

INSTRUCTOR GUIDE

SIMULATION: LIFESPAN EXTENSION¹

OVERVIEW

In this simulation, participants will be called upon to make a series of policy recommendations in response to four morally charged cases. The recommendations involve more than just taking a position on the issue in question. Participants are asked to take seriously how they can justify their positions, as well as how those justifications can be effectively communicated to others who may disagree with them.

CORE QUESTIONS

Technology Specific:

1. Is lifespan extension something we should desire for ourselves?
2. Is lifespan extension something we should desire for our society?
3. If lifespan extension is going to happen, how should access to it be allocated?

General:

4. How do we reason about this broad range of issues in a consistent way?
5. How can we communicate our reasoning to others who may have very different moral pre-commitments?
6. How should decisionmaking power be exercised when even good faith communication cannot generate consensus?

LEARNING GOALS

The scenarios are designed to emphasize the complexity of many ethical decisions and the deep values at stake—and often in conflict—in ethical disagreements. These aspects are emphasized to set up the following takeaways:

- (1) When you disagree with someone on a moral matter, it is important to be able to recognize whether the disagreement is rooted in incommensurate values or whether it is merely a difference in the priority given to different shared values. Discerning what type of disagreement is occurring allows for more productive communication and attempts at persuasion.
- (2) Many moral arguments are not the product of miscommunication or irrationality on the part of the disagreeing parties. Rather, the conflict is rooted in a more basic disagreement about what values are most important. Such conflicts may be functionally unsolvable by rational persuasion. Even so, it is important that we consider what ethical decisionmaking looks like when someone's deeply held values must be sacrificed.

¹ Created by Brian Palmiter for the Scientific Citizenship Initiative at Harvard University, Spring 2020.

RUNNING THE SIMULATION

Class Time Breakdown

- Intro/set up: 10 minutes
- Simulation: 60 minutes
- Debrief: 50 minutes
- Total: 120 minutes

Materials

- Enough of Scenarios 1, 2, and 4 for each participant to get one copy of each
- Enough copies of Scenario 3.1 for half the participants and copies of Scenario 3.2 for the other half
- Enough copies of the Values Hierarchy Sheets (both 1 and 2) for each participant

Procedures

Before starting the simulation, distribute Value Hierarchy Sheets to each participant, but hold on to the Scenarios. (These will be distributed one at a time so that no one can look ahead.) Give participants 5 minutes to rank and record their values. Then divide participants into groups of 3-5 individuals for the simulation.

To begin, pass out Scenario 1 and give participants 3-5 minutes to read it individually. Then open up time to deliberate with their group about what policy they should recommend (approx. 10 minutes). Groups should record their recommendations on a sheet of paper that will be turned in at the end of the activity. This same process is repeated with Scenarios 2 and 3, with the added twist that half the groups will receive one version of Scenario 3 and the other half will receive an inverted version of the same basic scenario. Groups should not be informed of this fact. (NOTE: Do not pass out Scenario 4 until after the debrief.)

THE DEBRIEF

After the simulation is over, the facilitator will bring all the groups together for a common debrief. This is the most important element of the activity, pedagogically speaking, so it should not be given short shrift. In the debrief, the facilitator asks a series of questions that work through the decisionmaking process groups just underwent. The goal is to use metacognitive reflection to inductively achieve the learning goals. During the debrief the facilitator should incorporate some brief didactic segments where appropriate in order to distill and formalize the lessons that emerge organically from the debrief conversation.

SCENARIO 4

After debriefing scenarios 1-3, reconvene the original groups and have them complete Scenario 4: Playing God. This case gives them a chance to start putting into practice some of the lessons they just discussed in the debrief.

VALUES HIERARCHY NO. 1

Below is a list of values that people commonly use to guide their reasoning when trying to determine the right course of action in a complicated situation. Though you may believe in the importance of many or all of these values, take a moment to identify and rank the five that are most important to you.

VALUES:

- Common good
- Compassion
- Efficacy
- Efficiency
- Equality
- Excellence
- Fairness
- Freedom
- Holiness
- Honesty
- Humility
- Integrity
- Justice
- Preventing harm
- Prudence
- Respect
- Self-determination
- Virtue
- Other: _____

HIERARCHY:

1. _____
2. _____
3. _____
4. _____
5. _____

SCENARIO 1: WHAT'S IN A CLASSIFICATION?

You are science policy advisors to Senator Olivia Foerver, the junior senator from California. Among her various committee assignments, Senator Foerver chairs the Senate Special Committee on Aging.² The issue facing the committee at the moment concerns a debate at the Food and Drug Administration (FDA) about whether aging should be classified as a disease.

Proponents of classifying aging as a disease argue that doing so would help improve the priorities of governments and funding agencies. Regulators, including the US Food and Drug Administration (FDA), have strict rules that guide what conditions a drug can be licensed to act on, and so what conditions it can be prescribed and sold for. If aging were on the list, then drug companies would have the incentives needed to spur the massive investment needed to pursue a “cure” for it. Additionally, labelling aging a disease would make anti-aging products “treatments” instead of “supplements,” thereby subjecting them to stricter FDA safety and efficacy standards.

Opponents counter that the change in priorities that would accompany a change in classification are the main reason to refrain from reclassification. For one, reclassification threatens to shift valuable research energy and funding toward anti-aging therapies at the expense of other disease research. Other concerns include the worry that labelling aging a disease will further stigmatize the old and that medicalizing aging might lead people to deemphasize the need for healthy living.

The Committee is preparing to issue a position statement to contribute to the FDA’s open comment process. Senator Foerver has asked for your group’s advice about whether she should support the proposal to classify aging as a disease. What is your recommendation? What reasons should the Committee’s report cite in support of this position?

² Special committees have no legislative authority, but they can study issues and conduct oversight of programs. For more on this committee, see <https://web.archive.org/web/20070131201407/http://aging.senate.gov/about.cfm>

SCENARIO 2: WHO GETS TO DRINK FROM THE FOUNTAIN OF YOUTH?

Shortly after the FDA classified aging as a disease, dozens of companies began clinical trials for a variety of anti-aging treatments. One of these treatments was recently shown to have safe, substantial effects on retarding aging, extending both lifespan and healthspan. The treatment, developed by Cambridge Senolytica, uses a patented senolytic compound to target senescent cells in an aging patient, causing the old, decrepit cells to selectively self-destruct. The dead cells are then removed by the immune system, leaving only healthy, younger cells behind and dramatically improving the “youthfulness” of the patient. The treatment has been demonstrated to reduce the “effective age” of a person by as much as a decade, and the company believes refinements to the technology could double the effectiveness within the next few years.

When the drug hit the market last month, it created a public uproar. Cambridge Senolytica priced the drug at \$60,000 per treatment—almost exactly the median household income in the United States, one of the richest countries in the world—and for maximum effect, patients should receive treatment annually. Given the price tag and the almost universal pool of potential patients for the drug, no insurance company is willing to cover it. This means that only individuals capable of shelling out \$60,000 a year out-of-pocket can expect to have an extra decade or more of healthspan.

Cambridge Senolytica appears to be impervious to public opinion on the matter, refusing to lower prices. In response, a growing majority of the American public has demanded that Congress pass legislation guaranteeing equal access to life extension technologies. The movement has couched its demands in the terms of human rights—both the human right to life and the human right to “enjoy the benefits of scientific progress and its applications.”³

Senator Foerver wants the group to weigh in on this issue. Should she support universal access to life extension technologies? If so, how? Possibilities include mandating that insurance companies cover offered services, weakening patent protections for lifespan extending therapies, implementing price caps on therapies, etc. What might be the consequences if access to lifespan extension technologies is treated as a human right?

³ International Covenant on Economic, Social and Cultural Rights, Article 15(1)(b). See <https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx>

SCENARIO 3.1: THE REAL MANDATORY MINIMUMS ACT

In addition to chairing the Senate Special Committee on Aging, Senator Foerver is a member of the Judiciary Subcommittee on Crime and Terrorism. The subcommittee is considering whether to recommend that the “Real Mandatory Minimums Act” (RMMA) advance to the full Judiciary Committee. The act would require individuals convicted of a Class A felony, which potentially carries a life sentence (or death), to receive anti-aging treatments until they have served at least 25 years or reached age 70, whichever comes later. The act’s advocates argue that this is necessary to reduce the odds that some convicts will escape the full weight of their sentence by dying “prematurely.”

What position should Senator Foerver take with respect to the act? And how should she communicate it to the subcommittee during her five minutes allotted speaking time? Come up with a pros and cons list, as well as a recommended position.

SCENARIO 3.2: THE TIME FOR A SECOND CHANCE ACT

In addition to chairing the Senate Special Committee on Aging, Senator Foerver is a member of the Judiciary Subcommittee on Crime and Terrorism. The subcommittee is considering whether to recommend that the “Time for a Second Chance Act” (TSCA) advance to the full Judiciary Committee. The act would require federal prisons to allow individuals convicted of anything less than a Class A felony (which potentially carries a life sentence or death) to receive anti-aging treatments while in prison. The act’s advocates argue that anti-aging therapies are life-saving medical services that prisons ought not to be able to withhold. Furthermore, allowing convicts to use anti-aging treatments will allow them to have more potential life post-release to have a real “second chance” after they’ve served their time. The act goes further for young people behind bars, mandating that anti-aging therapies be provided free of cost to prisoners through their thirtieth birthday.

What position should Senator Foerver take with respect to the act? And how should she communicate it to the subcommittee during her five minutes allotted speaking time? Come up with a pros and cons list, as well as a recommended position.

SCENARIO 4: PLAYING GOD

A nationally prominent rabbi issued a powerful statement condemning the Senate’s support for reclassifying aging as a disease and calling out Senator Foerster for her leadership on this issue⁴:

You don’t have to be Jewish to drink *L’Chaim*, to lift a glass “To Life,” but Jews have always had an unusually keen appreciation of life, and not only because it has been stolen from them so often and so cruelly. The celebration of life — of this life, not the next one — has from the beginning been central to Jewish ethical and religious sensibilities. In the Torah, “Be fruitful and multiply” is God’s first blessing and first command. Judaism from its inception rejected child-sacrifice and regarded long life as a fitting divine reward for righteous living. At the same time, Judaism embraces medicine and the human activity of healing the sick; from the Torah the rabbis deduced not only permission for doctors to heal, but also the positive obligation to do so. Indeed, so strong is this reverence for life that the duty of *pikuah nefesh* requires that Jews violate the holy Shabbat in order to save a life. Not by accident do we Jews raise our glasses “L’Chaim.” Neither is it accidental that Jews have been enthusiastic boosters of modern medicine and modern biomedical science. Vastly out of proportion to their numbers, they build hospitals and laboratories, support medical research, and see their sons and daughters in the vanguard wherever new scientific discoveries are to be made and new remedies to be found. Yet this beloved biomedical project, for all its blessings, errs grievously in viewing aging itself as a disease.

I wish to make the case for the virtues of mortality. Against my own strong love of life, and against my even stronger wish that no more of my loved ones should die, I aspire to speak truth to my desires by showing that the finitude of human life is a blessing for every human individual, whether he knows it or not. This is a question in which our very humanity is at stake, not only in the consequences but also in the very meaning of the choice. For to argue that human life would be better without death is, I submit, to argue that human life would be better being something other than human.

How, then, might our finitude be good for us? I offer four benefits, first among which is interest and engagement. If the human life span were increased even by only twenty years, would the pleasures of life increase proportionately? Second, could life be serious or meaningful without the limit of mortality? Is not the limit on our time the ground of our taking life seriously and living it passionately? “Teach us to number our days,” says the Psalmist, “that we may get a heart of wisdom.” To number our days is the condition for making them count. A third matter concerns beauty and love. Our appreciation of beauty depends on our appreciation of mortality— in us and in the beautiful. Love swells before the beautiful precisely on recognizing that it (and we) will not always be. Fourth, there is the peculiarly human beauty of character, virtue and moral excellence. To be mortal means that it is possible to give one’s life, not only in one moment, say, on the field of battle, but also in the many other ways in which we are able in action to rise above attachment

⁴ The language of the statement is pieced together, with slight modifications, from an article by the (Jewish) bioethicist Leon Kass. See Kass, Leon R. “L’Chaim and Its Limits: Why Not Immortality?” *First Things*, no. 113 (May 2001): 17–24.

to survival. Through moral courage, endurance, greatness of soul, generosity, devotion to justice — in acts great and small — we rise above our mere creatureliness, spending the precious coinage of the time of our lives for the sake of the noble and the good and the holy.

Why do we human beings seek immortality? Why do we want to live longer or forever? Is it really first and most because we do not want to die, because we do not want to leave this embodied life on earth or give up our earthly pastimes, because we want to see more and do more? I do not think so. This may be what we say, but it is not what we finally mean. Mortality as such is not our defect, nor bodily immortality our goal. Rather, mortality is at most a pointer, a derivative manifestation, or an accompaniment of some deeper deficiency. The promise of immortality and eternity answers rather to a deep truth about the human soul: the human soul yearns for, longs for, aspires to some condition, some state, some goal toward which our earthly activities are directed but which cannot be attained in earthly life. Our soul's reach exceeds our grasp; it seeks more than continuance; it reaches for something beyond us, something that for the most part eludes us. Our distress with mortality is the derivative manifestation of the conflict between the transcendent longings of the soul and the all-too-finite powers and fleshly concerns of the body.

Biblical religion says we seek wholeness through dwelling in God's presence, love, and redemption — a restoration of innocent wholeheartedness lost in the Garden of Eden. But, please note, these and many other such accounts of human aspiration, despite their differences, all agree on this crucial point: man longs not so much for deathlessness as for wholeness, wisdom, goodness, and godliness — longings that cannot be satisfied fully in our embodied earthly life.

If this is correct, there follows a decisive corollary regarding the battle against death. The human taste for immortality, for the imperishable and the eternal, is not a taste that the biomedical conquest of death could satisfy. We would still be incomplete; we would still lack wisdom; we would still lack God's presence and redemption. Mere continuance will not buy fulfillment. Worse, its pursuit threatens — already threatens — human happiness by distracting us from the goals toward which our souls naturally point. By diverting our aim, by misdirecting so much individual and social energy toward the goal of longer life, we may seriously undermine our chances for living as well as we can and for satisfying to some extent, however incompletely, our deepest longings for what is best. The implication for human life is hardly nihilistic: once we acknowledge and accept our finitude, we can concern ourselves with living well, and care first and most for the well-being of our souls, and not so much for their mere existence.

Since the religious leaders' criticism has been picked up and amplified by several national media outlets, the Senator feels that it is necessary to issue a public statement responding to their concerns. She has asked for your assistance composing her response. What should she say in order to respectfully address the rabbi's concerns without alienating other constituents with different religious or philosophical commitments?

VALUES HIERARCHY NO. 2

Having just worked through several complex decisions with your group, reflect again on the values you said are most important to you. Did your initial hierarchy accurately reflect the values that you found most compelling in your deliberations? If you were to re-rank the five values that are most important to you, what would your hierarchy look like?

VALUES:

- Common good
- Compassion
- Efficacy
- Efficiency
- Equality
- Excellence
- Fairness
- Freedom
- Holiness
- Honesty
- Humility
- Integrity
- Justice
- Preventing harm
- Prudence
- Respect
- Self-determination
- Virtue
- Other: _____

HIERARCHY:

1. _____
2. _____
3. _____
4. _____
5. _____

DECISION RECORD SHEETS

DECISION 1: WHAT'S IN A CLASSIFICATION?

Option	# of Votes	Reasoning
Support reclassifying aging as a disease		
Maintain status quo—aging is not a disease		

DECISION 2: WHO GETS TO DRINK FROM THE FOUNTAIN OF YOUTH?

Considerations counting in favor of supporting guaranteed universal access:

Considerations counting against supporting guaranteed universal access:

Group's recommended position:

____ members in FAVOR of universal access

____ members in OPPOSITION to universal access

Recommendation: **SUPPORT** | **OPPOSE** universal access legislation

Group's recommended policy (check all that apply):

- Mandating insurance cover lifespan extension technologies
- Reform patent protections
- Implement price caps for lifespan extension technologies
- Other (please specify)

DECISION 3: CRIMINAL JUSTICE REFORM AND LIFESPAN EXTENSION

Reasons to support the bill:	Reasons to oppose the bill:

Group's recommended position:

____ members in FAVOR of the bill

____ members in OPPOSITION to the bill

Recommendation: **SUPPORT** | **OPPOSE** the legislation

Subcommittee speech communication strategy:

How should Sen. Foerver frame her position in the five minutes of floor time she is allotted during the debate period?

DECISION 4: PLAYING G-D.

What should Sen. Foerver say in order to respectfully address the rabbi's concerns without alienating other constituents with different religious or philosophical commitments? Provide at least three talking points that directly address concerns raised in the Rabbi's statement.

Rabbi's Concern	Senator's Best Response
1.	1.
2.	2.
3.	3.
...	...