

# Playing God

## *The Rock Opera That Endeavors to Become a Bioethics Education Tool*

TUIJA TAKALA, MATTI HÄYRY, and LAURENCE LAING

**Abstract:** This article describes and introduces a new innovative tool for bioethics education: a rock opera on the ethics of genetics written by two academics and a drummer legend. The origin of the idea, the characters and their development, and the themes and approaches as well as initial responses to the music and the show are described, and the various educational usages are explored.

**Keywords:** bioethics education; music; genetics; popularizing science

*Playing God—The Rock Opera* is an idea for bioethics education that involves musical performances with visual elements, possibly together with directed discussions and academic lectures. Currently, it exists in CD format, distributed internationally to general classic rock audiences. It has been fully performed in playback with a follow-up session for questions and answers and as a live musical performance on stage. Much of the project is still work in progress, and the aim of this article is to explain how it all came about, what it currently is, how it could be developed, and what would be needed to take the idea further. The ultimate goal is to turn a story now told by a string of songs into an educational experience for college students, other targeted audiences, and the general public.

### Spoiler Alert

The following pages reveal the story of *Playing God—The Rock Opera*. If you wish

to have a virgin mind for its presentation or performance, read no further.

### Origin of the Idea

The idea of writing a rock opera on the ethics of genetics was conceived by Matti Häyry, Krista Jaquet, and Tuija Takala on a March evening in 2010 in Basel, Switzerland, over dinner—and definitely after a sip or two of good red wine. Three elements suddenly clicked together: Häyry's just-off-the-press book *Rationality and the Genetic Challenge*,<sup>1</sup> Jaquet's preparations for directing the musical *Rent*, and Takala and Häyry's freshly recorded demo track for their song "Peili" (Finnish for "mirror"). The idea came up, and a decision was immediately made, with much conviction and commitment, that a rock opera must be created on the book's themes, with music in the style of classic rock.

The working title was *Test*, reflecting the scientific subject matter (genetic and medical testing), the possible human

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interest story of the piece (a psychological and social test for the characters and their community), and the notion that four letters might just make an attractive heading (as in *Hair, Rent, Cats, Once*, etc.). The development of the story started almost immediately, albeit at a slow pace at first, and the idea began to take shape.

### Developing the Characters

The characters of the opera were molded from the themes of *Rationality and the Genetic Challenge*, with background information from other academic works by Takala and Häyry.<sup>2</sup> The topics dealt with in Häyry's book include the following:

- Extending human lives indefinitely by biomedical means
- Designing the best possible children
- Designing deaf children (perhaps as a special case of the foregoing)
- Designing savior siblings
- Deliberately cloning human beings
- Using human embryonic stem cells in research and treatments
- Curing diseases with gene therapies

These and other academic aspects of the book were discussed in a special section of this journal in 2011.<sup>3</sup> As for the opera, after about two years of work—first by Häyry and Takala in Finland and Jaquet with her cowriter James Sievert in Switzerland and then by Häyry, Takala, and Laurence Laing—the genetic themes, protagonists, and issues dealt with had taken roughly the following forms.

#### *Life Extension: Luke*

The theme of considerable longevity, with hints of immortality, is represented by the character of Luke, an age-old blues singer who has had experimental life-extension treatment decades ago, and who is now experiencing existential fatigue as a result of his unduly long

and, for him, intolerable life. His solution to the problem is suicide.

#### *The Best Possible Children: Tony and Alex*

The concept of designer perfection is covered by identical twin brothers Tony and Alex. Their parents have engaged the services of bioscientists to give their offspring the features and characteristics of their choice. One of the brothers is an extrovert, and the other an introvert, and they both have coping issues that result in erratic or subdued behavior.

#### *Designer Deaf Children: Sophie, and Then Not*

The theme of deaf children was dropped during the process for reasons explained in the subsequent section on outtakes. The genetically untouched character of Sophie, with whom both twin brothers are in love, eventually emerged to replace the original figure.

#### *Savior Sibling: Tina*

Tina is a rebellious young woman who was produced to act as a tissue donor for her ailing brother, Tim. She turns out not to be a match, and she blames herself and everybody else for this. After her brother dies, she starts a journey of self-understanding and reconciliation that ends up in her finding her own individuality.

#### *Cloning: Constable Hartman, Tony, and Alex*

The local police officer and her colleagues appear to be clones of one flawless law enforcer, but the impression may be due to their perceived uniformity. As artificial twins, Tony and Alex are products of embryo splitting (used in many countries as a reproductive aid), and, as it turns out, also nuclear transfer cloning (the notorious Dolly method).

*Human Embryonic Stem Cells: Only in a Dream Sequence*

Human embryonic stem cells are not included in the active cast, but they are part of a surreal between-the-worlds crowd that is seen in a scene after Tim's death.

*Gene Therapy: Tim*

As Tina, by being unable to be a tissue donor, fails to save Tim, genetic treatment comes into play. Unfortunately for Tim, the therapy is experimental and leads to side effects. The medical condition picked from *Rationality and the Genetic Challenge* is X-SCID, a lethal immune deficiency that occurs only in males, and the side effect of its experimental genetic treatment is leukemia. Tim's attitude toward all this is stoic.

*Nonmedical Characters*

Apart from the medical cases, the cast of characters also includes a focal and vocal spokesperson for science, angry gods, and assorted parents. These non-medical characters provide the play with its driving forces—science peddling, divine interventions, and parental choices.

*Mr. C.* At the center of events is Mr. C, a science salesman whose services almost everyone in the community—the small town of Happyville—have solicited. His increasing arrogance becomes visible toward the end of the play.

*Gods.* Overseeing events from their terrace are the gods, an assortment of deities who at the start of action are having an emergency meeting concerning the lack of prayers from Earth. The gods are not well versed in human matters, and they react to adversity with force and violence.

*Parents.* Tony and Alex's parents, Mr. and Mrs. Pigafetti, act hubristically and react with indignation when things do not go their way. Sophie's father, the owner of the Organic Vegetable Store, wants to retain a status quo in his family and dislikes the idea of his daughter leaving home for a different life. Tina and Tim's parents have lived in a perpetual state of concern for years, and by now their stance is one of resignation.

**Concept Album**

By the end of 2011, much of the story and many of the musical themes had been developed. At this point, it became clear that to achieve an authentic 1970s classic rock atmosphere, it would be useful to involve someone with actual experience of making music in that era. As a result, Takala and Häyry contacted their prior acquaintance Laurence "Corky" Laing, drummer of the pioneering hard rock band Mountain and holder of two gold records from Woodstock. For the next year and a half, the three of them spent a lot of time together in Finland and elsewhere completing the 25 songs that now tell the story. In studio work, music, and arrangements they were supported by Takala and Häyry's old friend Lasse Väyrynen, a renowned musician in his own right. Altogether, eleven musicians participated in the recordings, including two guest performances by Eric Schenkman on guitar, courtesy of his band, Spin Doctors.

Because the storyline was further developed during the music-writing and recording period, the ensuing concept album<sup>4</sup> came to have its own name, retaining a reference to the original title: *Playing God: Corky Laing and the Perfect Child Perform Original Music from Test: The Rock Opera*. The album is produced by Polite Bystander Productions, a company that Takala and Häyry established for the purpose.<sup>5</sup> The CD was released

internationally in July 2013 by Voiceprint/Gonzo Multimedia, an independent record company and label based in the United Kingdom. The record is available for purchase online, and free samples of the music can be heard via YouTube<sup>6</sup> and the album's sites.<sup>7</sup>

The spelling of "perfect" as "perfcrt" in the band's name is intentional. It is a play on the observation that imperfect passes for perfect in the human mind—our brain fills in the missing parts. Most people do not even notice the misspelling. More generally speaking, it is hoped to draw attention to the idea that, often, perfection is in the eye of the beholder.

### Story

The story told by the album, and by its playback and live performances, is based on a background excerpt, a synopsis, and the lyrics of the songs.

As a preface, the following text can be found on the album leaflet's back cover, and the text is also read in the beginning of live performances.

The good people of Happyville, set back in a 1970s version of tomorrow, have enjoyed the advantages of genetic engineering for decades without any thought, but the day of judgment is near.

When Luke comes to town, and gods develop an interest in Mr. C's science peddling, the secrets of the townspeople are about to be revealed, and their lives may never be the same again.

The synopsis of the story, as told in the album, is as follows.

### Playing God—The Rock Opera

#### *Act 1*

Gods are gathering to a meeting from all corners of the universe.<sup>8</sup>

Luke, a 110-year-old blues singer, enters Happyville at the break of dawn, nails the contract that sentenced him to indefinite life through medical experimentation on Mr. C's office door, and takes a lethal overdose of pills and liquor.<sup>9</sup> Luke's ethereal body climbs up to the Terrace of the Gods. Gods are discussing the long-term lack of prayers from humankind. When they learn that Luke should have died years ago, and that he comes from Happyville, the town that has had the lowest prayer rate for a long time, they decide to send him back to find out what is going on.<sup>10</sup>

Coming back down, Luke witnesses, as a flashback, the creation of designer twins Tony and Alex by their parents and Mr. C two decades ago.<sup>11</sup> He also witnesses Tony's return from college and an impromptu celebration in his honor.<sup>12</sup> The twins and their friends get together, reminisce about their teenage band, and sing about love as they see it now. Tony sings about college girls,<sup>13</sup> and Alex sings about his secret love for Sophie, the young woman who helps out her father at the Organic Vegetable Store and serves as part-time assistant to Mr. C.<sup>14</sup>

The celebrations are interrupted by Tina, who rages about people having a party while her brother, Tim, for whom she was designed to be a savior sibling, is dying.<sup>15</sup> As a side effect of genetic treatment, Tim is now at the end stages of leukemia. Tim's fate prompts Tony and Alex to reevaluate their relationship.<sup>16</sup>

Tina refuses to accept Tim's imminent death and starts gathering people to be tested, so that one of them might help Tim. They all sign the standard disclaimer. But none of them is a match, not even Tony, who is the last in line.<sup>17</sup> Sophie helps Mr. C with the procedure, and when the testing comes to an end, her eyes meet Tony's. Luke, who has been observing events, realizes how love

comes in different shapes and forms. There is love at first sight between Sophie and Tony, and sibling love between Tina and Tim that transgresses the boundaries of death.<sup>18</sup>

During the night, Tim dies and wanders into the interspace of all those who do not belong. He meets embryos who failed to make it beyond IVF/PGD and two smoking gods on a recess from their meeting on the terrace. In the corner, Luke is phoning the secretary god to give an update. Bernie Soul makes a scene by claiming that he has been forgotten. Everything dissolves into mist when the bells call the gods back to the terrace.<sup>19</sup>

The next morning, Sophie and Tony arrive at the Organic Vegetable Store, where Tony's parents are shopping, and announce their plans to be together. The news is not well received by Tony's parents, who wanted their perfect child to have a perfect wife.<sup>20</sup> After Tony and his parents leave, Sophie and her father confront each other. The father, an over-protective single parent, expresses his anguish about losing his daughter. Sophie expresses her resolve to change her life. The argument ends up in Sophie running away.<sup>21</sup>

## Act 2

Alex and Tony have put their old band back together. While they are tuning up, it is revealed that they are both in love with Sophie. An altercation ensues.<sup>22</sup>

Contemplating Tim's death, Tina realizes that she should move on but does not know exactly how.<sup>23</sup> She is briefly consoled by the feeling of sisterhood offered by the town constable and her colleagues<sup>24</sup> but finally finds her true spirit in her own self and individuality.<sup>25</sup>

Sophie has been missing since the confrontation with her father, and the townspeople are looking for her. The

argument with her father made her question who she really is and where she belongs. Tony's easy charm was not really the answer—any more than Alex's perpetual longing. She has spent the time with her computer and has gained access to Mr. C's secret personal files. It transpires that the services provided by Mr. C have not always been the services ordered or commissioned. The twins, for instance, have not been produced from their parents' gametes—they are actually clones of an actor whose picture Mr. C showed to Mrs. Pigafetti.<sup>26</sup>

Tony is the first to find Sophie. But premonitions about his own perfection stop him in his tracks, and his demons come to haunt him.<sup>27</sup>

Having secured access to Mr. C's files, Sophie continues to find out more about his ways of doing business. Tina joins her just in time to see the files on her own family. Her failure as a savior sibling can, the record shows, be attributed to Mr. C's deceptive activities, and the same is true about the failure of Tim's treatment.<sup>28</sup> Alex also enters the scene and expresses, from afar, his long-standing love for Sophie, but his words fall on deaf ears.<sup>29</sup>

Sophie gains access to the most secret file. It transpires that Mr. C is Sophie's biological father! She pushes "print," and information starts pouring out from printers all over the town.<sup>30</sup>

Townspeople gather around to see what the commotion is about. As the printouts are distributed and read, anger toward Mr. C grows among the crowd. Their secrets have been exposed, they have been cheated, they have been over-charged, they have been endangered, and they have been deceived. As Mr. C arrives at his office, he is challenged by an angry mob. Luke calls out for the gods and points out Mr. C to them as the cause of the declining prayers. The gods strike Mr. C dead with lightning. People, aghast, freeze.<sup>31</sup>

After a moment of shock and disbelief, the townspeople gather themselves. The evil man is no more. It was not their fault; nothing is their fault. Tina and Sophie leave the town hand in hand, people seek solace from one another, and little by little life goes back to normal.<sup>32</sup>

### Premieres and Early Reception

As of September 2013, the work has been performed three times.<sup>33</sup> The first was a test run, with demo music tracks and a stripped-down visual presentation, for students of the philosophical bioethics course at the University of Manchester in December 2012. The international premiere, with completed music, and in playback-cum-visuals format, was on June 20, 2013, in Paris, France, as part of the Third Cambridge Consortium for Bioethics Education.<sup>34</sup> Both playback performances have been followed up by discussions on the work itself and its potential uses in the classroom.

The live music premiere of *Playing God* took place in Basel, Switzerland, on August 15, 2013. The music was performed by a band of six musicians, with three additional singers and a six-person-strong choir. The audience saw short explanations of the songs and then the lyrics, with some pictures and other visuals to enliven the show. About 100 people, some from the concurrent 27th European Conference on Philosophy of Medicine and Health Care, attended, and the comments were enthusiastic and supportive. For us, this was proof of concept that the show can be performed live, and that it can retain its entertainment value with or without further theatrical elements.

The first review of the album appeared on August 30, 2013. Rock writer Ray Shasho of the *St. Petersburg Classic Rock Music Examiner* wrote:

Corky Laing has recently added a brand new chapter to his illustrious musical career. Laing's most recent project is a fascinating collaboration with two internationally acclaimed professors (Prof. Matti Häyry and Dr. Tuija Takala) intermingling the decree of genetic engineering with a rock opera music scheme. The concept album entitled *Playing God* is performed by the Perfect [sic] Child, an incredible ensemble of musicians and singers. At the core of the rock opera is Corky Laing who astounds instrumentally, lyrically and vocally. The album concept is brilliant and the music is colossal. It's an awe-inspiring rock musical production and a cross between *Welcome to My Nightmare*, *The Wall* and *The Rocky Horror Picture Show*.<sup>35</sup>

In his rating, Shasho gave the album five out of five stars.

We are currently building on these experiences, and putting together attractive and economically feasible packages for future presentations. The album can be played with visuals, preceded and followed by lectures and discussion. The opera can be performed live on stage, with or without theatrical embellishment, and with or without the added educational elements. The more musicians and singers are involved, the more demanding the financial arrangements will be. Right now, in September 2013, we are still waiting for the market reaction to the album to see how well the project can be supported commercially.

### Developments

The story can still be developed in many directions, some of which have already initially been considered and then rejected, ignored, or forgotten for reason or reasons known or unknown.

The character of Luke started life as a completely different entity, namely, as an angel who is sent down to Earth to deliver a soul that somebody was born

without. This was based on a speculative idea that persistently floats about in religiously oriented bioethics literature. According to the idea, when human beings produce new human beings by artificial reproduction and especially cloning, the resulting individuals may be left without a soul, as they are not a part of the divine procreative plan. Although this notion can, in the future, provide a starting point for another musical or theatrical work, it has been abandoned from *Playing God*, and the only trace of it in the current version is the fleeting character Bernie Soul in the description of the song "Tim's Requiem." The angel, originally called Luci,<sup>36</sup> became Luke, the 110-year-old blues singer.

The gods have gone through a couple of transitions during the development stage. Originally, they were two parent-like figures who send the soul bearer to her or his mission and then follow the proceedings with a keen eye, possibly doubling as human parents in the process. Why that was abandoned is anybody's guess. The next step was a collection of existing and recognizable deities from different traditions (Gaia, Vishnu, Yahweh, and so on). Since the gods of the opera cut a slightly ridiculous figure, that would no doubt have guaranteed notoriety for the work and controversy around it—excellent marketing points. But it was simply too difficult not to make the characters pointlessly offensive, so what was left was a congregation of vaguely Olympian, and possibly Norse, gods with human features and preoccupations.

The setting was in the beginning thought to be urban or even metropolitan and centered on a busy newspaper stand or bookstore where all the protagonists naturally meet. This was, again for reason or reasons unknown, discarded in favor of the current 1970s-spirited small town in the middle of nowhere.

Smaller changes have also occurred in the characters. Originally, there was only one perfect boy, but twins were fed into the story because one of the original team members happened to know a pair of singing and acting twins. Accidental as this addition was, it serves the thematic side by giving a foundation for comparisons between the influences of nature and nurture, genes and environment. The characters of the savior and saved siblings went through a series of changes, including gender shifts. Simultaneously, the part of Tina, originally a supporting role, began to grow and gradually came to be a central growth story. And the ever-present police officer, in the beginning a prominent figure, drifted into the background and is only hinted at in the preamble to one song, "Sisterhood."

Keeping these developments in mind might serve an educational purpose. Classroom discussions following the performance of *Playing God*, once they are in full swing, need not be limited to what the work currently contains but can be extended to what it could include or evoke. The same ends are served by the items of the next section, listing the most important outtakes so far.

### **Outtakes and Possible Discussion Points**

At the music-writing and recording stages, *Playing God* was planned and executed as a CD (compact disc), and this means that there were certain time and space constraints. A compact disc can store up to 80 minutes of music, with possible loss of some more advanced qualities beyond 74 minutes. This meant that for an ordinary CD release, we had to be constantly aware of time. Due to this, many songs are (to use a favorable expression) short and to the point, whereas others simply had to be left out.

Consequently, the small town of Happyville is not introduced in song in the beginning, although two or three demo versions of such a song exist. The saved sibling Tim and his fellow survivors of a lethal genetic disease (perhaps something resembling X-SCID—the “bubble boy syndrome”) are not explicitly introduced, although at least two songs for the slot have been written. Tim and Tina’s parents are not featured; however, a song by Tim’s deathbed could have been an option. Sophie’s inner life is almost invisible, as she is only vocal in a dialogue with her father, “Father’s Lament.” And perfect boy Tony could have been brought down incrementally rather than with the one mental crash that currently occurs in “Meltdown.” These are all elements that can be brought back to live stage performances, if they seem to serve useful purposes.

Pragmatic limitations aside, some of the exclusions have been more explicitly intentional than others. The following considerations could give food for thought in the use of *Playing God* as an educational tool.

First, none of the parents come out from the story smelling like roses, as it now stands. Some people who have experienced the show have wanted them to grow more, and as a particular request, some have wanted Tina and Tim’s parents to tell their tormented children that they are loved no matter what. For this particular purpose, an already existing song can be reintroduced, and this would probably also be otherwise beneficial for the storyline. But as for the other parents, although it does not say that they are bad people, it is one of the educational aims of the opera to gently question parental choices and motives. It is, arguably, one thing to wish that your child is healthy and quite another to order enhancements to provide them “perfection”—whatever that means. Or

perhaps these are morally equivalent choices. Some people argue that we should always strive for the best possible children by whatever means available,<sup>37</sup> whereas others contend that parents should view all children as gifts regardless of their physical and mental qualities.<sup>38</sup> In any case, these are points that could be discussed in the classroom after the performance.

Second, in one of the interim versions, a central role was occupied by the Bubble Boys: Tim and two other young men who have together experienced a childhood in isolation in order to avoid infections and other outside influences. These characters were supposed to be the life of the party, reminiscing about their days of growing up in a hermetic tent. This idea was later on rejected on the grounds that it would be too grossly insensitive to depict such a grueling condition, and a death caused by attempts to cure it, as a matter of humor and comic relief.

Third, following the themes of *Rationality and the Genetic Challenge*, Sophie was originally designer deaf. Her parents were deaf and wished that their future child would share their language and culture. So Mr. C was commissioned to order the in vitro fertilization, preimplantation genetic diagnosis, and embryo selection needed to secure the favored result. The problem with this turned out to be that in the song “Revelations” Sophie has to find out something that makes her start a movement against Mr. C’s wrongdoings. As long as she was born deaf by design, the only way to accomplish this would have been to make her find out about her planned origin. But being freaked out by designed deafness would have left the audiences thinking that it is horribly wrong to select children with disabilities. And although the point is debatable, in the opera we try to steer clear of rigid normative views, and especially of enforcing prevailing



popular prejudices. So, instead, Mr. C's crookedness takes on another form, and he is just generally and particularly a nasty science peddler. Sophie's erstwhile deafness is now only echoed in "Silent Dream," in which the lines, "Can't you hear me calling?" and "Under your quiet spell forever" used to have more literal readings.

Mr. C's crookedness then created another type of challenge. Bioethics experts who have seen the show have asked whether there would have been anything wrong with his activities had he provided people with the services he promised. Is it wrong of scientists, laboratories, and businesses to offer selection and enhancement opportunities for concerned parents? In response, we can only say, "Glad you asked that question." This, of course, is the crux of the matter, bioethics-education-wise. Should scientists do, and be allowed to do, everything that they can do? Should companies sell, and be allowed to sell, everything that they can sell? And should parents buy, and be allowed to buy, all the services that are available? These are excellent discussion points for the classroom.

### **It Is Not Only about Genetics, Is It?**

From the viewpoint of ethics, it is important to notice that the problems encountered in the opera, although often aggravated by science and genetics, are by no means exclusively created by them.

Luke is 110, he has had longevity treatments, and in the beginning of the action he is suffering from existential fatigue. But many people who are younger and who have not had life-extending therapy are in the same situation, and some of them, like Luke, see ending their lives as the solution. So the point of Luke's story is not that medicine has ruined his life (although he himself thinks so), but that he as an

individual has lost control of his life. Toward the end of the opera, he seems to be recovering from his depression.

Tony and Alex have issues related to their (allegedly) designed perfection. Tony reacts by living the part and becoming the Golden Boy, whereas Alex retreats to his dream world. Neither the issues nor the responses can really be blamed on the technologies ordered by their parents. Parents can, and in many cases do, have exaggerated expectations concerning their children, irrespective of the availability of genetic enhancements. In the opera, we know this to be the case, as in the narrative the twins are, in the end, just unenhanced clones of a handsome actor. The real questions here are questions of parental choices, parental expectations, and the freedom of the members of the next generation to live their self-chosen lives.

The power of parents over their children is highlighted by the story of Tim and Tina. Their parents cannot accept human mortality in their own son, and they are prepared to resort to any exotic and burdensome treatment to keep him alive. And when all else fails, they create another life, Tina, to help them to hold onto their ailing firstborn. In the story, both Tim and Tina eventually survive the expectations and find their personal autonomies. But here again, parental decisions rather than new technologies are at the core of the relevant ethical considerations.

The opera itself does not take sides in normative matters. But the questions are there to be debated.

### **What about God(s), Then?**

The role of the gods in our story raises another philosophical question. Gods are worried about declining prayer rates. People do not pray for their children to be healthy, because they can purchase the same product from other people

instead. In our account, the gods strike back in anger, but what does the initial point tell more generally about the relationship between new technologies and religion? Will religion die when (or if) humankind gains increasing control over nature, including the natural and artificial processes of reproduction? Will prayers stop when (or if) all children can be selected and enhanced to be healthy, strong, and intelligent? Atheists hope so. Religious people worry about it. Philosophers and ethicists could certainly talk about the possibility in the classroom.

Of course, the gods have such a limited role in the explicit storyline of the opera that they do not have to be interpreted religiously or theologically in the first place. They represent a random force (god or nature) that may or may not kill Mr. C, but that is present in the world and offers a backdrop to all human activities. According to many philosophies, trying to change matters fundamentally (for instance, by manipulating the genome) in the light of inadequate information is “playing god”—hubristically exposing ourselves to natural (or divine) forces that we can release but not control. This could provide another topic of conversation.

### Science, Science Fiction, or Musical Fiction as Ethics Education Tools?

What are the potential advantages of using *Playing God* in bioethics education? It is a work of pure fiction, so why should it be used in an academic context? Why not stick to science or at least to science fiction?

It is a given that academic education should be primarily about science—natural or social. Science and its associates such as philosophy provide students with facts, correlations, and regularities, and with methods of acquiring more information about them. This is good

for the motivation of students, who in many cases want their learning to have real-life applicability. From the viewpoint of bioethics, a potential problem is that factual thinking may stand in the way of imagination. Many ethical discussions benefit from being conducted hypothetically, and in these cases students are required to be able to think about scenarios that are not real, and from viewpoints other than their own.

Leaning more in the direction of imagination, some universities already teach science fiction as an introduction to philosophical and ethical questions. For general purposes this seems to be an excellent idea. What better way of entering into discussions on moral status and humanity than to present for perusal artificial but intelligent life forms like Lieutenant Commander Data, the *Star Trek Next Generation* android, or the doctor of *Star Trek Voyager*, an emergency medical hologram? The only limitation of these resources for bioethics education more specifically is that science fiction stories are often either too far removed from medical or healthcare questions or, if they address these questions directly, also introduce definite solutions that may block further discussion.

*Playing God—The Rock Opera* is a work of pure fiction, but its starting point is in science, philosophy, and ethics. The decisions facing the people of Happyville are decisions that face human beings today and tomorrow, but they are made by invented people. So the factual basis is there, and so, through the fictional characters, is the element of imagination. But what is more, because the story is told by music and songs, it also contains a level of communication that is not present in academic texts or literary or cinematic science fiction. Melodies and other musical themes convey emotional states, and when this is combined with the reading of the “poetry” of lyrics, audiences experience something

different from, and possibly more than, audiences listening to lectures or enjoying science fiction.

*Playing God* is primarily about survival, especially through reproduction. Reflecting the ongoing nature of these human enterprises, the last words that our audiences hear, with the fading notes of the last song, are as follows:

It is not over  
It is never over  
The road to Happyville goes ever on

Notes

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4. A concept album is a studio recording in which all music and lyrics serve a unified story or theme. A rock opera is a concept album with a story in the manner of classical opera. A rock opera may or may not be performed on stage.
5. As the musical producer of the album, Laing represents Thumper Productions.
6. A medley of the album’s music can be found at [www.youtube.com/watch?v=Jg2LDvNqjU](http://www.youtube.com/watch?v=Jg2LDvNqjU) (last accessed 1 Sept 2013).
7. Information about the project can be found at [www.facebook.com/playinggodrocks](http://www.facebook.com/playinggodrocks) (last accessed 1 Sept 2013).
8. The callouts in the synopsis refer to the songs of the album. The introductory instrumental piece is “Gods March.”
9. “Luke’s Blues.”
10. “Terrace of the Gods.”
11. “Perfect Boy.”
12. “Tony’s Return.”
13. “College Girls.”
14. “Silent Dream.”
15. “My Brother’s Gonna Die.”
16. “Open Up Your Imagination.”
17. “Here Is Our Blood.”
18. “Jupiter.”
19. “Tim’s Requiem.”
20. “Not Good Enough.”
21. “Father’s Lament.”
22. “Crying Shame.”
23. “Journey.”
24. “Sisterhood.”
25. “Vital Stream.”
26. “Revelations I.”
27. “Meltdown.”
28. “Revelations II.”
29. “Eyes in the Mirror.”

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30. "Revelations III."
31. "Mr. C's Demise."
32. "In This World."
33. Our thanks are due to the audiences in Manchester, Paris, and Basel for their insightful questions and constructive comments.
34. Information about this performance can be found at [cambridgebioethics.com/agenda.html](http://cambridgebioethics.com/agenda.html) (last accessed 1 Sept 2013).
35. The review and interview can be found at [www.examiner.com/review/corky-laing-mountain-legendary-drummer-talks-about-brilliant-rock-opera-release?cid=rss](http://www.examiner.com/review/corky-laing-mountain-legendary-drummer-talks-about-brilliant-rock-opera-release?cid=rss) (last accessed 1 Sept 2013).
36. This name was possibly short for Lucifer, the light bringer.
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