

Case studies

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- **Ethical dilemmas across disciplines**

The questions used with these case studies were developed with
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Person → **Action** → **Outcome**

Case studies

- **Students are presented with real stories and asked to debate on the proper course of action.**
- **They need to identify the problem and propose solutions applying ethical reasoning.**

Biomedical

RESEARCH WITHOUT PATIENT CONSENT

Can scientists do genetic research on your tissues without your consent? That's the essential question in a lawsuit pending before Judge Janet E. Barton of the Maricopa County Superior Court in Arizona. Members of the Havasupai Tribe allege that researchers from **Arizona State University (ASU) and the University of Arizona (U of A)** collected 400 blood samples from tribal members for diabetes research, but that those same samples were used for additional unauthorized research on schizophrenia, inbreeding, and population migration. The tribe asserts that research on schizophrenia and inbreeding stigmatizes them and that they would not have authorized any migration research because it conflicts with their religious origin story.

Person → **Action** → **Outcome**

Discussion Questions

1. What would you do if a colleague and friend wants to borrow some samples?
2. How would you explain to your friend why you can't share those samples?
3. What is at stake in this example?
4. Why did the Havasupai object to this request?

New York Times

April 21, 2010

Havasupai Case Highlights Risks in DNA Research

By AMY HARMON

A settlement between 41 members of the Havasupai Indian tribe and Arizona State University highlights the risk researchers take when they fail to secure what is known as “informed consent,” fully informing research participants how their DNA may be used, legal experts and civil rights advocates said.

“It sows distrust,” said Hank Greely, a law professor and director of the Center for Law and the Biosciences at Stanford University. “And researchers cannot do their research unless people are willing to trust them.”

Citing the Havasupai dispute in recent years, other Indian tribes have refused to participate in genetic research. (Under the settlement, the Havasupai agreed to ask other Arizona tribes to repeal resolutions saying they would not cooperate with researchers at Arizona State University.)

The Havasupai requested \$25,000,000 but a settlement between them and ASU was reached for \$700,000.

Person



Action



Outcome

Engineering

“Space Shuttle Challenger Disaster”

On January 28, 1986, seven astronauts were killed when the space shuttle they were piloting, the Challenger, exploded just over a minute into flight. The failure of the solid rocket booster O-rings to seat properly allowed hot combustion gases to leak from the side of the booster and burn through the external fuel tank. The failure of the O-ring was attributed to several factors, including faulty design of the solid rocket boosters, insufficient low temperature testing of the O-ring material and the joints that the O-ring sealed, and lack of communication between different levels of NASA management.

Discussion Questions

1. What could NASA management have done differently?
2. What, if anything, could their subordinates have done differently?
3. What should Roger Boisjoly (have done differently (if anything)? In answering this question, keep in mind that at his age, the prospect of finding a new job if he was fired was slim. He also had a family to support.
4. What do you (the students) see as your future engineering professional responsibilities in relation to both being loyal to management and protecting the public welfare?

Selections from: <http://ethics.tamu.edu/Portals/3/Case%20Studies/Shuttle.pdf>

Person → **Action** → **Outcome**

Arts/Music

"Better Playing Through Chemistry"

Ruth Ann McClain, a flutist and music teacher at Rhodes College in Memphis, was one of thousands of musicians who suffered from severe and debilitating stage fright. Her symptoms ranged from sweaty palms and quivering lips to shortness of breath, heart pounding, and an overwhelming sense of panic. In 1995, after years of failed attempts to calm her nerves before a performance, Ms. McClain's doctor prescribed her propranolol, a beta-blocking drug commonly called Inderal.

Beta-blockers are typically given to patients with cardiac problems such as angina or abnormal heart rhythms. By blocking beta-receptors, these drugs prevent hormones such as adrenaline from activating the nervous system's fight or flight response. For musicians like Ms. McClain, beta-blockers help lower heart rate and blood pressure, allowing performers to overcome their nerves. Drugs like Inderal have become common in the world of professional musicians. A 1987 survey of members of the 51 largest orchestras in the U.S. found that 27% of musicians used beta-blockers, and psychiatrists estimate that this number is much higher today.

Ruth Ann McClain, taught flute at Rhodes College in Memphis for 11 years, was fired from her position in 2003 for recommending beta-blockers to her students. College officials said that recommending drugs fell outside the teacher-student relationship.

Discussion Questions

In her defense Ms. McClain's states, "If I'm looking out for the welfare of my students, I cannot in good conscience not tell them about beta-blockers."

- Should she have been fired?
- Is she right in thinking she has a moral responsibility to tell students about these drugs?
- Is she overstepping her role as an instructor?

Person → Action → Outcome

Social Sciences

New York City's African Burial Ground: Science, History, and Race

The United States has a legal framework to protect its archaeological resources, particularly those on public land. Part of this legislation requires that a cultural resources survey be filed before the start of project construction. The General Services Administration (GSA; a part of the federal government) was conducting a project to erect a new office building in downtown New York. The archaeological firm retained for the 290 Broadway cultural resources survey correctly noted that "Negro Burial Ground" appeared on historical maps of the area and probably lay nearby. But, recognizing the longstanding construction history of the location, the cultural resources survey concluded the digging of nineteenth- and twentieth-century basements had probably obliterated any human remains within the historical boundaries of the cemetery.

Those excavations began in September 1991, and right away, human bone was found. Not just a few scattered remains, but dozens, (then hundreds) of intact human burials. In the end, the bones of 427 enslaved Africans, interred by their own community and forgotten for centuries, were discovered beneath a parking lot in downtown New York City.