Julie Syler  
One by Four by Nine: The Leitmotif of Ligeti in Kubrick’s *2001: A Space Odyssey*

**Prelude**

[T]he vast sphere of Jupiter is hazily visible in front of you. Obviously there cannot be any life of any kind here in this glacial cold, so far from the sun! But you follow a precise route that leads you across the solar system; you believe there is ‘something’ here, even though you cannot imagine what it is. It could be good or bad, or completely indifferent—but you must know. And it has been awaiting your arrival for millions of years.

-French press release, perhaps written by Kubrick

I can never look now at the Milky Way without wondering from which one of those banked clouds of stars the emissaries are coming. If you will pardon so commonplace a simile, we have set off the fire alarm and have nothing to do but wait. I do not think we will have to wait for long.

-Arthur C. Clarke, “The Sentinel”

To summarize *2001: A Space Odyssey*: wait.

Forty minutes of ape grunts, bone flinging, the otherworldly Monolith, spaceship waltzes…and the first words of dialog are an empty greeting, a prelude to actual conversation that never happens. The principle of waiting is crucial to all elements of *2001*—through short story, script, and soundtrack. Without that continuing thread, that leitmotif of waiting, the creation would be entirely different, as its underlying philosophy would have changed. Stanley Kubrick built a world of waiting, challenging the audience to change their views on cinema, film music, the science fiction genre, and the future of mankind—through the jarring “cinema of discontinuum” of the Monolith and Ligeti’s musical representation.

---


3 Chion, 70.
The story of the mad or overreaching scientist and the creations—the synthetic woman, monstrous man, the Golem, the Robot (*Frankenstein, Forbidden Planet*)

2. Extraterrestrial invasions or visitations, often hostile but sometimes also benevolent and peaceful (*The Day the Earth Stood Still, War of the...*)
3. The evil genius sequestered in a hideout (Fritz Lang’s Dr Mabuse, James Bond villains)
4. Pacifist science fiction showing a world ravaged by nuclear war, with an underlying moralizing tendency (Dr Strangelove, Fail Safe)
5. Totalitarian science fiction, Utopian ideals perverted, a society of regimentation and exploitation (Fahrenheit 451, 1984)

Clarke and Kubrick were working with a familiar genre, using familiar material, but taking the audience in an unexpected direction, not only in content, but also in procedure and style. Rather than following either of the expected relationships between movie and novel (either writing and establishing the novel first and filming directly from it, or the reverse, releasing the movie first, followed by the ‘novelization’), the decision of the conspirators was to work on both at the same time, to allow ideas to come together and percolate in a full novel. The ideas traveled both ways, from script to novel, and novel to script, so that both are two separate works, both able to stand on their own merit, and yet complementing each other. After all, “Every good novelist ‘knows’ much more than he writes down: every film maker should be aware of a larger universe than his script.”

Clarke kept notes of the growth of the story, script, and production in his diary, and dryly remarks six months before the original target release date (and two years before its actual release) that as the story had undergone so many revisions and hit several dead ends, perhaps it was better that he had lost count because it was rather depressing to consider. While “The Sentinel” became more of a prelude rather than the centerpiece, the sentinel itself became almost a deus ex machina device, heralding a moment of

---

8 Chion, 37-38.
9 Clarke, “Christmas,” 33.
10 Perhaps analogous to the impetus of Wagner’s Ring cycle, Siegfrieds Tod, which slowly opened the door for the most comprehensive piece of operatic drama yet conceived? Production for 2001 might have taken years, but production time for the Niebelungen certainly puts it into perspective.
transition and standing apart from its surroundings. The main thread connecting “The Sentinel” to 2001 is the focus on waiting and watching, the human race as wide-eyed children on Christmas Eve, eyes skyward.

Kubrick was always concerned with the larger universe of not only his script, but of the entire production—his reputation as a detail-minded, sharp-eyed hawk preceded him, as he strove to be in charge of every aspect of production with every film that was under his name. He was after total control, and the one film that he did not consider entirely his (Spartacus) was the one major release film in which he was disappointed. Kubrick explained in an interview, “Nothing is cut without me. I’m in there every second, and for all practical purposes I cut my own film; I mark every segment, select each frame, an have everything done exactly the way I want it. Writing, shooting, and editing are what you have to do to make a film.”11 That total control could explain a common theme linking all of his works—hunting and exploring the relationship between the predator and the prey.12

No detail was too small, and no authority was out of reach.13 Kubrick questioned representatives from NASA, IBM, Honeywell, Boeing, Bell Telephone, RCA, General Dynamics, Chrysler, General Electric, and Grumman to plot the course of life in the twenty-first century. After all, “The perfectionist director didn’t want his expensive, ambitious movie to be out-guessed by the real future.”14 From the exact positioning of

---

11 McKay, 62.
12 Chion, 44.
13 A day in production, as recorded in Clarke’s diary: “May 29. Soviet Air Attaché visited set. He looked at all the little instruction plaques on the spaceship panels and said, with a straight face, “You realize, of course, that these should all be in Russian.” Clarke, Arthur C. “Monoliths and manuscripts.” The Making of 2001: A Space Odyssey. New York: Random House, 2001. 64.
African trees for the Dawn of Man segment, to spending hours observing monkeys at the zoo, poring over blueprints for instrument panels and pod bay doors, and what kind of pajamas astronauts would wear were all equally crucial questions.

While Kubrick was sketching, building, and filming his vision of life in space, there was music in his mind and in the background. The details that Kubrick agonized over certainly extended to the soundtrack, and he was constantly tinkering to find something “distinctive but not so unusual as to be distracting.” For some selections, it seemed like divine providence played a hand—the Blue Danube waltz, infamous as the first representative as space and the new order, happened to come on the radio while the projectionist, fast asleep, let the film run. As Kubrick was counting on the support and appetites of the under-35 crowd, he was convinced that the waltz would carry only its own musical associations of grace and balance, without the baggage of historical Vienna to clutter the stars; however, every piece included in Kubrick’s soundtrack also serves to further the film’s allegories, was tailor-made to fit the scene it accompanies in some way, and yet can be analyzed as their independent works by any theory text.

An interesting note is that Kubrick is using entirely complete structures as individual components, parts which would otherwise are and remain whole without the influence of the film. Without the film, the novel is a complete literary work, and if pictures of the film were not included in the middle of the book, it could have been any of

---

15 “To get these images [of South West Africa for the Dawn of Man segment], Andrew Birkin, who was sent on location, recounts that Kubrick asked him to arrange, through generously greasing the palms of the local authorities, for the cutting down and transplanting of state-protected thousand-year-old African trees whose forms the director loved, but which he wanted with a different landscape in the background. It was then necessary to destroy the trees to hide the evidence of this shady deal.” Chion, 14.
16 Chion, 12.
17 Chion, 93.
18 “Today the problem is the reverse: it has been difficult for many people, myself included, to hear the ‘Blue Danube Waltz’ without thinking of spaceships.” Chion, 91.
the other Clarke science-fiction novels on the library shelf. Without the music, *2001* is essentially a silent film, a clashing of old and new genres, but complete nonetheless. Without the film, the pieces used in the soundtrack are full compositions resting on their own merits—none of the selections were written expressly for the film, and the composers of the pieces in question were either dead or only barely aware of the use of their music—and yet, these entirely separate works were deliberately chosen over a through-composed score. Even the technical props are practically usable, as enough research and study went into their construction. Or, to put it another way, there is a “sense of exteriority; they are shown as showing, rather than fusing with what they encaption.”\(^{19}\) What then puts all of these components together, and why where these particular building blocks chosen over other blocks that were, in some cases, more readily available?

One of those other blocks was the potential score of Alex North, a Hollywood film composer of some renown. He had worked previously with Kubrick on the score for *Spartacus*, and after the MGM executives saw one of the early cuts of the film with a temp track, they suggested that he contact North to acquire an original soundtrack. North was thrilled with the commission, especially after his previous work on the dialogue-heavy *Who’s Afraid of Virginia Woolf*. “And to do a film score with about twenty-five minutes of dialogue and no sound effects! What a dreamy assignment,”\(^{20}\) North recalled. For a bit, Kubrick was honest and admitted that he wanted to keep some of the temp tracks he had grown accustomed to, but North was confident in his abilities to “compose music that had the ingredients and essence of what Kubrick wanted and give it a

\(^{19}\) Chion, 121.

consistency and homogeneity and contemporary feel.”

The stress of writing forty minutes of music in two weeks was a great strain for North, but it was not to compare to the strain of waiting to hear back from Kubrick, to find out what else needed to be written. Kubrick informed North in February that he intended to use breathing effects only for the remainder of the film, and no more music would be necessary—and yet, “when he went to the premiere in New York in 1968, expecting to hear his score, then there was that Strauss and Ligeti and the rest of the temp track.” North’s score was not heard until 1993, with Jerry Goldsmith conducting the forty minutes of music that had been written.

The response to the release of North’s music brought a new angle to the already-sizeable legacy of the film. “Stanley had always over the years taken credit as being the great genius behind the music of 2001, and all of a sudden that was being brought into question, like, ‘Well, is that the way it should have been? Could it have been even deeper with the score that Alex wrote?’” Did the lack of extra-musical associations, a literal clean slate in the style of Strauss and Mendelssohn make for a richer film?

North’s music and Kubrick’s film do not match on a fundamental level. North’s music is, essentially, what musically-educated, older filmgoers expected to hear. However, Kubrick was too busy breaking expectations and throwing away boundaries, and to have a score with completely different motivations and drives would not have

---

21 Ibid.
23 Ibid., 283
24 “Also, how could I compete with Mendelssohn’s Scherzo from Midsummer Night’s Dream? Well, I think I did pretty damned well in that respect.” North, 130. But why bother competing with Mendelssohn—or Strauss, or Ligeti by simply copying certain aspects of the style? Something fundamental about North’s statement bothers me, in a way that is quite hard to explain. I think Kubrick might have been happier if he had received a score by Alex North, rather than a fanfare in imitation of Richard Strauss.
worked—by claiming to be finished with further score needs, Kubrick was ensuring the consistency of his vision. As much as North’s score stands on its own as a representative of 1960s film scores, it would have made *2001* just another footnote in Kubrick’s filmography. Admittedly, even though I can only roughly approximate an idea of what it might have been, because as with the novel, the interaction with the music goes two ways—is the film edited to suit the contour of the music, or are certain clips selected to highlight the contour of the film, or both? Regardless, there are still larger style questions that can be matched (or not matched) with the film in progress—and Alex North does not seem to be going in the same direction as Kubrick.

The opening fanfare is unsure of itself, and trying too hard to be Strauss. Losing the Nietschian undertext, while affecting the major body of literature on the *2001* allegories, does not change the foundation what the audience hears, only the associations that might be brought to mind. To continue with my Wagner analogy, it is not necessary for a student to dissect each and every leitmotif in the Ring cycle before she understands what is transpiring. Likewise, does *2001* require its audience to do research on the übermensch and 19th century Vienna? To the contrary—it primarily requires the audience to leave such baggage behind, to hear with new ears.

The theoretical side of the movie does remain, as one can certainly see *2001* as a modern-day Odyssey, complete with the symbolic initials of Heywood R. Floyd and counting the number of letter’s in Dave Bowman’s name, with all the Nietschian context reapplied, yet to focus on such symbolism seems to be take away an element of

---

25 Included as an appendix is a DVD of selected scenes of the film, both with their original score and Alex North’s contribution. I make no claims to be a film editor, but I think the result is clear regardless.

26 Indeed, one of my potential sources was nothing more than an entire book outlining the allegories in *2001*. While I was bored senseless, an excellent resource for information on the allegories and symbols would be Wheat, Leonard F. *Kubrick’s 2001: A Triple Allegory*. Landham, MA: Scarecrow Press, 2000.
organicism, which in turn poisons the other elements of the film. It feels fake and contrived, as though it were created as just an intellectual exercise—as does the fanfare, which might as well be a theory assignment in the style of Richard Strauss.

Kubrick was attempting to use music for music’s sake, rather than purposefully banking on people carrying in their musical baggage to be able to understand the film. Of similar note is the fact that Kubrick had originally written narration to precede the film, questioning and explaining the circumstances of the future, and yet chose to remove that text. While it would have helped to solidify the opening, and help the audience become acquainted with the film’s principal contexts, it was seen as unnecessary. Like the narration, the misdirected musical score had to be replaced with something that would lay a proper course. Kubrick would not have simply thrown away the work of a friend and colleague out of spite—it just did not fit the structure he was already building, much like some of the numerous attempts to build the ship cockpits.²⁷

The ultimate goal of 2001 seems to be to requires the audience to let go of certain preconceived notions about music and film, as well as flexibility to see the film as a whole, a literal complete artwork: not to hear the music and see the pen floating in midair separately, but as a new waltz of the pens. Johann Strauss provides not only grace, but contrasted with the snoring Heywood Floyd, who considers the beautiful views from his viewport window to be so commonplace he can sleep through them, it highlights the contrast between men and machines, as “the ship glides into port with the courtly grace which is apparently so indigenous to the spacecraft in this movie and so totally lacking in

²⁷ Again from Clarke’s diary. “November 10. Accompanied Stan and the design staff into the Earth orbit ship and happened to remark that the cockpit looked like a Chinese restaurant. Stan said that killed it instantly for him and called for revisions. Must keep away from the Art Department for a few days.” Clarke, “Christmas,” 41.
its humans.” North’s music for this scene is less deliberate and more flitting. Fairies might be graceful, but in my mind, they are less deliberate and more capricious. Through the constantly enforced meter (which almost screams out “one-two-three” like a hard-nosed dance teacher), there is a direction, a sense of purpose that is lacking from the whimsical and light North variation.

Most troubling of all, in the scenes dealing with the Monolith, the catalyst of great change and growth, there is no sense of waiting, of expectation for North. In both the Requiem and Lux aeterna, the unsure footing of Ligeti’s harmony and the voices sliding over one another pair perfectly with the sense of upcoming turmoil, the new path that has its gateway of murder, as “killing…[is] represented as a necessary adjunct to evolutionary succession.” In addition, the choice of Ligeti’s music adds to the wide-angle lens feel of the film, as both the film and the music give “the impression that the slight or sound presented is only a part of what is available.” An entire universe is represented—the other planets swing in their orbits, even though we are not actively watching them through our telescopes. Life on Earth does not stop as Dave Bowman is filled with stars. There is some element of that larger outlook that is missing from North’s score, as if he is focused entirely on his fairy music competition with the ghost of Mendelssohn.

However, Kubrick was in the business of chasing aliens, not ghosts, and returned to his temp tracks. It is interesting to note that at one time, Kubrick had wanted to commission an original score from Carl Orff, whose Carmina Burana was on the temp track for a time, but Orff declined to attempt the project because of his age. Other

28 McKay, 78.
29 McKay, 91.
30 McKay, 113.
previous temp track selections, the Mendelssohn and Vaughan Williams, show us how Kubrick’s perception of their two respective scenes changed. Apparently Kubrick was particularly drawn to the Karajan recording of Thus Spake Zarathustra, to the “sumptuous, capacious, mellow, and homogenous sonority.”

According to Chion, the only real culture shock in the temp track would have been the Johann Strauss waltz—though Kubrick did not really consider that a problem, as the film’s younger audience would carry no preconceived notions into the theater—but the other selections were lesser well-known, or even almost unheard of. On the scale of obscurity, if Ligeti was on the far edge, the Khatchaturian Adagio from Gayane would only be a few steps closer to center. Melancholy and smooth, it runs only for the scene introducing the Discovery and her crew, as they go about their normal, twenty-first century daily lives.

Aside from the title music fanfare, the music in the film makes clear contrast both seen and unseen—contrast between graceful machines and humans stumbling through pleasantries, the loss of human imagination (even a child so unimaginative that the first birthday gift she asks for is the first thing she sees), the so-called everyday life on a spaceship, every action and procedure hardly considered everyday to the audience, and the evolutionary process, as one road divides in two. In the film, there are three evolutions of humans—and Ligeti appears three times, the harbinger.

Ligeti…where did Kubrick manage to run across (at that that time) an obscure Hungarian composer? In his search for the music of the Monolith, Kubrick reportedly had been “listening to almost every modern composition available on records in an effort to

31 Chion, 93.
decide what style of music would fit best with the film,” in particular, *musique concrete* and electronic music. By looking in those particular genres, Kubrick was looking for something particularly striking, both out of the realm of classical-style film music and the beeps and boops common to the sci-fi movie soundscape. In all of the copious production notes that have been collected, there is surprisingly little on the subject of how the musical selections were originally found, and Ligeti’s music simply seems to have been one of the grooves on the mountains of records in Kubrick’s office.

Interestingly enough, Ligeti had been approached in the early 60s to do film scores with complete stylistic freedom, and had chosen poverty over the life of a film composer, as he had decided that “providing specific moods, composing with a stopwatch” is always corrupting, judging from the experiences of one of his colleagues.” And yet, it was through *2001* and the use of his music by Kubrick that truly opened the door to worldwide recognition.

It can only be speculated what might have happened if a keen-eared friend had not been at the New York premiere and therefore, had not written to Ligeti congratulate him on his “contribution” to the soundtrack. However, that is exactly how Ligeti learned of his music in connection to the monolith, and attended to the Vienna premiere shortly afterwards. While some sources suggest that Ligeti was informed by postcard that Kubrick wanted to use selections of Atmospheres (with no mention of the Requiem, Lux aeterna, or Aventures) for a space movie, Steinitz implies that Kubrick made no attempt

---

33 It might be very interesting to go back through a record catalog of the time to see which albums with works of Ligeti had been released in America, particularly to see if there was a single collection that had all of the Ligeti selections contained in the movie.
to contact Ligeti beforehand: “Yet neither Ligeti nor his publishers had been asked for permission, nor had any warning of this cavalier disregard for their copyright.”\(^{35}\) It seems to be a strange thing for Kubrick to have overlooked making even some contact with Ligeti, considering his penchant for detail and for working with colleagues in refining an almost-finished work of art. Ligeti, unlike all of the other artists commissioned for the score—Karajan, Maderna, even the orchestra and chorus that performed Ligeti’s music—was not paid, another detail that seems oddly out of place. Steinitz suggests that maybe it was an oversight on the part of the MGM offices, as North was paid for his unused score, but it seems to be yet another large oversight. When Ligeti’s lawyer demanded $30,000 from MGM for payment and compensation, or face the threat of legal action, Ligeti reports that MGM’s reply was “shrewd:”

> Please sue! You must start in Vienna and Frankfurt [the respective homes of Ligeti’s publishers Universal Edition and C.F. Peters]. Undoubtedly, you will win. Then you will have to go to London. Again, you’ll win. The process will continue in Los Angeles. There, too, you’ll win. But we think it will take twenty years. Would you prefer $1,000 now?\(^{36}\)

Ah, American legal ethics at their finest! The sum was slightly bumped to $3,500, still a far cry from the original sum that was suggested. MGM seemed to charge Ligeti for his newfound status and fame in worldwide music: “MGM wrote me such nice letters. They said Ligeti should be happy; he’s now famous in America.”\(^{37}\)

Chion notes that as very few people in the initial audiences would have been familiar with Ligeti’s music, and that like audiences today, few people stay in the theater through the end of the credits, which would have been the only place to find Ligeti’s name and works. A cynical part of me agrees with his suggestion that perhaps Kubrick

\(^{35}\) Ibid., 162.
\(^{36}\) Ibid.
\(^{37}\) Ibid., 163.
did not contact Ligeti so that it would seem like the audience was “witnessing a work or rather a sound-effects composition that was created expressly for the film.”

Was Kubrick worried that Ligeti would attempt to alter the film in some way, or would not give them permission to use the work? It would have been more difficult to track Ligeti down than it would be in a similar scenario today, but for a man of Kubrick’s resources, it would only have taken time—one thing the production of 2001 certainly had in abundance. Was Kubrick the recluse returning, in order to avoid another collaborative relationship with a composer that may or may not change his film, his vision?

2001 as Opera: A Literal Comparison

With independent sources of music, film, and architecture, does 2001 become an example of the modern-day gesamptunstwerk, an extension and descendant of Wagner’s Ring cycle? No, 2001 is not an epic twenty-two hours of opera stagecraft, but some of the principal ideas of composition are shared between the two works.

A brief summary of the composition of the Ring cycle might be in order, to show new parallels between the works. To begin with Oper und Drama, written while he was working on what would later become Gotterdammerung and Siegfried, Wagner saw music, dance, architecture, and drama working together to form a complete artwork, the illustrious gesamtkunstwerk. The entire cycle was the result of a short poem, Siegfrieds Tod, to explain how Siegfried’s death brought the world back to balance. This soon led to a push to create Siegfried’s past, to explain why his death was imminent, and how Siegfried

---

38 Chion 90.
39 Knowing what we do know about the later collaborations between Kubrick and Ligeti, a question is raised—what would such a collaboration have done for 2001?
40 I thank Professor Vincent Liotta for his lectures on Wagner in Opera History and Literature III for providing the impetus for this section.
came to be, followed by why Siegfried had to be born, because of the state of the world at
the beginning. The entire drama was sketched first, and music was added only after the
story was complete.

Similarly, the impetus of “The Sentinel” brought about the creation of the rest of
the world of the future. Each element of production was designed and developed
independently of the others, so that each of those elements can theoretically stand alone
without the name of the film behind it for artistic support, and yet they make a new whole
from the sum of their parts. The parts are not interchangeable, as music from Alex North
in place of the standard soundtrack does not produce the same result. However, more
importantly, the two works share a similar requirement, that of passive listening.

Perhaps there is more information available on this idea from music cognition, but
without relying heavily on technical jargon, there seem to be multiple ways of enjoying
music, or any other kind of immersive art. Active involvement requires pre-conceived
notions of expectations which guide the audience and are necessary for full
comprehension of the work. Passive involvement, however, only requires that the
audience let go of such rigid pre-conceived formulas, and be allowed to explore. The
Ring cycle, while loaded with anywhere between 70 and 240 leitmotifs and enough
symbolism to shake an ash tree stick at, is almost an impenetrable fortress of art.
However, how much symbolism is necessary to consider it art? These operas represent a
new method of singing, acting, production, story-telling, directing, and performing. To be
in an audience for Das Rheingold when you expect to hear Don Giovanni might lead to
trouble, depending on the set of expectations you have—and if you are willing for your
expectations to be led elsewhere.\textsuperscript{41}

\textsuperscript{41} For the record, there cannot be any value judgments between the two sides at this point—they must each
Again, while it is indeed possible (and for extended study, eventually required) to delve into the inner workings of leitmotif and allegory, that is not the focus of either work. The focus is that of creating a complete work of art that is a reaction to and against the stereotypes and expectations of the time.

For 2001, expectations are broken in the limited reliance on dialog to push the drama, a score consisting of works that were not written for the film, and more character development for the machines than for the humans. Whether or not the film is enjoyed by audiences is almost immaterial; my hope is that audiences complaining of these changes are not still clutching their ticket to Don Giovanni, but really just don’t like to sit through forty minutes of ape grunts.

There before him, a glittering toy no Star-Child could resist, floated the planet Earth with all its peoples…
A thousand miles below, he became aware that a slumbering cargo of death had awoken, and was stirring sluggishly in its orbit…He put forth his will, and the circling megatons flowered in a silent detonation that brought a brief, false dawn to half the sleeping globe.

Then he waited, marshaling his thoughts and brooding over his still untested powers. For though he was master of the world, he was not quite sure what to do next.

But he would think of something.

-Arthur C. Clarke, 2001: A Space Odyssey

The end, according to Clarke…the end of one era, waiting for the dawn of another. The end of my thoughts on the film itself, a brief intermission, waiting for the second act. For 2001, Kubrick essentially built a universe—and then cut a small window in which he be appreciated for what they are. There is no intellectual value in ignoring one side or the other, but there is certainly value in discussion and analysis. Das Rheingold and Don Giovanni are simply style representatives, and there is no attempt or purpose to belittle one style over another.

stuck a camera lens. Even though this universe was built with technical flaws and limitations, the sense of “reality and poetry surpasses the technical foundations,” and the music is certainly part of the reality and poetry that becomes the fundamental cornerstone of Kubrick’s future odyssey.

Bibliography


43 Chion, 16.


