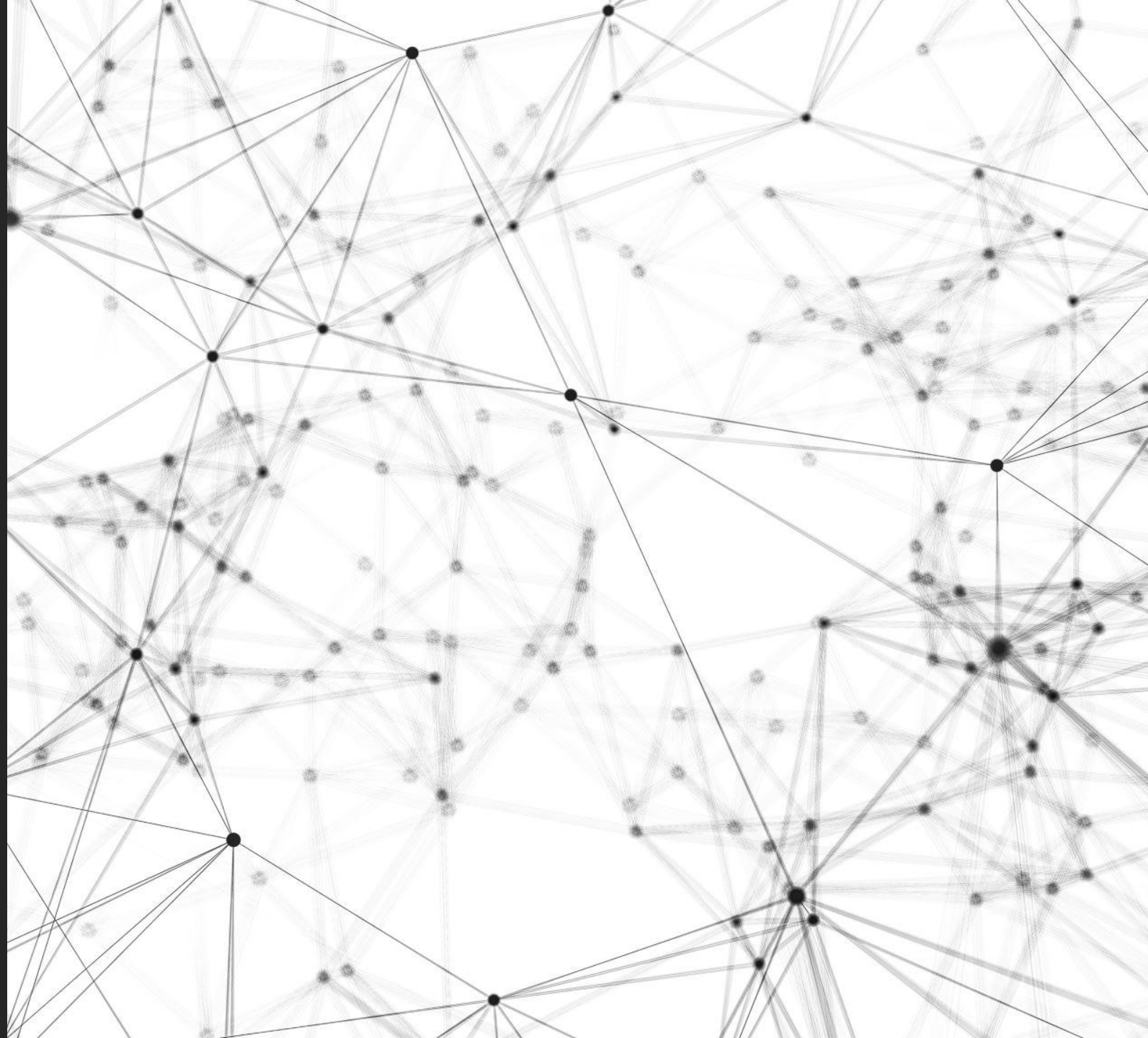
CSDE 502:

ETHICS & NORMS

WEEK 1: 4/1/21



COURSE STRUCTURE AND EXPECTATIONS

- This is a largely discussion-based course, most of the assignments involve coming to class prepared to discuss readings by a) doing them! and b) coming prepared with questions or topics you want to discuss
- As such, the expectations are that you'll do the readings and assignments, come with an open mind and readiness to participate, and be willing to unmute yourself to talk

COURSE ASSIGNMENTS

- Assignments and course are credit/no credit
- Assignments include:
  - Discussion participation
  - CITI Training
  - Final Exam (Take home, written)

ETHICS & NORMS

Thinking Ethically

The Utilitarian Approach

- greatest balance of good over evil
- What are the possible actions?
- Who will benefit and who will be harmed?
- Which actions allow greatest benefits and least harm?

The Rights Approach

- individual's right to choose for herself or himself
- right to the truth
- right to privacy
- right to not be injured
- right to what is agreed

The Fairness or Justice Approach

- How fair is an action?
- Does it treat everyone in the same way?
- Does it show favoritism and discrimination?

The Common-Good Approach

- Community members bound by pursuit of common values and goals
- the social policies, social systems, institutions, and environments on which we depend are beneficial to all

The Virtue Approach

- assumes that there are certain ideals toward which we should strive
- What will promote the development of character within myself and my community?

Fostering Integrity, Ch. 2: Core Values

- Objectivity
- Honesty
- Openness
- Accountability
- Fairness
- Stewardship

Fostering Integrity, Ch. 2: Core Values

- **Objectivity**
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Objectivity

- Karl Popper (1999)
- 1) pose refutable hypotheses,
- 2) test hypotheses with relevant evidence,
- 3) state the results clearly & unambiguously to any interested person
- Goal is reproducibility
- Best intentions not always sufficient!

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Honesty

- Starting assumption for institutions and stakeholders
- Forms of dishonesty
  - plagiarism & data fabrication
  - p-hacking, cherry-picking, misrepresentation of results (bad figures, bad interpretations, bad headlines)
  - Non-reporting

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Openness

- Transparency & presenting ALL the information relevant to a decision
- Sometimes there is a pull between adherence to the value of openness and other goals e.g. commercial gain, subject privacy

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Accountability

- Individual accountability
  - obligation to others in “web of science” and society
- Mutual accountability
  - Peer to peer
  - Mentor to mentee
  - Institutions to individuals

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Fairness

- Appropriate and ANNOUNCED criteria
- Authorship, citation, acknowledgments
- Human and living subjects
- Society

Fostering Integrity, Ch. 2: Core Values

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Stewardship

- Attending to professional relationships & curating working environments
- Service to societies and institutions
- Mentorship and education
- Society

Mertoninan Norms & Counter-norms

- A ***normative system*** is:

1. a systemic or societal attribute
2. the set of all norms associated with a particular social system
3. the members' collective subscription to the norms
4. the members' collective weighting of the norms' importance and applicability

- A ***normative orientation*** is:

1. an individual attribute
2. describes a unique pattern of subscription and resistance to a ***normative system***

Mertoninan Norms & Counter-norms

- Robert Merton came up with four research **norms** in 1942 and acknowledged there were direct **counter-norms** to each
- A **norm** may be a behavior that is typical within the social group, OR a behavior that is deemed desirable or ideal for the social group
- Ian Mitroff (1974) outlined four direct **counter-norms** to Merton and Michael Mulkay (1976, 1980) argued neither one describe a normative system actually adhered to by the scientific community
- Anderson et al. (2010) propose 4 more pairs of **norms** and **counter-norms** and study their adherence in modern science

Mertoninan Norms & Counter-norms

Norms

1. communalism
2. universalism
3. disinterestedness
4. organized skepticism
5. governance
6. quality
7. calling
8. breadth

Counter-norms

1. individualism
2. particularism
3. self-interestedness
4. organized dogmatism
5. administration
6. quantity
7. employment
8. narrowness

Communalism vs Individualism

- **Communalism:** Scientists openly share new findings with colleagues.
- **Secrecy/Individualism:** Scientists protect their newest findings to ensure priority in publishing, patenting, or applications.

Universalism vs. Particularism

- **Universalism:** Scientists evaluate research only on its merit, i.e., according to accepted standards of the field.

- **Particularism:** Scientists assess new knowledge and its applications based on the reputation and past productivity of the individual or research group

Disinterestedness vs. Self-interestedness

- **Disinterestedness:** Scientists are motivated by the desire for knowledge and discovery, and not by the possibility of personal gain.

- **Secrecy/Individualism:** Scientists compete with others in the same field for funding and recognition of their achievements

Organized skepticism vs. Organized dogmatism

- **Organized skepticism:** Scientists consider all new evidence, hypotheses, theories, and innovations, even those that challenge or contradict their own work.

- **Organized dogmatism:** Scientists invest their careers in promoting their one most important findings, theories, or innovations.

Governance vs. Administration

- **Governance:** Scientists are responsible for the direction and control of science through governance, self-regulation and peer review.

- **Administration:** Scientists rely on administrators to direct the scientific enterprise through management decisions.

Quality vs. Quantity

- **Quality:** Scientists judge each others' contributions to science primarily on the basis of quality.

- **Quantity:** Scientists assess each others work primarily on the basis of numbers of publications and grants.

Calling vs. Employment

- **Calling:** Scientists view science as serving a purpose worth of personal sacrifice.
- **Secrecy/Individualism:** Scientists work in accordance with the terms of their employment, such as pay, benefits, working hours, and vacation time.

Breadth vs. Narrowness

- **Breadth:** Scientists fulfill a broad range of responsibilities in the areas of teaching, research and service.

- **Narrowness:** Scientists put more of their time and effort into their research than into any other aspect of their work.

HARM IN RESEARCH

“RESEARCH” AND SLAVERY

- Throughout slavery, cases of abusive research on Black slaves abounded
  - Probably the most notorious cases involved surgeries on slaves without anesthesia

- Research not only unethically carried out, it was also used to validate racial oppression
  - “Scientists” in the 18th and 19th centuries argued that brain sizes and textures varied across race (often with no evidence or based on an autopsy from a single person)
  - Bache (1895) argued that whites’ slower average reaction time to shocks relative to Blacks and Native Americans was because they were more contemplative (White women’s slow reaction times relative to men were hypothesized to be due to lower brain development)

TUSKEGEE STUDY

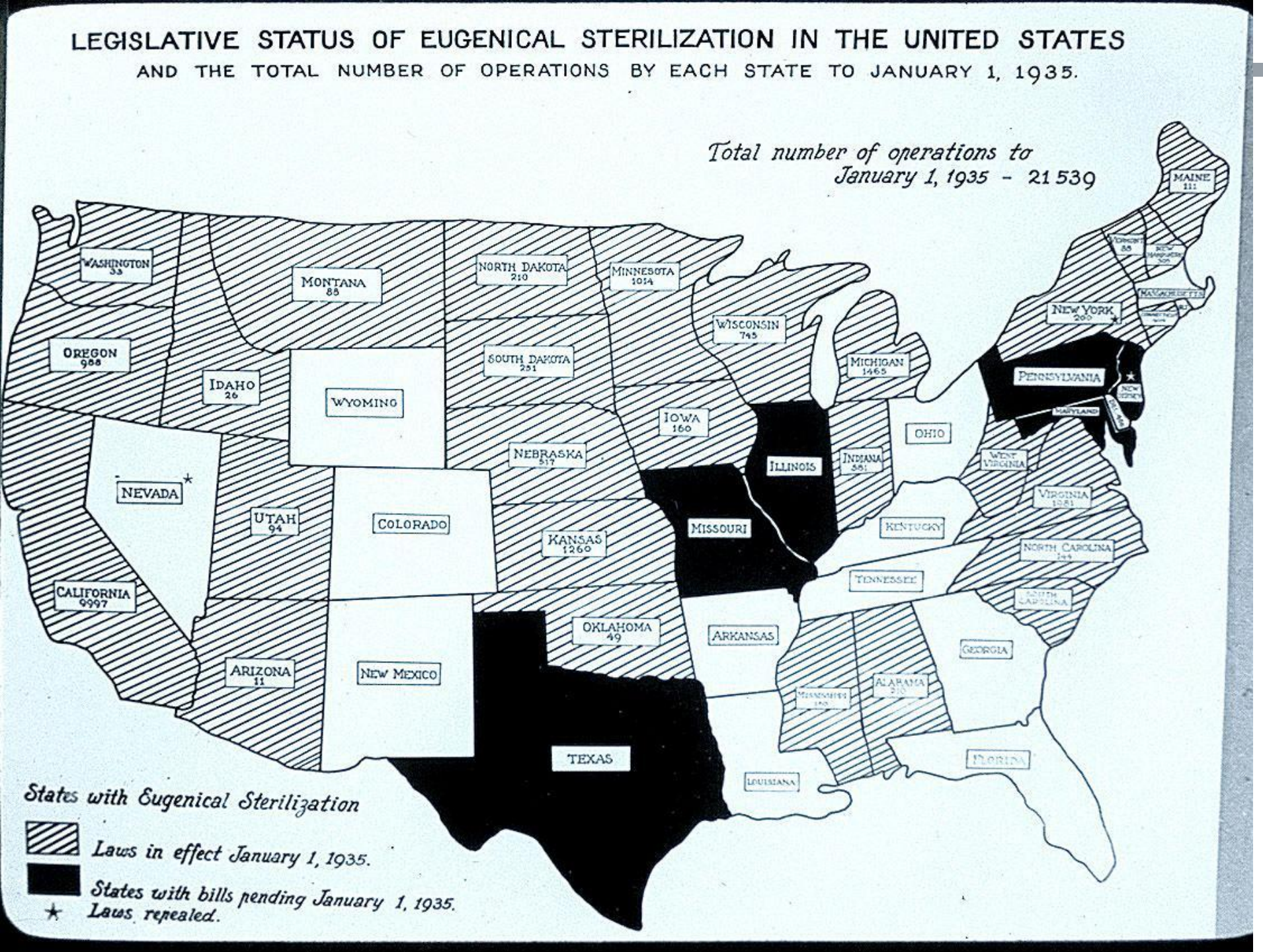
- The Tuskegee Study: Between 1932-1972 ~600 poor, Black men in Alabama were studied to examine the progress of untreated syphilis in Blacks
- ~400 of the study participants had syphilis, the other 200 did not
- While the men were told they would receive free medical care, their syphilis was never treated even when penicillin became an established medical treatment for syphilis in the 1940s
- The researchers even actively tried to prevent armed servicemen from receiving treatment after they were diagnosed by the Army in WWII

TUSKEGEE STUDY

- The study eventually ended when a doctor turned lawyer who had previously spoken out with doctors about the study, leaked word of it to the press, and outcry resulted in its termination
- By 1972, 128 of the 399 infected men had died of syphilis or related complications; 40 of their wives had contracted syphilis, and 19 of their children were born with congenital syphilis

TUSKEGEE STUDY AND MISTRUST

- Lasting mistrust has resulted from study
- However, there are numerous other examples of Blacks (and other racial/ethnic groups) being mistreated by researchers and doctors
  - In the 1950s, Henrietta Lacks's stem cells were removed and cloned without her knowledge. Her medical history was published without her knowledge as well
  - Black women, as well as poor, disabled, and immigrant women were unknowingly sterilized throughout the 20th century
  - As Hitler said, "There is today one state in which at least weak beginnings toward a better conception [of citizenship] are noticeable. Of course, it is not our model German Republic, but the United States" (http://www.pbs.org/independentlens/blog/unwanted-sterilization-and-eugenics-programs-in-the-united-states/)



- Source: http://www.pbs.org/independentlens/blog/unwanted-sterilization-and-eugenics-programs-in-the-united-states/

- The mistrust of research, particularly medical research, is evident in a number of studies on attitudes towards research
- While 40% of the U.S. population is non-White, medical studies are routinely 80-90% White (Feng, *Scientific American,* 2018)
- Image Source: Corbie-Smith et al (2002)

Table 2. Responses to Individual Items in the Distrust Index, Stratified by Race*

	African American	White
If your physician wanted you to participate in research, you trust that he or she would fully explain it to you (disagree or do not know).	41.7	23.4
Do you believe that you can freely ask your physicians any questions you want (no or do not know)?	15.2	7.6
Your physician would not ask you to participate in medical research if he or she thought it would harm you (disagree or do not know).	37.2	19.7
In deciding what treatments you will get, do you feel that your physicians always try to protect you from unnecessary risk, or do you feel that they sometimes expose you to unnecessary risk (expose to unnecessary risk or do not know)?	45.5	34.8
How likely is it that you, or people like you, might be used as guinea pigs without your consent (very likely, somewhat likely, or do not know)?	79.2	51.9
How often, if ever, do you think physicians prescribe medication as a way of experimenting on people without their knowledge or consent (very often, fairly often, or do not know)?	62.8	38.4
Do you believe that physicians have ever given you treatment as part of an experiment without your permission (yes or do not know)?	24.5	8.3

*N = 909. Data are given as percentages unless otherwise indicated. $P<.01$, χ^2 test, for all.