Please answer **two** questions for this exam: you must answer question 1 plus one question chosen from the options for question 2. We expect each essay to be **no more than 4 pages**. Please do not write more than 5 pages per question since verbosity is not appreciated or necessary.

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 as clear as possible. Your exam will be evaluated with reference to three criteria: (1) **organization**, (2) **argument**, and (3) **evidence**. A good answer addresses all parts of the questions (that is, be sure not to overlook any of the sub-questions).

You are **not** expected to do any other readings or research outside of those assigned in class, discussed during lecture, or given as part of the question, though you are free to. **A good answer, however, will indeed refer to several readings in order to support your argument.**

**CITATIONS AND PROPER USE OF SOURCES:**
You **must** cite any readings or sources to which you refer and supply a list of references you cite or rely on at the end of **each** of your answers (the bibliography does not count towards the page limit). You may use either footnotes or parenthetical references (e.g., Traeger, 2019) and you may follow any one of the standard citation/reference styles, as long as you follow it consistently and correctly throughout your essays. Don’t forget that if you are quoting specific text or citing particular facts from within a long piece, you need to include page numbers. **Plagiarism and misuse of sources are serious offenses. Cutting and pasting from a student-developed study guide, especially without citing it, is a form of plagiarism and will not be tolerated.** We will be using electronic techniques to check for plagiarism. If you panic and are tempted to cheat, email us instead so we can help you calm down, and don’t do something foolish.

**COLLABORATION:**
This exam must be your own effort; you may not get assistance from any other person or discuss your answers with anyone else. You are permitted to work with the Yale Writing Center for help with expressing your ideas. Any questions during the exam should be emailed to the head TF (margaret.traeger@yale.edu); we will prepare a digest of daily questions and post them to the Announcements section of course website; please review prior answers before sending new questions.

**FORMATTING AND SUBMISSION:**
- 12pt Times New Roman font, **double-spaced**, 1” margins. (Don’t play around with margins or font size; we know those tricks.)
- Begin each essay on a new page; use page numbers, starting at 1 for each essay.
- **You must use the cover sheet on the next page. Fill in the information at the top and electronically sign at the bottom. In each essay header, write ONLY your Yale Net ID and essay number in the top right hand corner, and the page number.** We will deduct points if you fail to do this exactly.
- **Upload** your exam to the course website by **8 pm Thursday, April 30th** (it locks automatically at 8 pm.
- Extensions will be given only for serious, documented problems.

The teaching fellows, and Professor Christakis, thank you for a great semester, and wish you good luck with this exam and as good a summer as is achievable in the setting of this pandemic.

We apologize for the seriously formal tone of these instructions, too.
**This cover sheet must be included with your project**

Name: __________________________

Yale Net ID: __________________________

Teaching Fellow (indicate): Margaret  Eric  Jacob

Questions answered (indicate):  1  2A  2B  2C

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**Checklist for turning in the final exam**

☐ I have conducted a final check for typos, spelling/grammar mistakes, and incorrectly formatted references.

☐ My essays have the proper formatting (12pt Times New Roman font, double-spaced, 1” margins).

☐ Each of my essays begins on a separate page.

☐ Each of my essays has a list of references at the end (does not count toward page limit).

☐ My essays have headers with my Yale Net ID, essay number, and page numbers only (not my name).

☐ Each essay is in a separate document.

☐ I have filled out this cover page, signed it electronically, and attached it to my essays.

*This is for your benefit only; you don’t need to check off the boxes even though you do need to turn in this form (had enough fine print yet?). But keep in mind we will deduct points if you don’t follow the submission instructions exactly!

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You must sign the following before submitting your exam:

I acknowledge that I have carefully read the instructions for this exam. I certify that the attached essays are my own work, that I have not received help from anyone else on this assignment, and that I have adhered to Yale College’s standards for using sources. I understand that any instances of plagiarism, misuse of sources, or inappropriate collaboration will result in my failing all or part of this exam as well as likely referral for possible additional sanctions.

_________________________________________  _________________________

Student Signature  Date

_________________________________________

Print Name
In his last lecture, Prof. Christakis made the claim that we may be reaching the “end of medicine.” Please write an essay with two parts. In the first part of your essay, briefly outline why this is plausible, and summarize the argument Christakis made. Explain why you agree with his argument. In the second part of your answer, argue against this position. That is, articulate at least three reasons – supported by evidence – as to why, in your opinion, his is not a tenable position. Explain why you disagree with him.
Question 2 (you must answer ONE of the following three questions)

2A. Read these recently published articles regarding statistics about race and COVID-19 [https://apnews.com/8a3430dd37e7c44290c7621f5af96d6b] and summarizing the ways in which poverty might increase risk for COVID-19 [https://time.com/5800930/how-coronavirus-will-hurt-the-poor/].

Some people argue that a germ kills indiscriminately and so it need not been seen through the lens of SES or other variables that stratify our society. Briefly defend this position.

Then, in the longer part of your essay, explore how inequality structures infectious disease like any other leading killer.

As part of your essay, be sure to describe how SES or race may place people at risk for other conditions which, in turn place people at risk for COVID-19. Discuss what this means for the desire to conclude that SES or race are a cause of excess mortality from COVID-19.

2B. As part of the effort to control the spread of COVID-19, the nation has been employing a set of actions (such as closing schools, banning gatherings, working from home, and so on). Explain the purpose of these actions. What are they intended to achieve? How do they achieve their objective? Also explain some of the possible adverse consequences of these actions for the physical and mental health of Americans, and the possible mechanisms for such adverse effects.

2C. Over the course of the semester, we have read a number of papers describing social science experiments spanning a diverse set of topics and approaches, including the following:

Cohen S et al.. Social Ties and Susceptibility to the Common Cold. JAMA 1997; 277: 1940-1944.

As these examples demonstrate, an experiment tests the relationship between an exposure and an outcome, while 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 study), 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 a college campus (e.g., at Yale) to evaluate a social intervention designed to address the problem of encouraging mask use to prevent COVID-19 among college students. 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 particular outcome you choose? Specify/define the social factor/exposure clearly. You can be very liberal in what counts as both an exposure and an outcome here. 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) **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. [perhaps 2 pages]

4) **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]

5) **Conclusion**: Provide a short conclusion. [perhaps 1 page]