

You're listening to Imaginary Worlds, a show about how we create them and why we suspend our disbelief. I'm Eric Molinsky.

So why don't you tell us where we are right now?

BARBARA: We are in the, uh, entrance to envisioning 2001, Stanley Kubrick Space Odyssey and exhibition, at The Museum of The Moving Image. I'm Barbara Miller. I'm the director of curatorial affairs here at the museum.

The Museum of Moving Image is one of my favorite museums in New York. They focus on movies and TV. Their permanent collection includes props, sets and costumes from Blade Runner, Star Wars, and The Muppets. So, when I found out they were doing an exhibit about 2001: A Space Odyssey – I had to check it out.

I had assumed that the movie 2001 was based on the novel 2001 by Arthur C. Clarke. But I learned that the novel and the film were created at the same time. They were both based on a treatment that Arthur C. Clarke and director Stanley Kubrick wrote together in 1964. The first room of the exhibit is dedicated to their epic brainstorming session.

In fact, one of the first objects you see isn't a prop from the film. It is a small telescope that Kubrick and Clarke bonded over.

BARBARA: So, this is a Quest star telescope that Kubrick saw. He was, you know, really sort of avidly into sort of looking up at the night sky and actually the, this letter here from Stanley Kubrick to Arthur C. Clarke is the first time that they had any point of connection. Um, Kubrick wrote a letter to Arthur C. Clarke and he writes to him, serve with this idea of, I heard that you can help me, you know, I'm trying to, I want to buy a telescope and I heard you're the one that can really give me the advice. And by the way, I'm, I want to make it really good science fiction film. Are you interested in working with me on it?

At the time, a lot of people were surprised that Kubrick was suddenly interested in sci-fi. Until this point, he was best known for directing Spartacus, Lolita and Dr. Strangelove, which was a dark satire of the nuclear arms race. And sci-fi was considered lowbrow.

BARBARA: Uh, you know, at the time, especially sci-fi and you know, aliens, like you said, that was the stuff of these B movies, these, these sort of like bad genre films. But the, the, the sort of ideas that laid behind them where the eternal

questions is there other life out there? What is it like, what impact would it have on us if we found it? These are not sort of trivial questions. And you know, there, there, they're being engaged by this, this genre that wasn't, you know, really engage in very serious filmmaking. They were out to entertain and sort of to sort of build on the momentum of that was growing around the space race and other things. And Kubrick saw an opportunity to engage these ideas really seriously.

One of the many extraordinary things about 2001 is that the film was made with practical effects – where they would film miniature spaceships to make them look gigantic. The effects were groundbreaking, and set the stage for Star Wars a decade later.

The museum has the ships from 2001 on display. But they're not original models – unfortunately those were scrapped after the production was over. These models were made by fans, and they are perfectly accurate.

BARBARA: Well, it might surprise you to know that there is a very lively community of people committed to um, model making and sort of generally geeking out about 2001: A Space Odyssey.

Yeah I guess that doesn't really surprise me very much

BARBARA: And it's almost like a sub story here. I think. Um, you could really sort of do a walk through this whole exhibition talking about fans, so the, the reproduction space suit that we have, the models that we have were made by people not just work for hire, like, here's \$10,000 making us the space suit. This is work that was made by super fans that were doing it to get it right from the pure love of it and the commitment.

Kubrick was also committed to accuracy and realism. So he immersed himself in the latest scientific thinking.

At the exhibit there's a video of Werner von Braun, who was one of the main scientists at NASA, showing off a model space station that looks like a wheel. But this video isn't from a NASA documentary.

BARBARA: This was an episode of the television show Disneyland. It aired in 1955.

Oh!

BARBARA: And it was um, it was an episode of that TV series that was devoted to sort of looking at the possibilities of space and there's Werner talking about what the space station will look like and um, it's, it's nearly identical to the space

station that's it's depicted in 2001. Of course, it winds up looking very different from what the actual space station that is actually up there in space looks like. But at the time that was their best guess.

In case you need a refresher or haven't seen 2001 – the plot is not as important than the film's iconic imagery,

There's the opening sequence, which is called Dawn of Man, where a prehistoric ape-man discovers he can use a bone as a tool. Eventually he throws the bone into the air, and we jump cut to a spaceship of the same shape, and that eventually brings us to the rotating space station that's shaped like wheel.

CLIP: OPENING 2001

Even if you haven't seen the film, I'm sure you know about the eerily calm homicidal computer HAL.

Bowman: Open the pod bay doors, HAL!

HAL: I'm sorry, Dave, I can't do that.

Then there's the monolith, the mysterious black rectangle built by an alien civilization that stands upright like a tower and emits an eerie sound.

CLIP: MONOLITH

Eventually, we travel inside the mind of this alien intelligence, and without giving too much away, it's very surreal.

And it took Kubrick a long time to decide what the monolith should look like. At the exhibit, there are sketches of other shapes he considered. It looks like a page of black origami designs.

BARBARA: But Kubrick also really struggled very much up until the end of production with where were you going to see images of aliens of E.T.s during the star gate sequence. And I thought it was really that that sort of line was that sort of line of thinking was something I really dove into it cause I was very interested in, in that and, and to why they decided not to because, and I, and I think in some sense it's sort of emblematic of Kubrick's approach to the film that it was better to leave it up to your imagination and to be told what these things look like because

he felt that the minute you depicted something, it sort of loses its power to, you know, to mystify or to inspire.

This is the kind of imagery that defines a culture, and not just the power of the imagery itself, but the way it's reverberated through pop cultural and collective imagination for more than half a century.

And as I learned about the making of 2001, I became fascinated by Kubrick's struggle to get the film made. It was much more of an odyssey than I realized. He pushed himself and his crew to the limits – especially his friend and collaborator, Arthur C. Clarke.

We'll fly into that monolith of a story just after the break.

BREAK

As I mentioned earlier, the movie 2001 and the novel 2001 were based on a treatment Arthur C. Clarke and Stanley Kubrick wrote together in 1964.

The two men had an instant bromance.

Katharina (Kat-a-rina) Kubrick was just a kid at the time, but she remembers how much her father and Arthur C. Clarke loved picking each other's brains.

KATHARINA: You've got, so you've got two giant brains asking the big questions, you know, what's it all about? Why are we here, who's controlling us? We'll never know what's it going to be like in the future and will we be able to maintain our humanity once we know what we know. And it was a huge adventure for both of them, and he loved Arthur C. Clarke's more lyrical thought process and also the fact that he was quite a good scientist himself. And then using his substantial scientific knowledge to then create these extraordinary stories. So the two of them worked very well together.

MICHAEL: Kubrick was described by almost everybody as a sponge. You know, when he had a topic in mind, he just sucked information out of everybody connected to that topic.

That is Michael Benson. He wrote an excellent book about the making of 2001 called "Space Odyssey."

He says Kubrick had looked through Clarke's previous work to find a plot for them to hinge their movie on. He finally settled on a short story that Clarke had written in 1951 called The Sentinel.

MICHAEL: It was a story, a short story about the discovery of an object on the moon. It was left there by an alien intelligence, uh, millions of years ago. And at the end of this story, the protagonist realizes and his colleagues and scientists who had been trying to crack open this thing, it's a pyramid shaped crystal pyramid on the moon. They realized that it was kind of a burglar alarm. It was an early warning system to warn those who had made it, that intelligence had arisen on earth, sufficient to make, to bridge the space between earth and moon.

Kubrick liked this story because he felt that humanity's exploration into space would change us, he wasn't sure how. Clarke gave him an answer. He said:

MICHAEL: It's not so simple that the human race developed tools and then proceeded to build civilization, rather our ancestors made tools. And then those tools change the way we think and changed how we operate. And then we modified the tools accordingly and then those tools proceeded to modify how we work and think, Clarke said, you know, it was more that, uh, tools invented us and that's at the heart of 2001 isn't it?

Eventually they had a treatment, they were satisfied with. So, each man went off to do his thing – Kubrick to make the movie, Clarke to write the novel.

At this point, Kubrick had earned a lot of goodwill in the film industry. His last film, Dr. Strangelove, was a huge commercial and critical success. The head of MGM gave him a long leash to do what he wanted. Kubrick took that freedom and ran with it.

Now, they were inventing every special effect as they were making 2001. Keir Duella, who played the astronaut Dave Bowman, remembers how they came up with a very down to Earth solution to create the illusion of gravity in the rotating Centrifuge space station.

KEIR: The Centrifuge of course, was whirling around and created artificial gravity, but for the rest of the ship we had Velcros at the bottom that the,

padding on, on all the hallways throughout the ship had Velcros and Velcros at the bottom of our shoes. So that's why we stuck to the floor.

Figuring out groundbreaking special effects required a lot of trial and error. But Katharina says her father treated every aspect of production that way.

KATHARINA: He always said he didn't know what he wanted, but he knew what he didn't want. So he, if you were going out looking for locations, for instance, which I did for him a great deal, you had to show him everything's whatever. Wherever you went, you had to do a three 60 and then you had to do detail shots and he didn't know until he saw it cause he didn't know what was out there. So you had to give him lots and lots of options. Also, scripts throughout his filmmaking career, a script was a very fluid thing. It was just a skeleton. And if you hired actors who came up with an idea or were, or they were ad libbing and he would say, oh that, gee that's great, do that again. And then that would go into the script. He was constantly on set or you would come home after night to shooting and rewrite the next days script pages.

Keir Duella did a lot of improvising on set, like in the scene where he and the actor Gary Lockwood are discussing whether to dismantle HAL, the ship's malfunctioning computer.

KEIR: That was a much longer scene. Originally we honed it down, we improved. What he would do is we would uh, improvise on the scene and it was recorded. Then he'd take that recording and give it to someone to type up. Then we get new pages and we'd improvise on that and it got shorter and shorter and shorter.

POOLE: There isn't a single aspect of ship operations under his control. If he were proven to be malfunctioning I wouldn't see any choice but disconnection
BOWMAN: I'm afraid I agree with you.

A lot of the dialogue was pared down to the bare minimum. The longest speech he had in the script was a mission report that never made it to the final cut.

KEIR: I for weeks worked on it privately to get it down and I worked on it so strongly. This is 53 years later I'll go to my grave. Within my mind, Michigan control is his x-ray Delta one at one nine or two zero on board fall prediction center and our nine or triple zero computer showed alpha echo three five units as possible failure within 48 hours. Request check your in ship system simulator.

Also confirm your approval. Our plan to go Eva replace alpha echo three five unit prior to phase your mission control. This is x-ray Delta, wind transmission concluded. That's the only real long speech I had in the whole film.

Wow. You're you, you spend so much time learning it. And when, when you realize that it got cut, how did you feel?

KEIR: Oh, it didn't bother me at all. It wasn't, it wasn't, I mean if you've cut the scene where I take hell apart, I might've been upset.

But Kubrick did upset a lot of people.

It's one thing to cut dialogue. It's another thing to scrap sets and models that are built, ready to film, until Kubrick decides he's unhappy with them. On top of that, he would change his mind about major things, like whether the backdrop was going to be Jupiter or Saturn.

The same was true with the music. The film was supposed to have an original score but he fired several composers – after they scored the film – and went with the classical music he was using as a temporary track.

Michael Benson says:

MICHAEL: He definitely drove some people crazy to the point where they needed psychiatric care, you know, so because he was so incredibly exacting and, um, uh, required things to be just so, and would he, he would definitely insist on things being a certain way and he would drive some people crazy.

In his book, someone who worked on the film described the mood in the art department as quote suicidal.

MICHAEL: But, um, you, you know, there are people who keep on changing their mind and they produce a disaster in there. People will keep on changing their mind because they are producing something more and more and more refined. And Kubrick fell into the latter.

To put this in context, we need to jump to the future.

Kubrick would eventually be infamous for his perfectionism. When he made *The Shining*, he did 127 takes of a single scene, which traumatized the actress Shelley Duvall, and made it into *The Guinness Book of World Records* as the most takes ever for a scripted scene.

In the '80s and '90s, there were huge gaps between films as he spent years obsessively researching movies that never saw the light of day. His final film *Eyes Wide Shut* was such an epic production; he died less than a week after he handed in the final cut.

But Katharina says this aspect of his personality has been blown out of proportion. Okay yes, he was a perfectionist but he was not the reclusive obsessive madman that the media made him out to be. In fact, at one point during our interview, she took out her phone, to show me candid pictures of Kubrick as just a Dad and a Grandpa.

KATHARINA: And when people say, oh, and this is his favorite cat, Polly and, and, and people say such terrible things about Stanley and when he died and all this terrible stuff was being told and babysitting.

Hmm!

KATHARINE: In the, in the newspapers, and we just had this big family meeting. So my son's birthday and he's helping himself to cake.

Ha! But it's funny to see those, those, those iconic Stanley Kubrick while holding his grandson or, or getting a piece of cake. (Laughs)

But Michael says, we can see hints of Kubrick's increasing perfectionism in the making of *2001*. That's partly because with this film, he was aiming for something so profound – the evolution of the sentient life in the galaxy.

MICHAEL: I do a PowerPoint talk, uh, about *2001* and I show a photo of, of Kubrick, uh, in '64 and a photo of him in '68 and only obviously only four years have passed, but he looks 20 years older.

But the shoot was not supposed to take 4 years. The head of MGM had unshakable faith in Kubrick, but the lower level execs were freaking out because he was going millions over budget.

Meanwhile Arthur C. Clarke had finished the novel *2001*. His agent was putting a lot of pressure him to sell it. His publisher was dying for it – and Clarke really needed the money. All he needed was Kubrick's permission.

Kubrick said no. He had a solid reason. He didn't want to give the story away. But that meant the novel could not be published until the film came out, and the film's completion was nowhere in sight.

Everyone else involved with the making 2001 was an employee, trying to please a director they admired and kind of feared. But Clarke had seen Kubrick as an equal partner.

MICHAEL: And so there was this, um, frozen conflict that would flare into hot, you know, debate on exchanges between the two of them throughout 66, seven, eight. Clarke said, I tried everything with Stanley tears, anger, rage, you know, lawyers. Um, none of it worked, you know, so there was definitely drama there. There was definitely serious drama there.

The next crack in their friendship came around the film's narration. If you're thinking, wait, I don't remember any narration in 2001 – you're right. There is none.

But the original concept was to explain everything. In fact, the movie was supposed to begin with a short documentary about space.

As Kubrick was putting the film together, he worried audiences might be confused so he actually kept demanding that Clarke write more narration. When he finally put the film together, he decided the problem wasn't too little narration; the problem was the narration itself. So he cut every word.

MICHAEL: Thank God because if the film had what Arthur wrote with all due respect to Arthur, I mean, Arthur is a writer. Kubrick's a filmmaker. Arthur knows how to write, knew how to write brilliantly, but you know, that doesn't necessarily always translate to the screen. And what Arthur wrote was kind of nice but it was, but it was a little purple. You know, you know, for example, at the Dawn of Man sequence, there was supposed to be a voice saying the reign of the terrible lizards was long in the past. It's all there in the image basically. Um, and Kubrick had the, um, strength of character to decide, no, this film will stand or fall on the basis of the, of the visual storytelling and the dialogue.

To say Clarke was disappointed by the would be an understatement

MICHAEL: He was upset because he had been writing, uh, uh, on airplanes, on trains, um, you know, in hotel rooms. He was on a book tour, refining it, getting frantic, you know, at the time, obviously not emails at the time. He got cables delivered Western union telegrams delivered to his hotel room saying, I need

more on that for this section and yeah, he was upset when it turned out it would all be thrown out.

By that point, Clarke saw the writing on the wall. This was going to be Kubrick's vision no matter what. And everyone trusted Kubrick. He may have driven them mad -- but nobody doubted he would make a masterpiece. Then Clarke went to a screening of the film, and all of his fears about the lack of narration seemed to come true.

MICHAEL: He saw disastrous screening, it was in Washington DC. You know, people were streaming out. Half the theater left. It was considered a disaster. The reviews were terrible.

The screening was full of journalists and studio execs that came up to him afterwards to offer their condolences on this mess of a film, or ask him:

MICHAEL: What is this about? What does this film about? Uh, and so of course Clarke had every reason to think, Oh my God, this is a disaster! This is not communicating.

There were more VIP screenings. They went just as badly. At one point, Kubrick told someone to stand by the door and count the number of walkouts. Over 240 people left the theater. So he actually went back to the editing room to re-cut the film, days away from wide release.

Katharina says:

KATHARINA: What was upsetting for me at the time was seeing how upset my parents were and how upset Stanley was. And, and then in my parents were upset because the, the film critics were really harsh.

The New York Times, said 2001 was, quote, "so completely absorbed in its own problems...that it's somewhere between hypnotic and immensely boring."

The Washington Post called it, "pretentious, abysmally slow, amateurishly acted and, above all, wrong."

Kubrick was projecting unshakable self-confidence throughout production, but behind the scenes, he was much more insecure than people realized.

KATHARINA: Stanley was incredibly self-critical and he was questioning himself in his ideas and things that he said all the time and he would say something and he said, Oh my God, what? I said, you said it was ridiculous. I was, what was I thinking?

MICHAEL: Stanley was extremely worried that he had produced a bomb, complete bomb lost his voice was on the edge of, you know, tears.

And then the movie opened.

KEIR: A month later there were lines around the block.

Keir Dullea never lost faith in his director. He thinks it's funny that MGM not only thought they had a bomb on their hands that could sink the studio, but when the film was a hit, they couldn't figure out why.

KIER: You know, MGM was very worried at first. As a matter of fact, they were worried enough, they wanted to get, they wanted to get the right publicity so that, um, when they realized there were lines around the block, they kind of estimated that most of the lines are made of the young people that were the age of those who were protesting the Vietnam War. And so, or probably even more likely smoking funny cigarettes, they got a brand new poster that came out. The new poster said 2001: A Space Odyssey: the ultimate trip.

But the audience was not just made up of stoner hippies. 2001 was the highest grossing movie of 1968. Today, it's a classic; it's been rated among the top ten best films ever made.

To say Arthur C. Clarke was relieved would be an understatement. Also, his novel 2001 was a hit. He ended up writing three sequels. He and Kubrick stayed in touch, but the bromance was over.

Kubrick was also relieved, although the film's success may have validated a pattern of perfectionism, which would later create several more cinematic masterpieces but also, a bit of angst for people involved with those productions.

Looking back at the legacy of 2001, what amazes me is that the film set the standard for special effects and tropes that would become common in science fiction.

But the lack of exposition feels so out of sync with sci-fi today, where if a plot point isn't explained enough to satisfy certain fans, the filmmaker will never hear the end of it on social media.

Katharina is very glad her father never went in that direction.

KATHARINA: Stanley didn't treat his audience, his fools. That's why he was so careful. That's why he was so particular with details because he didn't, you know, he gave respect to the audience and he wanted, you know, he put his money on the screen and he said, look, this is my very best effort. This is what I think, make of it what you will and people respond to not being taken for fools. And if you explain something totally, you know, if you put a long full-scale explanation of why Mona Lisa is smiling, you know, I mean, it's just going to take it all away. It'll take the mystery away.

If you go online you can find essays and videos of people explaining 2001, and what it all means. They're very well thought out explanations, but as Barbara Miller said to me at the 2001 exhibit, the movie is designed to inspire you to ask yourself those questions.

BARBARA: These are big questions. This question of is there life out there? What's the future of humankind? Stanley Kubrick doesn't know the answers to those questions. This film doesn't know the answers to those questions. Everyone makes those decisions for themselves and you know, the film provides an opportunity for you to sit and consider those things and it leaves space for you as a viewer to engage in those questions. And I think that that is sort of the ultimate reason why we're still watching it and talking about it.

That's it for this week, thank you for listening. Special thanks to Barbara Miller and everyone at The Museum of The Moving Image. And thanks to Michael Benson – I put a link to his book in the show notes. Also thanks to Katharina Kubrick, and Keir Dullea. You know Keir has been in dozens of movies, TV shows and plays, but he doesn't mind the fact that everyone still thinks of him as the astronaut in 2001.

KIER: Hey, if all you could do, if all you could have achieved anyone, an actor, and all this actor has achieved, was being in 2001: A Space Odyssey, you could do worse.

True. Story. My assistant producer is Stephanie Billman. You can like the show on Facebook. I tweet at emolinsky and imagine worlds pod. I also put a slideshow of the pictures I took at the exhibit on the Imaginary Worlds Instagram feed.

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