Journey Planet

Journey Planet 75

Fictional & Mythical Musical Instruments

Editors—James Bacon, Jean Martin, Chris Garcia

Editorial
Chris Garcia

Jean Martin is here again, and she brought a brilliant concept with her!

I love music, anyone reading recent issues of *Claims Department* will know that, but musical instruments are one of my favorite useless things. They're not inherently useless, but to me, someone who can not play anything (stubby fingers!) and has a tin-ear, they're about as useful as an opinion is at fighting a cold.

But man do I love them!

I own several—a trumpet, a trombone, a few guitars, a bass, but can not play them a lick! I just love them as object d'art and sumptuous objects. I love holding them, I love playing them...well, making unidentifiable noises with them, and just having them around.

So, wouldn't an issue about theoretical, mythical, fictional musical instruments be relevant to my interests?

I had a lot to say about three universes in which false instruments are found, but I also had more to say about the mythical stuff. About angelic harps, about the shofar and the Walls of Jericho a-fallin', about the drums that announced the birth of the Earth itself.

Yeah, I read a lot for this one.

I also composed the front and back covers. I've missed doing collages! I actually did a paper-based collage at the Museum of Contemporary Art in San Jose not too long ago and it reignited my live for them!

In other news, we're on the Hugo ballot again!

Also, I've got a book coming out in the UK on July 29th…I mean 29 July. *Food & Crime* from Pen & Sword.

We also did a goof on the Mandalorian issue. Gary Lloyd sent us a great piece, and we failed to run it in there. My fault, but in my defense, most things are! I've added it in and you really should give it a read in the following pages!!!

TEUTONIA TO TATOOINE (WITH TWO BULLETS)

BY GARY LLOYD

Post World War II in the Federal Republic of Germany a powerful urge for refreshed national identity manifested itself just as radically within artistic and cultural fields as it had in commerce, education, industry and politics. Artists in all disciplines explored fresh means and methods of expression with the hope of proclaiming a new, modern and forward-looking Germany freed from its recent past.

In the German film world revolutionary directors like Werner Herzog (who plays "The Client" in *The Mandalorian*), Wim Wenders, and Edgar Reitz pushed boundaries attempting to find new cinematic languages and looked to new literature, new poetry, fine art, performance art, contemporary dance, modern life and all kinds of brand new German music, from rock to experimental to orchestral, for inspiration - and for new forms of collaboration.

One particular group of musicians, from Cologne, drew considerable attention from film directors, a band who were a catalyst in the cultural shift in the country in the 1960s and 70s, a hybrid rock band with a very complex background, a band on a mission to find a new true rock and roll which had no roots in the blues and yet was somehow still distinctly German, a band that also aimed to thrive in the presence of other art forms. The band members included an ex-free jazz drummer who was an expert in drumming traditions from all across the world but who longed to find the beat again, a Japanese pre-punk wild-man, and two ex-students of pioneering composer, maverick genius and father of 20th century music Karlheinz Stockhausen. This band was CAN.

What the filmmakers saw in CAN was a skill et far from those of traditional film soundtrack composers rooted in the Romantic era of orchestral music, theirs was a skill set with much more in common with the improvised-to-screen works of Miles Davis for Louis Malle (Lift To The Scaffold), the electronic explorations of Bebe & Louis Barron (Forbidden Planet of course) and the tape-based techniques of Musique Concrete.

What does all this have to do with *The Mandalorian* though?

CAN were a new model as far as soundtrack composers were concerned because their collective capabilities were so extraordinarily broad and their musical techniques so elastic. Able to compose for the orchestra, or for rock, electronic, or any other kinds of instruments, all able to read music or improvise (usually rock, pop and jazz musicians would not be able to read music, and orchestral musicians usually wouldn't be capable of improvising - though this has become less and less true with each decade since the 60s so a lot of modern younger musicians are quite polymath, which is very useful!) CAN could work with sets of rules in play, in effect to work algorithmically, or they could be wildly, crazily spontaneous. Other strong factors to distinguish CAN included the fact that they owned their own studio - a converted cinema - which was highly unusual for the time, and they knew how to squeeze the best out of it. They were all producers of music too, in the sense of the use of studio technologies and using the studio as an instrument.

Historical connections too were strong in the members of the band, in particular band member Irmin Schmidt, who had been training to become a conductor prior to forming CAN, and who had spent time in New York enriching his musical knowledge meeting with composers La Monte Young, Terry Riley and Steve Reich, three of the founding fathers of Minimalism at its most profound process-based end (unlike Philip Glass's version of Minimalism which is manifested in a fashion which incorporates many tropes of Romantic era orchestral music, which goes some way to explain his easy adoption also as a film composer from very early in his career). Irmin also understood cinema and knew how to discuss work with directors, and had quickly become practiced in this. Irmin too might well have been the first musician to start life in the world of strictly orchestral music to jump out of that world with ambitions to join the world of experimental rock and enter the counter-culture too. He understood the force of the counter-culture, that without it the wider culture is unfed, it's like the moon: no moon, no tide, and if there's no tide, there's no life.

Styles—in any art form—are essentially just special cases of linked usually already-existing techniques - but techniques are born of process, the real heavy-lifting hard work in any art form, and processes are very

basic building blocks, the most basic in fact, and existing processes can even be explored to useful ends. Try figuring out what techniques sit behind the styles of art forms you admire and attempt to draw them back to processes; this is actually fun and often really hard! It's also a lovely challenge to decode creative choices, within singular art forms but especially when several art forms have collided, as they do in theatre, dance or in cinema.

To *The Mandalorian* soundtrack then...

In looking for what would work best for the series the decoding perhaps went a bit like this:

Placing absolute canon Star Wars themes in the series would probably have been deemed not a good idea. Those themes are for "full meal" feature films, singular events rather than sliced episodes, a regular sequence of connected "light lunches", and refer to specifics in the canon; those characters, those situations and events, using the leitmotif technique which has its roots in early cinema and still thrives today; so culturally shouldn't be used to refer to anything in this new series, and besides that leitmotif melodies can become very dull if overused, it can pull the viewer out of engagement, so it's not always ideal to use leitmotif in a series. Similarly BIG soundtracks, big scores, also wouldn't seem right in what appears to be a smaller cast almost chamber work as a piece of television. It's also a fan piece at heart, chock full of references, so to add to that a further layer of cultural baggage in music might just be too much, causing a collapse under the weight of its own over-familiarity. The series must add up in all quarters as serviceable to all ages, which couldn't be a larger demand frankly. It's easy to imagine the danger of every single stylish aspect of this franchise being over-used in every prequel, sequel, spin-off and side project, simply totalling up as a sum of its parts, a corny pastiche (sincerest apologies), a dull Star Wars Bingo with a point for every Star Wars trope when it appears.

A television series can be scored with many different approaches, for example, astonishingly, *The Simpsons* has a bespoke orchestral (plus whatever else is needed) score for every single episode, whilst the television adaptation of Neil Gaiman's *Neverwhere* was graced with a part-box of sixty 'beds' and 'stings' of music by Brian Eno to be used in any situation deemed appropriate to task, plus in both cases these shows had their own gorgeous glorious theme tunes of course: original to their core, not reminiscent of any other theme tunes, the most essential and elusive theme tune quality. Catchy but not too much, catchy of the wrong kind quickly becomes annoying.

So how then, with all these aspects considered, were all of these problems avoided?

Ludwig Goransson was cast well. In the first place, choose the right composer for the job, but Ludwig is also a successful record producer. This doesn't just mean that he knows how to use a mixing desk, it means he really understands short-form communication, how to create music that lasts, that doesn't tire the ear in composition or sonic content.

A soundtrack composer faces a "hell" of suggestions, from director and music editor, film editor and others in production - it's part of the job and often the fun - and it's very plain to hear in the score for *The Mandalorian* what was thrown into the bag of stylistic swatches that Ludwig has embraced without tripping over the associated weight of those clues.

So we hear references to Ennio Morricone's music for the Sergio Leone "Spaghetti Westerns" in gesture and instrumentation, the jaw harp, the guitar, a hint of a stand-off; we hear, as in most Westerns though more sparingly and thoughtfully here, Aaron Copland, the most musically quoted and stylistically exploited composer in the medium of the Western, who originally wrote much of the work that is quoted in Westerns for the choreographer - in the burgeoning medium of contemporary dance - Martha Graham; we hear Giorgio Moroder pulsing simple synths with basic super-effective outboard motor rhythms and subtle spacial differences in their placings, and we hear polymetric influences of the Minimalists fed into these when extra rhythmic synths join in with different measures within the musical bar, metric multiplications and divisions creating useful interplay; we hear Wendy Carlos with her lovely warm and fizzy delightful electronic tones brought right to the fore, full focus crackling lightning; Mica Levi and hard-to-identify oozing tones we believe were once real instruments but are now simply other and alien; we hear the French band Air in bright light clocking ticking percussions placed at different distances in reverb from all other elements, a nice touch to quote these able French producer/musicians famous not only as a great band and producers to other artists, but also for their work for director Sofia Coppola, and sounding like storytellers, always. These great ingredients are quoted by Ludwig and deftly handled, they don't overshadow or break the spell, they glide into mind sweetly and are welcomed, and we aren't troubled by being reminded of other music that is great, and this is a skilful trick not easily judged.

Ludwig possesses a great knack for nuanced work in this score. This work for *The Mandalorian*, like CAN but not sounding at all like CAN, is based in the main in simple melodic cells, not full-blown melodies, and often whatever instruments are in play only play one or two notes, are often collectively just playing rhythmic parts or parts where all instruments have equal weight - not many concerti moments in the score at all, and leitmotif is a rare element in the score too, often heard as more of a simple tonal gesture, more like a scent. We don't over-analyse a soundtrack of this kind - it just happens and though we notice it and its original qualities, it still propels us along satisfactorily, happily.

Strangely phase composition is missing in the palette of technique, perhaps because though phase is a highly useful device in film composition, pushing material along at different bar lengths or beat counts or passage lengths like Steve Reich or Terry Riley can be hard to understand, hard to catch, especially on a first listen, which kind of breaks a central rule of soundtrack composition - to work straight away, out of the trap. All phase techniques are difficult to master as well and mucking about with them and hoping for the best whilst against the clock is probably a bit foolhardy. "Just footsteps" is safer.

His tone palette is excellently exotic. Audio processing too, a lot of delays (even phased here sometimes) and reverbs, and Eventide H3000-style blurs trailing from instruments and challenging the diagetic positions of tones. Modelling synths creating near-acoustic believability in tone, classic hardware synths, recorders of several sizes and what sound like ocarinas often doing a sort of impression of the polyphonic singing of the Aka and Baka pygmies, the Mellotron - the original tape-loop based sampler heard at the start of Strawberry Fields by The Beatles - burbling or crooning away, the Fender Rhodes electric piano providing an analogue bell-tone warmer than a standard synth could and sweeter than a real bell, and samples of on-set noises put to effective use as percussion loops.

Most exotic of all, spotted in a short video interview with Ludwig about *The Mandalorian* soundtrack, and providing incredibly complex and hard-to-identify noises, chirps, chirrups, slides and 30th Century Scott Walker-like punctuations, is the Roland GR500 guitar synthesizer, a delightfully wonky and unpredictable device that comprises of a normal-looking guitar and a separate suitcase-sized box of waveforms, filters, oscillators, and other normal synth paraphernalia originally designed as a new kind of synth - the paraphonic - but modulated entirely by the guitar.

The GR500 was first released as a device by Roland in 1977 in a beautiful echo: it's as old as Star Wars.

Ludwig has made the most of his tone palette without over-shadowing usefulness, utility, in the score, it's never gimmicky.

Ludwig's theme music for the show, appearing each time at the end of the episode, over the credits and their beautifully rendered seemingly hand-drawn episode tableaux bringing to mind *Captain Scarlet* (the drawings that is, not the theme!) will grow and grow and fulfil its association with the show, well judged and not jarringly a million miles away from the centrally less-melodic content of the majority of the non-diagetic soundtrack for *The Mandalorian* and brings your thirty or forty minutes to a satisfying close.

Ludwig has composed a lot of really imaginative film music, he has a very solid career and a stack of well-deserved success already behind him and we can be sure we'll be hearing from him a lot more in the future. In *The Mandalorian* he's created a largely process-based stylistically referenced aesthetic, perhaps we'd call it something like Hollywood Electro-Minimalism and we'd all know what that meant.

To sew up where we started...

CAN's swan song was, appropriately enough, their small but perfect contribution in 1991 to the soundtrack for Wim Wender's sprawling near-future science fiction epic *Until The End Of The World*, though all the members had or still have fantastic solo careers. Irmin Schmidt in particular really flourished as a film composer, and even composed an opera based on Mervyn Peake's Gormenghast in 1998 aided by the Liverpolitan musician and theramin player Jono Podmore.

And...

Werner Herzog's fate at the end of the first series of *The Mandalorian* resonates very strangely with an incident that occurred whist Werner was being interviewed by British film journalist Mark Kermode for the BBC in 2006. You can see the relevant clip from this interview online very easily by searching their two names together.

The only spoiler in respect of both is that there is a bullet in each.

Musical Instruments in Tolkien's *The Lord of the Rings*

By Jean Martin

I often say that *The Lord of the Rings* has changed my life multiple times since I read the trilogy (or one novel as J.R.R. Tolkien preferred it to be called) in 1983. It was my entrée into the world of the school newspaper, student council and Dungeons & Dragons group in College later that year. It was also related to my musical preference for Hard Rock and Heavy Metal starting around the same time. When I moved to the US in 1987, and didn't know very many people yet, I read high fantasy (and science fiction) to while away the time. I even wrote some fan fiction during this period combining my love of music and sci-fi/fantasy.

Flashforward to the early 2000s in anticipation of and enjoying the three Peter Jackson adaptations of *The Lord of the* Rings, I made another new group of friends at work based on Tolkien's oeuvre. We enjoyed not only the movies, but also karaoke (where I competed in local karaoke competitions) and other geeky topics. This was around the time I began cosplaying. My first cosplay was Eowyn's blue dress from *The Two Towers* that I wore to my first Period Events & Entertainments Re-Creation Society (PEERS) event, *The Return of the King* Ball, in February 2004. This PEERS ball is where I met most of the people who became friends and colleagues in my early fandom life. This is also where I found out that there was an overlap with this costume and dance community with the Bay Area English Regency Society (BAERS) dance party I went to a few months prior (and where I remain an organizer for to this day) as well as fan-run science fiction conventions like BayCon. I went to my first BayCon in 2004 and the rest is history!

There are other times when *The Lord of the Rings* influenced my life, such as my two trips to Middle-earth (aka New Zealand), but for the purposes of this article, I will concentrate on music, specifically musical instruments.

Music has been an integral part of my life since childhood when I remember dancing whenever and wherever I heard music. I wanted to be a ballerina, but my parents had me and my sister study piano instead. I wasn't a good piano player by any means, but it did give me some foundation for understanding and appreciating music. This helped me when I started writing about local bands and visiting major label bands in the early 1990s. I even published my own Hard Rock/Heavy Metal magazine called *Nocturne Magazine* around that time.

Soundtracks are another of my favorite type of music. And I especially love those that luckily coincide with my favorite types of movies: historical, science fiction and fantasy. There's just something about the music in these movies that help carry me away from my day-to-day life into these other worlds.

So when I was thinking of topics to pitch for *Journey Planet*, music was top of mind for me. I'm sure there have been lots of articles already written about the actual music and composers, so I chose to focus on musical instruments, which I don't think I've read anything about. And I was curious what musical instruments have been used or even created for works of sci-fi and fantasy—be it books, TV shows, movies, etc. I'm glad that this topic has resonated with a lot of people who have contributed their interest and knowledge for this issue. And *The Lord of the Rings* being my favorite topic of all-

time, I chose to write about this myself.

I honestly don't remember any musical instruments in *The Lord of the Rings* other than the Horn of Gondor that Boromir blew to signal that he needed aid. This horn wasn't really used to play music per se. But it is technically a musical instrument. So I researched on the Internet to see what else I could find.

It looks like there are other references in the text of *The Lord of the Rings* that refers to horns. There is a beautiful silver horn that Eowyn gave to Merry as well as the horns of Buckland and Rohan. There are also trumpets, such as when Frodo and Sam riding the Eagles were greeted with celebratory trumpets.

As far as actual music, I know that there are a lot of songs in *The Lord of the Rings* and Tolkien's other work, but I seem to remember that these were all sung a cappella. It seems like Tolkien appreciated music but didn't know much about it and so he didn't really talk about musical instruments much. The instruments he does mention exist in the real world but probably played in a more medieval fashion. Tolkien meant *The Lord of the Rings* to be a mythology for England after all. He seemed to assign instruments to the different Middle-earth races according to their general personalities.

This article has a lot of information by race in Tolkien's Legendarium: https://tolkiengateway.net/wiki/Musical_instruments. I've summarized, and commented on, the most interesting points in just *The Lord of the Rings* and *The Hobbit* books below:
Surprisingly, the Dwarves have the most number of instruments. Thorin and his company in *The Hobbit* played the fiddle, flute, drum, clarinet, viol and harp while they were partying at Bag End. I wouldn't necessarily think of Dwarves being partial to harps, but among Smaug's treasures were Dwarven made harps and the Dwarves of Khazad-dûm were also known to play this instrument that I would associate more with Elves.

As for the Elves, the Elves of Mirkwood played the harp and Elrond brought a silver harp with him when he ventured West to Valinor after the War of the Ring. Elves also played the flute and trumpets, with the latter mostly used during battle.

Men in Middle-earth, such as the Rohirrim and the people of Minas Tirith, were also said to have played the harp. During Aragorn's coronation, the Gondorians played music on the harp, viol and flute.

And last, but not the least, the Hobbits liked to celebrate with music. At Bilbo's "Farewell Party," the Hobbits played trumpets, horns, pipes, flutes and other musical instruments.

As for adaptations, the music by Howard Shore for the Peter Jackson movies (which won two Oscars for Best Original Score for *The Fellowship of the Ring* and *The Return of the King*) were masterpieces that clearly evoked specific characters, scenery and events. They were also very magical and otherworldly. From the pastoral and happy tunes in Hobbiton to the dark and ominous dirges in Mordor, everything was beautiful and memorable. While the music is recognizably played by a symphonic orchestra, Shore added unique melodies. Solos and different types of choirs were also employed to add to the musical atmosphere. Larynxes are musical instruments too, right?

Shore set the stage appropriately in the opening monologue of *The Fellowship of the Ring* with the ominous sound of an ancient instrument called a monochord, played by the late multi-instrumentalist and composer Sonia Slany. He also interspersed unusual instruments in his score, such as the mandolin, musette (a small, elegant bagpipe) and bodhrán (Irish frame drum) for the Hobbits, and log drums and marimba for the Ents. Gollum's theme used a Hungarian cimbalom (or hammered dulcimer) and the Riders of Rohan had the Norwegian Hardanger fiddle. Lastly, for the Orcs, Shore used Japanese Taiko drums, blacksmith anvils, suspended sheets of metal and metal chains striking piano strings.

There are other *The Lord of the Rings* and *The Hobbit* adaptations too. I loved Ralph Bakshi's *The Lord of the Rings* (1978) because that was the only adaptation at the time I read the novels. I don't remember much about the music, composed by Leonard Rosenman, other than it was good fantasy soundtrack from that era. But I do remember the music for the Rankin & Bass adaptations more, especially "Where There's a Whip, There's a Way" (by Glenn Yarbrough) from *The Return of the King* (1980) with its organ and actual whip. "Roads" (music by Maury Laws, vocals by Glenn Yarbrough) from *The Hobbit* (1977) was a very nostalgic folk tune with guitars.

So there we have it, my adventure through Middle-earth through its music and musical instruments. I enjoyed finding out about this as much as I enjoyed sharing all this new-found information with you all.

Exploring Instruments in Dungeons & Dragons: The Instruments of the Bards

By Robert Pleasant

The term "bard" can take on a different meaning depending on who you're speaking to. To some, there is only William Shakespeare, THE bard. To others, it could refer to Google's new conversational AI. But for tabletop RPG players, the bard is a "Dungeons & Dragons" class that mixes magic and music, crafting a character that can excel in support, roleplaying, combat, and their use of skills.

Bards are iconic character classes in the game, first introduced in "Advanced Dungeons & Dragons" 1st edition as a special class that required specific stats and multi-class combinations. Today, they're one of the core classes in D&D 5th edition. But, of course, this is all from a fantasy game—real musicians can't cast spells with a song, no matter what instruments they use.

That brings us to one interesting subject of note (or perhaps several notes, depending on what you play): the Instruments of the Bards. These seven magic items are all based on different instruments, and given powers based on in-game lore.

Instruments of the Bards

The instruments themselves, first introduced in the 3rd edition of the game, were created for, and gifted to, the founders of the seven elder bardic colleges. In the current edition of the game, they are magic items (ranging from uncommon to legendary rarity) that can be used to cast a wide array of spells; while a few spells, such as flight and invisibility, are shared among all instruments, others can range from healing to shaping stone to calling down pillars of fire.

These instruments are, in order of rarity:

- Doss Lute
- Fochlucan Bandore
- Mac-Fuirmidh Cittern
- Canaith Mandolin
- Cli Lyre
- Anstruth Harp
- Ollamh Harp

So, without further ado, let's take a look at these different instruments and see how they connect to their real-world counterparts.

Doss Lute

The lute is perhaps one of the most iconic medieval instruments, commonly seen in illustrations of wandering minstrels and heard playing at renaissance faire. As such, it's only fitting that the list begins with a lute.

In "Dungeons & Dragons," the Doss Lute is an instrument with a few basic utility spells. In addition to the spells shared among all the instruments, the lute can also cast spells to befriend animals and protect the user from fire and poison.

The lute itself is a stringed instrument, designed with a deep round back, typically including a hollow cavity. Technically, several instruments can fall into the lute family, but for the purposes here, we're looking at the classic lute. Like many stringed instruments, lutes are played by fretting the strings on the neck's fingerboard while strumming or plucking the strings.

While the history of lute-like instruments goes back thousands of years, the lute itself reached its peak of popularity in the Renaissance and Baroque periods. As such, it's an appropriate item to commonly appear in fantasy settings like the worlds of "Dungeons & Dragons."

The House of the Rising Sun--trad. blues, Daniel Estrem, baroque lute

Fochlucan Bandore

In "Dungeons & Dragons," the Fochlucan Bandore provides several spells with a nature theme, such as *entangle*, which summons vines and plants to entrap foes, and *speak with animals* (which does exactly what the name suggests).

The bandore itself is a pear-shaped instrument with a long, fretted neck. While similar to a lute,

it has a wider body and a larger number of strings. It, too, saw popularity in the Renaissance and Baroque periods. As with the lute, this makes it a fitting instrument for a medieval fantasy setting, even if it's not the first design that comes to mind.

Metallica - Nothing else matters | Bandura & Accordion Cover

Mac-Fuirmidh Cittern

Moving on to another stringed instrument, we have the cittern. In D&D, the Mac-Fuirmidh Cittern has minor healing and protective magic, being able to cure wounds, give someone bark-like skin, and summon a cloud of fog.

Real citterns are plucked string instruments, with flatter bodies and fewer strings than a lute, but popular around the same time. Citterns date back to the Renaissance period and is descended from the Medieval citole. The cittern was a popular instrument among musicians, given its ease of use and portability when compared to instruments like the lute and bandore.

Fun fact: in Shakespeare's "Love's Labour's Lost," the term "Cittern-head" is tossed out as an insult. So now you have a new phrase for insulting someone.

O'Carolan's Draught - Cittern Duo

Canaith Mandolin

Moving on to the rarer magical items, we have the Canaith Mandolin. This is a popular item among bard players, thanks to its ability to cast *cure wounds* at a high level (thus providing more healing) and dispel other magical effects.

The mandolin is another instrument in the lute family commonly associated with the Renaissance. While there are several regional variants of the mandolin, the most popular ones were the Neapolitan mandolin and Lombard mandolin, although they can also come in a variety of sizes, from the soprano mandolin to the mandocello. Mandolins are often still used today for musical genres like bluegrass, folk, and classical music.

Here Comes The Sun on Mandolin | Tim Connell

Cli Lyre

Next, we have the lyre. In "Dungeons & Dragons," the Cli Lyre is a rare item that can create walls of fire or wind, or reshape stone.

The lyre itself has an extensive history, dating back to as far back as 2700 BCE in Mesopotamia, but is commonly associated with ancient Greece and Rome. In fact, the lyre pops up in Greek mythology with frequency, particularly in the hands of the Greek sun god, Apollo, or the muse of eloquence and poetry, Calliope. While lyres are often thought of as "tiny harps," they still fall within the lute family of instruments and can come in a wide range of sizes (as well as the lyre harp, of course).

COLORS OF THE WIND - Disney's Pocahontas OST | lyre harp cover

Anstruth & Ollamh Harp

Finally, we have two harps rounding off the instruments of the bards: the Anstruth Harp and Ollamh Harp. In-game, the Anstruth Harp can cast even more powerful healing spells, control the weather, and summon a wall of thorns, while the Ollamh Harp can cause confusion in targets, call down a fire storm, and … also control the weather.



Interestingly, the concept of harps controlling the weather does have roots in mythology. In Celtic mythology, the Dagda (chief of the Tuatha de Danann and foremost of the gods) had a harp that could control the seasons as one of his sacred treasures. As such, it makes sense that these instruments—both of which are designed after Celtic harps—would have the power to control the weather.

Like the other instruments listed here, the harp was particularly popular during the Middle Ages and Renaissance, although harps and harp-like instruments can be found around the world and across history in one form or another. Today, the form of harp most commonly associated with the instrument is the concert harp—a particularly large harp featuring seven pedals that affect the tuning of the strings. However, harps can come in all sizes, including more portable variants.

The Sound of Silence | Simon & Garfunkel (Harp Cover)

The Magic of Music

While real-world harps and mandolins can't control the weather or cast healing spells, there is still a certain kind of magic about music. Music can capture the listener's heart, bring back old memories, and conjure emotions. As such, it's no wonder that bards, the in-game masters of music, are the characters who can entrance crowds with a performance or inspire entire armies with a song—such is the power of music.

And while musicians may not need a magical instrument to showcase their craft, it is still quite interesting to see the form Medieval and Renaissance instruments take when brought into a game like "Dungeons & Dragons."

Now if you'll excuse me, my game is starting soon, and my party needs their bard to help talk them out of another life-threatening situation.

Gurney Halleck Sings for Us
By Allison Hartman Adams

I watched *Andor* in a flurry of bleary-eyed late nights, convinced I was the last one in the world who hadn't seen it (turns out that's not true, but not by much). The series' myriad elements continue to echo in my head months later, most importantly my deeply-held conviction that *Andor* is the best that the *Star Wars* franchise has ever offered. Yes, I will fight you on this.

Of all the peripheral characters, I find the Time Grappler the most intriguing. He is more than a Ferrix alarm clock, for certain. Each morning and evening, he climbs the tower, adjusts his earmuffs, arranges his limbs into precise form. He centers himself, prepares. His body language speaks to his training, and his guttural calls before he strikes reminds us that this is not a chore, not a Free-Trade sector minimum wage job he endures just to get by.

This is ritual, and a sacred one.

In a world where so much labor is surrendered to droids, his job cannot be automated. The Time Grappler is on screen for a scant few minutes, but his presence anchors the audience in the culture, history (possibly even religion?) of Ferrix through the simple act of making the everyday into art. The Time Grappler isn't just banging away up there to wake everyone up; he is making music. If you listen carefully, you'll notice that his beskar-ringing sets the tone for the show's moody, brilliant soundtrack. He is the oboe tuning the orchestra on the A note.

By the end of the season, we fully understand the importance of that note, shared by all Ferrix. At Maarva Andor's funeral, the Time Grappler is the conduit for civil disobedience. He rings the beskar anvil two hours earlier than scheduled, not a melody this time, but a single note with a single hammer,

dirge-like, signaling the band to tune their instruments. The musicians emerge, braiding together as they move through the streets, merging at the base of the Time Grappler's tower. A more somber cousin of the New Orleans jazz funerals, the melody they play draws out the crowds in defiance of the Empire. This is the music Maarva speaks of when she addresses the crowd as a hologram, the same music that lifts Bix from her torture-induced stupor. The Imperial military can't comprehend it. "Of course I hear it," Lieutenant Keysax says as the funeral music echoes through the streets. "I'm just not *seeing* it." No, honey, you're not, because you never bothered to connect with the people of Ferrix as the audience has. This is the genesis of the rebellion, and it is set to music played in familiar notes on familiar instruments for a familiar purpose. It's an old story, one the colonizers never, ever understand.

While *Andor*'s success doesn't hinge on the Time Grappler (but buy me a pint and I'll tell you why it actually does), music and art is scattered throughout our SFF texts in a way that is absolutely not coincidental. My fantasy artist husband has long bemoaned the sterility of far-future sci-fi movies. "We know it's sci-fi," he says, "because there's no art on the walls." This is changing, I think, and for good reason.

In 1977, audiences of *Star Wars: Episode IV* heard their parents' and grandparents' swing tunes echoed in Figrin D'an and the Modal Nodes' cantina numbers, played on instruments that aren't that different than jazz bands have today. This was a savvy worldbuilding move, but still limited in scope. 44 years later, we have *Star Wars: Visions*, in which a full third of the 18 episodes show the characters engaging in art-making of some sort. In "Tatooine Rhapsody," the characters rock out when they're not being chased by bounty hunters. In both "Sith" and "In The Stars" the characters process their trauma and Force-sensitivity through art-making, and in "Aau's Song," Aau sings to cleanse the kyber crystals of corruption. Rani and Charuk's childhood innocence is symbolized by their father's flute in "The Bandits of Golak," and in "The Spy Dancer," Loi'e distracts her stormtrooper nightclub patrons from her rebel schemes with a high-flying, looping, breathtaking dance, all to the tunes wrought from some sort of space-butterfly theremin.

So why bother?

Sketching a recognizable backdrop for an audience to hold onto seems like the obvious answer, but I believe it goes deeper than that. These films, series, and books are cultural touchstones, but they're not in-depth studies of art and music-making. So why is the SFF world peppered with entirely invented musical instruments? Why do the characters take time out of their busy schedules of saving the galaxy/multiverse/Shire to play them? Charles Darwin called music-making "the most mysterious" of human attributes, as music is not necessary for survival; we cannot eat songs, and we cannot slay our enemies with tubas. In worlds where treachery, war, and annihilation linger at the edges of the shadows, why play the baliset? Why compose tunes for the Ressikan flute? Why lift the Horn of Gondor to see its silver tip shimmer in the sunlight?

The answer lies in the fact that music binds us to our shared sense of humanity, and when we encounter creatures from far-flung worlds, the audience must connect with them on a subtle, subconscious level before we can ever think of rooting for them. This happens before we see what they're fighting for, before we understand their tragic backstory, before even they open their mouths. Art and music-making in SFF is cultural shorthand. It is shared memory. These are our rhythms, our songs. They have been all along.

In a study for *American Psychologist*, David M. Greenberg, Jean Decety, and Ilanit Gordon remind us that, after Covid put the world into lockdown, our first move was to turn to music for comfort. Italians sang to each other from their balconies. Famous artists took requests over Zoom. Disney organized streaming sing-alongs that made this Gen-Xer, weaned on *The Little Mermaid,* cry her eyes out. Greenberg, Decety, and Gordon propose that music-making is a crucial building block of our society. In addition to boosting dopamine and oxytocin and reducing cortisol, they argue that "entire social brain networks are implicated in music production," the same "social processes that are most evolved in human cognition–mentalization, empathy, and synchrony–all components of the herding brain, which is pivotal for social connection." Simply put, "music may not be as necessary as food and water for biological survival, but [...] it may be the food and water of social psychological connectedness." Additionally, Leonoid Perlovsky, of Northeastern University, makes the connection between music-making and confronting cognitive dissonance. Every time we come up against new and unfamiliar information that opposes our understanding of the world (say, a big-eyed alien playing what might be a clarinet in a seedy space bar), music helps us find patterns and rhythms–*familiarity*–that allows us to integrate this new information. "Music," he writes, "is an evolutionary adaptation, one that helps us navigate a world rife with contradictions." Notice that the Modal Nodes aren't playing "alien music" or whatever humans imagine alien music to be; they're playing jazz (okay, *jizz*).

SFF creators could stop there, treating music as little more than window dressing. But they don't. Characters–*main* characters–spend time on the page and screen making music themselves. Precious minutes in a weekly TV serial are devoted to this. Paragraphs upon paragraphs are consumed by descriptions of musical instruments. Clearly there's more to see and hear.

One of my favorite moments in Frank Herbert's *Dune* is when Gurney Halleck plays the baliset for a dying soldier. Extensive fan wiki entries exist on how to properly make the instrument (it's hard), how long it takes (hundreds of days), how to tune it (that's lost on me). The baliset has a specific and complex history in the world of *Dune*. But when Halleck plays "My Woman" for the dying Mattai, the glorious heroics all grind to a halt, and we remember that these are all people with their own histories, their own dreams, their own hopes, and their own deaths. Herbert's description of this moment could have been witnessed on any battlefield, in any age:

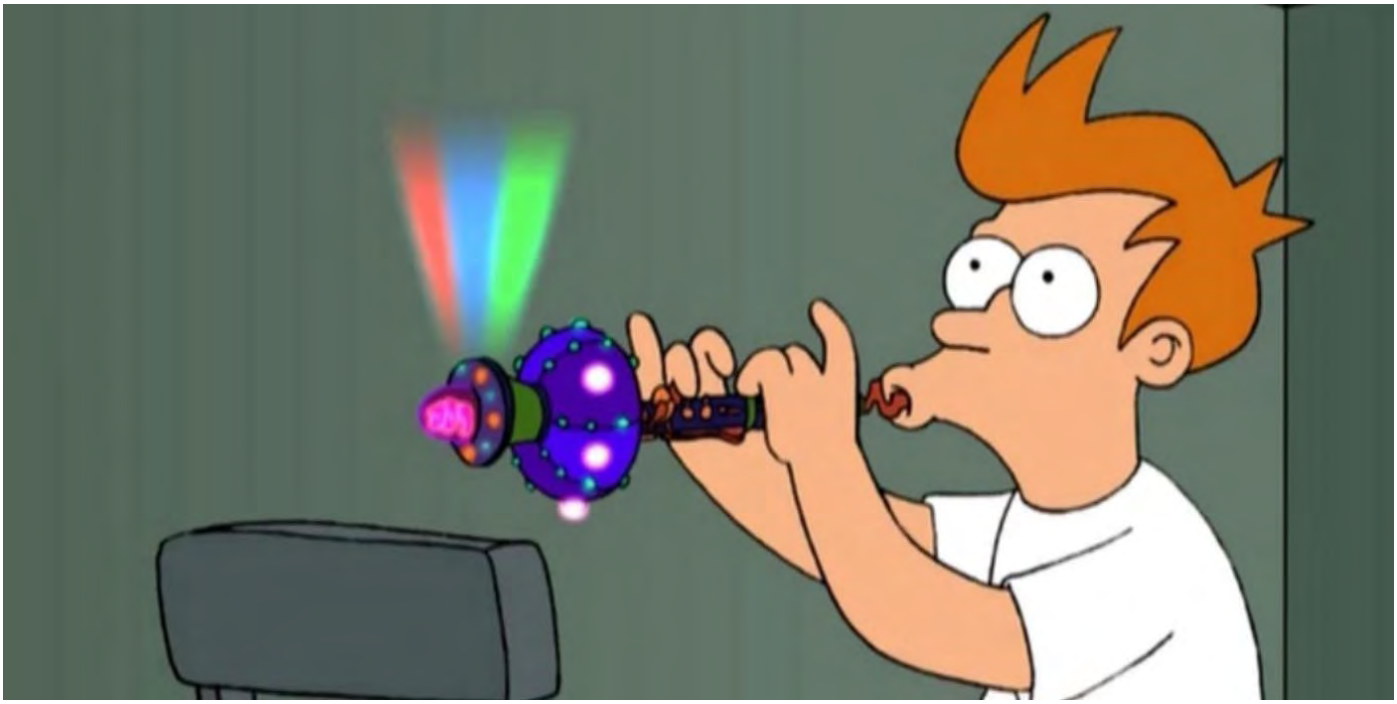
Halleck took the baliset [from the lieutenant], flicked the multipick out of its catch on the fingerboard. He drew a soft chord from the instrument, found that someone had already tuned it. There was a burning in his eyes, but he drove that out of his thoughts as he strolled forward, strumming the tune, forcing himself to smile casually.

Halleck sings the soldier to his death, telling him of a beautiful lass, her warm arms open to receive him. Then "Halleck [draws] a final soft chord from the baliset, thinking: *Now we are seventy-three.*"

The images in the song are as familiar to us as our own playlists. It doesn't matter that this scene is happening in another world. It is our world, these are our friends dying. Halleck sings for us.

The baliset features prominently in Herbert's books and serves another very human purpose: courtship. When Paul sings to Chani, his mother observes the effect of the music, feeling "the verbal music in her breast--pagan and charged with sounds that made her suddenly and intensely aware of herself, feeling her own body and its needs." This is not worldbuilding only, even though Herbert's inclusion of the song lyrics goes a long way to weaving a rich tapestry of backstory for the reader. Here, the music works on Jessica's own desires but also reveals troubling developments and underscores the precarious nature of her son's situation. The music propels the plot forward, hammering on an existing wedge between mother and son and jumpstarting the inevitable next step in Paul's journey.

Herbert might have used the baliset to reflect human desires, but SFF creators lean heavily on leveraging the power of musical instruments, even making them magical tools for the heroes. The flute in Mozart's *The Magic Flute* has the power to transform sadness into joy, and Fry's Holophonor from *Futurama* (inspired by Asimov's Visi-Sonor) almost helps him win Leela's heart. The Horn of Joramun from *The Song of Ice and Fire* could bring down the Wall, and the Horn of Valere from *The Wheel of Time* wakes long-dead heroic soldiers. So maybe we can slay our enemies with tubas after all.



Through use and lore, these instruments become symbols, too. The Horn of Gondor in Tolkien's *The Lord of the Rings* signifies at once gallantry and the frailty of man. The alien mothership in Steven Spielberg's *Close Encounters of the Third Kind* underscores the universality of music as a communication device. But at their most basic level, horns, flutes, holophonors, and resonant alien spaceship blasts represent hope: hope for salvation; hope for a new beginning; hope that it's all going to be okay in the end.

Hope, or the loss of it, also leads our characters to do curious things. In Philip K. Dick's "The Preserving Machine" the contraption by the same name is used to transform music into animals in an attempt to save human culture in the event of the apocalypse. Of course, Doc Labyrinth is the one who gets to pick what goes into the machine (Bach, Stravinsky, etc.), and he discovers to his dismay

that the animals it produces begin to change. Once run back through the machine, the animals turn into discordant, disorganized, fragmented sounds–barely music at all. The lesson here can go in many directions, but the one that emerges for me is that music is ephemeral. Leave it alone. Of course, there is value in democratizing music by tossing it up on Spotify, but with that comes the risk of gatekeeping, which ultimately will destroy it.

PKD's story is on the edge of dystopia, and as Doc Labyrinth discovers, if you hand the creation of "the most mysterious" of human faculties over to a machine, you run the risk of losing that mystery entirely. Music is at its heart an expression of emotion. If you strip away the emotion, you strip away truth, and dystopia hinges on the distortion of truth. Works that press this point show music and art as highly controlled, manufactured, streamlined, and sanitized. The "real" music, those prosocial, universal works that have been produced by free minds as an articulation of true humanity, have either been destroyed or secreted away to be enjoyed only by the most privileged.

The most chilling examples are the synthetic music machine in Aldous Huxley's *Brave New World* and the versificator in George Orwell's *Nineteen Eighty-Four.* The first, creates player-piano-like punch cards approved by the Bureau of Propaganda by Synthetic Voice and Music. The second churns out Party-approved music and novels "without any human intervention whatever." Both are machines of propaganda: the message is controlled by those at the top, but the machine itself is simply let loose to mine existing content and create new and "dreadful rubbish."

Sound familiar?

I considered simply ending these reflections with a question to the reader: which instrument, in our imperfect, selfish, beautiful, transcendent world, would we create? But we have our answer to that question already. As a teacher, I see the results unfolding before me every day. While MuseNet, Amadeus Code, and ChatGPT may be extraordinary tools for some, they are easy cheats for most. Worse, they circumnavigate curiosity and perseverance, not just on an intellectual level, but on an emotional one as well. Creation is an act of empathy, and I see the light of empathy in my students flickering. I fear it might go out altogether. It has become increasingly easy to *not* create, therefore to *not* empathize–to abstain from the "food and water of social psychological connectedness" in favor of AI-generated "dreadful rubbish." I don't know the shape our future will take when curiosity and empathy have been outsourced to a machine.

Instead, I will turn, again, to hope.

Hope is at the heart of the Hugo Award-winning episode of *Star Trek: The Next Generation*, "The Inner Light." Captain Jean Luc Picard is rendered unconscious when he is struck by an alien energy beam probe. As the crew of the *Enterprise* attempts to revive him, Picard experiences a vision in which he lives as a man named Kamin in the village of Ressik. He has a family, becomes a grandfather, learns to play the flute, builds relationships, and battles with the local government over what to do about the planet's impending doom. In this vision that spans decades, Picard discovers that the people in this society, knowing the end was near, sent the probe out into space in order to preserve their culture. When Picard wakes on the *Enterprise*, he retains his memories from a lifetime lived, including his ability to play the Ressikan flute. The flute becomes one of his most prized possessions, and plays it on multiple occasions throughout the series.

This episode has won several "Best Of" awards and mentions, with good reason. The emotional impact of the story, like PKD's machine, pivots on the audience's shared fear that one day our society will face annihilation from nuclear war, climate change, a super-virus, or some other darkly creative disaster. It will happen to us, and when it does, who will be there to remember us? Who will sing our songs?

It's no mistake that Picard's method for remembering the Ressikans is concretised in the flute. And it's no mistake that the writers allow him to play this flute again and again, even at the expense of multiple valuable show minutes. He even composes for it, blending Ressikan music with Earth music, preserving the lingering voice of a lost culture. Like ancient cave-painters across all corners of the world, the Ressikans chose to safeguard some fraction of their history, and they took it on faith that someone, someday would understand it. Picard–not AI–is that someone, and his flute plays the Ressikans' final declaration, a declaration echoed in the songs of revolutionaries and soldiers alike:

We were here. We existed. This is our story.

There is nothing more human than that.

Greenberg, D. M., Decety, J., & Gordon, I. (2021). The social neuroscience of music: Understanding the social brain through human song. *American Psychologist, 76*(7), 1172–1185. https://doi.org/10.1037/amp0000819

Perlovsky, Leonid. "How Music Helps Resolve Our Deepest Inner Conflicts." *The Conversation*, 13 June 2023, theconversation.com/how-music-helps-resolve-our-deepest-inner-conflicts-38531.

The Baliset
By Chris Garcia

David Lynch's *Dune* is still the only version of the story that I consider to be worth a damn. It's beautiful, it's got a stunning sense of place that is based on a mélange of times, places, and ideas. It's got perhaps the example of making a film where the primary concept is far less than the sum of the miniscule bits, bobs, and portions that comprise it. It's the little things, like the battle trainer that Paul fights, like the Pugs Gurney carries out of the palace, like the gorgeous tank that vaginal-mouthed Guild navigators float in.

And, of course, the baliset.

What's a baliset, you ask? Well, there are a couple of answers.

First, let us look at the text! Herbert mentions the baliset several times throughout the book, the first time on page three. We don't get any idea of what it actually is until page 33, though.

"Paul watched the rolling, ugly man set himself back in motion, veer toward the training table with the load of weapons, saw the nine-string baliset slung over Gurney 's shoulder with the multipick woven through the strings near the head of the fingerboard."

This is followed a bit later by the following:

""I know." Halleck took the baliset, flicked the multipick out of its catch on the fingerboard. He drew a soft chord from the instrument, found that someone had already tuned it. There was a burning in his eyes, but he drove that out of his thoughts as he strolled forward, strumming the tune, forcing himself to smile casually."

See, pretty normal. There's not a lot there that gives you a physical idea of what it is, but there's certainly a lot of it mentioned, about 33 times in total, but only those two passages give you an idea of what it is beyond an instrument that Gurney plays.

The *Dune Encyclopedia,* the franchise's Apocrypha unauthorizedly written in 1984, has a long entry about the baliset. It begins thus:

"The baliset is a portable nine-stringed instrument played by an individual musician, usually a troubadour or member of the nobility. It is not unlike an ancient instrument popular on Old Terra at the beginning of known space travel called the "guitar." Like it, the baliset consists of a resonance chamber, neck, head, strings, and tuning knobs. Like it, the baliset can be slung from the shoulder or around the neck by means of a strap. The embellishments on the baliset strap, however, usually display the player's station and origins rather than simple decoration as was the case with the guitar."

That gives you an idea of what it is, but of course, things go further, including describing the tuning ("…seven of the strings are pitched in quarter intervals beginning for C. The pattern evolves as follows: C-F-B-E-A-D-C" while "Strings eight and nine are drones placed at the side of the neck of the instrument.") The entry also notes that it comes from a lineage that includes lutes and lyres, which it seems is far more what Herbert was describing than what we saw in the canonical version from Lynch

in 1984. It seems to resemble less a guitar and more something like the Indian sarod or sursringar in the drawing that accompanies the entry.

That was a different idea. There was a thick neck, about a hands-width for good ol' Gurney Halleck, and a pronounced pegged head at the top. Then, at the bottom of the torso-lengthed neck was what must be the sounding chamber, off-center and tear drop-shaped, and features a spinning wheel. That addition is certainly not mentioned in either *Dune* of *The Dune Encyclopedia.* It sure does look cool, though.

The strap, or at least what we see of it, is thin and simple, with a simple silver clasp of some sort. You would expect Gurney to have some major bling if that was an indicator of station, right? Maybe the simplicity of his was a sign of him being above simple things like feather-fluffing, yes?

The thing about the Lynch *Dune* baliset is that it's using a real instrument as its base. That would be The Chapman Stick, and it's just about as science fictional as you can get for a real-world instrument without being a there-min.

Emmett Chapman was a good dude, and a helluva musician. In the late 1960s, he was working as a guitar player playing a nine-string guitar. He had made it himself and he specialized in doing two-handed finger-tapping on the fretboard. This wasn't exactly new, but it was fairly rare. Since he had made himself a guitar that enabled his tapping, he wanted to make a guitar that was actually designed to be played that way. He wanted something along the lines of his 9-string guitar, but also something electric, and something distinctive. Electric would mean that he could do away with the resonance chamber, meaning he could do a "body-less" guitar, which was pretty distinctive. The initial prototype, which Chapman played for years, did have a body, though I believe it was solid.

He also wanted a large range of possible tones. That meant more strings!

The Chapman Stick, as he called it, was basically a fretboard a little wider than the palm. It could have eight, 10, or even 12 strings. That gave him access to bass and treble, which meant he could be a one-man band!!! Well, if he strapped some cymbals to his knees…

Chapman started a company to sell the thing, and while it wasn't a huge success, it was something that a lot of musicians tried at one point or another. The best known were probably Jeff Ament of Pearl Jam, and Mike Oldfield. The sound is, well, electric. Some players have basically turned it into a MIDI controller, allowing them to make it sound like anything. The one thing that becomes obvious when you listen to it is that it's full of possibilities. Chapman tended to move between strumming, picking, and tapping, which produced an incredible sensation not unlike that of Sisters of Mercy. The song *Back Yard*, which happens to be what Gurney plays in *Dune*, is an excellent example of what's possible with just a Stick.

The baliset has also stood out to me as one of the big things in *Dune.* Yes, I know it's a small piece of the puzzle, but it showed that the world is different than ours, but still like ours because they too have music, and it plays a real role in their world. I love that.

It also doesn't hurt that, as a guy who has zero musical ability and a tin ear, I just love musical instruments.

Vulcan Lute
By Christopher Erickson

Of all of the alien instruments to appear in the *Star Trek* franchise including Picard's Ressikan flute, the most enduring and impactful is the Vulcan lute (also known as the Vulcan harp by fans). It has gone on to be seen or mentioned in several of the other series after its introduction in *Star Trek* and has created a bit of a subculture on the internet.

The first scene to introduce the Vulcan lute is also the most famous. The lute was featured in a scene in the seventh episode of season one, "Charlie X." In the scene, members of the crew are enjoying each other's company during their off-hours in the crew lounge when Spock is playing his Vulcan lute and Lieutenant Uhura is singing "Oh, On The Starship Enterprise." The recently rescued Charlie Evans then uses his telekinetic powers to suppress the sounds of the lute and Uhura's singing to get a chance to impress Yeoman Rand.

The Vulcan lute was featured in further episodes in season one ("The Conscience of the King"), season two ("Amok Time"), and season three ("The Paradise Syndrome," "The Way To Eden"). In the episode "The Paradise Syndrome," Spock uses it identify symbols on an obelisk as a musical alphabet (though he is not shown playing the instrument).

The instrument also made several other appearances or mentions. The Vulcan lute was shown in the end scene of *Star Trek V: The Final Frontier* where Kirk, Spock and McCoy are sitting around a campfire. The lute was seen in the background of Melian's quarters in the season one episode "When the Bough Breaks" of *Star Trek: The Next Generation*. One of Kira Nerys's Vulcan eunuchs plays the Vulcan harp while she receives a massage in the Mirror Universe episode "Through The Looking Glass" of season three of *Star Trek: Deep Space Nine*. Tuvok is shown to be a proficient player in the *Star Trek: Voyager* episodes "Persistence of Vision" and "Innocence" from season two and "Riddles" from season six.

NuTrek shows also feature the Vulcan lute. A Vulcan is playing the instrument in Michael Burnam's graduation from the Vulcan Science Academy in the season one episode "Lethe" of *Star Trek: Discovery*. The *Star Trek: Lower Decks* episode "wej Duj" name drops the instrument in a scene where one Vulcan officer tells another that she is unavailable to play chess as she is working on a musical arrangement for the Vulcan harp. *Star Trek: Strange New Worlds* gives the origin of Spock's lute hobby when Doctor M'Benga prescribes the instrument as a way to manage stress that Spock is experiencing in the season two episode "The Broken Circle".

As this has become a famous "alien" instrument, several fans have become dedicated to the recreation and use of the Vulcan lute. A couple of websites have published instructions for building a Vulcan harp (https://www.cygnus-x1.net/links/lcars/vulcan-harp-construction-plans.php, https://www.instructables.com/Acoustic-Vulcan-lyre/, https://www.therpf.com/forums/threads/star-trek-tos-spocks-vulcan-harp-lyre-build-and-finished.128004/). Artist Peter Pringle released two YouTube videos of music composed for the theremin and the Vulcan lute (https://www.youtube.com/watch?v=xRfbWrI03gc, https://www.youtube.com/watch?v=hF7CG8E_OTk). There was an app released for the iPad where you could play the lute that is unfortunately no longer available (https://www.youtube.com/watch?v=m3uvUeSF3k4). Musician Michael Levey released a downloadable album, "The Ascension of the Lyre," that was inspired by the Vulcan harp and combined with his self-appointed task to bring the ancient lyre into the 21st century. (https://ancientlyre.com/21st-century-lyre-music-inspired-by-spock-s-vulcan-harp). He also has several YouTube videos of the same music. Annette Bazinaw has released several performances on her Soundcloud page (https://soundcloud.com/annette-bazinaw). Another video features a harp enthusiast performing the *Voyager* theme on the Vulcan lute (https://www.youtube.com/watch?v=mVABxsfz6UU). One more video features original music based on a throwaway line by Jadzia Dax on *Deep Space Nine* about the Vulcan Delvok (https://www.youtube.com/watch?v=T_ji5xRVSDs).

From a background instrument to an internet community, the Vulcan lute has become a symbol of fanbase passion and dedication to ensuring that a prop that was originally meant to only be an alien instrument on a TV show has become an item that can be played and an inspiration in real life.

Star Trek: The Musical Generation
By Sarah Gulde

As a young piano player watching *Star Trek: The Next Generation*, one of my favorite things about the show was that so many of our favorite characters played musical instruments like I did! From recitals in Ten Forward, to Q serenading the bridge, the Enterprise-D was full of music. Here are some of my favorite examples!

Data explored several instruments in his quest for humanity:

He played an acoustic guitar in S2 E4 "The Outrageous Okona".

In S3 E2 "The Ensigns of Command", we see Data play the violin, Miles O'Brien play the cello, and other crewmembers play violin and viola.

In S4 E25 "In Theory", we see Jenna D'Sora playing the flute, Data playing the oboe, Keiko O'Brien playing the clarinet, and other crewmembers playing the bassoon and French horn.

In S5 E24 "The Next Phase", Riker plays jazz on his trombone at Geordi and Ro's funeral, and a tuba is played in the background. We see him play the trombone several times throughout the series, and even though Jonathan Frakes has actually played since the age of nine, they dubbed him with professionals!

And of course, in S6 E19 "Lessons", we see Picard play his Ressikan flute from S5 E25 "The Inner Light", accompanied by Nella Daren on keyboard.
A few non-Federation favorites:

“Amarie” plays the keyboard (and flirts with Riker!) in S5 E8 “Unification II”.

And finally, in S3 E13 “Deja Q”, Q plays trumpet with his mariachi band! (Much to Picard’s dismay!)
I love that Star Trek envisions a future where we can not only pursue the career of our dreams, but we can also take up music and other hobbies as part of a fulfilling life. I can’t imagine a better future to strive for.

(Bonus musical scene: the crew of the Orville enjoying a symphony concert!)

The Sounds of Star Wars
By James Bacon

I absolutely love the sounds of *Star Wars*, and who would not appreciate the brilliance of John Williams, the composer who has left so many sounds with us that immediately take us to different places. His ability to enliven film and help the story is incredible, all the while with a classical orchestra, giving such an incredibly fantastical soundscape to a film far, far away. All this using traditional instruments.

One might think that the Cantina Band really helps to create the Star Wars world as Ben and Luke go into the bar in search of a Pilot and Ship. It sounds so different, yet Williams created this piece, brining in a selection of instruments, Steel Drum, Fender Rhodes Piano, an ARP synth, and a host of Jazz musicians. One can hear the clarinet, although that instrument features elsewhere too, but here it is melded together, and takes one away. Music Scores seem to have been really important, and there are no shortage of printed *Star Wars* scores, and in the Deluxe 1977 Souvenir Folio, one filled with photos, it outlines the instruments and that is fascinating.

I was in a disused factory in East London for secret cinema. the concept is straight forward, one goes through a series of sets from *Star Wars* experiencing an adjacent view of the film, through the places Luke, Leia, Han, Chewie and Ben went, but as an observer. I was astonished by Mos Eisley, sand all across the ground, pieces of Aircraft and Junk brilliantly set out, and as I walked into the Cantina, with a timing that was shocking, the Cantina Band opened up, and that was stunning. I was immediately taken to *Star Wars*, the high sounds, the steel drums, just so good, giving an unusual and jazzy feel, but so very different, and very quick dance paced.

That's the thing; Star Wars sounds help immerse one into the fictional, make it all the more be-

lievable, and of course, help to capture emotions, and feelings, and steer the viewer along the story. As a child, I saw the films initially totally out of order, so seeing Return of the Jedi in the cinema at the age of nine was perhaps suboptimal, but it doesn't seem to have mattered to me very much to be honest, because I watched them so many times, and while a surprise or two was lost on me, I think the enjoyment, and immersion into Star Wars was brilliant. I was not a toy collector, I loved the films, and then the theme song, and then the *Imperial Attack*. It all vies for music that I love, and of course *the Last Battle*, so much excitement. It is all brilliant.

How much do I love this music? As Vincent said in the issue about him, " At the 2009 Eastercon LX, James asked me to run the Music programme, including a large symphonic concert. This proved to be the start of something very big. I thought 'How far can we go with that? Could we actually get an orchestra in?' And we did..."

It was phenomenal, Vincent and Adam Robinson were so good, and we got an Orchestra into a 400 seater room, and yes, of course we had some Star Wars along with a fine selection, classical and film and TV based, and we had the *Luke and Leia Theme*. Vincent, ever one to conjure up an idea that works really well, and so when it came to Loncon 3, with Adam Robinson arranging and Keith Slade conducting, the final piece was the Star Wars Symphonic Suite although, the Orchestra was utterly astounded by the response to the whole performance, indeed we had seen this at LX, where the musicians started to pack, after their first Ovation had calmed down, unaware that we as fans would present a gift to Adam and then applaud them more and more, they were astonished. At LX, Keith Slade, instinctively aware of the audience, of the fans, and the orchestra played an encore —unheard of.

The Memoriam section of any Worldcon is hard now. I know so many fans who have passed, it is difficult and while a tribute and honour is wonderful, it is of course a sad moment. At Dublin 2019, Vincent, Adam and Keith were back again, with a magnificent lineup of music, a real Irish focus, and it was right that we would play *Leia's Theme* with Carrie Fisher's image, having lost her in the previous year. A sad and moving moment for all, John Williams striking hard at our emotions, the sounds filling us with memories and thoughts, and remembering an actor who we all loved. The orchestra went on to play *Jedi Steps* and *Finale.*

While I have not seen John Williams conduct, and that would be wonderful, I would not for the life of me swap seeing him, for these performances, where we brought the sound of Star Wars to fans, to enjoy amongst friends and family.

I think my favourite Star Wars piece is The Throne Room piece at the end, perhaps vying with the final battle, from that film, but I can listen to the full albums, and be exactly where they are, and that is amazing, there is a delicateness to his music at the right times, and tension and excitement and pensiveness, it all comes through so well, and when one listens to Empire, it is definitely there, I can appreciate why so many fans call it their favourite, but for me *Return of the Jedi,* where it all started and in many ways, where it ended, and the seven minutes of The Final Battle are just incredible, and I love them.

There is so much to the music of Star Wars. I was lucky enough to see David Collins, a sound designer for Lucasfilm and music expert, talk about *The Phantom Menace* in Chicago at Star Wars Celebration. David is an amazing person, he shares music with the average listener. He has 93 episode of *The Sound Track Show*, a podcast that looks at film soundtracks from *Star Trek* to *Casablanca*, but he is a Star Wars fan. (https://podcasts.apple.com/ca/podcast/the-soundtrack-show/id1351960656)

Collins does that thing for music that some Comic creatives do for art; they help understand and share. This is not an easy thing to do. I would not rate *The Phantom Menace* in my Top Ten Star Wars things now, unfortunately, as there is so much to watch, we now have thirteen films and over 200 TV episodes of varying kinds, so there is a lot to contend with, but I went to this item, as Collins is good. He had an electronic piano on stage, and of course, he can play, so he helps and takes things apart for the audience. He spoke about the film, and although a Lucasfilm person, he did not work on the score, but he talked about how the music enhanced the film, he was here to interpret the music for us. He understands and hears it in a way we don't, and that is fine, but it is wonderful how he then shares his understanding. And so we went to 'Duel of the Fates' and with that, a story about the Soundtrack which gave away some of the story. We had some footage of John Williams himself, talking about making the piece choral, giving it a ritualistic or quasi-religious feeling, and the battle between good and evil.

Other works were mentions, for *Rite of Spring* by Stravinsky and Celtic Poetry from *The White Goddess* by Robert Graves, The Battle of the Trees, and then the use of Sanskrit a classic operatic language, apparently, all the time I am sitting trying to learn and take it in. Then he does his thing.

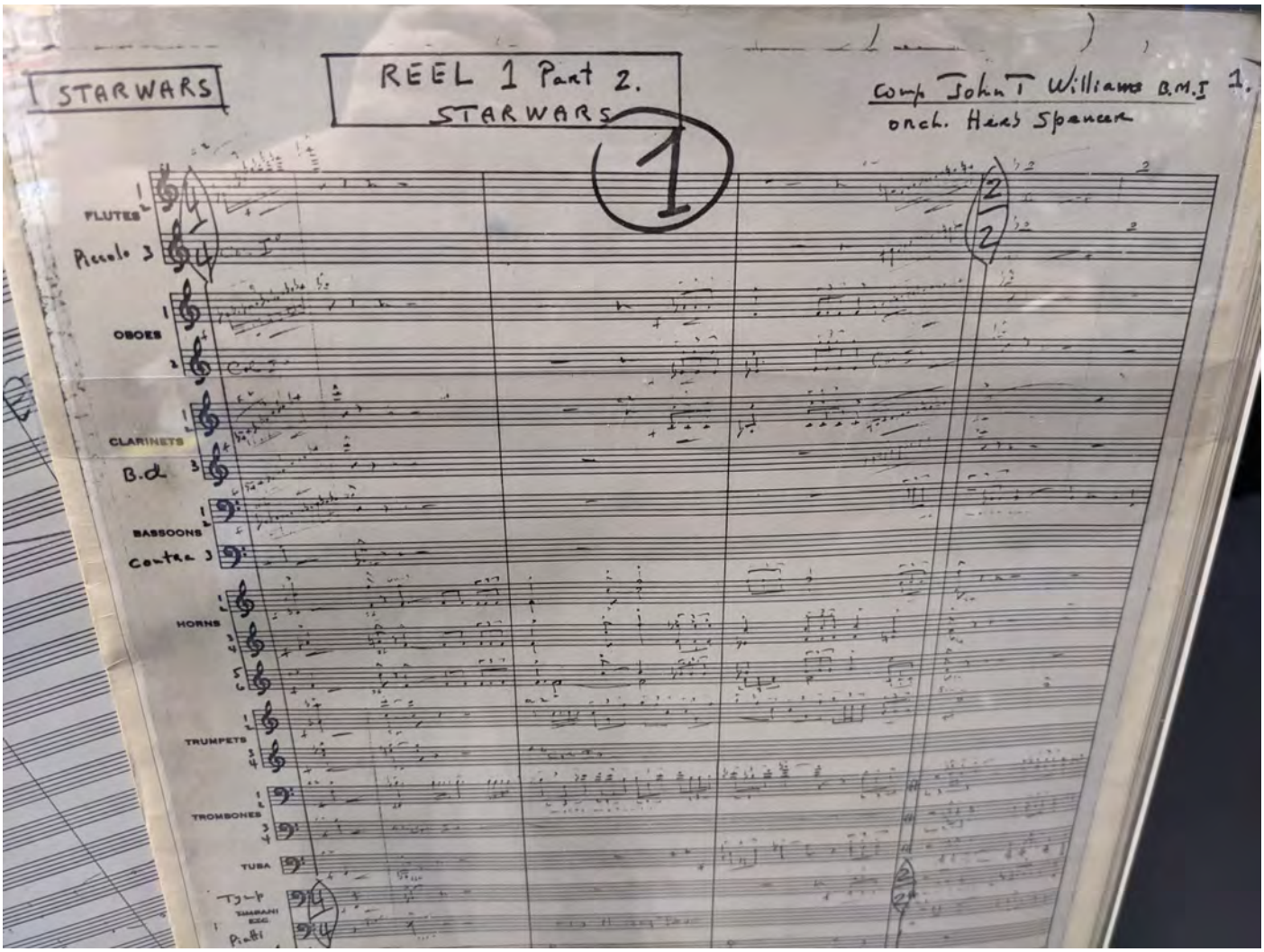
He cranked up at the piano and then started playing tunes, music we all recognised, and then pulling it apart, and he demonstrated how the Imperial March and the Force theme are both hidden in Duel of the Fates, showing them to the audience, the sounds, the structure snuck into the work, and he allowed us the opportunity to hear it. This was phenomenal and electrified the audience. He explained it as Williams using his musical sounds and that in this case, the music holds part of what would come later, which is brilliant. Then as if we had not had enough we then get to hear some of *Anakin's Theme*, and he noted how it was an unusual piece, and he threw me off as he noted that it is very complicated, but then again he starts to take it apart and we all then hear in this upbeat and celebratory piece the sounds of The Imperial March and the room was stunned, he also showed how other pieces were layered in there, all of this totally unsettling this final piece, changing it from the success to a foreboding of doom ahead. It was stunning.

John Williams has been such a presence. I have of course enjoyed various Animation series and the music for those has of course hinted to WIlliams but I was absolutely stunned by the change with Mandalorian. The sounds of Ludwig Göransson just fitted so well, it felt like a spaghetti western, gritty, realistic and worked so well for that series, and of course, so much music, with multiple releases throughout the seasons, something I really appreciate, but it is so different and right for this series.

Then the shift to Andor, the electronic, modern and dark, from a Western to a Future Noir Thriller, it was perfect, the seedy night scene, the modern oppressive corporate empire and then rebellious workers oppressed, and the way the music was linked to each episode and then throughout, how the music from Andor was the music played at the end, it was exquisite, I loved the funeral dirge, as soon as I heard the first few notes, I was immediately brought to smaller, but no less passionate Brass Bands who I have heard play, with imperfections but to my delight, and this was that sound.

Nicholas Britell did an outstanding job on the music for this series, and again, it is perfectly different yet fits so nicely.

I do hope that we get to hear some of these new pieces live, especially at fan events.



Native American Flutes
By Jade Falcon

If the drum is the heartbeat of the Native American people, the flute is the soul…

~Bruce Capin

The flute is the oldest musical instrument invented by humans. The oldest is a 60,000-year-old Neanderthal-made bone flute carved from the leg bone of a calf cave bear. (Listen to a replica). In the Americas, the oldest flute (found thus far) is dated to 4000-7000 BCE.

So, to say that the flute has some history is an understatement.

I've played music instruments for most of my life; starting with piano at the age of four, then violin at seven, then other instruments—drums, mandolin, ukele, spoons, etc.— as time passed. I've played different genres from Classical to Irish/Scottish. But woodwind instruments eluded me, even though I enjoyed flute music and had friends who played. I toyed with the penny whistle and recorders, but they never clicked.

It was my adopted father, Bruce, who introduced me to the Native American Flute (NAF); up until then, I had no knowledge of it. Unfortunately, it took his passing (and being given two of his flutes) before I even started how to play… to my utmost regret.

Initially, I started learning to honor my father, but eventually, I became hooked, because it's a wonderfully fun instrument producing hauntingly beautiful music.

The NAF is surprisingly easy to learn; no musical background is necessary. The NAF community is heavily into "heartsong" (i.e., improv), so you don't need to read music. Once you get the basic fingering, you can make music. It is one of the simplest musical instruments to learn to play!

It's my hope that you'll want to know about the NAF and be inspired to try it.

The Origin Stories of the NAF

Let's talk origin stories, because if you don't know its history and the mythology surrounding it, you might not appreciate it as much, especially as it was nearly eradicated.

The NAF has gone by different names—the Anglicized names include: Courting Flute, the Love Flute, Grandfather's Flute. Different Native American nations have their own names for the flute.

A number of mythologies and origin stories surround the flute, different for each Native American nation and tribe. Here's an extremely *oversimplified summary* of a few….

In one myth, a young hunter failed at hunting and bemoaned his lack skills (which were necessary to prove his worth as a potential husband and father), so the elk took pity and gave him a flute, which he used to court a young woman.

In a few more, the woodpecker made holes in the cedar tree that the wind played. It was the woodpecker who showed a young man how to make a flute, then taught him to play to win the love of a girl. The woodpecker also gave the flute to a man who had lost his wife and children, helping to console his loss.

Of course, there's Kokopelli, the fertility god who played the flute, seen in so many rock carvings.

These are only a small fraction of the flute's stories, showing the importance of this instrument to the indigenous peoples of the Americas.

History of the Native American Flute

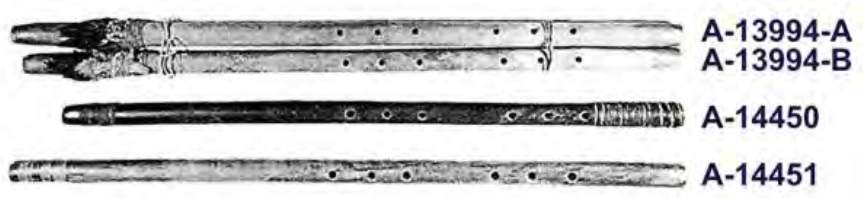
In, what is known as, the modern US, a variety of flutes have been discovered—bone flutes, rim-blown flutes, reed flutes, ocarinas, pan flutes, etc.

First, let's look at a few of the archaeological findings:

The oldest flute in the US is a 4000-7000 BCE bone flute discovered in Texas.

The East-West Texas bone flute.

In Arizona (1930s), the discovered "Anasazi" flutes are dated to 354-652 CE.



In 1823, the Beltrami Native American flute that was "discovered" by the Italian explorer Giacomo Costantino Beltrami on a journey through present-day Minnesota.

The Beltrami NAF

Although there are replicas of other flutes found (like the Anasazi), nearly all the modern NAFs being sold are based on flutes resembling the Beltrami flute.

The Modern Native American Flute

Now, let's get into some ugly history, shall we? In nearly all of American history, there was a concerted effort to suppress and eradicate American indigenous cultures and assimilate Native Americans into white American culture. (See "American Indians and the Law" published in 2008). Laws banned traditional religious practices. Consequently, Native music, songs, and dances were nearly eradicated. To circumvent these laws, many of the Native singers, dancers, and musicians turned to musical venues to keep their traditions alive.

In the 1940s, the laws and attitudes softened somewhat, heralding the start of a rebirth of Native culture and music. An indigenous flute player, Belo Cozad, using an ancestor's flute (closely resembling the Beltrami flute) became popular after he made recordings for the Library of Congress. In turn, he influenced the likes of Aaron Copland and Jefferson Airplane… not to mention future Native American flautists. He worked with Doc Payne, who started making flutes based on Cozad's flute (as well as Central and South American flutes). Doc Payne then gave these flutes back to the Native American tribes.

These two men are attributed in saving the NAF from extinction.

In the 1960s, we saw a revival of NAF music, being popularized by Grammy-nominated indigenous artists such as "Doc" Tate Nevaquaya, Carl Running Deer, R. Carlos Nakai, and Mary Youngblood (who is the only Native American flautist to win two Grammy awards).

The NAF (as we know it today) evolved even further, when Doc Payne showed Michael Graham Allen his flutes.

Allen eventually set the new standard of pentatonic tunings on the flute, because he was an experienced player of a Japanese rim-blown flute—the shakuhachi— hich uses a pentatonic minor scale.

As an aside:

In the US, only flutes made by members of a federal or state recognized tribe can be called a "true" NAF or American Indian Flute, per the US Law, "the Indians Arts & Crafts Act" which was established to protect products created by members of any federal- or state-recognized tribes.

However, NAFs can be made by non-tribe members, which often labeled "Native American-style flutes" or "North American Flutes." In this article, I use the acronym, NAF, to mean the ***flute*** versus who made it.

Is one inherently better than other? No, but make sure you understand the labeling.

Flute Anatomy, Materials, etc.

While NAF flutes come in different materials, sizes, keys, and tuning, there are commonalities:

Nearly all NAF flutes are tuned to a minor key. You can get flutes in nearly any minor key, ranging from the high tones (1-2 octaves above middle C) to low baritones (1-2 octaves below middle C), and within the mid-tones (key around middle C). (Note: The relative major scale can be played on any minor key NAF because music theory applies!)

The NAF's range is generally limited to one octave plus 1-2 notes in the higher octave. (Penny whis-

tles or recorders have 2 octaves).

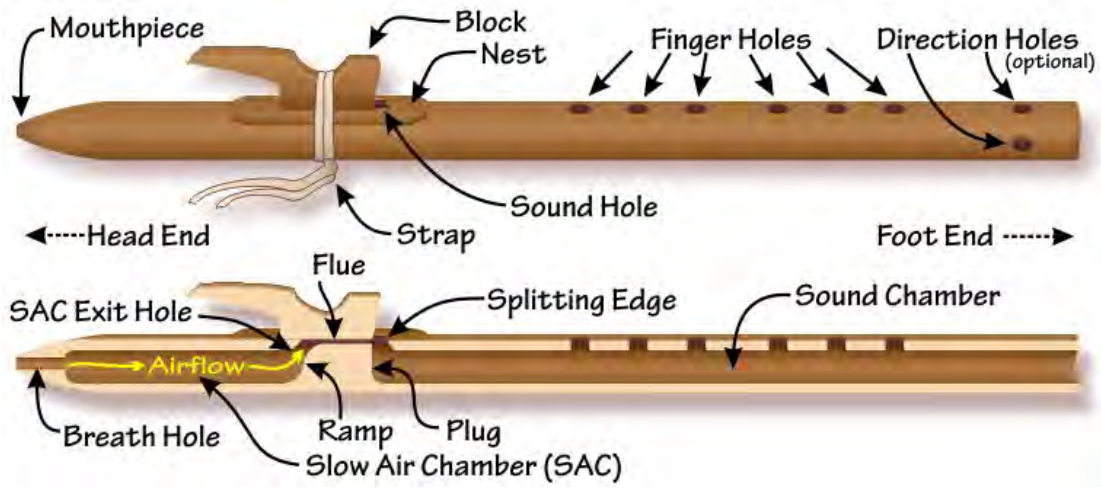
Two chambers are used; removing the need for the precise embouchure (or "lipping") required for other flute types.

the slow-air chamber chamber collects the player's breath

The sound chamber produces the sound.

A "block" (aka bird, fetish, totem) acts as a "fipple"/"flue" to move the air from chamber to chamber.

Finger holes allow you to directly block the notes.



Anatomy of a NAF (From Flutopedia)

While the NAF comes in predominant pentatonic tuning. (*Amazing Grace* is written in the pentatonic scale), you can find other tunings like diatonic (Do-Re-Mi…), which are similar to penny whistles/recorders.

Typically, NAFs are handmade and usually out of wood, but you can find them made out of bamboo and stalk (i.e., yucca, sunflower, agave, etc), and modern materials, such as plastic (i.e., ABS, PVC), carbon fiber. There are even 3D printed ones. So not all flutes will be ***exactly*** the same (unlike machine-made flutes). Each NAF has its own voice and will be slightly different. Most flute makers will make custom flutes.

Depending on the flute maker, the flutes are tuned to 440Hz (the standard "concert" tuning for modern instruments) or 432Hz ("Verdi" tuning). It's a debate among flautists which is best. Personally, I like both tunings for different reasons, but if you want to play with any other instrument, 440Hz is the way to go.

Want to Play?

If you're interested in playing the flute, there's a lot:

There are many flute makers around the US and Canada. Some provide a basic guide to play.

Many online resources, especially on YouTube, teach you how to play and share information.

If you are interested in learning, here's a couple of quick pointers for you to get started:

Start with an NAF tuned to A(minor). You don't need to get the most expensive one. (Here's a relatively inexpensive ABS flute from Northern Spirit Flutes (Canada) or a Cedar wood NAF from Butch Hall Flutes (US)). Both are well under $100.

Watch this mini lesson; Odell is a flute maker, who covers solid basics for learning the NAF.

1. Go to Flutopedia.com for more history.

HAVE FUN!

Exploring the Oud: A Musical Time Machine for Ancient and Futuristic Soundscapes

By Michael Larsen

Introduction:

In the realm of traditional, mythical, fantasy, and sci-fi musical instruments, few can claim the rich historical legacy and versatile tonality of the Oud. With its roots dating back to at least 1500 BCE, the Oud has transcended time, bridging ancient and modern worlds. Join me on a melodic journey to explore the ancient origins of the Oud and unravel its ability to integrate into both ancient and futuristic musical compositions. I consider it a perfect instrument to capture history and fantasy, appropriate for Renaissance fairies, belly dancing, fantasy faires, and orchestration for sci-fi and fantasy realms.

Truly Ancient Origins:

The Oud, known for its pear-shaped body and mesmerizing sound, finds its origins in the cradle of civilization. It is difficult to pinpoint the exact time and place of its birth, but it is widely believed to have originated as far back as 3,500 years ago in the region of Mesopotamia and Persia. It has been called a number of different names. It was called "Barbat" in Persia and this instrument can be seen being performed in Ancient Egyptian wall paintings. To think that an instrument that was once played by courtiers of the Pharaohs is still being played today and in a very similar form places it truly in time and out of time. This instrument became known in Arabic as "Al Oud," which means "wood" and specifically "thin wood." It's a call to the thin strips of wood that are bound and bent to make the bowl -shaped back of the instrument.

The instrument has traveled through time, adapting and evolving, both in retaining its own identity over millennia, as well as leading to a branching evolution, birthing both the lute and the guitar. Today, the most common variations of the Oud are the Arabic and Turkish Oud. The Arabic Oud typically features a larger and rounder body compared to the Turkish Oud. The Arabic Oud's body is deeper, allowing for a resonant and warm tone. In contrast, the Turkish Oud has a shallower body with a slightly slimmer waist, resulting in a brighter and more focused sound.

The Oud is often strung in different ways depending on the musical style that is being played and the tonal varieties desired. My Turkish Oud that I play has 11 strings, with the top string being a single low string (often used as a drone) and five courses of doubled strings. The strings are steel-wrapped nylon and are tied to the bridge in a similar way that classical guitar strings are tied. Arabic Oud's also typically have 11 strings but the way the courses are strung and how many can vary. Tuning the Oud also varies. The tuning I prefer is referred to as "Old Turkish" which, going from the lowest string to the highest, can be represented as: E - AA - BB - ee - aa - dd – gg.

Neck Structure and Playing Method:

The Oud, unlike its modern counterparts the lute and guitar, has no frets or even fret markers, reflecting its emphasis on microtonal playing. This allows for more intricate melodic embellishments and quarter-tone intonation. Both the Arabic and Turkish Oud have similar playing techniques. Aplectrum (called a "risha" or "mizrap") is used to pluck the strings and help to employ various fingerings and strumming patterns. Unlike a guitar plectrum (pick), the plectrum used with the Oud is long and can be held in the palm of the hand to be played with the point, and then the hand can relax and play with all fingers and still hold the plectrum in the palm of the hand. To add a more fantastical element, "risha" is the Arabic term for these plectrums and it comes from the Arabic word for "feather," as eagle feathers were used as plectrums.

Musical Characteristics:

The Oud is renowned for having a rich and resonant sound, ideal for playing intricate melodic passages and exploring the microtonal nuances of "maqam" (Arabic musical modes). It is often used to accompany vocalists or as a solo instrument in Arabic classical, folk, and traditional music.

One of the captivating features of the Oud is its ability to transport listeners to distant eras through its resonant tones. With its fretless nature, the Oud opens up a universe of possibilities, allowing musicians to explore notes outside the conventional Western scales. This versatility enables the instrument to seamlessly blend with both Eastern and Western musical traditions. From ancient "maqam" melodies to contemporary compositions, the Oud's tonality creates a sense of timelessness, making it an ideal choice for fantasy and sci-fi soundtracks.

Ancient Music:

The instrument's rich history crosses paths with many diverse cultural traditions. As such, it's a beautiful choice to use with just about any musical culture one can imagine. Outside of the traditions established in Arabic and Turkish music, the Oud can be used to play classical Western melodies, African songs, native music from both North and South America, and also can be worked seamlessly with Central and Eastern Asian musical traditions by virtue of having no frets. This means that any note that can be imagined can be played, at least within the confines of the three-and-a-half octaves available in the tuning and string space, plus harmonic overtones, if employed.

Modern Explorations:

While the Oud preserves ancient musical traditions, it has also found a place in contemporary artistic expressions. In the movie *Only Lovers Left Alive*, the Oud takes center stage during a captivating musical performance in an Istanbul café. This rendition beautifully showcases the Oud's ability to evoke a sense of both timelessness and modernity. Furthermore, the evolution of the instrument has given rise to a solid body electric Oud (Godin makes one and I confess to longing after it, and at some point, I hope to buy it), demonstrating its adaptability to new technologies and musical styles.

The Oud in Fantasy and Sci-Fi:

The allure of the Oud extends beyond historical and modern contexts, finding resonance in the realms of fantasy and science fiction. Its ethereal sound allows composers to craft otherworldly scores, transporting audiences to mythical landscapes and futuristic galaxies. Just as the composer for *The Witcher* drew upon Eastern European traditional instruments to create an immersive fantasy soundscape, the Oud's unique timbre can infuse sci-fi and fantasy compositions with an otherworldly essence, resonating with the imagination of both creators and listeners.

Conclusion:

The Oud stands as a testament to the enduring power of music to transcend time and connect diverse cultures. Its ancient origins, combined with its versatile tonality, make it a perfect instrument for bringing the past and future together in harmony. Whether weaving melodies of ancient civilizations or composing soundtracks for fantastical realms, the Oud's ability to transport listeners to bygone eras or unknown galaxies is unparalleled. As we continue to explore the boundaries of music, the Oud remains a timeless muse, resonating with the hearts and souls of musicians, fantasy enthusiasts, and sci-fi aficionados alike.

Captain Eo: The Crew IS the Music
By Christopher J Garcia

I can not tell you how many times I saw *Captain Eo* at Disneyland. Dozens, easily. It was a great attraction for the times when it was really hot out and you just wanted to sit down. Tomorrowland had a few of those helpfully sitting things, notably 360 CircleVision, but *Captain Eo,* featuring Michael Jackson, was easily the most fun.

The story of the film is easy – Captain Eo leads a crew of misfits off to a planet where the queen, played by Anjelica Huston, has undergone serious Giegerfication and has brought the entire planet down with her. Eo and co. crashland on the planet, and they're taken to the queen, where through the power of dance and music, they transform first the people, and then queen herself.
See, told ya it was simple, especially for a film directed by Francis Ford Coppola!

The crew is composed of six members—a small flying fuzzball named Fuzzball. I think we're supposed to think of him like we would a parrot to a pirate captain. The security officer is a robot named Major Domo. He looks like an upper-crust British general, only a robot. There's Major Domo's side-hack, who fits into a cradle in his back. His name – Minor Domo. The Navigator and pilot is Geek, or Idy and Ody, a two-headed creature who looks straight out of *Sesame Street*.

And there's a clumsy short elephant guy named Hooter who looks exactly like Max Rebo from *Star Wars* and was played by famed Little Person actor Tony Cox. He's comic relief, really.

OK, so Captain Eo is played by Michael Jackson at the absolute peak of his fame. He's actually really good in the role, and the two songs of the soundtrack as impressive. In fact, they're the main plot point, as Eo has been sent to deliver a gift that happens to be music, which will change her forever. When she asks for his gift, he calls on his crew.

Half of whom happen to turn into musical instruments.

And this is where it gets a little weird, and where I really wish that the 3D version still existed so I can see the effects that looked cool back in the old days.

Minor Domo is first. He leaps into the air and turns into a dual-tiered, three-part keyboard synthesizer-type thing with built-in speakers. Hooter is the one who plays it, though he trips on Eo's cape, knocks it down, and in many universes doomed the team to an eternity of working in the mines. Luckily, in the one we're seeing he recovers and starts playing Minor Domo.

Major Domo does triple duty! He kicks off his leg, which transforms into a bass, which is played by our little friend Fuzzball. He gets going good on it too! The rest of Domo turns into a drum set that Geek plays, though he also produces a microphone from his head, which I guess they sing back-up with? I'm not 100% on that one.

The magic of these transformations, at least to 12-year-old Chris, was that they were shown in 3D (before every freakin' Sci-Fi film was shown that way!) and were so cool! Everyone loved Fuzzball, but my favorite was always Hooter. He's short, cute, and silly. Also, like I said, he's basically Max Rebo, my favorite minor character in the *Star Wars* universe.

The beautiful thing is that while every instrument shown is pretty much a sci-fied version of an instrument you'd see on MTV being played by someone with a flowing mane of teased-out hair, the design is so perfect and makes it feel so different. The Minor Domo keyboard is instantly recognizable as a keyboard (the keys make that statement) but there's no real world equal to it. The bass (which I guess could also be a guitar, but it really looks like a bass, though I remember there being only three strings) has this curvy look that I wish real basses had, though some electric violins do the concept.

I love *Captain Eo*, and these funky instruments are something that stuck with me!

Play holophonor for me
by Ann Gry (anngry.com)

I really like *Futurama*. The *Simpsons* are great, *Disenchantment* is fun, but *Futurama* has always been just that much more touching, exciting and, overall, closer to heart. It was on TV when I was a kid, just starting school. And it ran on TV pretty much till I stopped staring into that box and began sitting in front of another, but with the Internet connection. This is where I found the original English dubbing of *Futurama*, too, and finally watched 'Parasites Lost' and got all the wordplay in the titles.

Despite listening to a lot of music, with large thematic playlists, I was never really that musical myself. There is a funny story when my parents suddenly realised that, although a bit late. When I was 15 and preparing for the university entrance exams, they booked me a private piano lesson. It didn't go far. After I played the saddest ever 'Ode to Joy' I gave it up.

I picked up some guitar (commented on with 'that had a lot of heart' but apparently not much music) and had a collection of harmonicas – some bought and some presented to me occasionally as 'gathering dust' in other people's places. My harmonica appreciation, by the way, is first and foremost connected to Moomins, through my affection for a certain wayward character, Snusmumriken, also known as Nuuskamuikkunen or Snufkin, depending on your distance from the nucleus of Moominvale.

A sketch of Snusmumriken by Tove Jansson, Moomin Museum

Even with this very light understanding of music I, like some other species on this planet, am

deeply influenced by those waves and vibrations and find them pleasant. Magic, you know.

Back to *Futurama*! 'Parasites Lost', the first episode with a holophonor, is still my favourite. It tells much about the Fry-Leela relationship throughout the series, and profoundly reveals the imperfections and strengths of the characters. But I also like the episode because it is so close to what I think being human is all about. When you don't stand a chance, when there is certain death at the end and a gazillion obstacles to reach for pretty much anything you ever wish in your life, and when you can never ever play holophonor perfectly (at least with your feeble human arms), Fry still picks up the instrument and tries.

In this episode, Fry is also being lured and tempted by the parasites, who are good for him at first. But they take so much from what he truly is that he would rather die than let them change him (a conversation about human-machine integration, anyone?). Those mayo parasites also give Fry a momentary glimpse into the giants we could be, the power, the knowledge, the skill, (the girl) – all of it. And then Fry shows so much courage to refuse this temptation as he chooses to be who he is, just an ordinary human being. That's solid therapeutic acceptance of yourself.

To make an additional point on this, Fry is swayed again by the lure of a shortcut to greatness in 'The Devil's Hands Are Idle Playthings', now with the Devil giving him robo-arms. It plays out differently for him and Leela in that episode.

Holophonor is a peculiar futuristic instrument. It produces a visualisation of the music but also merges it with the emotions and thoughts of the person playing. This is what makes it so unique and inventive among the fictional instruments. But it's not a novel idea per se. In the commentary for 'Parasites Lost' it says that the instrument is based on the Visi-Sonor from *Foundation and Empire* by

Isaac Asimov. It's not as cinematic, as it is akin to a hallucination produced by the stimulated brain rather than a holographic image. The Sensory Syrinx with similar features of projecting images with music is in *Nova* by Samuel R. Delany.

Holophonor made its way into the hands of Lisa Simpson in a Simpsorama episode on the Simpsons, and she's quite good at it. The instrument was played by the aliens Kang and Kodos in the short film where Billie Eilish is jamming with Lisa ('When Billie met Lisa').

In episode four of the second season of *Disenchantment*, a holophonor is seen in the background of the treasure chamber. The show has many references to *Futurama* and, of course, that's because these three are all created by Matt Groening and his team. But it's so cool to see those Easter eggs in the shows. That fuzzy feeling of recognising something dear to you.

Apart from Groening's productions, it is kind of referenced in *Orville* where they have a similar instrument in episode 10 of season two, which they call Pelpifa from the planet Xelaya that 'combines musical tones with holographic patterns'. It doesn't look like an oboe, though, but more like a lamellophone.

On a side note, my Totem player on Ubuntu has always had some visualisations that sometimes were quite mesmerising. I'm not using that player (nor the OS, unfortunately) anymore, but before it was a large part of my life.

Here's a sample of what it looked like, taken from the Net:

The bittersweet 'Parasites Lost' featuring the holophonor found its place in my heart. It's one of the most memorable episodes for me from the whole *Futurama*. It taught me to avoid expired sandwiches in strange places, but it also taught me many things about life. And also, in that holophonor's image of Fry and Leela as otters is so adorable!

"Of Holophonors"
By Peppard Saltine

In Matt Groening's "*Futurama*" the *Holophonor* is an audio-visual instrument which requires great skill to play. It looks like a wind instrument with a large purple bulb at it's end, like a hookah or an onion. It is often described as a cross between an oboe and a holographic projector.

Like it's often cited inspiration, the *Visi-Sonor* from Isaac Asimov's foundation, it is a synaesthetic instrument in that the images it creates are bound or synced to the music, however as the name suggests, the Holophonor projects a visible hologram, whereas with the Visi-Sonor the "visual" part of the instrument's effect is psychic, perceived directly by the visual cortex rather than by the retina.

Both instruments require great skill on the part of the player, both in terms of manual dexterity and mental fortitude. In Foundation the player has psychic ability as well as the knowledge of the instrument, in Futurama the player (Fry) only ever acquires the ability to actually play the instrument by exotic means.

I am going to suggest that any instrument, (and indeed performing art), requires incredible talent to play at professional level and that everything else about the skill levels both these instruments require to master is actually dramatic hyperbole. (Sure, within the fictional universe they are "real" or at least functional.)

Similarly I would like to submit that, in the right frame of mind, any great piece of music, well played or performed has the ability to have a psychoactive effect. To emotionally affect the listener. Some of this is certainly due to commitment on part of the listener, commitment to attend, to be part of an audience, to turn down the world and commit to experience.

Okay. So now, with that, we can perhaps contemplate that the psychic part of both these great fictional instruments is just window dressing, to justify talking about ways of thinking about music and visualisation. If that is acceptable, then the holophonor is in fact a *Colour Organ* or *Light Organ*

Colour Organs

Let's talk a little about *Visual Music* and Colour Organs. Visual Music really goes back to the dawn of humanity, when you think about it. Right back to the roots of the visual arts, (flickering firelight on painted cave walls), encompassing and informing singing and dancing, chanting and ritual, shadow play and theatre. Colour Organs, instruments made specifically to perform colour and light shows, on the other hand, are a much younger development.

The Colour Organ has a rich back story and is described in western histories as early as 1590, (though I am sure with access to sufficient research materials and using broad enough terms, one could find many earlier devices and performance techniques throughout the world which conform to the description 'Visual Music Instrument'), In the mid 1700s the "ocular harpsichord"

was proposed by both Jesuit monk Louis Bertrand Castel and Professor Johann Gotlieb Kruger. It is not until the late 1800s however, that Colour Organ development really gets going.

In 1870 musician and physicist Georges Frederic Eugene Kastner created the first *Pyrophone*, (based on techniques described variously during the previous 100 years by physicists Byron Higgins, Michael Faraday and John Tydall), an instrument in which each note is sounded by a small, controlled gas explosion in a cylindrical tube, creating both light and sound. Kastner also created a fascinating instrument called the *Lustre Chantant*, or 'singing chandelier', which attached keyboard control to gas jets built into a large chandelier. Glass tubes of different lengths were heated by individual jets and as the glass tubes cooled they would produce musical notes.

In 1877 the artist and inventor Bainbridge Bishop filed patent for the first of his Colour Organs which was an attachment for a pipe organ that could project coloured lights onto a screen in synchronisation with the notes played. In the 1890s painter Alexander Wallace Rimington invented the *Clavier a Lumieres, w*hich he describes in detail in his 1912 book "*Colour Music: The Art of Mobile Colour*". In 1911 composer Alexander Scriabin engaged engineer Preston S. Millar to oversee the technical aspects of a synaesthetic performance piece "*Prometheus:The Poem of Fire*", (which was not performed until 1915), and the result of Millar's work would be the creation of the *Chromola* colour organ, with twelve independent lights controlled by a fifteen key keyboard. The following year, (1916), Russian futurist painter Vladimir Rossine premiered the *Optophonic Piano*, the same year the Italian futurists Arnaldo Ginna and Bruno Corra describe in a futurist art manifesto, their experiments with a colour organ some years previously.

In 1918 American concert pianist and inventor Mary Hallock-Greenewalt created an instrument called the *Sarabet*, (and would patent a number of technical devices that she invented to make the instrument possible, including a particular type of rheostat), and coined the term *Nourathar* as a name for the art she created using the Sarabet. The interesting thing about Nourathar is that there is no strict correspondence between the sound and the visual, (especially in terms of colour), and is dependent more on the ability and temperament of the player, (sound familiar?), unlike the majority of colour organs where specific musical notes have specific corresponding lights or colours. What is also interesting is that the earliest version of the Sarabet was an automated machine which was meant to be played alongside a specific recording, and utilised painted film with colour changes and geometric patterns made with stencils, (not unlike the hand painted films of Len Lye in the 1930s), and this could be considered one of the earliest *music visualisers*. (Mary Hallock-Greenewalt wrote a book in the 1940s about the art of light-color playing, if you are interested in more on her fascinating approach to the subject.)

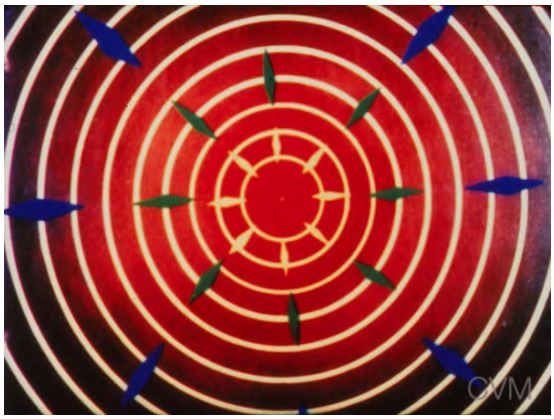
In the early 1920s Thomas Wilfred, a musician and son of a photographer created a colour organ called the *Clavilux.* (He named his instrument specifically in response to the term Colour Organ which he did not like). The Clavilux was a mute visual instrument, and used revolving glass plates, lenses and colour filters through which a light was shone, creating moving refractions and abstract shapes on a screen. Wilfred was committed to the idea of silent visual music and coined the name '*Lumia'* for this art form, which he described as the "eighth art of electric light". He performed and lectured about it throughout the 1920s, however after WWII, he would focus instead on recorded lumia and simpler less interactive table top clavilux devices for the home market. Unfortunately Wilfred was highly resistant to filming or recording of Lumia or their performances, so most of his extant work relies on his specific device to playback. One of his later performances, "*Opus 161*" was filmed and is featured in the Terrance Malick film "*Tree Of Life*"(2011), and you can see the whole original piece in pretty awful low resolution on youtube.

Visual Music

By the 1930s, there has been a paradigm shift in visualisation due to the advent of film at the turn of the century, and the advent of optical sound for film in the 1920s. Many of the artists who might otherwise be working with colour organs are now working with film and the art form of synchronised light and image has shifted into cinema and the age of *Visual Music* or *Colour Music* has arrived. Worth noting before moving on though, is Oskar Fischinger who worked with film and animation but also, in the 1940s he created his own unique Colour Organ, the *Lumigraph.* The lumigraph is another mute colour organ, and it relies heavily on the organic nature of the physical performance. It is in essence a rubber sheet stretched across a plane, (usually a vertical "screen" or "stage"), with coloured lights shining across the plane, but offset. When the performer presses their fingers into the rubber sheet, (from behind the screen), The sheet enters the light beams and is illuminated. Thus, organic and conceptual performance of abstract light patterns can be achieved. Samuel Z. Arkoff licensed the lumigraph to use as a visual effect in the 1964 film "The Time Travelers". Fischinger created a few really great films himself, (check out "*Motion Painting No.1*" if you ever get the chance), and was part of the team who created the Bach *Toccata and Fugue in D Minor* sequence in Disney's "*Fantasia*" (1940), as well as the animated magical effect for the blue fairy in Disney's "Pinocchio"(1940).

I have kind of gone off on a tangent here.

Visual Music is a huge area to which I cannot hope to do any justice in a short piece, but I will say really worth checking out are the filmic works of Visual Music artists Hans Richter, Mary Ellen Bute, Norman McLaren, Viking Eggeling, Len Lye and brothers James Whitney & John Whitney Sr. (father of computer visual effects artist John Whitney Jr. who made effects for "Westworld", "Labyrinth" and "Last Starfighter"). Hans Richter's work is particularly of note here maybe "*Filmstudie*"(1926) or "*Rhythmus 21*"(1921), and possibly Viking Eggeling's "*Diagonal-Symphonie*"(1924) in relation to our topic, in that Asimov's description of the Visi-Sonor visual is remarkably similar to how one might try to describe the visuals of these films. Though it is probably more likely that Asimov is describing something he imagines, inspired by Disney's "*Fantasia*"(1940) as the passage in question was published a few years later in 1945, (and the reach of "*Fantasia*" is far greater than any work made by Richter or Eggeling).



Although mainly restricted to experimental cinema at first, filmic *Visual Music* eventually gives rise to particular conceptual types of film title sequences, effects and montage sequences before breaking into the mainstream in the form of music videos. Long before editing images on a computer became feasible, John Whitney Sr. was using surplus WWII analogue computers from anti-aircraft guns to create geometric animations which are definite forerunners to computer *music visualisers*.

By the 1990s the technology had advanced and once again the art form of synchronised audio visuals shifts platform, media and practice. Film gives way to computers and programming. Visual Music shifts back toward interactive models and thus the new Colour Organs are born, (with the now perhaps preferred term Light Organ), in the form of computers running VJ software. There are now three or four major pieces of commercial software, and countless smaller programmes and apps, and set-ups vary from auto visualisers run on a phone or tablet, to stadium illuminating rigs for arena size music performances and every permutation in between. I am sure you would agree that today it would be rare to see a popular music performance which does not incorporate visual music or synchronised visual accompaniment in some form.

Real World Holphonors

For less than a hundred dollars you can build yourself something capable of performing visual music of some sort, and if you are willing to spend the time and the energy you too can master your own Light Organ.

If you wanted to go a step further you could use a midi device like a *Roland Aerophone* or *Akai EWI*, (clarinet similar key control plus breath to midi for extra expression), in conjunction with software like *Resolume*, (multi channel VJ software), running on a mid range home computer like a mac mini. If you were to add a device like the *Emotiv EPOC-X*, (a personal wearable EEG), you could map your brainwaves to midi control inputs for Resolume. Then you would have all the performance inputs of an actual holophonor. Add a video projector to that and there is your holophonor, today, in 2d, for maybe three thousand dollars. Okay, it's not a holophonor because it's video rather than a hologram, perhaps a *Videphonor*.

The great thing about this is that it has most of the playback form factor sorted. The player has the instrument and the headset but otherwise is unencumbered to perform. The CPU of the instrument is off board as is the projection, and your output is a universal standard so you are open to multiple playback scenarios, (you can turn up and play a gig using the displays in venue), and different setup and performance options.

It's still a step away from Holo, though, and once you start to get into 3D projection you find it is very situation dependent and has cumbersome setups and long setup times. This is way beyond the cost and setup level of most hobbyists or consumers, but you can see through large scale events and advertising that the technology exists and is in use by a/v specialists. Options like multiple point video projection and projection mapping, which will create a great optical illusion that looks like 3D in the right scenario. LED holo-projection fans can also create a pretty good illusion, and are scaleable (multiple fans can be synchronised to create a larger image projection area), but are cumbersome and require specifically processed signals to create the illusion. Similarly Pepper's Ghost effect, (a mirror effect often used to produce "holographic" performers on stage), or Holo Gauze, (projection onto a reflective semi-transparent textile), setups can be very effective ways to project images with the illusion of 3D, especially in low light scenarios. There are even options like LED volumes, (a matrix or multiple planes of LEDs with space between), that can produce credible 3D when viewed from a distance, and synchronised drones can be used to create large scale high flying LED volumes. Such an interesting area of visual art, but not really applicable today to the individual user. If an arena level performer wanted to play a holophonor concert, they could, today and it would be close enough in every aspect, (performance inputs through to audience perception), to be considered a '*Real*' Holophonor performance.

For the regular individual performer perhaps we can accept AR and AR goggles like Apple VisionPro as an alternative to actual Holo "projection", in which case, using over the counter consumer hardware and software, available today, you can assemble an instrument that is about as close to a Holophonor as our technology allows.

Holophonor in real life by 2024.

Canonical appearances of the Holophonor:

The Holophonor appears in ten episodes of "*Futurama*" but is plot involved in two, S03E04 "*Parasites Lost*" and S05E16 "*The Devil's Hands are Idle Playthings*". A variation of the Holophonor appears in the Simpsons/Futurama crossover "*Simpsorama*", in which Lisa plays a saxophone shaped holophonor, or perhaps a saxophone with a holophonic adapter.

Fico in Flash Gordon
By James Bacon

***Flash Gordon* was incredible**, for me. I was mostly oblivious to the *Star Wars* phenomenon that was going on, I had not yet seen the movie, and was instead enjoying science fiction on the television and movies, mostly the ones that seemed to interest Dad. On some weekend, we went out to see *Flash* in Dun Laoghaire, and it was mind blowing.

We loved it. It was so good. *Flash Gordon* was amazing, and later when we got a VHS video, along with *Star Wars*, *The Great Escape*, *A Bridge Too Far* and others, we would watch and rewatch *Flash Gordon* until the tape was worn, knowing the words.

Dad took us to see it in Dun Laoghaire, at the Cinema. I loved Queen at the time, I thought their music was great, and I was only six, and when I got my first Walkman, I soon had a cassette copy of their greatest hits and listened non-stop, along with the actual album from the movie. *Flash Gordon* was always on in the house, we all knew the words line by line, and it was hilarious, and even now, if I shout out, 'Klytus I'm Bored', 'This Ming is a psycho', 'Impetus Boy' and 'not the bore worms', my brothers know what's going on.

Like what are the Bore Worms exactly?

The *Flash Gordon* serials were broadcast on BBC, usually during the summer. I loved the crackling and banging of the Rocket Engines and of course I had an affinity for Flash and got the picture, even if it was black and white and the pet lizards had super glued appendages. The oddness of Zarkov having an Irish accent, and the some of the armour that the Mongo soldiers have were like Roman Soldiers, but I liked the Ned Kelly style helmet and black armour. Although I would have been more loyal to my Dad and did people really see Polo as a tough sport in the 1930s or just one where Riding Boots and jodhpurs on a flight were OK?

The relationship between Aura and Ming was strained more than I anticipated, and what of the 'dehumaniser'. Would science eventually overcome all things, 'even human emotions' and it was all a bit mad and fun. At no stage did I wonder or ask whether the science of the rockets would work, that seemed preposterous, and even though occasionally Buster was more boring than Sam, I still enjoyed them and even watched *The New Adventures of Flash Gordon*, the cartoon.

Then we had TED. And when Ted arrived, it came along and featured Flash Gordon so much, we all understood, like if you were invited to a party where Sam J. Jones was at, everyone in the whole world would understand you bailing out, and we got that, along with the laughter. Christ we never laughed so much, everything, Shots, Cocaine Death to Ming, it was our family Christmas movie in 2012 and it was amazingly brilliant because we were a Flash Gordon household. It was our last Christmas

with Dad and all the best films were lined up, *Michael Collins*, *Schindler's List*, *Where Eagles Dare*, but this was new, and Dad was insistent we enjoy it, and so we did and it was so much fun.

Musical Instruments you say ... and so as ever we have our delightful angle, I can go back and watch *Flash Gordon*, the 1980 movie because in the middle of it, we have the impertinent and brilliant Richard O'Brien playing Fico, a bard of sorts in Arborea, who plays a wonderful double recorder, that also sounds a bit like an amazing and haunting synthesizer. But the sound gives a lovely dark woodland feel, as we see Aura saving Flash and bringing her love, Prince Baron a 'Present'. There are maybe seven or eight notes used in total, but it is so perfect. Baron wants Flash Dead and Fico is playing his recorder and Baron is frustrated, but Fico offers him a solution. The simple recorder, well synth, contrasts with the Kettle Drums and the synth beating out a paced and exciting chase as we first see Baron chasing down Flash and then Flash saving Baron.

And soon it will be 'What do you mean, Flash Gordon approaching' and the great sounds of Queen, and good old War Rocket Ajax being dispatched.

And in between, as if to follow up on Ted, actually, you know, I always laugh when I hear someone talk about a TED talk, imagining this teddy bear talking about Flash Gordon. Anyhow we then got Mark Miller along, who gave us the comic *Starlight* with Goran Parlow. *Starlight* is an imagined sequel to the 1980 film of *Flash Gordon*, although that is like the great unspoken thing, as if you say that, well you'd be sued.

So let's say the six issues of this comic calls on some of the elements of classic pulp science fiction, but adding a modern-day twist by metaphorically looking at how society treats the ageing and those whom we believe to be mentally unsound. The comic has its own problems, the bad guys, but the story of our Modern-Day, lonely one-time world saver, Duke McQueen, was a fine study of how we discard those, jettisoned once they are used, and the familial challenges that we all face, especially with old age, and it was just the best comic of 2014. It is at its core, a love letter to *Flash Gordon*, but actually a post-modernist view, of *Flash.* And in some ways, pretty sad, for upon his return he is never believed. He returned home from saving a planet and no one believed him, except his wife, even his kids doubt him, and then bereaved of his love, alone and lonely. It's fantastic.

I may have used Fico's interesting instrument to write considerably about how I love a film, two films, actually three films, I did not mention the documentary, *Life After Flash* and a comic. Isn't it mad to think that those making the 1980 film laughed at it. Forty-four years later, it is probably the finest embodiment of *Flash Gordon*, fun, colourful, a bit crazy and brilliantly sounding. It outlasted itself and despite everything, and many people not having a clue what folk like about it, remains popular. Ben Cornish was connected to *Starlight* in 2021 and one wonders if we could get that film, continually in development hell, I hope Sam J. Jones and Melody Anderson are brought back, and some deal somewhere could happen that would see it all adjusted, so Duke can be Flash.

Pure Will, True Will, and The Hydrogen Sonata

or

How Aleister Crowley met Iain M. Banks

By Richard Smothers

"For pure will, unassuaged of purpose, delivered from the lust of result, is every way perfect."

— Aleister Crowley, The Book of the Law

Vyr Cossont is a member of the *Gzilt* race and, as such, is required to complete a life-task of her choosing. As daunting as this would be under the most favourable of circumstances, her completion of this task is complicated by one small detail: Her entire race is going to become non-corporeal in 23 days ("Sublimation"), and the task she's chosen could hardly be more arcane or difficult.

The *Gzilt* are a humanoid race and society existing at a post-need/post scarcity level; i.e., anything anyone could ever need, have, or want is available to them, due to the harnessing of unlimited energy and material resources. Some 9,000 years prior, the *Gzilt* turned down the opportunity to become part of the Culture, a society of pan-human races which also exists at a post-need/post scarcity level. The primary difference between the two is that, whilst the Culture's social structure is anarchistic, with god-like AI *Minds* playing referee and functioning more in an administrative, protective and managerial capacity than as overlords, the *Gzilt* society is built upon a militaristic model (despite the fact they are extremely non-aggressive and don't seem to have been involved in many wars), and they've opted not to go the AI route. The reason I mention the Culture at all is that it is the setting and backdrop for the series of novels by the late Iain M. Banks, to which *The Hydrogen Sonata* belongs, and Vyr's involvement with the Culture is the main plot-point of this book; this essay, however, concerns the minor plot-point of Vyr Cossont's choice of a life-task.

> *"T. C. Vilabier's 26th String-Specific Sonata For An Instrument Yet To Be Invented, MW 1211 – The Hydrogen Sonata – started with a single sustained note, right at the top of the range of the instrument which had had to be invented to play it properly, the bodily acoustic Antagonistic Undecagonstring for four hands. That single note was then joined by a faint, uncertain chord of slowly shifting harmonics, which was another way of saying that it started to sound out of tune after it got more than one note in. Fans and detractors alike agreed that this was a remarkable achievement, and also that the work as a whole was something of an acquired taste."*

Vyr Cossont chose to make the performance of the Hydrogen Sonata her life-task. This requires that she master a musical instrument, the *Antagonistic Undecagonstring.* The instrument re-

quires a player with four arms; the *Gzilt,* unfortunately, are born only with two, but, being the highly-advanced, post-need/post-scarcity society that they are, Vyr was able to have the requisite two additional limbs added to her physique, and at no cost, since there are no costs in a post-need/post-scarcity society. Vyr Cossont has chosen to devote her life to learning how to play an insanely difficult musical piece that nobody likes or wants to hear and which can only be played once she has mastered an obscure, insanely difficult-to-master musical instrument that requires her to actually mutilate herself by adding two arms to her body, the mastery of their use in and of itself, no doubt, requiring additional years of practice.

Sort of begs the question:

WHY?????????????????????????

Her life-task, though they are mandated for every member of her society, was not chosen for her; she chose it herself. The only finger on the trigger of this "gun to the head" is her own. And at virtually every step of the way, she is faced with serious hurdles, physical, psychological and emotional, over which she must jump just to *attempt* to complete this task, for which she now has only 23 days left, whilst simultaneously having to complete a vital and time-sensitive mission for the Culture, which she also chose to accept. One example of the hurdles over which she must jump is the soul-crushing experience of witnessing a Culture *Ship-Mind* create a physical avatar and play, perfectly, beautifully and without any rehearsal, the aforementioned *Antagonistic Undecagonstring*, after she mentioned her life-task during casual conversation. She reacted by experiencing a 15-year depression during which she couldn't bring herself to even look at the thing, let alone lay bow to it. Yet, she resumes her training. She continues to put enormous effort and time into learning to do something nobody cares about, few would even know about (her entire race will be non-corporeal in 23 days), and which, implicitly, would give her no pleasure in itself. No financial reward, no praise, no broadcast event for an expectant audience, no tangible, external validation of her efforts, so again: Why?

In our need-and-scarcity-based society, we are, arguably, encouraged to believe that everything, everyone, must have a "useful purpose". There is the expectation for many (one not embraced,

thankfully, by myself) that we be "productive", that our actions must produce something of "value", almost exclusively in the context of economics, and that our actions and the fruits of our labours must have value as well. In other words, there must be a "reason" for everything we do, and the very "reason" for our existence is to have a "reason".

This ideology seems to be an extension of a need-and-scarcity-based society, and not, axiomatically, that of conscious existence. When we see animals in their natural state, what do they seem to do when they are not seeing to their basic needs of survival? They play. They take naps. They stare off into space. They chew on things they can't eat. They sniff things they haven't seen before just to find out what they are. They do not fret over not "being useful". Human beings, having the type of consciousness which allows for abstract thought and imagination, have the ability to make art. But even this seemingly-useless tendency has been co-opted into requiring a "reason", be it monetary or providing amusement and entertainment for others.

In the case of Vyr, I believe the answer to "why?" is simple: Because it is her Will. She simply chose to do it. From a Thelemic perspective (Thelema being the philosophy and religion established by Aleister Crowley in *The Book of the Law*), there is nothing more purely human, nothing more true to our essence as conscious beings, than the manifestation of our True Will, through the exercise of Pure Will.

In Thelemic terms, True Will can be described as the "real you". The "you" you would be if Maslow's *Hierarchy of Needs* were all met for you, and you weren't conditioned into a model of appearance and behaviour dictated to you by society, your parents, et al. In other words, True Will is identity, informed only by you and not by any externalities.

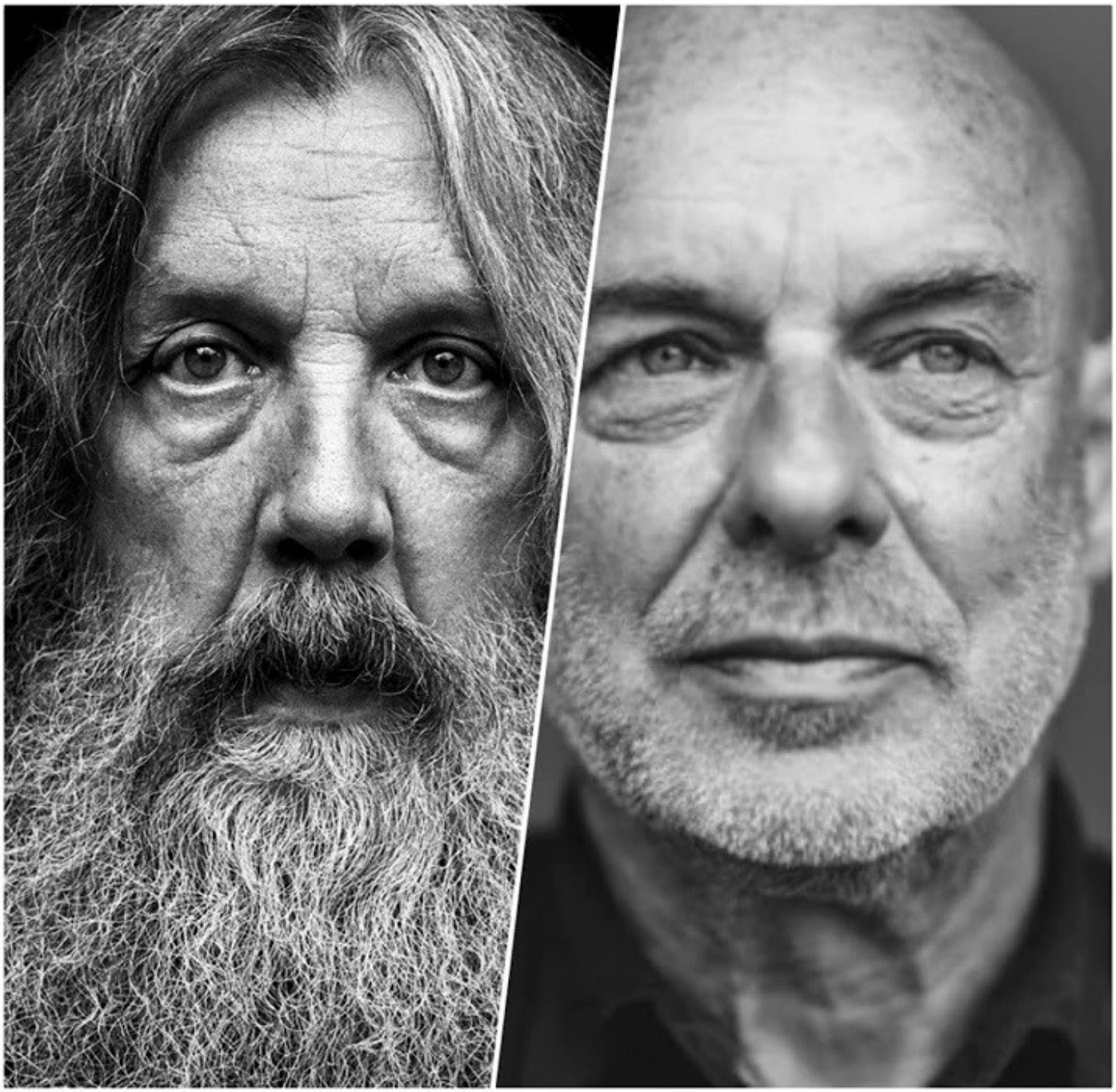
Now, the very idea of a society demanding a "life-task" out of you is obviously a glaring example of a society imposing an identity upon its members, after a fashion, but only in very broad strokes. Within that mandate, there is no requirement that one's life-task be "useful", and the only "reason" for doing it is the doing of it. In our society, in which virtually every action is (and must) be performed with a very clear lust for clearly-defined results, the undertaking of such a task, for which there is no demand nor productive result, is tantamount to recalcitrant madness, and only the domain of those not faced with need nor scarcity, the idle luxury of the wealthy, except in our society this luxury most often has very real costs to those less fortunate than the wealthy individual indulging themself.

I have no idea what Mr. Banks was trying to say with this, or if he was trying to say anything at all (he's currently unavailable for comment, having pulled the croak-chain some time ago). But my takeaway is that Vyr Cossont's choice, as neurotic as it seems, is one of the very purest examples of doing one's True Will through the exercise of Pure Will, and therefore one of the truest examples of Humanity I can think of. So, the definitive answer to "why", is:

WHY THE F* NOT?**

Music in the Works of Alan Moore
Or Alan, Eno, and Me
By Pádraig Ó Méalóid

Although the brief proper calls for me to write something about, and I quote, 'Futuristic, mythical, fictional, historical and imagined musical instruments [...], as well as pieces from TV and Film that inspire and take you away and include different sounds and instruments that somehow transcend the lines between fiction and reality,' I have instead chosen to reinterpret this to mean 'Here's another chance to trawl what's left of the little grey cells for something related to music in and around the work of Alan Moore, and to torment the editors with numerous frankly self-indulgent footnotes.' Let me start with this extract from an interview I did with him on 26 February 2015...



PÓM: I met Tim Perkins[1] for the first time in August. Worldcon – that's the World Science Fiction Convention – was on in London[2], and myself and himself and Gary Lloyd[3] ended up doing a panel about your musical output.

AM: Aw, brilliant! And how is Tim? I haven't spoken to him for ages.

PÓM: Tim was good! I was delighted to meet him, because I have a lot of his work, but I've one question I was asking him that I had always been interested in, which was, in all the musical work that you did, did you play a musical instrument at all?

AM: Oh, no. No, I never played a musical instrument. I am – yeah, I know I'm a fairly multi-competent kind of individual, but no, no. Playing a musical instrument has always been beyond me, and I have nothing but the greatest of respect for those that can, and I tend to – even if I could play a musical instrument, I've known such brilliant musicians that it would have been foolish not to leave that side of things to them, and to play to my strengths.

PÓM: Yeah, I know. He did say something about your playing – was it with one hand, was it *Twinkle Twinkle Little Star*, something like that, on a piano?

AM: Oh, I can actually – because when I was a child, I had a Sooty Xylophone, with numbered keys, and the actual score to *Twinkle Twinkle Little Star*, with numbered keys on xylophone, is 1155665 – it's been a long time since I played it, but I could remember it all the way through, on my Sooty Xylophone. So, yes, I suppose technically, if there is ever any need for a kind of *Twinkle Twinkle Little Star* refrain on xylophone, then you've got my number.

PÓM: Fair enough. I always wanted to clear that one up.

AM: Well, it's an important point, Pádraig. No, I'm surprised that Tim remembered that.

PÓM: Yes. Well, it obviously made an impression.

AM: Yeah, obviously, obviously.

...all of which may explain why there's a comparative dearth of actual instruments portrayed in his work. On the other hand, it'd be hard to cast a stone in the direction of his comics work and *not* hit something that had some sort of musical association, either real-world or fictional.

Old friend and occasional JP contributor Julian West once said to me that it's possible to guess what Moore was listening to when he was writing certain things, based on the titles of stories and references snuck into the text. There's probably no better example of this than Another Green World, the title of issue #23 of *The Saga of the Swamp Thing*, published in April 1984. *Another Green World* is the title of Brian Eno's third studio album, released in November 1975. The title track has also been used as the theme music for BBC Two television's arts series *Arena* since its inception in 1975.

Several other early issues of *The Saga of the Swamp Thing* betray cultural references in their chapter titles: #21, Moore's first proper issue (after spending the previous issue, his first – aptly titled

Loose Ends – clearing up after the previous unfinished storyline) was titled The Anatomy Lesson, whose title graphic owes a clear debt to the cover art of the Penguin Books edition of Robert Traver's 1958 murder mystery *Anatomy of a Murder*. Issue #25, The Sleep of Reason, takes its title from an artwork by Spanish painter and printmaker Francisco Goya, called *El sueño de la razón produce monstrous* (*The Sleep of Reason Produces Monsters*). On page 2 of that issue, we see a character called Jason Blood buying a print of the Goya, along with some amber incense from a shop called Third Eye Books and Paraphernalia. On the wall in the background is a sign that says New Sinister Ducks 45[4] on Sale Here. This is a reference to a real record, whose A side was called *The March of the Sinister Ducks*[5], recorded by Northampton-based band called The Sinister Ducks, whose personnel consisted of Capt. José Da Silva, Max Akropolis, Translucia Baboon, aka David J Haskins from Bauhaus, Alex Green from The Jazz Butcher, and Alan Moore on vocals. It's really rather good, and not difficult to locate on the like of YouTube.

To go back to Eno, whilst a reference to a major album by him is relatively to spot, sometimes the clues are subtler. He'd left Roxy Music in 1973, but still worked with some – but definitely not all –

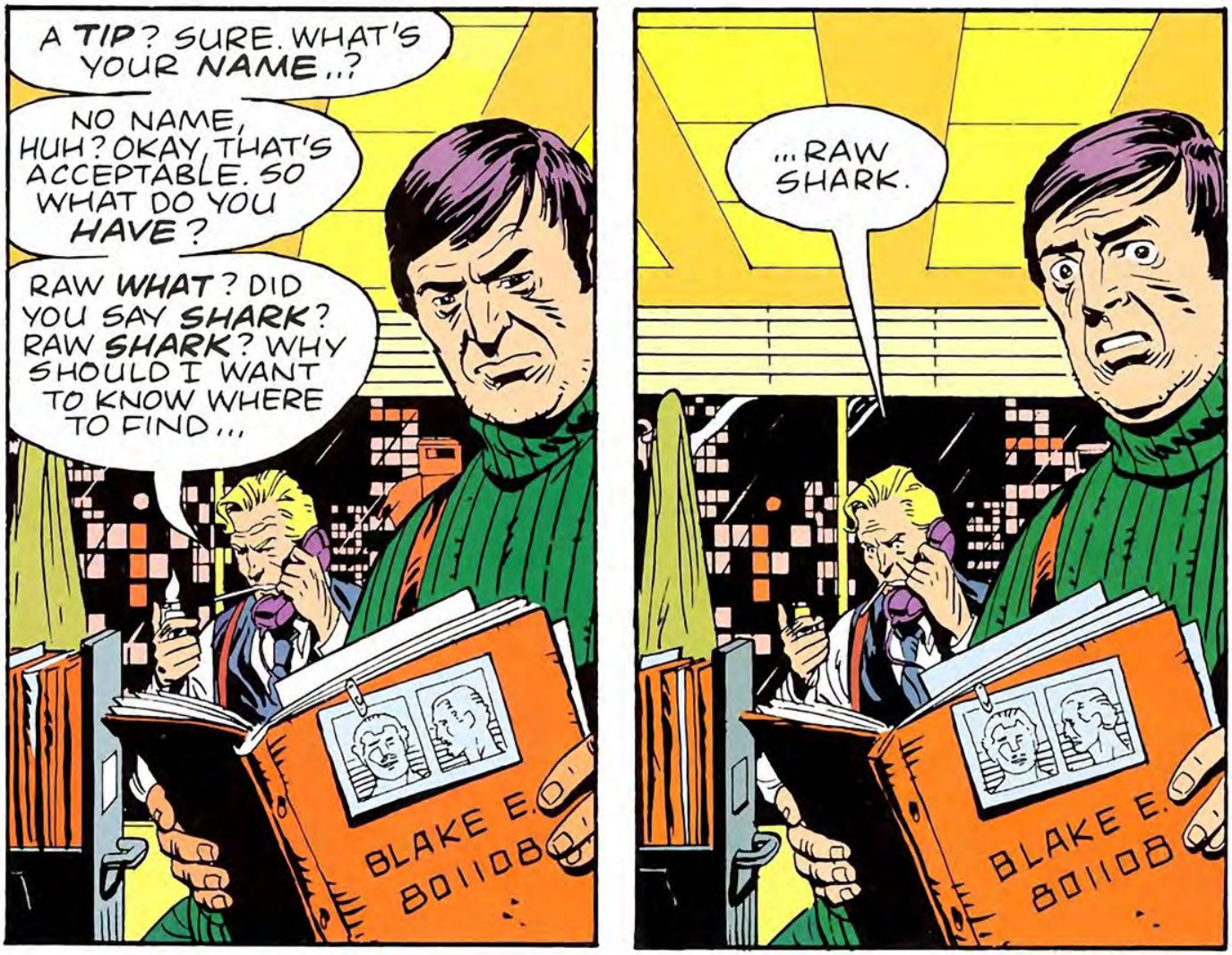
of his previous band members. Later on, in 1976, Roxy Music was on hiatus, so their guitarist, Phil Manzanera, along with Eno and other musicians that were generally in the same musical milieu as them – Lloyd Watson, Francis Monkman, Bill MacCormick, and Simon Phillips – formed a band called 801, and played three highly acclaimed concerts. One of these, the one at London's Queen Elizabeth Hall on 3 September 1976, was recorded, and released as an album in November 1976. I had just passed my 17th birthday, was working in a record shop in Dublin and, as the years passed, I realised that this was my single favourite album of all time. In conversation with Moore once, I told him this, and he assured me that he had been at all of the 801 concerts. He certainly went to the trouble of sneaking in references to them in two of what would come to be seen as his most important works. In DC Comics' *Watchmen,* on page 22 of issue #5[6], in panels 6 & 7, we see Detective Joe Bourquin holding a file on the death of Edward Blake, aka The Comedian. The number on the file is 801108. Considering this issue is particularly themed around symmetry, it is worth noting that 801108 – particularly as lettered without the fiddly bits on the two 1s – is symmetrical both vertically and horizontally. Sometimes, in *Watchmen*, things became more than just the sum of their parts.

The other reference to 801 is in *Batman: The Killing Joke*, originally published by DC Comics in March 1988, on page 2, panel 7 we see the door of a cell in Gotham City's infamous Arkham Asylum, whose nameplate reads Name Unknown 0801...

When I started writing this, I intended to cover Moore's own musical career – which I have at least touched on – and to write about all the fictional bands and artistes who appear in his work – Pale Horse and Krystalnacht in *Watchmen*, Les Miserable in *Promethea*, Ice Ten in *The Ballad of Halo Jones* – which probably has the only real example of a fictional instrument in it, the dota that is played by Halo's flatmate Ludy – and all the robots performing scrap music in *Top Ten*. Moore hoovered up culture, and displayed traces of it in all of his work. Instead I seem to have written just about Moore and Eno, perhaps the two great cultural figures of our times whose work I admire the most. I mean, I almost forgot to mention Maxine Manchester, aka Ladytron, named after a song on Roxy Music's eponymous first album in 1972, who first appeared in *WildC.A.T.s* #21 in July 1995, during Moore's run on the title.

Music, in particular, both real and imaginary, saturates both his work and his life. Perhaps I should instead present this as a possible chapter of a book, which I may never actually get around to writing, about it all...?

1 -Tim Perkins collaborated with Alan Moore on five spoken word/musical projects between 1995 and 2003, all of which were released on CD: *The Birth Caul* (1995), *The Moon and Serpent Grand Egyptian*



Theatre of Marvels (1996), *The Highbury Working* (2000), *Angel Passage* (2001), and *Snakes And Ladders* (2003). Not to be confused with Tim Pilcher. Or with any of the other Tim Perkinses, of whom there seem to be many.

2- The 72nd World Science Fiction Convention, also known as Loncon 3, was held on 14–18 August 2014 at the ExCeL London.

3- Gary Lloyd also worked on spoken word/musical project called *Brought to Light* with Alan Moore, an adaptation of Moore's Brought to Light graphic novel segment *Shadowplay: The Secret Team*, originally illustrated by Bill Sienkiewicz, and published by Eclipse Comics in 1988 as one half of a 'flipper' book, along with *Flashpoint: The LA Penca Bombing*, Written by Joyce Brabner, and illustrated by Tom Yeates.

4- 45 here means a 45 rpm 7" vinyl record, otherwise known as a single, which would have had a song on each side, with the primary piece referred to as the A side, and the other as the B side.

5- With *Old Gangsters Never Die* on the B-side. The cover was drawn by Kevil O'Neill, with whom Moore would later go on to create *The League of Extraordinary Gentlemen* series.

6- Cover-dated January 1987.

On kings and fiddlers and the harp unstrung
By Ethan Hay, MA

Many nursery rhymes and childhood songs, especially the older ones, are indeed very ancient relics of a very basic human need to express the world musically, through sound and rhyme, as old as human imagination itself.

"Old King Cole was a merry old soul
And a merry old soul was he:
He called for his pipe, and he called for his bowl,
And he called for his fiddlers three"

The origins of King Cole are apocryphal. The nursery rhyme first appeared in Britain in 1708, possibly attributed to Coel Hen, a Welsh-born king of northern England in the fourth to fifth centuries, toward the end of Roman occupation. When the Romans left, Coel remained in control of northern Britain in Eboracum (modern day York) [*see mentalfloss: *Who Was Old King Cole*]

Where there is music, there will be dancing. The Pipe and Bowl Morris of the original Renaissance Pleasure and Dickens Faires, take their name from the rhyme, commanded to perform before the king (or Her majesty the Queen, as it were, depending on the year), as indigenous English dancers from the Cotswolds village of Chipping-Under-Oakwood. The Morris is a display dance tradition, and may be considered as a sport on some levels, where the musicians keep the score.

In truth, no one can actually say when Morris dancing began, but most will agree it is indigenous English, village-based, and has been passed down from fathers to sons and also daughters for generations out of mind. "Because we have always done it this way," may be your best explanation as to the where and why of how of village Morris traditions.

So, origins of The Morris are ancient. The oldest mention on record lists bolts of white cloth be-

ing made available to "the maurrice dauncers" for dancing at Whitsuntide (aka White Sunday, or Pentecost) upon the church grounds around the year 1100 CE. Clearly, the dances had been performed much longer than that, for both religious as well as secular purposes. Roman written accounts also mention local Britons dancing "a mores," which simply means in the style of local tradition, however, none of these dances were described in any detail.

In addition to Whitsuntide, Morris dancers gather on their local greens every year on May Day, which coincides with Beltane celebrations. Importantly, they dance out-of-doors, well before sunrise in order to "dance the sun up." Often overheard are comments along the lines of, "best be out dancing or else there will be no sun this year." When the old yellow orb makes his (or her) grand appearance, there is much joy and reverence, accompanied by merriment, the mischief of hobby horses, partaking of special foods, beverages, songs and dancing for everyone.

What better way to welcome in the coming of the May?

United by song and dance

Britons, like most Celtic peoples, were a collective of loosely associated tribes, held together by war, treaties, trade and the customs of druids and traveling bard-poets. Among the wandering Druids were troubadours, who memorized songs with hundreds of verses, often including news about recent events and various exploits among the noble classes, such as our veritable Coel Hen. Nearly all of early British legends, myth, and historic sagas were transmitted exclusively by the spoken word until the writings of Geoffrey Chaucer in the 1300s (b. 1342/43?, d. 1400).

When the Romans arrived in the first century AD and built roads through Britain, they effectively and perhaps unwittingly cut off the ancient trade routes of the druids through the sacred groves, thus ending thousands of years of civilized trade. [*see *The Life and Death of a Druid Prince*]

Sacred traditions destroyed, Britonnic tribes united and rallied behind the warrior queen Boudicca and held the Romans back, for a time, at Londinium, at fords across the river Thames in what is now contemporary London. The Romans regrouped, pressed on and eventually occupied England as far north as Hadrian's Wall near the border of modern Scotland. Significantly however, it must be noted that theirs was the last battle by a foreign invading army upon British soil for almost a thousand years, until the Norman invasion of 1066.

Avid speculation mentions Druidic sorcery and incantations accompanied by ritual human sacrifice may have contributed to, if not the removal of the invading Romans, at least providing a boon of protection against further destruction and enslavement. [*see *The Life and Death of a Druid Prince*]

And again in the Morris, we find a corollary in certain sword dances, where a lock of swords is placed over a representative victim's head, for example the Saint George of a mummers play. The swords are withdrawn to great theatrical effect (and of no harm to the "victim" actor whatsoever), prompting an emotive death-and-resurrection pageant. Fittingly, these particular performances are called "barleycorn dances," the victim thus representing John Barleycorn or the Jack in the Green, who is harvested in the fall and lays fallow through the winter months, only to rise again in springtime.

"All among the barley, who would not be blythe
When the ripe and hooded barley is hanging on the scythe..."

The Harp

An even deeper myth than the legend of King Cole is that of the harp unstrung. The harp is an ancient instrument, depictions dating back 5,000 years in ancient Egypt and Mesopotamia, and is the heraldic symbol of Ireland. Harpists studied for decades and were considered at the heart of Gaelic social life. Irish coins minted by King Henry VIII when he declared himself King of Ireland in 1541 featured a harp topped with a crown.

Modern records show Guinness Brewery in Dublin began using the harp symbol, trade-marked in 1876, 50 years before the national free state of Ireland incorporated it into the national flag, in 1922. In order to use the harp as an official symbol of state, the Irish government flipped the image and shows the harp strung right to left instead of left to right. [*epicchq.com]

Upon flags, the Irish harp is emblazoned in gold, which itself is significant.

Irish gold was prized and traded actively for thousands of years among pre-Roman Celts, throughout Bronze Age Europe. Many ancient groves, sacred tree-lined pathways from the coast of Wales through Britain and on into the northern European continent, were ancient trade routes for gold, tin, salt, the passing of druidic lore, and other prized commodities.

The Harp Unstrung

Even more mysterious is the lore associated with music played by an unstrung harp. William Butler Yeats wrote about *The Madness of King Goll*, an Irish king who lived in Ireland in the third century, oddly at about the same time as Coel Hen in northern England. Goll speaks of a "harp all songless" that he has found.

"When my hand passed from wire to wire
It quenched, with a sound like falling dew
The whirling and the wandering fire
But lift a mournful ulalu
For the kind wires are torn and still
And I must wander wood and hill
Through summer's heat and winter's cold
They will not hush"
- W. B. Yeats

In addition, Edward Gorey wrote "a small masterpiece" of a novel, according to the Times Library Supplement, entitled *The Unstrung Harp*. The book is about the literary life and times of its character, a thinly veiled account of the life and times of Gorey himself.

David Dodd, writing in *The Compleat Annotated Lyrics of the Grateful Dead*, calls *The Unstrung Harp* "a cracked mirror of a book," dedicated to RDP, or "Real Dear Person."

Perhaps best known are song lyrics to the Grateful Dead song, *Ripple*, often ascribed as one of the best songs ever written. Here the harp lays in plain view.

"If my words did glow
With the gold of sunshine
And my tunes were played
On the harp unstrung
Would you hear my voice
Come through the music
Would you hold it near
As it were your own?"
- Robert Hunter

What strange forces compel this harp, without strings attached, to play itself—not unlike the golden harp found by Jack in the castle at the top of the giant's bean stalk, or residing in the enchanted mansion of the Beast in *Beauty and the Beast*?

"It's a buck-dancer's choice, my friends,
Better take my advice
You know all the rules by now
And the fire from the ice
Anybody's choice
I can hear your voice
Oh oh, I want to know
How does the song go?"
- Uncle John's Band, Robert Hunter

It should come as no small surprise that the iconic Steal Your Face logo of the Grateful Dead, with its skull and lightning bolt, as well as the Dancing Bears, were designed and drawn by a Pipe and Bowl Morris Dancer, Bob Thomas, while living in Novato, California in the 1970s.

By what strange charms are we compelled to hear the words of this unseen troubadour, alas, the Yorick of psychedelia, lilting within the silence for all eternity?

"There is a small, still voice, echoing its same simple truths to the solitude eternally."

- Willa Cather

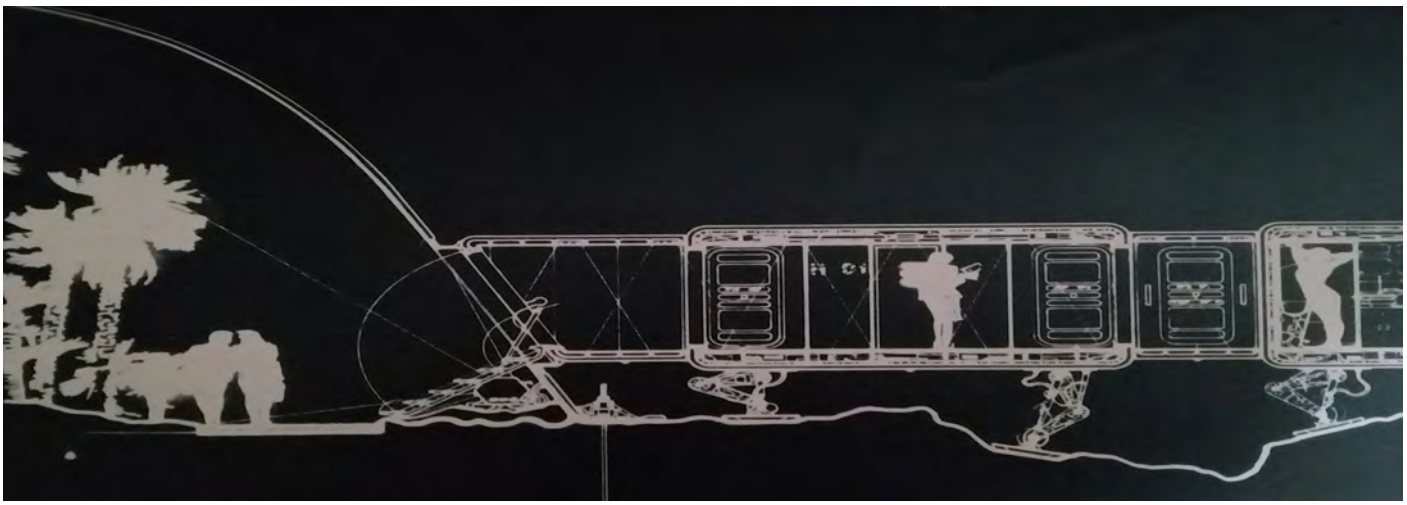
Do you hear the words of the harpist, or the piper perhaps, calling you to join him, and to dance upon the fields of the May, celebrating the gold of sunshine shining upon ripening summer fields of golden flax, all among the barley, praising and a-praying for a bountiful early harvest at Stephenstide/Lughnasa, and on through the late harvest of Samain?

Or the mysteries of mistletoe reaped with a druid's golden sickle, in ancient ceremony lost to the sands of eternity? These and other stories will have to be told at another time.

Instruments from the Moon to Gaia (via North Queensferry, Scotland) with Two Plugs
by Gary Lloyd

What is a musical instrument ***anyway***, let alone musical instruments that are futuristic, mythical, fictional, historical, or imagined?

Is a musical instrument simply a device which permits controlled (or not) sonic output from physical articulations and modulations in order to elicit a desired effect, something rhythmic, something melodic, something harmonic, something timbral ... an effect which could be descriptive, or emotional, or emotion-inducing, or just aesthetic, or an embodiment, or ugly, beautiful, bland, useful or useless? Is it also important how you *use* the instrument, how you approach the instrument, is that just as important in the result as the instrument itself?



Moonbase by architect Tom Gent (1987)

MOONBASE - 1987

Commissioned to create a piece of music for an installation by the young architect Tom Gent, I really had to engage with these questions. I'd been recommended to Tom by the affable architect and RIBA Fellow Dave King who, the year before, had been one of my examiners at the University of Chester. Tom was making an installation around his designs for a moonbase—he wasn't aiming to actually *build* the moonbase, he was using it as an effective vehicle to show off his architectural *cladding* concepts, and other architectural inventivenesses. Tom was a very smart chap. The brief he gave to me was *"imagine you are standing on the moon and you are looking up at our planet, the moonbase is behind you, you can't see it or any other evidence of human activity, you are feeling happy and comfortable but at the same time with a little nervous undercurrent and a bit spooked".* It's a great brief, but it still took some time for me to think of the Roland GR500 guitar synthesizer as the ideal instrument and (weirdly specific) place to begin. The GR500 is a very rare beast and they cost thousands if you're lucky enough to even find one, it's also very rare to hear it used, and it was a pleasant surprise to encounter its unmistakable tones (unmistakable because if you can't tell what the instrument is, it's often because it's a GR500!) employed to beautiful effect in the soundtrack for *The Mandalorian*, created by Ludwig Goransson.

The GR500 itself comprises two parts—a modified electric guitar clearly modelled on the Gibson Les Paul, and the synthesizer module that the guitar is plugged into. The module is equipped with the usual trappings you'd expect from a 1977 synthesizer—oscillators, waveforms, filters, envelopes and so on. The distinctive sound of the GR500 comes also from the player, the strings that trigger the synth can be set in accordance with the exact *played* pitch—so strings can be *bent* and the pitch will correspond—and set to other controllers, thus *all* of the articulations of the player can be tracked and employed as synth generators/modulators. It has a *much* more natural, living sound than a keyboard synth or a MIDI guitar, it's as expressive as a guitar, with the benefit of as many as 24 assignable modulators operated at the guitar itself. Ok, that's enough technical talk about the GR500 ... It was the perfect instrument for the job of creating the *Moonbase* installation music not only because it feels especially fluid, alien, and futuristic, but because it's also a unique machine that can be hard to identify, as a synthesizer or even as pretty much any other musical instrument one might know or be familiar with.

The making of the piece was relatively quick and easy. A friend, Nick Smith, owned a GR500 and was an expert at using it (and he's a brilliant session guitarist too) so we got together and through a process of coaxing Nick into certain places musically, all the while considering embodiment from Tom's brief, even during the mixing process, and with the help of multitrack tape, an SM58 microphone and a digital reverb unit, we eventually get there.

On a first listen, Tom is astonished that his brief has been met so closely, he is really visibly more than just pleased, and both of us feel it works just perfectly in tandem with his drawings in creating a strong atmosphere, the sum more than the parts. Tom had by now made fine prints of his architectural drawings in a black so black light fell into it and he lit it so that even the finest white lines of his drawings popped sweetly. His first question after that first listen was predictable: *"How are you making these Weird tones, is that even a real instrument?"* and Tom's installation a big success.

NORTH QUEENSFERRY - 2006

I'm a guest of Iain M. Banks (with the *M*, this is an SF publication) at NQHQ (as Iain's place is affectionately referred to) to work on our impossible project *Espedair Street*—the conceit of which is that it's a tribute album to the fictional band *Frozen Gold* from Iain's book *Espedair Street*—and we are trying to find the right thing for a solo in a song called *Misinterpretation*. It's a slice of gorgeous electronica, fizzing and brimming with details, and contains *carillons*—bell-ringing patterns—cunningly deployed throughout, and that are generators of a common set of techniques I've explored for decades, even appearing in the tribute to Iain that I composed for Loncon 3, *The Bridge Redux (In Memoriam Iain Banks)* in 2014. We're trying to create a synthesizer tone that sounds like a *nuclear lightning shock* from *ALL of the Hells* on the other side of the universe. It's a crucible moment, inventing an instrument, and at this point, in 2006, Iain doesn't know that he'll invent the instrument the *Antagonistic Undecagonstring* for his great and final SF tome *The Hydrogen Sonata*, and both of us don't know that this book title will spin from convincing Iain in 2010 that opera is actually fantastic and isn't, as he will put it, *"where singers just needlessly oscillate notes the whole time"*. In 2010 I'll give him a copy of *Hydrogen Jukebox* by Philip Glass, a brilliant but not very well-known work of Glass's, a collaboration with Allen Ginsberg that grabs Iain's attention beautifully, and his mind will forever be changed about opera. I also don't know in 2006 that in 2019 I'll pinch the other word from Glass's title for my anthology opera about the blinking state of everything, *Disunited Jukebox*, I don't know that I'll compose operatic work at all, that I'll adapt Mary Talbot and Bryan Talbot's *Dotter Of Her Father's Eyes* as an opera, and that *Disunited Jukebox* will be commissioned in January 2020 (by the super-conductor Clark Rundell) and that like a hell of a lot of everything else, it will be wiped out by a pandemic until it crawls back to be performed for the first times in Spring 2024. Look, it's really hard to sneak in a plug unnoticed, but I've done my best.

'*Dotter Of Her Father's Eyes'* at Dublin Worldcon, featuring James Bacon & Isabelle Mohan (2019).
PHOTO: Simon Bubb

Iain and I are using a device called *Sculpture*. It's a plug-in synthesizer within the software we both use, Logic Pro. *Sculpture* is one of a great many highly complex and evolved musical software devices that has benefitted from very deep R&D from places like MIT in the US, and IRCAM in Paris (the *Institut de recherche et cooordination acoustique/musique*, founded in 1977). IRCAM gave me the chance to explore fractal synthesis and composition over 30 years ago, it had some of the biggest computers ever constructed, certainly for creative endeavours, and a quite scary anechoic chamber, and was populated by great compositional explorers expert in blending/blurring orchestral instruments and compositional boundaries with all kinds of technologies. IRCAM opened up my mind to just how far we might be able to go with instrument invention, especially within software. I've forever hoped this would give me an edge on days like today, but it doesn't seem to be helping.

Gary in the anechoic chamber at IRCAM (1990)

Image 3 - CAPTION:

Hours fly by as we wrestle with *Sculpture*, trying to elicit this unknowable supernatural, meteorological, extraterrestrial tone, modulating a four-pole filter that models sound in real time, varying proportions of Bowed Glass, Plucked Steel String, Plucked Nylon String, Struck Wood tones in both Stiffness and Inner Loss (Iain: *"Sounds like a drastic diet"*). We're modulating timbre and creating all manner of variations, modulating resonant filters ... modulating anything and everything to get what we *need*, we get really close, it falls apart, another gas evaporating into the ether, and we restart many, many, many times ... the afternoon goes dark, Iain falls asleep (he'd moved to his carefully adjusted *Magistretti Maralunga* so

he could *"concentrate better"*, both of us chuckling at his comment). I'm still at the terminal totally determined to nail this thing before we head out for the curry at the Omar Khayyam.

At approximately 7pm and in the dark (but no longer in the dark, haha) I loudly proclaim *"Triomphe!"* Iain wakes up, and in very kindly super-soft tones whispers *"oooooh ... what a lovely clarinet sound"*.

I am *really* going to need that curry.

On another occasion, Iain really wants—and this is very unusual, for him—some *knotty* randomising factor for a solo for the song *Another Rainy Day*—the song that graces the 7" vinyl graphic on the front cover of the original hardback of *Espedair Street*, and the song which, in its original form, had the Very Worst lyrics of all of the E St songs, by light years. We try everything to get the solo to work, we even try aping a machine I mention to Iain called the UPIC which was invented by the composer Iannis Xenakis. Xenakis started out as an engineering architect under Le Corbusier and founded another institute in Paris akin to IRCAM called CEMAMu (*Centre d'Etudes de Mathématique et Automatique Musicales*). He invented the UPIC (the *Unité Polyagogique Informatique CEMAMu*, since you asked) in 1977, and this device generates music by drawing on a large "tablet" which scans and analyses whatever is drawn, and then spits out a composition, the x-axis being the time line and the y-axis the pitch, it's a cross between a score and a synthesizer. The data captured by the UPIC can then also have various algorithms applied to it, to give two simple instances by just inverting the score or reversing the score, and there are many complex score-exploding algorithms that can manipulate the score in very inventive ways, and even in real time.

Mimicking the UPIC then, Iain and I scribble matter onto a sheet of A4 in several colours and attempt to obliquely translate what it looks like into something we can hear. We are still profoundly getting precisely and exactly nowhere. Then, in a fit of pulling notes from another failed attempt at randomising one of our badly performed keyboard solos from the Matrix Editor grid within Logic Pro, Iain accidentally drags the mouse cursor, with its select-as-you-scroll function activated, *across* the grid of the matrix, which has about 20 random-ish notes on it, and drags it back again, and forth, and back ... and a fantastic sort-of-random *splattery-splutteriness* occurs that we both instantly pounce on. A really welcome rabbit-out-of-hat moment of sheer opportunism especially after feeling we'd hit a brick wall. We play this accidentally discovered new "instrument" against the song in the place the solo needs to go and it's instantly fabulous, equal parts formful and formless, and it's truly difficult to identify just how it could have been generated or created. The problem then is that we can't actually record it—the plumbing in Logic just can't cope with such a *Weird* thing internally and we only have a stereo interface. I didn't think of it at the time but we might have been able to do it if we assigned the instrument to the left and the invented "instrument" to the right and ... never mind. Instead we used the only other digital recording device he had at the time, a recordable CD unit, played the backing track from an iPod whilst Iain did his stuff in the matrix, and recorded direct to a CD, capturing several takes and picking the best effective bits to edit and fly back into the piece.

How to define this, what we did, in normal musical parameters is quite difficult, even pinning down what it means for the authorship of the work—as usual there were musical notes on the matrix page by both of us, and it was Iain who creatively scrubbed back and forth on them, and then it was both of us who selected the winning "phrases".

We continue the track the following day with a differently experimental trip to Iain's kitchen and build *musique concrete* from Iain's scrapings at the hob of his stove and his spinning of different-sized silver ashets on his kitchen and garage floors. I use the word *ashet* for the pleasure of the real Banks *trainspotters* reading this. The end result—complete with our inexplicably transcendent kitchen percussions—is a joyous mysterious thing, like a dreamy drift through a Culture *Mind* with *The Wizard of Oz*.

Sometimes the instrument needs to be invented, sometimes it's how you work or engage with the instrument itself that matters most. It's rewarding to look at the Free Jazz musicians like founders Derek Bailey or Keith Rowe, and the more modern exponents of this like Otomo Yoshihide and

Sachiko M, and explore their real need to disengage from their instruments or 'find' new ones like the *'no-input mixer'* created by Toshimaru Nakamura, which has become pretty ubiquitous in many worlds of experimental music. There is a phrase musicians who *really don't like this kind of thing* like to use—*"Is it hard to play, because it's definitely hard to listen to"* but it's easy to miss the point. Rowe has written a lot of philosophical thoughts about Free Jazz and music and in particular about engaging with instruments and, quite Jedi-like, *un-learning* your own instrument.

'Stronger Together' at Parr Hall, Warrington (2022)

WARRINGTON - 2022

I'm in Warrington, in the North of England. It's a brilliant place, a primordial soup of human life and creativity, and where the choreographer and force of nature Stacey Goodall has summoned me. We're working on a sprawling dance piece called *Stronger Together*— there'll be 45 bodies on the ground in Parr Hall for the performance, below a work by the sculptor Luke Jerram called *Gaia* (thank you James Lovelock, for everything). *Gaia* is a giant beach-ball lit from within, printed with NASA photographs of the earth from space—*Gaia* is a mini-Earth and creates a profound effect in the space. Due to time constraints I've been granted license in the task of making a suite of music for *Stronger Together* to use work from my back catalogue. I'm recycling old compositions by rearranging, remodelling, augmenting or just plain remixing music pulled out of my archive to fit the various briefs for each of the sections of the dance piece, and also somehow appropriately speaking to the overall topic of the piece, which is climate crisis, and the need to think longer term about every impact of human life on the environment.

At the moment that I am told what's required to open this suite of music I instantly think of *Moonbase*, which had been sitting unused for 35 years, and when Stacey hears it she agrees with a very satisfying *"ooooh, perfect!"* The eventual suite includes music that I've surgically altered from compositions made in the 1980s to the 2020s, a bit on the nose for the embodiment of longer-term thinking perhaps, but carefully selected by Stacey and I to fit her brief, and all sitting very surprisingly happily alongside brand new work, none of it feels old or out of place.

Luke Jerram's *Gaia* also appeared above our newest Company Carpi dance theatre piece *When You Light A Candle, You Also Cast A Shadow* when we performed it in Chester Cathedral in March this year, begging the question are *we* following it, or is *it* following us? We have three more venues to take the piece, to starting with The Crypt at Liverpool Metropolitan Cathedral in October, so I guess we'll find out. Is *this* how to sneak in a plug unnoticed?

A little while after completing the first draft of the suite, I attend an early rehearsal in Warrington to see how things are developing. The very lovely creative director of Culture Warrington, Leah Biddle, greets me at the door of the rehearsal space at Pyramid Arts Centre with the words *"Oooh, that opening piece … when I heard it I felt like I was standing on the moon"!*
Me: *'Well ... a funny story …"*

Gary Lloyd
companycarpi.com

APPENDIX
About IRCAM, the composers who passed through it, and other composers.

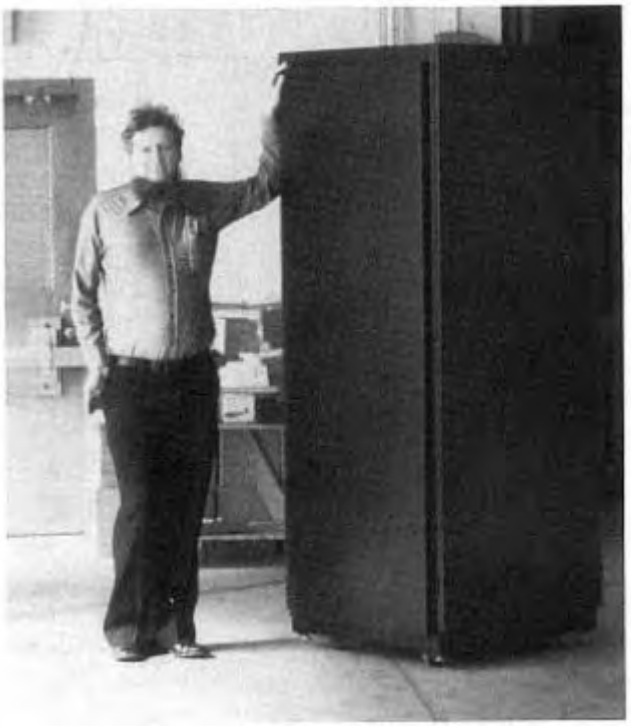
IRCAM was founded in 1977 by the composer Pierre Boulez, as part of the Pompidou Centre, which was opened by George Pompidou with the words "I like art, I like Paris, and I like France". Nice one George.

If you would like to investigate modern composition, some of the composers who passed through IRCAM briefly or substantially that I feel are really worth investigating include:
Iannis Xenakis, Alejandro Viñao, Kaija Saariaho, Jonathan Harvey, Marc-André Dalbavie, Karlheinz Stockhausen, John Cage, Terry Riley, Elliott Carter and George Benjamin.
Other composers who are extremely inventive and are currently making great work (in my opinion) include: Gary Carpenter (who was the arranger and co-composer of the music for the film *The Wicker Man*—but definitely check out his piece *Dadaville,* which was a First Night of The Proms commission), Dobrinka Tabakova, Tansy Davies, and Anna Meredith.

'When You Light A Candle, You Also Cast A Shadow' performed by Company Carpi at Chester Cathedral (2023) PHOTO: Sam Ryley

A Refrigerator for Music – The Samson Box
By Chris Garcia

I researched computer music for 20 years, and they paid me to do it! As a Curator, I looked into all areas of computer graphics, music, and art, but I admit I was a little sweet on the music side. The biggest reason was because of my access to a place called CCRMA (pronounced 'karma') at Stanford. Truly the single most important site for computer audio research in history and a place where an incredible array of important figures in the history of computer music moved through, from Legeti to Karlheinz Stockhausen to Max Matthews to John Chowning. It began as an off-shoot of the Stanford AI Lab (called SAIL) and has been a major player in the world of computer audio research for more than 50 years.



And one of the reasons was a big green refrigerator-type thing called The Samson Box.

Peter Samson was an engineer dating back to the early 1960s at MIT. He was one of the people who contributed to the first important video game, SpaceWar! and created programs to run music on the DEC PDP-1 mini-computer. He's still around, and still on the team that maintains and demos the PDP-1 to this day, including playing his musical programs! He was hired to design a music co-processor in the 1970s, and delivered it in 1977. It looked like a completely unadorned box, seven feet high and three feet wide, green with no signs of what it was to be used for. It could have been a refrigerator, but instead it was a powerful musical tool.

At CCRMA, there were already a bunch of researchers yearning for the chance to get their hands on the system, then attached to a PDP-6 (and later, or perhaps at the same time, attached to a PDP-10, I've gotten different answers from that question from different people at different times) and they immediately started creating music for it.

And the music was good!

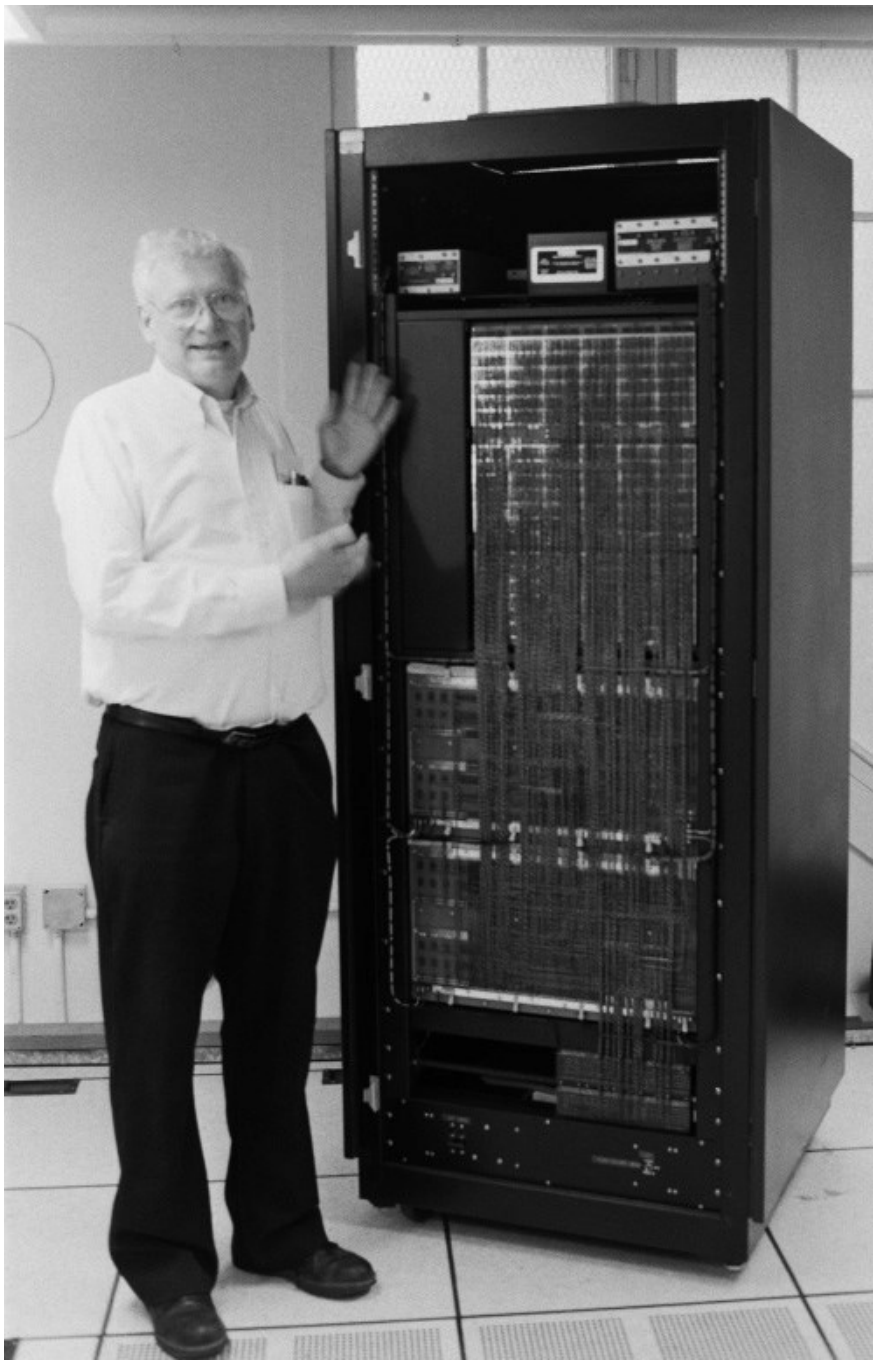
The thing is, the Samson Box was a limited palette for a composer, but it was so much broader than anything that had come before. You just couldn't walk up to it and start composing; it required mapping, diagramming, and a full understanding of both the electronic aspect and the musical aspect.

The Samson Box was an instrument that happened to be a computer, and it lived in a world where it was understood as both, but really lived in neither realm. It could produce sound, but at the same time, dealing with it was dealing with a computer in the engineering aspect, not the user aspect computers get used in by today's composers. It produced music that expressed something new. Listening to pieces you can find on YouTube today, you see that it was being used to create music that

played in the realm of things like The Disneyland Electric Light Parade of the 1970s and 80s, but also it was working with concepts of real-world application of computer music when it had been only accepted as a part of pop music… or Pop Muzik as it was pretty much just Kraftwerk at that point.

So, why does it belong in this issue? Simple – the idea was to not only emulate the music composed and presented by traditional means, but to go beyond, to place new sound concepts into the world of composition. They succeeded in this, at times, but the general limitations of the Box meant that it was somewhat stiff in adaptation. Still, it presented music that was beyond our world, and that makes it a fantastical instrument in my eyes.

Sadly, they had to give it up, and it ended up in the collection of a French music museum. They don't have it on display and it seems like they wanna get rid of it. I had it on a goal sheet for the Museum when I left, but it's never happened. I hope someday it can return to the Bay Area, hopefully while we still have Peter Samson with us. There are good emulators for it out there, but really, there's something about the physical presence of a magical electronic object.



Under The 5000 Fingers
by James Langdell

Decades before Jim Carrey played The Grinch, there was a live-action musical film written and designed by Dr. Seuss. This film, *The 5000 Fingers Of Dr. T*, appeared in 1953 (as did I). The first time I saw it was one afternoon in my childhood when I turned on the B&W TV at home when it was just beginning. It involved a boy about my age practicing the piano at home, as I did. I found the film fascinating and enjoyed seeing it a number of times since, including at SF convention film programs where I learned the film was actually in color.

At the beginning the boy, Tommy, complains about his piano teacher, Dr. Terwilliger, then falls asleep while playing his piano exercises. Then things got steadily weirder and fascinating.

In his dream, the boy was imprisoned along with 499 young piano students, being drilled by their master teacher, Dr. T, to use their 10 fingers to play his musical invention masterpiece—a massive piano with an extensive keyboard that snaked around and up the walls of a huge chamber. That fantasy musical instrument by itself would be worthy of an article.

However, I'd like to focus on a scene in the film that has fascinated me for decades, the "Dungeon Ballet." Tommy, attempting to escape from Dr. T, finds himself entering a room labeled "Dungeon for scratchy violins, screechy piccolos, nauseating trumpets, etc. etc."

In the course of about six minutes (including some lengthy sustained shots) about 60 prisoners are seen (largely) playing fanciful Seussish musical instruments. The soundtrack's music for this "Dungeon Ballet" (by Frederick Hollaender) uses conventional instruments, but I have long been struck by how the onscreen performers handled their tasks to be surprisingly convincing as the source of the music we hear.

As Tommy explores this dungeon (and then quickly hides to observe) the first group to enter is eight prisoners playing oversized flutes, while the soundtrack is played by several piccolos and flutes. The flute players are leaping down a stairway of stone blocks. Those in the lead don't start playing until they land safely on the floor, but several in the rear are going through the motions of playing their flutes, so the impression of the onscreen prisoners creating the soundtrack music is there from the beginning.

The flute group passes by a single man holding a pair of small finger cymbals in each hand, which are heard punctuating the flute tune. Then the cymbal player leaps from his platform to join the flutes as eight trombones displace him. Each trombone has a slide like a traditional instrument, but a bell that curves upward with a typical Seuss visual flourish. Flutes, trombones, and cymbals play together a little while until the trombones head from their platform up the steps.

The exiting trombones pass six boxers, whose practice punches with their gloves are reflected in rhythm of the soundtrack music. I've long been puzzled by the presence of the boxers at various points in this otherwise musician-filled scene. I suspect that the boxing group is filling in for several originally planned instruments that there hadn't been sufficient production budget to equip or cast.

The next four prisoners to appear are playing a large hooka-style clarinet—all blowing into it with flexible tubes while one is supporting and fingering the body of the instrument. Several clarinets are heard together on the soundtrack. This is accompanied by bells, a dozen of which are attached to the antlers on the head of one prisoner that another prisoner grabs by the neck to make the bells ring.

The camera then pans to another varied small group. The most prominent player is striking two lengthy metal radiators like a xylophone. Another percussionist holds two hand bells that he strikes with a beater on his nose. The other two in this quartet are wind instruments. One with a bicycle-style hand pump that seems to sound higher pitches as the prisoner raises the handle higher. The last instrument looks like part of a garbage disposal unit with a roll-out party favor blowing out the socket at the far end, with a growly low sound of a bass trombone.

The trombone group then walks by as the stone steps become filled with seven prisoners with curved brass horns attached to their faces like masks. They flex these horns to the sound of saxophones.

The focus switches to five prisoners leaping as they play blue concertinas, which stretch out somewhat further than the actual instruments that we hear. Their music is punctuated by a prisoner using a gun that fires suction-cup sticks, which rings a small round gong with a target design at just the right moments. That prisoner is the only one in this whole ballet who is looking at sheet music on a music stand.

The concertinas hand off the flow of the music to a group with five squeezing fireplace bellows that play a large horn at the end as a large bandoneon-style accordion requiring three prisoners to handle as it snakes through the room. More oom-pah is added to the waltz music we now hear as seven prisoners, each with two bulb horns, dance and pound the bulbs on their bodies (sometimes against their feet, reminiscent of German Schuhplattler dancers).

The view changes to showing five prisoners playing one instrument, like a marimba with 16 tone bars, gray like the stone in the dungeon. Each player has soft fuzzy mitts of a different cover. They swarm around the marimba many different ways, including walking on top of it.

This comparatively soothing musical interlude is interrupted by the sound of a tuba and the sight of a prisoner playing a huge brass instrument coiled around his body five times like a python. This is joined by eight very long straight trumpets and the trombones we saw before. This introduces a prisoner with a mallet as another assists him with a swing to fly across the room and strike a tiny gong hung in midair. This signals the boxers, five of whom start punching the prisoner in the center, and the saxophone-mask players whose flexing match the music we hear. The sequence of tuba-trumpets/trombones-tiny gong repeats, followed by the flutes appearing.

Now we see two prisoners standing on large skin-head drums played by their feet, as they also hold two very long beaters to strike two smaller drums on the floor. They are joined by a pair of boxers who punch in time with the music, until one boxer lifts the other off the floor. They rush past a giant harp with about 20 long strings, as the carried boxer sets the strings vibrating with his gloves.

Six harp players enter plucking and brushing against harp strings while more prisoners enter with bowed instrument to make the dungeon's overall sound lusher. Eight are bowing smaller violin

instruments with their heads passing through the soundhole. They are joined by four others bowing larger cello-like instruments that look like female dress forms, and three others bowing large bass viol-style instruments that move with their bodies as they walk.

All the musician prisoners mentioned so far are somewhere in the scene now, which is overwhelming in sight and sound. At the peak of this, a prisoner hurls a beater at a huge gong, which rings out dramatically. Then a man with a small beater rushed up the steps to reach a triangle to follow the fading tone of the gong with a single ding. The triangle player then stumbles down the step, bumping into other prisoners whose instruments make sounds accordingly. The stumbling prisoner, falls on his back on the floor and waves his beater like a baton, bringing the ballet to an end.

What has struck me about this whole scene is how much the gestures of the dancers with their music props have the feel of being the source of the music on the soundtrack. A lot of their gestures read as preparing to make the sound you hear, rather than merely moving in sync with the recorded soundtrack.

As a conductor, I've taken to heart the difference between beating time with a baton in sync with a recorded performance and doing the real work of conducting to provide live musicians with anticipatory gestures that help shape the sound at the moment they produce it.

A later creation of fictional musical instruments has a similar quality of being convincing as the source of the musical sound you hear with it. I was impressed this way by the ANIMUSIC videos of animated musical instruments seeming to be the source of the music composed for each video. The ANIMUSIC website provides an essay about the difference between Proactive and Reactive relation of depicting musical sound in animation. The Proactive approach crafts into the visuals elements of realistic anticipation and follow-through involved in producing each sound of the music the team creates in parallel with creating the animation.

Clearly the creators of the "Dungeon Ballet" understood the importance of that Proactive quality for visualizing music.

A clip of the Dungeon Ballet from *The 5000 Fingers Of Dr. T*:
https://www.youtube.com/watch?v=9aqXYLyC64Q

"Resonant Chamber," a good example of ANIMUSIC's Proactive animation of music:
https://www.youtube.com/watch?v=toXNVbvFXyk

Animusic

By Christopher J Garcia

Every good con hotel needs a terrible design element that a con can turn into something magical. It can be something simple, like a continuous level that wraps around the building but becomes three different floors according to the elevators, allowing for lots of movie referencing signs. It can be a window that looks into an added elevator shaft that's perfect for allowing artists to chalk pen all over.

Or it can be a giant, empty, blank wall.

The DoubleTree in San Jose, formerly the Red Lion, has been the site of hundreds of cons over the last 30-plus years. It's a comfy hotel, one where I might go to a high school leadership conference on Monday, a collector card show on Thursday, and a con all weekend. The rooms are big, the spaces open, and the staff are very used to us being there. When we were evacuated for the fires in 2020, I chose the DoubleTree as the first hotel we landed at because it's a place where I knew Vanessa and I would feel safe, a place that might not feel like home, but familiar.

Above the pool area, looming like a henge, is a massive expanse of empty wall. No windows, no decoration, just wall. The unique layout of the hotel allows for it to be seen from the main pool deck, and the outdoor connection between the convention rooms and the sleeping rooms, the path I've always called The Overland Passage. You'd always see that wall, annoyingly beige-grey, and at some point, someone got an idea.

Let's show movies on it.

And thus, BayCon started showing Dive-In movies!

The films would be projected on that big ugly wall, and we'd watch from the pool or the Overland Passage. The official feature films wouldn't start until it was all the way dark, usually about 9:30 p.m. or so, and that meant a series of shorts before. These were classic cartoons many years, but starting about 2002, they showed an amazing set of computer animations that really showed the state of the art.

These were the Animusic shorts.

A guy named Wayne Lytle made an animation in 1990 called *More Bells and Whistles.* The shot opened on a floating xylophone, a pair of mallets begin playing it. Other instruments join in—drums, pipes, cowbell, all unplayed by human hands. The song is short, and by today's standards it looks a little primitive, though I can remember seeing it about 1993 or so and being amazed. Lytle did the graphics, the control software and the music.

The control software, by the way, is the really cool thing.

What became Animusic was driven by a software package that allowed an animator to select instruments, some quite strange, though mostly based on modified real-world things, and then feed a real-world stream of music using MIDI, the Musical Instrument Digital Interface. The software would then generate the motions needed to produce those sounds. If there was a snare sound, a stick would hit a snare (or whatever was being used to simulate a snare) and if there was a guitar sound, a string would be plucked. This is non-trivial stuff, because the feed of audio must follow the visuals, so in effect the software has to find the effect then give us the cause. This turns out to be trivial once you have fast enough processing, but in the 90s, this wasn't that.

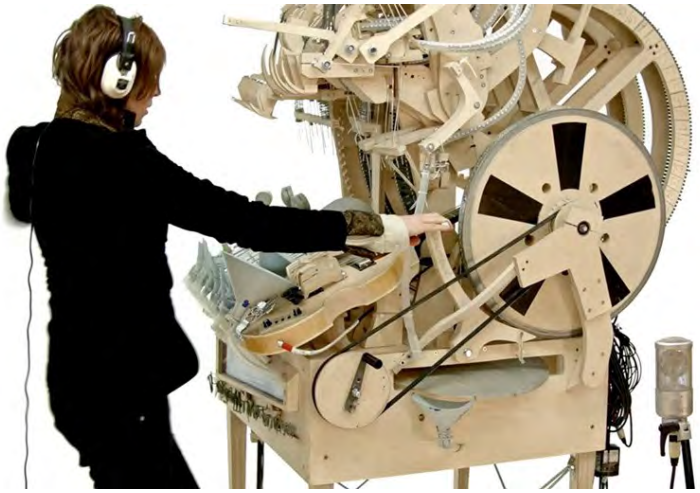
Lytle co-founded a company eventually called Animusic in 1996, and that's when things got interesting. They started to produce animations, which ran at things like SIGGRAPH, the Association of Computer Machinists' annual conference for the Special Interest Group in Graphics, and at various festivals. The first one they released as Animusic was called *Beyond the Walls*, and the difference in anima-

tion quality from *More Bells and Whistles* is huge. It's the same idea, but there are far more elements, including a fully rendered background.

It was 2001 when a full video tape was released of the Animusic animation, starting with *Pipe Dream.* These songs featured instruments like a xylophone played by hitting them with flying rubber balls, multi-necked guitars, self-playing, anthropomorphized cellos and guitars, horns with twisting necks, sound-producing lasers and all sorts of strange instruments just on this side of what we see in the real world.

The thing is Animusic synchronizes the motion of the instruments to the MIDI input, which means it's an animator's tool. The animator still has to determine how the "camera" moves through the created environment, and there are animators who still have to figure out what the instruments actually look like, though I believe there's a library of pre-created instruments to choose from if you wanna go that direction. You need to create a background, and of course, you gotta compose the music, and the form of input that Animusic seems to be able to handle appears to be fairly limited.

These instruments were truly fantastical, but as often happens, it appears that they were influenced by real-world projects, and that the folks what saw 'em wanted to figure a way to make them real. The biggest influence I can see, and makes sense timewise, is the Ball Machines. George Rhodes was the most famous maker of these systems that sent balls on an endless trip up and on tracks towards elements that made various sounds. These started appearing in the 1980s, and were incredibly popular with Children's Museums (The Tech in San Jose was a famous large one that has been active since 1990) and children's hospitals. These kinetic sculptures using balls certainly would have been something that influenced videos like *Pipe Dreams* where the flying balls are the actuators of the instruments.



Then, there's the Marble Machine by Wintergatan.

If ever there was a machine that appeared to be the living embodiment of an Animusic machine, it was this Swedish-precision music back . It's an incredible machine that uses thousands of marbles to play xylophone keys, hit bass strings, and symbols. Added to that is what appears to be a Lego Technic piano-roll that activates bells. It's also MIDI-enabled, allowing for far more sounds to be achieved. The video has become a massive sensation on YouTube and social media, and people have actually covered the song it produced (the machine can play different songs, but it requires significant redesigning for each one) and the band actually highlights these tributes.

Animusic is a wonderful example of what was possible at a key point in the history of computer animation. When I was the guy at the Computer History Museum working on documenting the history of Computer Graphics, Music, and Art (and doesn't Animusic fall into all three?) I had hoped to start a project to provide a full history of the project, but alas, the layoff took me out of the game before I could get it approved. Still, I watch Animusic on YouTube quite often and love it as much as I did when I first saw it projected on the side of the DoubleTree, the waning sun behind the hotel, the sound of planes landing a quarter mile away adding to the soundtrack.

The Legend of Zelda – The Magical Instrument
By David Ferguson

The waves crash against a small boat as the hero, Link, struggles to sail through a dangerous storm. He fails. His boat sinks and he washes up on the beaches of Koholint Island and is discovered by a girl who looks remarkedly like Princess Zelda. The camera pans up to show more of the island, notably a large mountain with a large egg sitting on top of it. <Cue iconic theme music and title graphics> *The Legend of Zelda: Link's Awakening* (1993). Thus begins one of my favourite games of all time and a quest to find the eight Instruments of the Sirens across eight dungeons to wake the Wind Fish, who sleeps in that giant egg on top of Mt. Tamaranch.

The Instruments of the Sirens are not the subject of this piece however. It's another instrument that appears a number of times in the Legend of Zelda franchise: the ocarina. In fact, the *Zelda* series has been credited, by the New York Times, with increasing the popularity and sales of the instrument. That was largely due to *Legend of Zelda: Ocarina of Time* (1998), a hugely commercially successful game, where you need to learn to play numerous songs on the instrument to progress through the game. (This continues and is expanded in its sequel *The Legend of Zelda: Majora's Mask* (2000)).

The first mention of the instrument however was in "Link's Awakening." The purpose of the instrument in the game is to play three magical songs that aid you in your quest. Manbo's Mambo, learned from a giant fish called Manbo, allows you to teleport to one area on the map and the beginnings of dungeons, in the original version of the game. The 2019 high definition remake for the Nintendo Switch expanded this to teleporting to various portals across the map (the ocarina performs a similar function in *The Legend of Zelda: The Minish Cap* (2004)). The second song, "Frog's Song of Soul," learned from a giant frog called Mamu, can wake the sleeping and the dead! However, the most important song is "Ballad of the Wind Fish." Learned from Zelda lookalike Marin, the song will wake the Wind Fish once you have collected the eight Instruments of the Sirens. Koholint Island is seemingly a dream of the Wind Fish and you must wake it if you wish to leave the island.

However, the monsters warn that you are part of the dream and, if you wake the Wind Fish, you will disappear!

Enditorial
By James Bacon

Thank you!

I was totally surprised to see that *Journey Planet* was a Hugo Award finalist. Such an honour and we are very grateful. I have to say that it was a real pleasure working with our co-editors. Here is our full and correct listing in both English and Chinese.

> *Journey Planet* edited by Regina Kanyu Wang, Yen Ooi, Arthur Liu, Sara Felix, Amanda Wakaruk, Olav Rokne, Jean Martin, Steven H Silver, Chuck Serface, Erin Underwood, Alissa Wales, John Coxon, Pádraig Ó Méalóid, James Bacon and Christopher J Garcia
>
> 《旅行星球》，编辑：王侃瑜，黄盈沅，天爵，莎拉·菲利克斯，阿曼达·瓦卡鲁克，奥拉夫·罗克尼，琴·马丁，史蒂文·H·西尔弗，查克·瑟菲斯，艾琳·安德伍德，阿莉萨·威尔斯，约翰·考克逊，帕德雷格·奥梅洛伊德，詹姆斯·培根，克里斯托弗·J.加西亚

I am exceptionally grateful to have worked with these superb co-editors, all of whom bring something so special and significant to our issues. I must thank Ann Gry for leading the way with a dual language issue, and thus seeing subsequent ones, and this is something I think we will do next year too. We have a lot of contributors, and we thank you all! Your voices really make the content happen, and that is important.

It has not all been good times though, and it will be unfortunate when we reflect on the situation at a future time, but I will not tarnish the Hugos, nor this fine honour bestowed upon us at this moment. Others have done that for themselves.

It feels like we are in good times, issues of *Journey Planet* are flowing steadily, we have a decent pace as this year proceeds well. Next is our SMOL issue with Sarah Gulde, and then with Allison Hartman Adams we have our American War in Vietnam issue, which is looking very strong, although we would welcome more content, *V for Vendetta* and Jack the Ripper in Fiction will finish us off for 2023. Already for next year, 2024 we have three strong issues suggested, and we want to again get these out early in the first two quarters, all of which are exciting, but one of which may be very different in format.

It is amazing how energising and positive being a Hugo Finalist can be, and so one feels that one must work to do more, to be more creative and share more voices, and at the same time, work to do our best on all aspects of the zine. So we continue. There is a good way and a bad way to do things, and *Journey Planet* likes to do things the good way, and we hope you like these issues. We are grateful to the voters and readers, and supporters (professional and fan), contributors and artists, and co-editors and all who help make *Journey Planet* the amazing collaborative publication and zine that it is!

With thanks

James