Gold aluminium cover of the record *The Sounds of the Earth*, designed to protect the two identical 12-inch gold-plated copper discs that travelled aboard the space probes Voyager 1 and 2, launched on 5 September and 20 August 1977 respectively. Courtesy NASA/JPL-Caltech
In late 1971 science reporter Richard Hoagland climbed up the metal ladder at the hangar-like thermal-vacuum test facility at TRW Systems in Redondo Beach, just south of Los Angeles. It was dark. Inside a cavernous chamber, the Pioneer 10 spacecraft was undergoing a week-long test regimen designed to simulate the vacuum and extreme temperatures of deep space. As he climbed up towards the quartz-glass viewing window, Hoagland could see light emanating from the chamber.

Pioneer 10 was going to do something unprecedented. The spacecraft would mark humanity’s first venture towards the outer planets and would deliver the first close-up pictures of Jupiter on a fly-by of the great gas giant. But there was something else. On its fly-by, Pioneer would accumulate so much speed from the slingshot effect of Jupiter’s gravity that it would achieve escape velocity from the sun. After studying Jupiter, Pioneer would hurtle on towards the infinite blackness of interstellar space.

‘The inside of the chamber was painted black,’ Hoagland remembers, ‘and there’s this gleaming creature inside, like a praying mantis pinned to a velvet surface.’¹ The spacecraft’s gold and Mylar shielding gleamed in the darkness. ‘It looked like an imprisoned insect waiting to be born… a huge insect waiting to be set free.’ Then a revelation: ‘I’m looking at this thing and absolutely out of nowhere I realised I was looking at a man-made earth object that was going to leave the earth and the solar system, never to return… something that will last longer than the pyramids, the ice ages and even the earth itself… and I realised, “Oh my God, this is the first thing we’ve created that ‘they’ could find.” It’s got to carry a message!’

Hoagland stepped back down the ladder. His friend and fellow science writer Eric Burgess was next in line, waiting to climb and view the spacecraft. Burgess looked up at Hoagland. ‘Dick,’ he said, ‘it’s got to carry a message!’ Upon their first encounter with the spacecraft, the two friends had the same thought.

Later that day, at NASA’s Jet Propulsion Lab (JPL) in Pasadena, California, Hoagland and Burgess tracked down astronomer Carl Sagan, who had just finished delivering a lecture on Mars. They knew that Sagan was involved in the Pioneer programme, and that the famous astronomer was a well-known proponent of the Search for Extraterrestrial Life (SETI), an exploratory science that seeks evidence of life in the universe.

Hoagland and Burgess guided Sagan towards JPL’s small museum, and under a model of the Surveyor spacecraft told the astronomer that Pioneer 10 should carry a message for aliens. ‘He looks up and that classic Carl smile spreads across his face,’ recounts Hoagland. ‘Oh, what a nice idea!’

¹ Unless otherwise stated, Richard Hoagland’s recollections are from an interview with the author via telephone on 8 September 2012.
saying ‘yes’ to messages on space probes and taking the ensuing questions seriously opens up a mind-boggling series of problems. Trying to communicate with aliens asks us to consider the limits of representation, the status of the ‘universal’ and the West’s generally ethnocentric, even anthropocentric, assumptions about other beings and cultures. It asks us to address the problem of multiplicities speaking univocally, and involves the indignities associated with speaking for others. If we try to speak to aliens, every manner of formal and ethical conundrum follows. Irresolvable paradoxes and contradictions emerge; one way or another, trying to communicate with aliens means asking, and answering, impossible questions.

### III

Months passed before Hoagland and Burgess heard anything more about their idea. But Sagan had taken their idea to heart. Unbeknownst to Hoagland and Burgess, Sagan enlisted the help of astronomer Frank Drake, the first person to actively search for extraterrestrial radio signals and one of the founders of SETI, and the two began developing a plan. Drake proposed an ‘interstellar postcard’ depicting a pair of human figures, a sketch of the solar system and a diagram meant to show the location of earth in the galaxy. With only a few weeks to complete the project, Sagan’s wife, the artist Linda Salzman-Sagan, drew two figures: a man and a woman. Her first instinct was to draw the figures holding hands, but she second-guessed herself — she didn’t want to give the impression that the drawing represented a single two-headed being. To indicate earth’s location in the Milky Way, Drake decided to use pulsar frequencies. The astronomer knew that pulsars (collapsed stars that produce powerful, rhythmic radio pulses) could be used as galactic timekeepers. Because pulsars decay at reasonably predictable rates, a map showing the location of pulsars and their frequencies could theoretically be used by an extraterrestrial scientist to triangulate the location of earth, and the moment in time that the spacecraft came from. Or so he reasoned.

The now iconic images on what would be called the Pioneer Plaque were etched onto gold-anodised aluminium and placed on-board the spacecraft, facing inward to shield the pictures from the constant barrage of micrometeorites it would encounter in space.

On 1 March 1972 Hoagland was practising with his band in the basement of his New England home. The phone rang. It was Sagan. ‘I just want to let you know — we launch tomorrow, and it’s on-board,’ said the astronomer. According to Hoagland, the Pioneer team had kept the Plaque secret from the public and even the higher-ups at NASA.

But the precedent had been set: from now on interstellar space probes would be recognised as not only scientific devices, but also as cultural emissaries to the galaxy at large.2

Four years later, Sagan would be tapped to develop a far more ambitious message. In December 1976 NASA project manager John Casani approached Sagan about the upcoming Voyager missions. Like the Pioneer probes, Voyagers 1 and 2 were designed to visit the outer planets, and like their predecessors in the Pioneer programme, the Voyager spacecrafts would accumulate so much speed flying by Jupiter that they too would achieve escape velocity and eventually leave our solar system. Casani asked Sagan to create a message for Voyager to carry along.

Sagan’s initial thought was to ‘make a modest extension of the Pioneer Plaques, perhaps adding some information from molecular biology — for example, on the structure of our proteins and nucleic acids’.3 But the project quickly grew. In late January 1977, Sagan attended a meeting of the American Astronomical Society and its Division of Planetary Sciences in Honolulu, where he shared a cottage with Drake. Sagan’s friend suggested that instead of making another plaque, they should consider making an LP record. Like the Pioneer Plaque, an LP would be an etching on metal, but rather than pictures the LP could contain waveforms. Sound and music could be encoded as on a conventional record, while low-resolution images could be encoded as a video signal

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2 For the Pioneer 11, the next spacecraft launched by NASA, in 1973, a second Pioneer Plaque, with the same engraving, was also placed on-board.

Pioneer Plaque, etching on gold-anodised aluminium plate, 15 × 23cm. This pictorial plaque travelled aboard the space probe Pioneer 10, launched on 2 March 1972. Courtesy NASA

and etched in a similar manner. The two astronomers began sketching ideas on a piece of paper: ‘Spacecraft at launch with human figures; A, T, C, G, PO4, deoxyribose; DNA; human figures (child, adult man and woman, elderly man and woman); Sydney Opera House (with boats); Taj Mahal (with airplane, elephant?); and so on.’ Upon their return, Sagan brought the idea to NASA, which approved it after several weeks.5

With only six weeks to complete what would become known as the Golden Record, Sagan assembled a team to develop its contents.6 Sagan envisioned an ecumenical approach, saying that ‘the message in its fundamental sense was to be from all mankind’.7 There would be images and music from around the world, salutations in 55 languages, nature sounds and written greetings by US President Jimmy Carter and UN Secretary-General Kurt Waldheim, Sagan explained.

Though Sagan loved the idea of including music on the Record, he had a narrow view of what that meant: he had little use for much beyond Western classical music, and was especially dismissive of what he called ‘the mindless outpourings of rock-and-roll stations’.8 The task of choosing music fell to journalist Timothy Ferris, who took a broader view. Ferris’s chief concern was to send music ‘with enough variety to hint at some of the diversity of earth’s peoples’, he explained. Still, he recognised the difficulty of the task before him: ‘We could meet the first criterion imperfectly at best. In addition to our own cultural biases and the time constraints of the Record, we had to contend with the sharp drop in information that imposes itself when one looks beyond one’s own culture.’9 With the help of Alan Lomax and other ethnomusicologists, Ferris added a Bulgarian shepherdess’s song, a Navajo night chant, Senegalese percussion, a Peruvian wedding song and other ‘ethnic’ selections to the works by Bach, Beethoven, Mozart and Stravinsky.10

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4 Ibid., p.64.
5 Ibid., p.68.
6 A second, identical Golden Record was placed on-board the Voyager 2, also launched in 1977.
7 C. Sagan, Murmurs of Earth, op. cit., p.23.
9 Ibid., p.204.
Salzman-Sagan was responsible for collecting greetings in 55 languages, from Acehnese to Zulu, seeking to represent the official languages of as many nations as possible. Some examples: Ancient Sumerian (‘May all be well’); Arabic (‘Greetings to our friends in the stars. We wish that we will meet you someday’); Punjabi (‘Welcome home. It is a pleasure to receive you’); Amoy (‘Friends of space, how are you all? Have you eaten yet? Come visit us if you have time’); and English (‘Hello from the children of planet earth’). By Salzman-Sagan’s accounting, more than 96 per cent of the world’s speakers were represented.11

Journalist Ann Druyan had a rather stranger task, namely, to come up with the ‘sounds of earth’. Druyan explained that they ‘wanted to use the microphone as the ear’s camera in further enhancing Voyager’s portrait of our planet and ourselves’.12 The selection includes ‘volcanoes, earthquakes and thunder’, followed by ‘mud pots’ and ‘wind, rain and surf’. Later in the selection, we find ‘the first tools’ (the sound of flint struck against a rock), followed by the barks of a ‘tame dog’ and the sounds of ‘herding sheep, blacksmith shop, sawing, tractor and riveter’. There’s a ‘kiss’ and a ‘mother and child’, and, finally, the sound of a pulsar.13

Artist Jon Lomberg spearheaded the collection of images, working with Wendy Gradison of Cornell University. The duo amassed a stack of books and images: The History of Toys, Birds of North America, Plant-Devouring Insects, The Age of Steam and nearly two decades worth of National Geographic magazines. As Lomberg later explained, the point was to ‘give a full picture of earth and its inhabitants’.14

Despite the Record’s grand ambition, the team deliberately veered away from anything controversial: ‘We reached a consensus that we shouldn’t present war, disease, crime and poverty,’ Lomberg recounted. ‘We felt that we were making something that would survive us and our time — something that might be the only token of earth the universe would have. We decided the worst in us needn’t be sent across the galaxy.’15 Furthermore, the team wanted to ‘avoid any political statement’ or any images that might ‘seem threatening or hostile to recipients (“Look how tough we are”), which is why we didn’t send a picture of a nuclear explosion’.16 There are no religious images (‘there are so many human religions

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11 Ibid., p.147.
12 Ibid., p.150.
13 Ibid., pp.154—60.
14 Ibid., p.77.
15 Ibid., pp.75—76.
16 Ibid., p.76.

View of the Pioneer 10 space probe showing the location of the Pioneer Plaque, 1972. Courtesy NASA
that if we had shown any, we felt we would have to give equal time to all"). No images of art (‘mostly because we didn’t feel competent to decide what art should be sent... And we thought extraterrestrials would have enough trouble interpreting photographs of reality or simple diagrams without including a photograph of a painting, which in itself is an interpretation of reality’). 17

For the most part, the images chosen are fairly predictable, based on the rules the team set out for themselves and their source material. There’s a selection from Edward Steichen’s 1955 Museum of Modern Art, New York exhibition ‘The Family of Man’ (a child being born, Bushmen hunters, a Midwestern American family) and numerous images from National Geographic (sand dunes, a forest scene, a woman raking fallen leaves, a sequoia, dolphins, a school of fish, Jane Goodall with chimpanzees, a dancer from Bali, Andean girls, a Thai craftsman, a cotton harvest, the Great Wall of China, an Amish construction scene, a house interior, a view of Boston from the Charles River, an airplane, an Antarctic Sno-Cat and a radio telescope). Other photographs come from the United Nations (the UN building in New York City in both day and night shots, an African construction scene, a hut, fishing boats, a Japanese schoolroom, a portrait of children with a globe, a man from Guatemala and a nursing mother).

Perhaps the strangest images in the collection are photographs that the team shot themselves, when they were unable to find an image that clearly showed what they wanted to explain. The surrealist image titled ‘Demonstration of Eating, Licking and Drinking’ shows astronomer Val Boriakoff biting into a toasted tuna fish sandwich, researcher Wendy Gradison licking an ice cream cone and graduate student George Helou pouring water from a pitcher into his mouth. In another one of the pictures produced in-house, an unnamed woman stands in a supermarket eating a grape.

IV

Even before Voyager was launched, the protests and critiques had begun. Objections to the Pioneer Plaque and Golden Record were nearly as diverse as the diversity of ‘mankind’ the record’s authors had tried so hard to encapsulate.

Martin Ryle, a Nobel laureate and Astronomer Royal of England, thought it was exceptionally foolhardy to reveal earth’s location to a potentially hostile alien battle fleet. In Ryle’s estimation, we had no assurance that an extraterrestrial recipient would be friendly. They were just as likely to attack us or to come to earth looking for a meal. Ryle went so far as to ask the Executive Committee of the International Astronomical Union to approve a resolution condemning the development of cosmic maps such as the ones found on Pioneer and Voyager. 18

Other opponents were less diplomatic. At a dinner after a Cape Canaveral press conference, a boozy NASA official of Italian-American descent approached Lomberg: ‘You put three German composers on the Record and not one Italian one?’ The official proceeded to give them ‘a gesture of such forceful clarity’ that Lomberg claims to have wished they ‘had a photo of it on the Record as an example of how humans communicate non-verbally’. 19

The question of inclusion and exclusion had started with the figures on the Pioneer Plaque. Sagan is said to have felt terrible about the fact that the people depicted looked white. He and Salzman-Sagan had envisioned making the figures ‘pan-racial’ but

17 Ibid.
18 Ibid., p.66. More recently, Stephen Hawking has reiterated this concern, dubbing such attempts at alien contact ‘a little too risky... If aliens ever visit us, I think the outcome would be much as when Christopher Colombus first landed in America, which didn’t turn out very well for the Native Americans.’ Anonymous, ‘Stephen Hawking: Alien Life Is Out There, Scientist Warns’, The Daily Telegraph, 25 April 2010, available at http://www.telegraph.co.uk/science/space/7631252/Stephen-Hawking-alien-life-is-out-there-scientist-warns.html (last accessed on 30 November 2012).
'somewhere in the transcription from the original sketch drawing to the final engraving the Afro was transmuted into a very non-African Mediterranean-curly haircut'.20 A cover story in the alternative weekly Berkeley Barb printed an image of the Plaque with the caption 'Hello. We’re from Orange County'.21

Artist Connie Samaras pointed out that even as the team sought to paint an all-inclusive portrait of humanity, they couldn’t escape Walter Benjamin’s observation ‘There is no document of civilisation which is not at the same time a document of barbarism’.22

Samaras writes:

Predictably erased are any vestiges of that era’s social change movements — e.g. civil rights, women’s liberation, anti-war, lesbian/gay liberation, nuclear disarmament. The result is a privileging of elite white male American/Eurocentric culture where women’s bodies are depicted as reproductive vessels, non-Western communities are timelessly portrayed as outside of technology and where whiteness and heterosexuality are naturalised because, once again, they are not commented upon.23

Similar critiques were made of the music selection. Communications scientist Stephanie Nelson and music composer Larry Polansky pointed out that ‘a disturbing characteristic of the published description of the record is the tremendous disparity of attribution of composers or performers between Western and non-Western musicians. That is, Western composers and performers (Bach, ‘Blind’ Willie Johnson, Mozart, etc.) are named, while the non-Western musicians tend to be simply acknowledged by ethnic category or country of origin (‘Pygmy Girls; Initiation Song’, ‘Japanese Shakuhachi’, ‘Senegalese Percussion’).’24 But the critique doesn’t end there. Nelson and Polansky go on to explain that the very notion of disembodied music, such as that found on an LP record, is exceptionally culturally specific:

In many parts of the world, music and dance are often fused into one category. The conception of music as a sound text capturable by written notation or sonic device is not a ‘universal’ cultural idea, and the marking of music as a subject for scholarly analytic study apart from its performance is even less ‘universal’ ... we contend that it is unlikely that much information is imparted about music’s use and cultural meanings via its sonic structure alone.25

This formal critique also extends to the inclusion of images. Just as the notion of disembodied music is a relatively recent, historically specific phenomenon, so is the idea of a picture or a photograph as a representation of something outside itself. The Golden Record team was perfectly aware of this. Physicist Philip Morrison and science-fiction author Robert Heinlein had both alerted Lomberg to the fact that ‘the concept of “picture” as we understand it is by no means “universal” even on earth, and that human beings from other cultures that don’t use pictures have to be educated to the concept before they see photographs as Westerners do’. Lomberg noted that these formal questions ‘may be an insoluble problem, especially in the unlikely case that those who find Voyager ... have no senses as we understand them’.26

So who is the audience for the Golden Record (besides, of course, those of us here on earth)? Human imagination of extraterrestrials from both scientific literature and popular culture generally falls into two categories. The first is what we might call the ‘alien-stranger’ — this is an extraterrestrial that is not human, but which shares many characteristics with humans (roughly similar senses, language, capacity for abstract and symbolic thought, individuals organised into social units and so forth).
The alien-stranger is the alien of *Close Encounters of the Third Kind* (1977), *E.T. the Extra-Terrestrial* (1982) and the panoply of beings in the *Star Trek* franchise that emerged in the mid-1960s.

Lomberg’s ‘insoluble problem’ emerges in relation to a different figure of the alien, a figure we might call the ‘alien-alien’. This is an alien that is truly and radically non-human, with few if any overlaps in communication strategies, thought and sense experience. In literature and film, the figure of the alien-alien appears in stories such as Stanislaw Lem’s *Solaris* (1961) and *Fiasco* (1987), and to an extent in Arthur C. Clarke’s *2001: A Space Odyssey* (1968) and *Rendezvous with Rama* (1972). Humans can barely recognise the alien-alien as a life form, let alone meaningfully communicate with it. Stories in which humans encounter the alien-alien usually end in one of two ways: either the humans and alien-alien can’t recognise one another and, confused, go their separate ways, or they kill each other, often without even realising it. To design a message for the figure of the alien-alien is by definition impossible; doing so would mean being
able to think radically unhuman thoughts, and to imagine beyond the limits of human imagination.

Therefore the audience for the Golden Record can only be the alien-stranger, a species broadly similar to humans. If this is so, then Samaras’s critique of the Golden Record may hold. Perhaps it is true that the LP recapitulates some of the more troubling legacies of humanism, echoing the French mission civilisatrice, used to justify European colonial rule in the late nineteenth and early twentieth centuries, or even the more recent US ‘liberations’ of Afghanistan and Iraq. But could it have been otherwise? Is it even theoretically possible to compose a message for extraterrestrials with the stated goals of the Golden Record group, namely ‘a full picture of earth and its inhabitants’? Of course not. Any ‘complete’ representation of earth’s geologic, biological, chemical, scientific and cultural diversity would inevitably result in a map of the type envisioned by Jorge Luis Borges in his short story ‘Del rigor en la ciencia’ (‘On Exactitude in Science’, 1946) — a representation at least the size, or even a great deal larger, than that which it seeks to represent.

But the Golden Record is not a documentary. As Sagan biographer Keay Davidson put it, the Golden Record reads like ‘the cosmic equivalent of a Hallmark greeting card — all sweetness and light, but with no deep, dark truths’. Instead of documenting the long histories of poverty, inequality, war, injustice and terror that most of the world’s peoples have been subjected to most of the time, the Voyager team opted to ‘put our best face to the cosmos... Why not a hopeful rather than a despairing view of humanity and its possible future?’ The Record’s vision of a harmonious, multicultural planet is one of a world that Sagan and company imagined humanity should aspire towards.

By the end of 1979, Voyagers 1 and 2 had reached Jupiter, shot a collection of iconic photographs and used the gravitational slingshot effect to achieve escape velocity. They were set to leave the solar system and wander space for untold eons. NASA wasn’t planning any more programmes resembling Pioneer’s and Voyager’s mission profiles. There would be no more interstellar spacecraft for the foreseeable future. And there would be no more messages, no grand representations for aliens, no heated arguments about the merits of Italian versus German classical music, nor photographs intended to explain licking, eating and drinking, nor tepid conversations about whether to tell E.T. about the bomb.

‘Demonstration of Licking, Eating and Drinking’, one of 115 images analogically encoded in the Golden Record, which travelled aboard the space probes Voyager 1 and 2, launched on 5 September and 20 August 1977 respectively. Original in colour. Photograph: Herman Eckelmann. Courtesy National Astronomy and Ionosphere Center — Arecibo Observatory, a facility of the NSF

It’s understandable. The Pioneer Plaque and Golden Record were impossible objects. Formally, they could not guarantee their own intelligibility vis-à-vis aliens who might not have a sense of vision, or know what images or music are. Even if they were interpretable, their ambitions to represent humanity, even its ‘best face’, could only fail. This double failure leads us to an inevitable conclusion. Sending messages to extraterrestrials on-board space probes is absurd. Let any future space probes remain devoid of grand pronouncements and adornments.

But I am not convinced.

V

A concern: if we stop crafting messages for ‘others’ to find in a distant future, do we symbolically turn our backs on the future itself?

When I started thinking about the Golden Record, I hazarded a phone call to Seth Shostak, senior astronomer at the SETI Institute in Mountain View, California. Shostak has been an advocate of broadcasting all the information from the World Wide Web into space. ‘If you were getting a message from some other society, would you rather get the Hallmark card or the Library of Congress?’ he asked an interviewer in 2006.²⁹ It puzzled me — I asked why he thought that such a gesture had any potential meaning whatsoever. For him, the point was to send a lot of information. A plethora of information ensures that there will be plenty of redundancies in that information. Redundancies make any code far more ‘crackable’ by alien codebreakers. What of the objection that such a gesture presumes aliens to have a roughly similar sensory apparatus to our own? What if they don’t have eyes? Again, Shostak was undeterred, explaining that any organism that develops in the vicinity of a star is probably going to have eyes — after all, vision evolved very early among earth’s animals, and complex image-forming eyes have evolved independently at least twenty times. What’s more, said Shostak, humans have been able to decipher all sorts of ‘alien’ languages, from Cretan Linear B to Egyptian hieroglyphics and German Enigma machines. Why wouldn’t ‘they’ be able to decode our languages and signals?

In a 1984 paper, ‘Why Intelligent Aliens Will Be Intelligible’, artificial intelligence guru Marvin Minsky opines that communicating with aliens is perfectly reasonable. His argument has to do with the fact that spaceflight is only possible when a society develops means through which individuals are able to communicate, cooperate and learn from one another. Collective endeavours, such as building spacecraft or radio-transmitters, require a society to break hard problems into smaller ones, and to have a language with which to communicate about objects. They need notions of causality, a way to develop and preserve institutional memory and the ability to allocate resources efficiently. They must be able to plan, and to be self-aware. All of these factors would entail a notion of language similar in its broadest strokes to human language — thus suggesting that there would be enough overlap between a human and an alien civilisation so that some sort of meaningful communication could take place.³⁰

I’m not inclined to agree with Shostak and Minsky’s seemingly easy assumption that extraterrestrials are likely to fall into the alien-stranger category. In a recent essay, ‘Talking Mathematics to Aliens? (Get Real!… Or Have Fun with Anthropomorphism 101)’, cognitive scientist Rafael Nuñez argues against the notion of ‘universal’ communication, taking aim at mathematics in particular as a supposedly universal medium: ‘Because no actual forms of extraterrestrial aliens … have ever been documented empirically, such beings are, scientifically, nonentities.’ They are the product of our imagination. ‘If we want to believe that talking mathematics to aliens makes sense, we must humbly accept that we are anthropomorphising, big time.’³¹

²⁹ See ‘Sending Google into Space to Search for Alien Life’ [video footage], http://www.youtube.com/watch?v=qOY88QjTI6s (last accessed on 27 November 2012); Seth Shostak also makes this suggestion in his book Confessions of an Alien Hunter: A Scientist’s Search for Extraterrestrial Intelligence, Washington, DC: National Geographic, 2009, p.242.

³⁰ Minsky does, however, give one caveat: ‘if those aliens have evolved so far beyond us that their concerns are unintelligible to us … then communication might not be feasible’. In fact Minsky specifies that his thesis applies ‘only to those stages of mental evolution in which beings are still concerned with surviving, communicating and expanding their control over the physical world’. Marvin Minsky, ‘Why Intelligent Aliens Will Be Intelligible’, in Edward Regis (ed.), Extraterrestrials: Science and Alien Intelligence, Cambridge and New York: Cambridge University Press, 1985, pp.117—28.

If we take Núñez’s notion seriously — that is, that the figure of the alien is a product of our imagination — then whatever relationship we develop towards that alien is a proxy for our own relationship to ourselves. Because the figure of the alien is also someone we imagine or expect to encounter at a time that has not yet come, it is interwoven with our expectations and imaginations of the future itself. If this is the case, then the decision about whether or not to include grand messages or gifts on space probes carries the symbolic significance of our own relationship to the possibility of a future.

Critiques of the Golden Record are based on either representational or formal grounds: either charging that the content is unrepresentative of humanity, or that the media they are encoded upon are themselves ethno- or anthropocentric. But neither of these critiques addresses the ethics of the gesture itself, the question of whether we should or should not include messages for an alien future on our space probes. The task of crafting a message for a future alien-stranger involves developing a notion of the form and content of a greeting. We must ask ourselves what we would like to say and how we would like to represent ourselves. This was the (impossible) task of the Golden Record team, to which they gave their best effort.

In the face of the impossible task, it seems soothing to throw up our hands and instead imagine that any recipient would be an alien-alien, a figure unable to recognise any message we may have crafted for them, let alone derive any meaning from it. Some might say that if we imagine a future alien-alien as our message’s ultimate recipient, then it is irrelevant whether or not we compose messages for them. Invoking the alien-alien seems to deliver us from the thorny problems of representation and form posed by an address to the alien-stranger, but it only does so by placing us in a frightening position, from an ethical perspective.

The belief in the alien-alien harbours a great deal of violence. Utterly foreign, the alien-alien is devoid of any semblance of human emotion, curiosity, fear, knowledge and dignity. It is a figure to whom we have no responsibility, and there are plenty of alien-aliens here on earth. Consider the chicken. We raise chickens in factory farms; grow them for the sole purpose of eating their flesh; and do so in such a way that they have unimaginably horrible, painful and short lives. The justification, if there can be any, is that chickens are alien-aliens — they are so different from us that we are permitted to treat them with what we would consider the height of ultra-violence if humans were the subject.

What’s more, the belief in an alien-alien is just as much a figment of human imagination as the figure of the alien-stranger. Anyone who works and lives around animals will attest to the personalities of the chickens, pigs, dogs and sheep in their care. Anyone who owns a cat or a horse can describe at length the rich emotional and affective communications they have with these animals. ‘Elephants cooperate to solve problems. Chimpanzees teach youngsters to make tools. Even octopuses seem to be able to plan,’ writes science journalist Katherine Harmon, explaining the recent ‘Cambridge Declaration of Consciousness’, wherein an international group of neuroscientists ‘unequivocally’ declared that ‘all mammals and birds, and many other creatures, including octopuses’ have consciousness not entirely unlike our own. And of course, there remain all too many examples of humans treating one another with same sorts of violent indifference brought against the alien-alien.

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It may seem silly to spend so much time thinking about hypothetical beings like aliens, alien-strangers and alien-aliens. For the record, I do not believe that extraterrestrials will ever find the gold-plated LP attached to the Voyager spacecraft, and I have a very hard time believing that space-faring civilisations exist at all, but that is irrelevant to the point I am making. I do believe in marking those objects, such as interstellar spacecraft, that are destined for an unimaginable and uncertain future. Not necessarily because we actually believe that our spacecraft may one day be intercepted by aliens, but because there is much to learn by acting as if that were the case. I believe in continually asking the questions that designing for extraterrestrials implies, because thinking about aliens is a way to think about ourselves and our relationship to the future. The impossible questions of representation and form are fruitful to consider. I do not think that the Golden LP holds anything more than provisional, deeply flawed solutions. I do not think that there are any solutions. There cannot be. But that does not mean that these insoluble questions are ones that we should ignore. Symbolically, much is at stake.

Underlying the question of how to consider aliens is a deeply ethical question, namely what relationship do we want to have to the cosmos, to the stranger and to the future? Should our disposition be pregnant with the nihilism of silent indifference, or should we endeavour to develop an ethical relationship to those symbolic figures, and, by extension, ourselves?