transmitted disease? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

## Appendix 6. Questionnaire on Behaviors

1. Have you seen an X-rated movie in the last year?

Yes

No

Don't know

Refuse to answer

2. Were you ever divorced?

Yes  
No  
Never married  
Don't know  
Refuse to answer

3. How many sex partners have you had in the last 12 months?

No partners  
1 partner  
2 partners  
3 partners  
4 partners  
5-10 partners  
11-20 partners  
21-100 partners  
More than 100 partners  
Don't know  
Refuse to answer

Skip logic: If the answer to Question 3 is exactly equal to No partners, skip questions 4-8

4. Was one of the partners your husband or wife or regular sexual partner?

Yes  
No  
Don't know  
Refuse to answer

5. Was one of the partners a close personal friend?

Yes  
No  
Don't know  
Refuse to answer

6. Was one of the partners a casual date or pick up?

Yes  
No  
Don't know  
Refuse to answer

7. Have you ever paid for sex, or been paid for sex?

Yes

No  
Don't know  
Refuse to answer

8. About how often did you have sex during the last 12 months?

Not at all  
Once or twice  
About once a month  
2 or 3 times a month  
About once a week  
2 or 3 times a week  
More than 3 times a week  
Don't know  
Refuse to answer

## Appendix 7. Questionnaire on Beliefs about Others (Behaviors)

1. What percentage of the US population, do you think, regularly have same-sex relations? Type in a number between 0 and 100.
2. What percentage of the US population, do you think, have a sexually transmitted disease? Type in a number between 0 and 100.
3. What percentage of the US population, do you think, have had or are currently having an extramarital affair? Type in a number between 0 and 100.

## Appendix 8. Questionnaire on Others' Perceptions of Behaviors

1. What do you think other people taking this survey would say is the percentage of the US population that regularly have same-sex relations? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

2. What do you think other people taking this survey would say is the percentage of the US population that have a sexually transmitted disease? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

3. What do you think other people taking this survey would say is the percentage of the US population that have had or are currently having an extramarital affair? Type in a number between 0 and 100.

You will get a bonus of \$1.00 for being within one percentage point of the average percentage. If there is more than one person within one percentage point, we will randomly select the winner.

## Appendix 9. Demographic Questionnaire

What is your gender?

What is your age?

What is your state of residence? (All U.S. states in a dropdown menu)

What is your religious preference?

- Protestant
- Catholic
- Jewish
- Latter-Day Saints
- None
- Others – specify

How often do you attend religious services? (answers may be approximate)

- Never
- Once a year
- Once a month
- Once a week
- Multiple times a week

What is your race/ethnicity? Please check all that apply.

- White
- Hispanic
- Asian/Pacific Islander
- Native American
- Black

Generally speaking, do you usually think of yourself as a Republican, Democrat, Independent, or something else?

Strong Democrat

Not so Strong Democrat

Independent – Near Democrat

Independent

Independent – Near Republican

Not Strong Republican

Strong Republican

Other Party

Don't Know

How satisfied were you with your work experience?

Very satisfied

Satisfied

Slightly satisfied

Not at all satisfied

Please click on this link to get your completion code (it will open as a new window). If the link does not work, please enter a unique string of 10 letters, numbers, or symbols.

Enter the code below AND on the Mechanical Turk website.