Teaching Empathy in Medical Ethics:
The Use of “Lottery Assignments”

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In a symposium on empathy and ethics in the journal Ethics, Robert M. Gordon counts transforming oneself via an “imaginative shift” as one of the higher forms of empathy. The mental imaging that an actor uses to transform himself from a person playing a role into the character the actor is supposed to represent is one example of this imaginative shift. The actor is no longer a person who presents himself as someone pretending to be someone else; the actor presents himself as the character he represents. The empathy embodied in the imaginative shift allows an actor to become a better actor by allowing the actor to capture what a character’s responses would be in a particular dramatic setting.

Empathy in medicine is at least as valuable as empathy in performance. Empathy, also called “compassion,” is celebrated by Beauchamp and Childress as one of the “four focal virtues” of medicine. Beauchamp and Childress define compassion as “a trait combining an attitude of active regard for another’s welfare with an imaginative awareness and emotional response of deep sympathy, tenderness, and discomfort at the other person’s (or animal’s) misfortune or suffering.”

But how can we teach empathy and its importance for arriving at a considered decision in medical ethics? Empathy may strike us initially as a gift: one is born with an ability to respond empathetically to others, or one is born without that talent. The possibility that empathy is an unteachable talent may strike others as a dire state of affairs, rather than merely “unfortunate.” If empathy is invaluable in medical ethics, we should seek some means of teaching empathy to others. If empathy is a talent, and one that cannot be taught, then some students’ abilities to successfully analyze cases in medical ethics may be permanently compromised. The result is that some patients may be receiving substandard care from health care practitioners.
who are missing this core virtue. Teaching empathy should be part of the medical ethics curriculum. But how do you teach imaginative awareness of another’s suffering?

One approach to learning empathy in medicine is to learn empathetic responses in the same way that students learn other aspects of ethics—via a case-study approach. Courses in business ethics, journalism ethics, and medical ethics, to name a very few, have benefited tremendously from the employment of case studies. Case studies allow students to test the strengths and weaknesses of classical moral normative theories, virtue ethics, the ethics of care, or principlism, by applying each theory’s means of moral assessment to particular cases. Case studies thereby augment the understanding and application of these approaches to ethics in medicine. The paradigmatic use of case studies in medical ethics is found in casuistry. Casuistry embraces a bottom-up approach to ethical instruction, in which prototypical cases are presented to students, and the students then learn moral reasoning by using these cases as models from which to generalize moral principles or maxims. Case studies are thus enormously important in ethics instruction—either as a pedagogical tool, when instructing students in the application of a moral theory, or as the primary means of generating ethical theories, as with casuistry.

However, the case-study approach has its limitations in teaching empathy, as illustrated by the following case:

Robert S. requests that his physician, Dr. Rao, conduct a test to see if Robert carries the gene for Huntington’s disease. Robert arrives at Dr. Rao’s office at a prearranged time to receive the test results, but before Dr. Rao is able to disclose the news that Robert has tested positive for Huntington’s, Robert tells Dr. Rao some alarming news. Robert has made elaborate plans to kill himself if the test result turns out positive. What should Dr. Rao do at this point?

The student of medical ethics knows what to do at this point: if invoking the principles of biomedical ethics, he must employ considerations of autonomy, beneficence, and nonmaleficence. If invoking a rule-utilitarian approach, he must consider the value of truth-telling, being careful to weigh the utility-maximizing force of telling the truth in all circumstances against the value of preserving hope in the face of enormous medical and personal challenges. If invoking a virtue-based approach, he must first ask which of the virtues of physicians should be exercised in this case. If invoking Kantian deontology, respect for persons necessitates recognizing the importance of preserving the autonomy of the patient, despite the negative consequences that may arise in the process. Though perhaps an over-simplification, it is clear from the above discussion that the case-study approach is often no more than a word problem left over from seventh-grade algebra—find the right variables, plug them in, and generate an answer. Is this
an effective way to teach empathy? One would hardly think so. I call this the “plug-and-play problem”—the inadequacy of the case-study approach due to the fact that students eventually treat case studies like word problems in lower-level math courses—plugging in the right variables and spitting out an answer.

In addition to the plug-and-play problem, other possible drawbacks confront the case-study approach. An initial problem in using the case-study approach to teach empathy is that most cases ask the student to discuss what is the right action for the health care practitioner to perform. As a result, whatever imaginative shift might have taken place in the student is a shift to the health care provider, and not a shift to the patient in the case. Yet, the empathy which health care providers are expected to develop is primarily empathy for their patients, not empathy for other health care providers! Of course, empathy for other health care providers is important. Physicians should have empathy for nurses, nurses should have empathy for physicians. However, health care practitioners most often need empathy for their patients. And not coincidentally, empathy for patients is most difficult to cultivate. Thus, students of medical ethics often hone skills to be empathetic with the wrong persons in the case studies, if they are honing their skills of empathy at all.

Another challenge in using case studies to teach empathy is that students separate themselves from the patients in the cases that they discuss. Students cannot help but see the patients in the case as an “other.” The psychological separation from the persons discussed in cases is natural, and it might be explained by any number of theories. Perhaps the students do not recognize significant similarities between themselves and the patients described in the case. What, after all, does a third-year philosophy student have in common with a twelve year old with spina bifida and an IQ of 76? If all the student knows about Huntington’s Disease is what can be learned in a textbook, it seems unlikely that the student can imagine what Robert is going through. Students may not be able to locate the similarities between themselves and the patients described in the case. As a result, the cases may be ineffective tools for teaching empathy.

Perhaps the patients in the case are in a situation that the students see as so undesirable that they intentionally separate themselves from the case (“That would never happen to me!”). No one likes to imagine falling victim to a congenital disease, and this fear may keep students from adequately exploring the nuances of the case at hand. This reaction is not due to any fault of the students; rather, it is a reaction to the enormity, or unpleasantness, of some of the details of a particular case. The road ahead for Robert, described in the case above, is not a pleasant one. Thus, students may subconsciously distance themselves from Robert’s predicament.
The problem of student detachment inherent in the case-study approach becomes especially pressing when the occasional student has real-life experience with some of the elements of a case under discussion. For example, most students can dispassionately discuss the option of assisted suicide for patients with ALS—save the one student in class who had an uncle who died from ALS. For this student, the case takes on a vividness that eclipses the clinical approach of the rest of the class. In these cases, the student whose experience parallels the case is able to internalize the emotions of the case, as well as its psychological and ethical complexity. How does one capture this kind of vividness for the entire class, and not just for the occasional student? In creating lottery assignments, I attempted to capture this vividness for each student, by making that student into the case study.

Lottery assignments ask students to imagine that they have contracted a disease. The diseases are assigned by lottery, because just as in real life, the students are not able to choose their health status. Rather, their status is determined by genetic, cultural, and socio-economic lottery. Lottery assignments are perhaps best understood as protracted case studies. Unlike the case of Robert, the lottery assignments are designed to last an entire semester. In these protracted case studies, each student adopts the persona of each patient, and discusses that patient’s health status as the patient ages. What follows is a discussion of the lottery assignment in one of my courses, and its success in teaching empathy for others to my students.

The Lottery Assignments and Their Implementation

The lottery assignments were integrated into a course on ethics and genetics. The course was developed after attending a summer faculty institute at Dartmouth College entitled “Teaching the Ethical, Legal, and Social Implications of the Human Genome Project.” The course began with an overview of several normative theories and approaches to studying ethics. Additionally, several class sessions were devoted to the genetics and biology necessary for the students to discuss meaningfully the ethical implications of genetics research and genetics findings. The bulk of the course focused on issues such as prenatal screening for diseases like Huntington’s disease or cystic fibrosis, the definitions of ‘disease’ or ‘disability’ and the ways in which competing definitions present different moral questions, the use and abuse of behavioral genetics and eugenics policies, genetic privacy, selective abortion, genetic enhancement, and human cloning. The students enrolled were predominantly women, and they reflected the racial diversity of the campus as a whole. Some students were philosophy majors; a significant minority were enrolled in our university’s six-year BS/MD program. The diversity in intellectual background, as well as gender
and racial diversity in the course, resulted in informed and intense discussion. Given the objectives of the course, as well as the varied backgrounds of the students enrolled in the course, integrating case studies seemed to be a natural teaching tool.

On the first day of the course the students randomly selected a slip of paper that held their lottery assignment. They were told that this was the disease that they “had” during the course. The fact that they selected their disease by “lottery” was an attempt to reinforce for the students the fact that our genetic assignments are very much out of our own hands. Their lottery assignments were the topics of a series of oral presentations that the students would give periodically, over the course of the semester. These five- to ten-minute-long presentations would chart the medical and social progress of their disease over the course of their “lives.” Every few weeks the students were to report on a new stage in their lives: birth, the ages of three, five, ten, twenty, forty, sixty and eighty. In addition to the lottery assignments, course evaluation was based upon a short in-class exam, a midterm, a final, and their participation in discussion of class material.

The reasons for focusing so much on early life, and then spacing out the lottery assignments towards the end of life, were two-fold. First, several of the diseases that my students were assigned resulted in their “death” long before the age of sixty; some of the diseases were early-onset diseases such as Tay-Sachs. Because of the rapid progression of some of these diseases in childhood, it was important to focus on early life. A second reason for focusing on early life is that my students were overwhelmingly traditional students. One of my students was in her mid-twenties, another was a retiree. Because of the fact that my students were overwhelmingly of traditional age, most had already experienced the life stages that one goes through at three, five, or ten years; they knew what many typical ten-year-old lives are like. However, the lives of a typical forty-year-old remained unfamiliar to them. In attempting to teach empathy, it was important to teach the students to relate to the person they were pretending to be. Thus, the students were asked to report more extensively on young stages in their lives.

The assignment was intended as a means of taking the students beyond mere medical reporting. Any positive or negative psychological impact of the disease was essential to the discussion. The students were to report on the effect of the disease on their personal lives—family, friends, and casual social interactions. How did their families interact with them? How did they do in school? Additionally, the students were to report on the impact of their condition on the lives of their caregivers.

Three weeks into the semester the students had their first lottery assignment—their “day of birth.” This three-week period into the
semester gave the students time to begin research on their lottery assignment. By the time the students gave their first oral presentation, several of them were able to try to converse in the languages of basic moral theory and basic genetics. Each student had to give a short oral report on the facts surrounding his or her birth. Were they born with phenotypic abnormalities that were evident at birth? Had their parents performed a test such as amniocentesis that would have predicted the birth of a child with this malady? During the day-of-birth assignments the students were somewhat hesitant about integrating a personal narrative into their assignments. The information that they reported to the class was mostly clinical: the penetrance of this genetic condition, its frequency in the population, their expected life spans, and their prognoses over time.

Two more weeks into the semester the students presented their three-year-old lottery assignments. At this point, the narratives became richer. A student with trisomy 21 (Down’s syndrome) told the story of her parents’ decision never to have her institutionalized, because the survival rates for children with trisomy 21 who are institutionalized are far smaller than for those who have consistent stimulation in a home environment. Most children with trisomy 21 who are institutionalized live only to the age of nine. She demonstrated for the class the exercises her parents did with her to improve motor skills and coordination, and spoke of her parents’ dedication to improving her quality of life. My student with Duchenne’s muscular dystrophy demonstrated the way he walked. While my student with retinitis pigmentosa was healthy and happy, my student with Tay-Sachs had lost gross motor skills at the age of six months; now, at the age of three, she was blind. The richest narrative was from my student with spina bifida, who until the age of one was not unlike the other children in his neighborhood. But, as the others began to crawl, and eventually walk, he found himself dragging his body along the ground. His disability was beginning to put a strain on his parent’s marriage, and understandably so: he reported that in Britain the rate of divorce among couples who had a child with spina bifida was twice as high as in the general population. Although this student was unable to find the corresponding statistic in the United States, he inferred that similar strains would be placed on his parents’ marriage.

When the students reported the age of five, an interesting development occurred. They began to incorporate their own perceptions of their lives with a disability, along with the perceptions of their family and caregivers. My student with trisomy 21 said that she still could not eat on her own, and was going to a special kindergarten. “What’s wrong with me?” she asked rhetorically. My student with sickle-cell anemia also noticed that he was forced to undergo treatments to which his peers were not subjected. This breakthrough of self-consciousness
on the part of the students was an excellent step in learning empathy for
the persons they pretended to be. The students were beginning to un-
dergo the “imaginative shift,” and ask themselves what the experiences
that they might have as a person with trisomy 21, or sickle-cell ane-
mia, might be like. The most fascinating stories, though, came from
my students with Duchenne’s muscular dystrophy and spina bifida.

In a twist worthy of a soap opera, my student with Duchenne’s
discovered that he had a long-lost monozygotic (identical) twin. His
twin brother was being raised in a family that did not have the finan-
cial resources of his own family. Because of this, treatments and
therapy that my student took for granted were not available to his
twin. So while my student was still able to walk, his twin was al-
ready confined to a wheelchair. I was impressed with this move by
my student, for he recognized that the genetic cards we are dealt are
only part of the story. One of the material principles of justice, dis-
cussed by Beauchamp and Childress, is “to each person an equal
share.” Beauchamp and Childress’s principles of biomedical ethics
were introduced to my students as one of the means by which we can
analyze ethical problems and their solutions. My student introduced
his twin in part to test our intuitions about this material principle of
justice—should one five-year-old child with Duchenne’s be given
better treatment than another? Justice would say no, but in the health
care delivery system of the United States, a family’s financial re-
sources play an important part in determining the health care oppor-
tunities. This move on the part of my student was an important step
in recognizing a child with Duchenne’s as a member of a family, and
not merely as a patient with this-or-that diagnosis.

My student with spina bifida’s parents were divorced by the time
he turned five. He lived with his mother, who joined a support group
so that she could discuss with others her role as his primary caregiver.
Like many children with spina bifida, my student began to have vi-
sion problems, and he was fitted with glasses. Prior to his class pre-
sentation, my student downloaded from the Internet pictures of a white
male with spina bifida, wearing glasses and supporting himself on
crutches. “This is me!” he proudly announced to the class. Strangely,
the child in the picture did bear a resemblance to my own white,
male, and bespectacled student. Including the picture in his presenta-
tion was a memorable step in breaking down the wall between my
student and the “other” young child he pretended to be during his
oral presentations.

Sadly, my student with Tay-Sachs died at the age of five. At the
age of ten, my student with Duchenne’s went into remission. He noted
that though his family could be fooled into thinking that he was get-
ting better, it was always a matter of time before his symptoms would
again manifest themselves. He underwent surgeries to implant healthy
muscle cells into his own muscles, promoting the manufacture of
distophphin and allowing him to walk. My student with fragile-X syn-
drome was in physical and mental therapy, and her family was in a
support group to deal with the recurrent mourning that sometimes
arises in families that have a member who is disabled. My student
with sickle-cell anemia was in pain, sometimes sporadic and some-
times continuous.

My student with trisomy 21 continued her rich narrative. Her fam-
ily was trying to deal with her attempts at independence. Her teenage
years would bring the challenge of emerging sexuality, which both
she and her family struggled with. Eventually, she was diagnosed with
a congenital heart defect, which she described as “a wake-up call”—
her physical disabilities, and not only her mental disabilities, would
prove to be challenges in the future.

Finally, my student with spina bifida had two dramatic announce-
ments. He introduced his narrative with a second picture he found on
the web: a smiling bespectacled head-and-shoulders shot of a boy
propped up by a wheelchair. “This is my school picture,” he an-
nounced, “I am seven!” Again, the picture looked astoundingly like
the student enrolled in my class. The first of his important announce-
ments was that he had achieved a great milestone: though he was
occasionally in a wheelchair, by the age of ten he was using a walker,
and by the age of eleven he was using braces alone! The second of
his dramatic announcements shocked the entire class: at the age of
thirteen he suddenly died of heart failure. The class was surprised, as
this had come out of nowhere. When my student with Tay-Sachs died,
it was not as surprising, for she told us from her day of birth that she
would almost certainly not live past the age of five. But we had for-
gotten that with a poor prognosis, spina bifida can shorten a life dra-
matically. Coming to know this boy with spina bifida—his parents,
his friendships, his experiences at school and his triumphs—took pre-
cedence over the clinically relevant “thirteen-year-old white male with
spina bifida.” By unfolding a richer narrative, by sharing the experi-
ences of this child with the rest of the class, and by seeming to see
the student in our class become the child with spina bifida, the case
study had come alive.

At the age of twenty, my student with Duchenne’s was in a wheel-
chair, his spine twisted into an ‘s’. His lungs were compressed and
he suffered several respiratory illnesses as a result. His twin had died
of viral pneumonia due to this complication. Seeing his brother die
let him know that he too was in danger. My student with retinitis
pigmentosa was not able to get a driver’s license because her night
vision was so poor. She was also beginning to lose her peripheral
vision. This complication affected her personal life—she was not able
to spend as time much with her friends as she wanted. My student
with fragile-X was put on Prozac, because her depression was beginning to manifest itself in self-mutilation.

By the age of forty most of my students were dead. My student with sickle-cell anemia confessed that he should have died a long time ago, for the average lifespan of those with sickle-cell anemia is only twenty to twenty-five years. Headaches, paralysis, and convulsions were part of his daily life, and he eventually died from a stroke. My student with Duchenne’s died. Most tragic was my student with trisomy 21, who still had the same issues of independence that she had with her family at the age of ten. Her greatest frustration was that her skills simply did not match her desire to be independent. At the age of thirty-five she died of heart failure. My student with retinitis pigmentosa continued to check out books on tape from the library, and her doses of Vitamin A no longer had a noticeable effect. She would probably be completely blind in ten years, she reported.

Despite my initial desire to have students give oral presentations past the age of forty, time constraints on the class made this impossible. We never learned what would happen to my student with retinitis pigmentosa, or my student with fragile-X syndrome.

The Success of Lottery Assignments as Classroom Tools

The integration of lottery assignments fulfilled the goals of the course in three distinct ways. First, they allowed the students to learn the course material more quickly, and with special care to the complexity of the material. Second, they provided a creative outlet for the students which was also an invaluable motivator. Finally, the lottery assignments were an excellent tool for teaching empathy.

An immediate and measurable goal was reflected in the students’ answers to midterm questions related to their lottery assignment. The students examined naturalistic and social constructivist definitions of terms like ‘disease’, ‘disability’, and ‘malady’, as well as definitions that attempted to incorporate normative and nonnormative aspects. The students then wrote on the normative and nonnormative aspects of their lottery assignments. The students were also able to integrate their knowledge of their own disease, as well as the diseases of the other students in the course, into class discussions about the benefits or harms of selective termination, public policy on the rights of persons with disabilities, and the use of genetic therapy. Each student became an “expert” on a disease that reflected many of the ethical concerns that were topics of the course. It is particularly valuable to have students who are “experts” in this fashion when teaching an applied ethics course. The students were in a unique position to explain the benefits and the drawbacks of genetic therapy, the perils of genetic discrimination, or the moral normative status of selective
termination in relation to their lottery assignment, making the discussion more informed for the entire class. Lottery assignments reflected different kinds of diseases, including early-onset, late-onset, X-linked, autosomal-recessive, autosomal-dominant, and somatic mutations. The wide variety of diseases allowed the students to draw involved and diverse conclusions about the ethical questions that arise when discussing prenatal testing, predictive testing, genetic privacy, and genetic enhancement techniques. The students learned that there was more than one answer to complex ethical questions about genetics, and that the specifics of a particular disease or disability can affect the ethical assessment of different actions.

A further consideration when assessing the success of the project was the creative element that the lottery assignments afforded the students, a creative element that may be lacking in some philosophy or bioethics courses. Undergraduates occasionally experience frustration when reading Aristotle, Plato, and Kant, waiting anxiously for the opportunity “to write their own philosophy.” The lottery assignment created an opportunity for the students to exercise their imaginations, thereby going beyond the traditional boundaries of philosophy classes. This creative outlet was much appreciated by the students; they reported that the lottery was among their favorite portions of the course in the end-of-semester evaluations. But this creative element also promoted a deeper understanding of the course material. The students felt responsibility for their lottery assignments, resulting in friendly competition for the most detailed and interesting narratives in their oral presentations. It also helped to motivate the students in other class activities, such as their take-home midterms, in-class discussion, and readings.

Though the above are all important advantages in using lottery assignments, the most welcome benefit in using the lottery assignment was the ability of a protracted case study to teach empathy for persons unlike ourselves. The lottery assignments forced the students in the class to become someone else, thereby treating the experiences of others as their own experiences. As mentioned above, one of the problems in using case studies in the classroom is that students create a psychological separation between themselves and the persons in the case that they are considering. Such a separation makes it difficult for them to consider some cases with sufficient attention to detail and the humanistic component of the cases. It has been suggested when analyzing medical ethics cases that one should ask “What does the patient want? What does the patient not want?” But it is often hard to know what precisely a patient would want when we are considering a case in the classroom, and are asking students to place themselves in the shoes of people who may be very much unlike them. How can we know what it is to be a child with spina bifida, or trisomy 21? When
discussing questions about individuals unlike ourselves, it is not fruitful to say, "Okay, for a few minutes, imagine that you are this other person." A first step is spending an entire semester being that person. The lottery assignments broke down the wall of "self and other," because the "other" was now not a different person at all. An imaginative shift, such as the kind that Robert M. Gordon describes, had taken place, allowing the students to respond to events in a hypothetical life as if the events were events in their own lives. This imaginative shift took place despite the fact that students were asked to fill the shoes of people very much unlike themselves.

Unlike a one-time role play in the class, the students occupied these roles throughout the semester. This allowed the students to identify themselves more strongly with the characters they were playing. Students who at the beginning of the semester had strong views in support of selective termination for some genetic disorders were less certain of their views as the semester progressed, because in aborting a fetus with spina bifida or trisomy 21 "you were killing me." Other students were able to reinforce their own moral convictions by seeing the development of a life with a genetic malady which was very much unlike the development of their own lives.

Methods for Improvement

The use of lottery assignments, though an invaluable teaching tool, was not without problems. In the future, I will change two aspects of the lottery assignments, so that both the students and I will gain more from this teaching device. First, I will encourage the students to include a richer narrative earlier in the semester. Although some of the students took the opportunity to weave a rich personal story early in the semester, many of them did not. The assignment sheet that included questions for their day-of-birth presentations included questions about the discovery of their illness and the phenotypic manifestations of their illness. In the future, I will raise questions regarding the student’s social situation, such as “Do you have any siblings? Do any of your siblings have your condition? How have your siblings reacted to your arrival in the family? How old are your parents? What is your parents’ income level, and what is their education level? How might your parents’ income or education level affect the progress of your disease, or its treatment? What might your parents’ expectations for you include?” My hope is that these questions will allow the students to see themselves not as disabled persons, but persons, with a full social world, who happen to have a particular disability.

The second aspect of the lottery assignments that I will change is to give over even a greater amount of class time to the lottery assignments. As professors, we occasionally believe that we are the experts
in all things in the classroom. Certainly there are some things about which I am an expert. However, the lottery assignments were a helpful way to bring the course material alive, and my lectures alone could never duplicate that. Though I knew more about each disease I assigned than the students knew at the beginning of the semester, the wealth of empirical data that they uncovered by the end of the semester far exceeded my understanding. As mentioned above, these empirical claims have important bearing on the ethical conclusions that the students attempted to draw. Thus, giving the students the information needed to apply ethical distinctions was essential to the success of the course.

The lottery assignments were a positive addition to a course in medical ethics for a number of reasons. The most significant reason is that they enabled the students to cultivate empathy for persons very much unlike them. Insofar as one of the goals of an ethics class—and medical ethics in particular—is to give students the tools to act more ethically, a classroom tool which helps students develop empathy is invaluable.

Appendix: Diseases and Genetic Markers

The following are diseases or genetic markers that predispose an individual to a disease; any or all can be used for this class exercise. Many of these have a genetic component, such as being an autosomal-dominant trait, autosomal-recessive trait, the result of a chromosomal defect, or some other genetic disruption. The diseases marked with an asterisk are ones that I used in my course. I did not use Huntington’s disease, cystic fibrosis, BRCA1 or BRCA2, or APOE (a genetic marker for a predisposition to Alzheimer’s disease), because these were discussed in detail in other portions of the course. However, a greater enrollment would have allowed me to give students these lottery assignments, turning the focus of the discussion from my lectures to the students’ lottery experiences.

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<td>Hutchinson-Gilford syndrome</td>
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Notes


5. I am especially indebted to Ronald Green, “Buzz” Scherr, and David Bizic for their work at Dartmouth College’s Summer Faculty Institute, “Teaching the Ethical, Legal, and Social Implications of the Human Genome Project,” which was funded by the National Institutes of Health. Additionally, I am in debt to all of the faculty members who attended this institute along with me. Many of the ideas for the development of this course were not my own. I write this article not to claim credit for the idea of the lottery assignments, or the content of my course, but to report on the successful implementation of a teaching tool that can be used in several philosophy courses.

6. It is not enough to ask the questions “What is it like to be a bat?” or “What are the experiences of a bat like?” Rather, in teaching empathy, the question is “How does the bat feel, and what does that tell me about how I should treat the bat?”


8. While fragile-X affects primarily males, the student who received the fragile-X lottery assignment was a female. This occurred despite the fact that there were several males in the class. Similarly, the student who received sickle-cell anemia, which affects primarily Africans and persons of African decent, was white, despite there being African Americans in the class. Although the assignment of sickle-cell anemia to a white student, and fragile-X to a female student, was coincidental, it only helped my students to further picture themselves in the position of the “other.”


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