

Name (Last, First): _____

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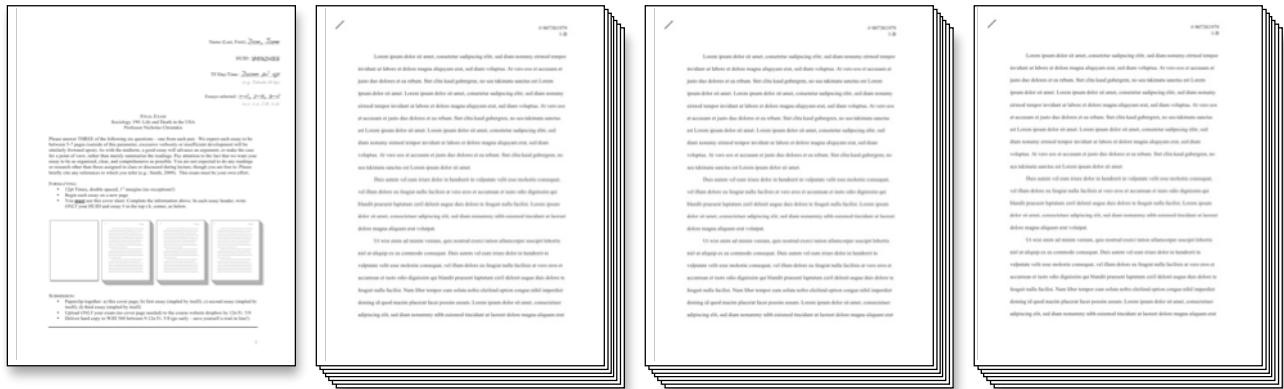
Essays selected (e.g. *1-A, 2-B, 3*): _____

Final Exam 2012
Sociology 190: Life and Death in the USA

Please answer **two** of the following four questions, **one from each pair**. (Also, we have a fifth question that can be used to replace one question from either of the pairs, as outlined below.) We expect each essay to be 7-8 pages. Please do not write more than 8 pages since verbosity is not appreciated, and, if it exceeds 10 pages, might harm your grade. A good essay will advance an argument, or make the case for a point of view, rather than merely summarize the readings. Your essay should be as organized and clear as possible. Remember, your exam will be evaluated with reference to three criteria: (1) **organization**, (2) **argument**, and (3) **evidence**. Some of the questions below make use of readings from outside the course, but citations are provided. You are **not** expected to do any other readings or research other than those assigned in class or discussed during lecture, though you are free to. A good answer, however, will indeed refer to several readings in order to support your argument; please briefly cite any references to which you refer (e.g., Smith, 2009) and supply a list of references you cite or rely on at the end of each of your answers. A good answer also addresses all parts of the questions (that is, be sure not to overlook any of the sub-questions). **This exam must be your own effort; you may not get assistance from any other person or discuss your answers with anyone else. Any questions during the exam should be addressed to: soc190.final@gmail.com.** The teaching staff thanks you for a great semester, and wishes you good luck with this exam and a happy summer.

FORMATTING:

- 12pt Times New Roman, double spaced, 1” margins
- Begin each essay on a new page; use page numbers.
- **You must use this cover sheet. Fill in the information above. In each essay header, write *ONLY* your HUID and essay # in the top right hand corner, as shown below, and the page number. We will deduct points if you fail to do this exactly.**



SUBMISSION:

- **Paperclip** together: a) this cover page; b) first essay (**stapled by itself**); c) second essay (**stapled by itself**)
- **Deliver hard copy** to WJH 455 between 2:00-5:00pm Thursday, May 3 (go early – save yourself a wait in line!) **EXAMS WILL NOT BE ACCEPTED AFTER 5:00PM.**
- **Upload *ONLY*** your exam (no cover page needed) to the **iSites** dropbox by 7 pm Thursday, May 3 (it locks automatically at 7 pm); you can upload your exam before or after you deliver the hardcopy. **Uploading your exam is NOT a replacement for also turning in hardcopy, which is required.**

1A. The Prevention and Access to Care and Treatment (PACT) project employs community members to care for vulnerable, chronically-ill patients. These community health workers are paid to check in on patients on a regular basis, making sure they attend medical appointments, take their medications, and have access to other essential needs and social services.

The PACT website (<http://www.pih.org/pages/usa/>) has described their patient population as “poor people of color living in inner-city Boston neighborhoods who have fallen through the cracks of other health care delivery systems. In addition to living with chronic diseases, these men and women typically must confront racial and language barriers, social isolation, mental illness, and drug or alcohol abuse. Some are homeless. Almost all live in poverty. These obstacles often mean that patients have difficulty taking all of their prescriptions on a regular basis, which adds to the cycle of poverty and disease.”

Read the following article chronicling the experience of a community health worker and one of his patients who suffers from AIDS and Hepatitis C.

<http://opinionator.blogs.nytimes.com/2011/02/28/a-housecall-to-help-with-doctors-orders/?hp>

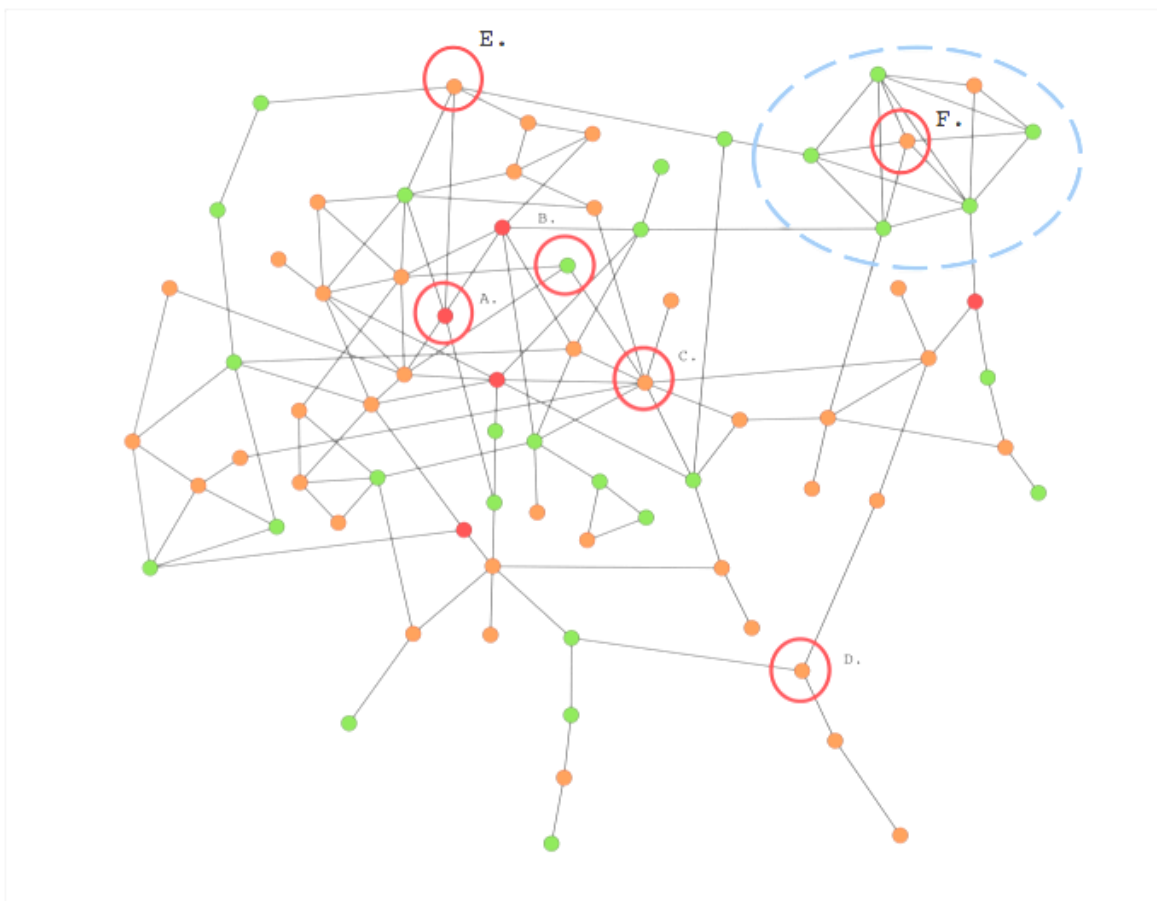
Do you think peer-based health promotion can overcome the negative effects of social factors on health? Use what you’ve learned in this class to discuss how this model of health promotion may be effective in overcoming chronic disease in marginalized populations in the US. Discuss the potential limitations of such an approach as well. Make sure to address the following questions:

- a. How does this case demonstrate the relative roles of medical care (“big medicine”) and socioeconomic factors in chronic disease management in the US? Is big medicine enough to meet this patient’s needs?
- b. How does the literature on the social distribution of illness, social networks, social support and neighborhood effects help explain the patient’s health risks and health status, and also the challenges the patient faces in responding to his illness?
- c. In what ways does the community health worker succeed in overcoming the health risks? In what ways does he not, and in what ways is the approach possibly limited? How might a community member be more effective than a physician in promoting the patient’s health, and why?

1B. Consider the network image on the next page. These are college students. Lines between nodes represent close friendships, and node colors represent body mass index (red= “obese,” orange= “overweight,” green= “normal weight”). [If you print these images with a black and white printer, be sure to pay attention to the color of the nodes on the screen; if you need help identifying the colors, please contact us.]

- a. Which of the six nodes, A, B, C, D, E, or F, has the highest degree (number of connections), and what is the degree (hint: it is an integer greater than 1). Which of the six nodes has the highest transitivity and what is that transitivity (hint: it is a number between 0 and 1)? Here, transitivity is the fraction of existing ties among an ego’s alters divided by the total number of possible ties among those alters.

- b. Consider the possibility of an intervention designed to improve the health of this population by “seeding” certain students with better exercise and eating habits. Consider two people, C and E. Which of these two individuals would offer the most advantages to their peers who are one degree away; that is, which one would generate the greatest spill-over effect to their friends, do you think, and why? Assume that the behavioral intervention you use to seed the network does work in the individual, and also assume that a change in this individual definitely affects others – like a contagion which spreads from person to person.
- c. Consider two people, E and F. Who would be a better candidate for a behavioral intervention to improve exercise habits in terms of who will, himself or herself, be more responsive to the intervention? Why? In this case, we are not asking who will create more spillovers to others. Instead, we are asking which target individual will themselves be more responsive to the intervention. Feel free to use your knowledge of Harvard students and the value of social support or network structure in order to ground your argument.
- d. Note the cluster of mostly normal-weight individuals in the upper right of the network (which is enclosed by the dotted blue oval). What are three possible reasons (other than chance) that these individuals all share similar body sizes at baseline (i.e., prior to any intervention)? Explain how these reasons might have given rise to the observed cluster.
- e. For your conclusion, integrate insights from the foregoing with lessons on social connectivity from the course (relevant themes might include, but are not limited to: social capital, structure and agency, etc.), and make an argument for a social-network-based intervention as a health policy tactic to reduce weight in this population. Would understanding social network ties be useful for a university-based public health intervention? How so? Are there any disadvantages to such a tactic? (4-5 pages)



2A. Smoking is the #1 cause of death in the United States, responsible for over 400,000 deaths each year [McGinnis and Foege (*JAMA* 1993; 270: 2207-2212)]. Moreover, as we saw in lecture, smoking is not declining among college-age students. While the Harvard Medical School, the Harvard School of Public Health, and the Harvard Kennedy School enforce campus-wide smoking bans, Harvard University (and Harvard College) does not have a comprehensive smoking ban in place. Yet, nationally, at least 700 colleges and universities have fully smoke-free campuses.

This has become an issue on the Harvard campus; for example, see recent coverage in *The Crimson*:

-<http://www.thecrimson.com/article/2012/4/20/harvard-smoke-free-graduate-housing/>

Medical School student Kristin T. L. Huang '07 and her husband Yi-An Huang '05, a Business School student, started the push to prohibit smoking in graduate student apartments since they were concerned about the effects of second-hand smoke on their seven-month-old child. Currently, 40 percent of graduate apartments are smoke-free. . . . Some medical experts said that Harvard is not doing enough. According to Jonathan P. Winickoff, a Harvard Medical School professor and pediatrician at Mass. General Hospital who contributed to the newsletter that caught Huang's attention in the fall, Harvard should expedite the process of converting its units to smoke-free residences.

-<http://www.thecrimson.com/article/2012/2/24/committee-student-life-smoking/>

At the Committee on Student Life meeting Thursday morning, College administrators and House Masters discussed an initiative proposed by the Institute of Politics Tobacco Control Policy Group that would develop and implement a University-wide smoke-free policy. Members of the policy group—which consists of five undergraduates and their adviser Mackenzie J. Lowry '11—have presented their proposal to a number of student life groups beginning last semester. Lowry, who serves as a freshman proctor in Wigglesworth, said that the group hopes the University will gradually institute a campus-wide smoke-free policy in 2012. The group suggested that Harvard impose the ban on Harvard Yard before extending the policy to cover the rest of campus. “The reason we’re focusing first and foremost on Harvard Yard, is because—as Occupy Harvard really highlighted—Harvard Yard is very symbolic of Harvard University as a whole,” Lowry said. “It really represents the heart of Harvard.”

-<http://www.thecrimson.com/article/2012/2/29/smoking-ban-no/>

Imagine that you have been hired by a public health policy firm to advise senior administrators at Harvard and to make recommendations regarding implementation of the ban. Taking advantage of your knowledge of the various kinds of social factors that contribute to this unhealthy behavior, write about the following:

- a. Who (that is, what characteristics of students) is most likely to smoke? What factors are likely contributing to their smoking behavior?
- b. What are some of the ethical and practical (e.g., feasibility, cost, impact) implications of a comprehensive campus-wide smoking ban?
- c. What reasons are there for and against the proposed ban? Discuss second-hand smoke and the role that health externalities play in arguments in favor of smoking bans. Also, include a discussion of how the social construction of smoking as an addiction might affect both medical and public health approaches to reduce it.
- d. Describe how you might go about implementing the ban. What else, other than the ban itself, might you do?
- e. Discuss the impact of the ban on students and on the broader college environment. Be sure to support your arguments with scientific concepts and evidence from the readings. Position your recommendations in some of the broad themes of the course (such as structure versus agency, removing the handle of the Broad Street pump, etc.).

2B. Pick just one health behavior from the following list:

- Smoking
- Drinking
- Drug use
- Regular exercise
- Vegetarianism

Interview two friends who evince the foregoing behavior and another two friends who do not (either because they never did or because they quit). These four individuals should not be Soc190 students! You might spend perhaps 15-30 minutes interviewing each of these four people; please submit a sample of the interview questions you ask as part of your essay; for example, what are the 4-6 basic questions you asked your subjects (you can include the questions at the end, and they will not be counted toward your number of pages). Be sure to ask your respondents about any traits you deem pertinent, such as family background or whether family and friends engaged, or did not engage, in any of these behaviors.

- a. Collect information on when and how they developed or did not develop (or stopped) the behavior. For example, identify two friends who exercise regularly and two who do not, and, through short interviews with each, determine the factors that led them to start/continue, and those that led them to not start or to stop.
- b. You should summarize what you learned from your interviews and analyze the findings. Use the collected qualitative evidence to make an argument about what mechanisms account for the development of the problem/behavior.
- c. Discuss how what you learned from the interviews could be applied to college students in general.
- d. Finally, propose possible health initiatives to promote the health behavior you have selected among college students.

A good essay will not only summarize your friends' answers but will also quote from what they say. It will also employ theories discussed in the class (such as the tension between structure and agency, the variable ways that disease might be defined, different strategies to promote desirable social change, etc.) to analyze the interview material to make an argument about how to encourage good health behavior.

Note: You should record the interviews (a phone with a recording device or app will do), or take raw notes during your interview. While you do not have to submit the recording or original notes with your exam, we may ask you to submit at a later date if we have questions while grading.

3. ALTERNATIVE QUESTION: Below is a challenging question that some students might wish to answer. If you choose this question, you can replace either question 1A or 1B, or question 2A or 2B. That is, you may use this question as a replacement for a question in either of the other two pairs of questions. All students taking this exam must answer a total of just two questions.

Over the course of the semester, we have read a number of papers describing social science experiments spanning a diverse set of topics, including the following:

- Volpp KG, *et al.*. A Randomized Controlled Trial of Financial Incentives for Smoking Cessation. *New England Journal of Medicine* 2009; 360: 699-709.
- Cohen S *et al.*. Social Ties and Susceptibility to the Common Cold. *JAMA* 1997; 277: 1940-1944.
- Carrell SE, Sacerdote BI, and West JE. From Natural Variation to Optimal Policy: A Cautionary Tale in How Not to Improve Student Outcomes, September 30, 2010, available at: <http://www.econ.ucdavis.edu/faculty/scarrell/sortexp.pdf>
- Centola D. The Spread of Behavior in an Online Social Network Experiment. *Science* 2010; 329: 1194-1197.
- Valente TW, Ritt-Olson A, Stacy A, Unger JB, Okamoto J, and Sussman S. Peer Acceleration: Effects of a Social Network Tailored Substance Abuse Prevention Program Among High-Risk Adolescents. *Addiction* 2007; 102: 1804-1815.
- Keizer K, Linderberg S, and Steg L. The Spreading of Disorder. *Science* 2008; 322: 1681-1685
- Leventhal T and Brooks-Gunn J. Moving to Opportunity: An Experimental Study of Neighborhood Effects on Mental Health. *American Journal of Public Health* 2003; 93: 1576-1582.
- Andersen RE, Franckowiak SC, Snyder J, Bartlett SJ, and Fontaine KR. Can Inexpensive Signs Encourage the Use of Stairs? Results from a Community Intervention. *Annals of Internal Medicine* 1998; 129: 363-369.
- Brook R, *et al.*. Does Free Care Improve Adults' Health? Results from a Randomized Controlled Trial. *New England Journal of Medicine* 1983; 309: 1426-34.

As these examples demonstrate, an experiment tests the relationship between an exposure and an outcome, controlling for confounding factors. Remember, an experiment must involve the random assignment of some group of people to something; it must have some sort of “control group.” These experiments have sometimes cost a lot of money to conduct (such as the Volpp and Brook studies), but sometimes they have cost only a small amount. The studies by Keizer et al and by Andersen et al are especially instructive with respect to small-scale, inexpensive, but important experiments that can be done.

Design an experiment that could be conducted on the Harvard campus (either online or offline), or in Boston, to evaluate the role of a social factor that affects a health outcome. The experiment must be inexpensive, like the Keizer and Andersen experiments, and hence must cost less than \$10,000 (not including the labor of the scientists doing the experiment) – that is, the \$10,000 can be used for supplies, hardware and software, technical consulting, subject payments, etc... This amount is not a hard number; it's just here to emphasize that your experiment should be cheap, like the Keizer and Andersen experiments.

Your answer should have the following components:

1) Research Question: What is the hypothesized relationship between the social factor (exposure) and the health outcome? Specify/define the social factor/exposure clearly. Also, state the health outcome clearly. You can be very liberal in what counts as both an exposure and an outcome here, and these could include anything to do with eating, drinking, violence, or any sort of thing affecting our mental or physical health. Be creative.

2) Hypothesis: Articulate the key hypothesis you are testing very clearly as a falsifiable statement. For example: “Exposing people to a sign encouraging the use of stairs increases subjects’

use of stairs, compared to people not exposed to such a sign.” Your study should focus on a single hypothesis.

3) Motivation and Background: Use the readings and lectures from the course to briefly set the stage for your experiment, outlining why the hypothesis is important, what is known about the general topic already, and what your study adds to the literature (i.e., what gap does it fill?). [perhaps 1 page]

4) Methods: In this section, describe your methods: What will you do? How many subjects do you think you will need, who are they, how they will be recruited, how they will be given/exposed to the intervention, how will both the exposure and outcome be observed or measured, and so on. If (by chance) you plan to write any apps or software to do such an experiment, briefly describe what you might do (obviously, most experiments would not require de novo software!). [perhaps 2 pages]

5) Results: Briefly describe your expected results and how you might analyze them. For example, you might do a chi-squared test comparing the proportion of people exposed to the sign who take the stairs compared to the proportion of those who are not exposed to the sign who take the stairs. Note that we are NOT looking for a sophisticated statistical outline here. You could also provide a graph or table of hypothetical results as part of this section (although this is not required). [perhaps 1 page]

6) Briefly discuss any ethical considerations in your study, if any. Is there any potential harm to the participants? Harms to the community? Issues of data security and integrity?[perhaps 1/2 page]

7) Limitations: Briefly discuss any practical considerations that might make your study hard to conduct. Also discuss potential limitations to your conclusions. For example, how generalizable is your study? [perhaps 1/2 page]

8) Provide a very short conclusion. [perhaps 1/2 page]