

The Tim Ferriss Show Transcripts

Episode 22: Ed Catmull

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Tim Ferriss: Hello, Ladies and Gentlemen. This is Tim Ferriss, and welcome to another episode of the Tim Ferriss Show. Thank you for listening. We have an incredible guest today, and his name is Ed Catmull. He is the cofounder of Pixar Animation Studios, which he started with Steve Jobs and John Lasseter, and President of Pixar Animation and Disney Animation. Ed has also received five Academy Awards, and as a computer scientist, he has contributed to many of the most important developments in computer graphics.

He has done a hell of a lot, and in this episode we talk about many different things; the birth of Pixar, his background, going from a technician to more of a manager – president, in this particular case; the creative process, storytelling, how they embrace it and developed in within Pixar, the mistakes they've made, what they've thrown out and much, much more including the lessons he's learned the things he's observed working with people like George Lucas and Steve Jobs.

Before we get to the interview, two things that I like to provide. This is from Harry Truman, and it is as follows: "It is amazing what you can accomplish if you do not care who gets the credit." And, in fact, Ronald Regan has a very, very similar quote, to this effect. The next is a Japanese proverb. Of course, you know I'm a Japanophile; I used to live there. I love sharing kotowaza, or Japanese proverbs. And there are many.

We talked about the [Speaking Japanese] a few episodes back, and this time we have Shiranu ga hotoke. Shiranu ga hotoke Shetanu is not knowing; ga is a subject marker, basically, hotoke. So not knowing is Buddha. What the hell does that mean? Shiranu ga hotokay means ignorance is bliss, or what you don't know can't hurt you. The way that I interpret this as it applies to this particular is sometimes to do the incredible; you have to go in somewhat naïve.

And if you knew what you were getting yourself into, you probably wouldn't sign up in the first place. So beginner mind, or being a novice, or jumping into the unknown can sometimes allow you to do what you would otherwise be told is impossible. Without

further ado, I want to get us to the interview. If you want all the transcripts, the links, the show notes and everything else, please go to fourhourworkweek.com/podcast, all spelled out: four hour workweek dot come, forward slash podcast.

And if you'd like to support the show, please go to my book club and you can find a number of books that have changed my life. That's fourhourworkweek.com/books. Hope you enjoy, and thank you for listening.

Tim Ferriss: Ed, thank you so much for joining me today for our conversation. I hope you enjoy it, and I've been looking forward it for quite some time.

Ed Catmull: My pleasure.

Tim Ferriss: This is somewhat of a landmark moment for me because I feel like destiny has had this in the cards. I remember 1995 very clearly for a lot of reasons. But one of them was that I bought my first ever share of stock, and that was in Pixar. It was also, I guess, the last year of Calvin and Hobbes so it was a very emotional year for me. I've been following comic book art, animation and Pixar for as long as I've known of it.

And of course, as cofounder, you've had a key role in creating a lot of the stories that I can pretty much play back sort of frame by frame, line by line. And of course I'd like to talk about that, but also Creativity, Inc. and the book you've put out which Forbes has said might just be the best business book every written, which is a very strong testimonial.

What I'd love to ask you is perhaps starting with a defining moment. Maybe it wasn't a defining moment. When Pixar went public, what did that feel like? Do you remember that day extremely clearly or was it not a defining moment?

Ed Catmull: The time we went public, which was in 1995 was actually very close to a number of other events that happened at the same time. So I look at it as a period of time, and for me it was a pivotal year. But we went public one week after the movie went out.

Tim Ferriss: Right, very smart.

Ed Catmull: So Steve Jobs' logic was that while he wanted us to go public, and he had some reasons for it which we were skeptical of, to be honest, but he wanted to do it after the film came out to

demonstrate for people that in fact a new art form was being born, and that was worth investing in. The film came out, it was a big success.

It was a success for me in the sense that we had made a film, and it wasn't just a technical tour de force. I never thought of this as we can demonstrate technically we can do it, but we actually wanted to make a real, honest to goodness complete film. I always had that goal in mind. And that's what we achieved. It was also the culmination of 20 years of pursuing this dream.

So there is, within the short period of time, the culmination of 20 years, the achieving of a goal, going public, starting off on our next film – and actually, we began, I think, about two films, the other being *Toy Story 2* – having a relationship with Disney. And while all this was going on, I personally felt a sense of loss. And it was a curious one because I had just achieved this goal.

But the loss was in having achieved the goal, I was now missing one of the defining frameworks. So I went through a period of a year of trying to sort this out. And I realized as I went through that year, that there were some really exciting things observed along the way. One of them that I observed was that most successful companies have this arc where they rise, and then with that success, most of them fail; most of them fail quickly. A lot of them take longer but ultimately, they fall apart.

So the question was, okay, how do you make it so that it's sustainable? Because the people that I knew of who were in these companies, and I had a lot of friends in Silicon Valley were smart, and they were creative, and they were hard working. So whatever the problem was that was actually leading them astray was really hard to see.

And the implication was that whatever that force was, it would also apply to us at Pixar. So this then became the interesting question. These forces are at work; can we find them before they do us in? And so at the end of the year, I realized this is actually the next call. It's not a film, it's how do we have an environment in which we can find and address these problems? So that was the big thing I got in that year, at a personal level.

There was another one also, which was not in the book but I'll at least tell you about it because it was a personal thing for me. And that was when I was younger, because I remember this, thinking at some point I want to be the best in the world at something.

Tim Ferriss: Good goal.

Ed Catmull: So this is a goal that I had. So now it's 20 years later. The film comes out, and now we're successful and there are these phenomenal people here.

There are the technical people, most of whom aren't well known but you've got Bill Reeve, and Eben Ostby and people like that that helped build the technology. And besides John Lasseter and Steve Jobs, there also was Andrew Stanton and Joe Ranft, and Lee Unkrich, and Pete Toxin – a whole bunch of people were a part of this. So now being a part of this group that achieved something, there was a question that I asked myself, which I didn't admit to anybody at the time. And that was, all of us were part of this but how much of it was me?

So this is this background question. So I know I'm part of it, and I'm only part of it but how critical was I to this? At the end of the year as the goal became clear, I also realized that the question was not a useful question. And that in somehow trying to do that, I was actually misleading myself.

Now, the only reason I bring this up was that I now recognized that a lot of people, when they reach that place where they're successful, they ask that question. And most people won't admit it, but they do ask the question. And a lot of people reach the wrong conclusion.

Tim Ferriss: Why is it misleading and what is the conclusion that they come to?

Ed Catmull: What I believe is that what we did together was not something that I can separate myself from. And this is true of most enterprises; is the desire to separate oneself out is like asking for a clean answer to a question when there is no clean answer. And it is true of most of the things in our lives, whether it's personal or business, is that the inner connection between them and the way they're all mixed together is inherently messy and confusing and there aren't clear boundaries.

And the desire for complete clarity actually leads one away from addressing the mess that's in the middle.

Tim Ferriss: This reminds me of a conversation I had recently with a very successful trader on Wall Street who said it's better to be roughly correct than precisely wrong. And it seems like that mess in the

middle is something that a lot of people strive to avoid. You have an incredible technical pedigree, and of course we could talk about the ARPA Group, we could talk about your work early on with all sorts of technologies that then have become standard technologies in the use of animation; texture mapping and so on.

One of my close friends actually, who was a musician by training, ended up working at Pixar. I believe he's still there because he wrote his thesis at Princeton about texture mapping, of all things, and coded it himself.

But what I'd love to get your thoughts on is as someone who's exceptionally well trained in computer science and engineering, how did you take that precision of thought, that logical approach to problem solving and replicating issues and so on, which I find translates into many different areas, and apply it to storytelling?

And in your current and in previous roles, what have been your key observations with how to apply framework? And just one more comment related to my one and only tour of Pixar. I live in San Francisco and ended up having a friend of a friend who is an engineer Pixar besides Rob, my previous friend. I was so impressed by the process.

Do you have processes, and it doesn't mean everything is a home run but I remember looking at the color-coding of different segments of the films. I had never observed it and it was so genius to me to see it laid out in front of me and that it was a deliberate decision. So that's a mouthful that I just put out there. But with an engineering mind, what have you observed about storytelling, and why can't other companies get it right so consistently, or people?

Ed Catmull:

I guess I've got three or four things to respond to, there. So let me take one of those, which has to do with the relationship between the decision of the science and the art side. For that, I go back to when I was growing up in the '50s, a rather unique time and post World War II, but also a very safe time. And as I was growing up, my two people who I aspired were Walt Disney and Albert Einstein. But for most of my childhood,

I wanted to be an artist. I wanted to be an animator. I studied art, and I did very well in art in high school. I also did very well in physics. But as I got near the end of high school and going into college, I didn't see the path to get to the level of what the animators were at Disney.

So when I went to college, I switched over into physics. Now, the interesting thing to me is that over the years, I've actually told that anecdote to people when I've given talks, how I switched over. And I say it rather abruptly, like I switched over into physics. And usually there's a sort of titter in the audience, like that's an incongruous statement. But then that caused me to think about it; why is that incongruous?

Because most people to this day think of them as so radically different from each other. But I want to toss it as a different way to look at it. And it comes from what I think is a fundamental misunderstanding of art on the part of most people. Because I think of art as learning to draw or learning a certain kind of self expression. But in fact, what artists do is they learn to see.

Tim Ferriss: Right, observe.

Ed Catmull: And the actual training is one of observation. So now if you look at it from that point of view, it's okay, so which are the professions in which observation is not important? How about doctors or engineers or scientists? Because you want the skills of observing.

And for me, there are different ways of looking at things. If you look at the storytelling side, then the first realization – and I think I understood this fairly early on – is that storytelling is the way we communicate with each other, all the way from when you're reading to your children when they're young, but also the news, and magazines, and the movies, and television; storytelling is a way we do things. Even in education, what are the good teachers? They're telling us good stories; their way of communicating and understanding.

And what are scientists, biologists and neuroscientists trying to do? They're trying to reach an understanding and then they're trying to find ways of communicating that understanding to other people. These are all different elements of the way we communicate with each other. And it's even stronger than most people think. Because if you take something complicated like making a movie. So you've got a few hundred people working on a movie, like it could be *Toy Story* or it could be more recent films.

Well, what is the story of the making of the film? It turns out, it's too complicated to tell. Nobody writes that story down. If you wrote down all the complexities of what it took to do any one of these major complexities, that full story is too boring, it's too long.

So what do you do when you tell a story, but you edit it down and you simplify it?

So you simplify it in order to convey certain of the ideas that are critical, but you can't capture all of them. So you end up with a kind of mythology, and a mythology is a way of us teaching basic principles to each other, but the mythologies don't capture everything and they never can. So we are in a continual state of trying to create our own mythologies.

And even when we come up with a mythology, like the things we did on *Toy Story 2*, the people who are here at Pixar, a lot of them weren't here when we made *Toy Story 2*. So the pivotal experiences that are there which are part of our history were not experienced by a lot of the people who are here. And you can't actually pass that on as a story because it fades over time to a piffy essences but it no longer is a personal thing.

So what you want is a new crisis. And in solving the new crisis, which they experience, then they get something different than they can get by hearing about somebody else's story. So we have a combination of both storytelling and experiencing and we need both.

Tim Ferriss: In the crisis case, are these crises that organically appear in the making of every movie? Or are they things that you deliberately bring to a head or manufacturer in some way to galvanize the troops and spur creativity?

Ed Catmull: I think in order for them to be successful, they essentially need to be organic. So if you manufacture a crisis, and you can affect this somewhat, obviously because if you set a budget or if you set a schedule for instance, and it's very difficult, then to some extent you are creating a crisis.

But even that's a little artificial because the fact is, if you don't meet the schedule or you don't meet the budget, you have a different crisis. So what you want are the kind of crises that arise out of the thing that you're doing, but you don't artificially generate it.

Tim Ferriss: Got it.

Ed Catmull: So I don't think of setting a budget or a schedule as an artificial generation of a crisis. But if we have a surprise that happens because things never go according to plan, then what you want to

do is use the problem that's there as a way of getting you as a group to force the change in the process or to figure out the problems in order to solve it. And in doing so, it becomes a combined, joint effort to move everybody forward, and everybody has ownership in it.

Tim Ferriss: To come back to one of the things you said earlier, one of the terms you used, mythology. Looking at, say, Joseph Campbell; of course he's cited quite a lot in *The Hero's Journey* or *The Hero of a Thousand Faces*.

Are there any other books or resources besides your own, of course, which I would recommend to everybody, that people can use to learn about mythology or these archetypal structures to aid them in developing their own ability to tell stories? Are there any other books or resources that come to mind as being particularly outstanding? Or people, for that matter.

Ed Catmull: It's fairly broad because I've been influenced by so many people and so many different things. I will say one thing that I did which was informally but in ways that are hard to articulate. My brain works differently. It turns out I am unable to read poetry.

Tim Ferriss: No kidding.

Ed Catmull: Because reading poetry within a few seconds shuts my brain down.

Tim Ferriss: Why is that?

Ed Catmull: It's just differences. I was actually describing this to somebody many years ago.

They said: don't read it, listen to it. All of this came about because there was a new translation of *The Iliad*, by Thomas Bagels and it was in verse form. The thing is, I couldn't read it. So this woman at a dinner said: don't read it; listen to it. So I bought the tape and I listened to it, and I found I was completely enthralled with it. And then I was surprised by the fact that here's a story that was orally transmitted 2800 years ago in a different language to a different culture.

And it was meant for oral transmission, of course, because it had kind of that rhythm to it. But now, translated all these years later into English, the fact that it had this oral nature to it still worked and captivated me and I was able to enjoy and pull in this entire story. So that got me started down this path.

I then started listening to these lectures from the Teaching Company. They had these actually marvelous lectures. What I did was I tried to listen to lectures of all of human history. There's ancient Egypt, and Mesopotamia, and Israel, and China, and India. And going up through the Roman era through the Dark Ages, the Middle Ages, and the Renaissance. It took a few years. Every day in the car I would listen to this.

But I felt like I had this grand sweep of history. Now, at some level it's all pretty high level because it's listening to lectures in a car. But there was something about that which gave me a sense which I loved, and it gave me a different feeling about people and how things relate to each other. So that was one level of things.

The second is there are the wisdom books out of various traditions in China and India and meditation, and things coming out of Greece and Israel and so forth. And somehow, reading all of those and the way people wrestled with those things which are the foundations of our culture, I found informative.

Tim Ferriss: Do you mean both the classics and the religious texts and scriptures, whether it's the Torah or the Tao Te Ching?

Ed Catmull: Yes, all of those.

Tim Ferriss: All of the above.

Ed Catmull: You take all of those and say okay, there's something about a breadth. So I don't try to grab one of them; I try to get the breadth there. Because I do believe we are better off if we experience wide breadth, that's what a general education is, and then there is some point at which we dive really deep. And some people want to specialize, like I just want to do this; I just want to be an artist, or I just want to be a scientist, and so forth. I understand that. There's an experience of diving deep into something, which is indescribable. So it's good to have that experience.

And, I think one has the breadth. You need a combination of the two. Once you experience the depth in something, you're actually in a better position to go deeper into an area once you've discovered what your area of love is. Then there's the more monitoring in terms of neuroscience and how we work.

And then the other is just the observation of if you look at what took place in Silicon Valley and continues to take place in Silicon

Valley and San Francisco, and the rise and the fall of the companies, and the way they interact, and the amazing things that happened and the bad things that happened. That human drama I find very interesting. And we're kind of in the middle of it.

Tim Ferriss: Absolutely.

Ed Catmull: And that's cool. And how do you look at the mess that we're in, and the good things that we're in?

Tim Ferriss: Part of the reason I moved to the Bay Area and then gravitated up to San Francisco from the peninsula is because of that chaos and the creation in that chaos.

You mentioned specialization. Obviously, you've done a lot of work with George Lucas and Steve Jobs. Do you view them as generalists, specialists, or both? What were some of the key habits or routines, rituals, anything that either of them had that still stick in your memory?

Ed Catmull: On George, what was particularly interesting there is that while he was a successful filmmaker, even though he was not a technical person, he viewed and believed to his core that technology was going to change the art of filmmaking. So with the success that he had with *Star Wars*, he was willing to do something that was not done anywhere else in the industry. So he was the sole person who did this. He said, "I'm going to investing in bringing technology into filmmaking." And so that meant not only graphics but it also meant digital audio and video editing.

I was fortunate to be connected with George at that time, but he was unique in this.

Tim Ferriss: Why do you think he decided that? What led him to have that prescience where it seemed to be lacking in other people? What allowed him?

Ed Catmull: I think the thing that triggered him, and it's not that he ever told me exactly what the trigger was, but in the making of *Star War*, it required the best use of the advanced state-of-the-art of special effects at that time. And there were two parts to that. One was the precision control of optical printing and blue screen matting. So this is an optical process and required a great deal of technical skill on the part of the people who were there.

And the second thing, which was a new idea for *Star Wars* but was critical for effects – not everybody appreciate this but it was one of the breakthroughs for the film, is that it's important to have objects blurred in the direction of motion.

Tim Ferriss: Oh, interesting. Yeah, that makes perfect sense.

Ed Catmull: If it doesn't happen because of the way the projection systems work, then I fix it up and we actually see a double image that we're not conscious of, but we're conscious that something is wrong. So what they did was they had a technical group that moved the space ships while the shutter was open. So they captured the blur on the blue screen matting film, and then with great precision worked to keep that blur of these space ships as they then matted the objects together.

So this was, for the time, very high level technical skill. And then *Star Wars* was this enormous success. And George realized that technical expertise that was brought in by this amazing group of people was one of the things that helped elevate this film and put it into a different category.

So with that success, he said let's keep going down this path; how far can we go? Because that world out there is continuing to change. Now, what's different about George was he made that little leap – or big leap, depending on how you view it – from saying technology was a key part of this, to saying: oh, that world outside is still changing; I'm going to be part of it and try to incorporate it. Why he was that way, I don't know but he was the guy who did it.

Tim Ferriss: It reminds me of Alfred Lee Loomis during World War II with Tuxedo Park, who was an amateur scientist but who took a keen interest in radio and later had a huge impact on detecting U-boats and whatnot in the war itself. Did George and Steve have anything in common, or much in common?

Ed Catmull: They were very different from each other. Steve was an extraordinary person, and I wrote about him at the end of the book but I allude to him throughout the book. But there was something there which I find this fascinating because I watched the arc of Steve over his life. The image of Steve that people know publicly about the way he worked was from when he was younger, and I witnessed some of those behaviors. And a lot of them weren't nice at that time.

But as a result of being cast out of Apple and starting Next, and then buying Pixar from Lucas Film, and then being part of starting up Pixar, Steve, who was so incredibly intelligent, he just figured out that some of those things he did in the past didn't work and he change his behavior. He became a more empathetic person, and he changed the way that he dealt with them.

What the outside world sees is the mythology of the young Steve, and then all of a sudden this gigantic success of Apple and then the iPhone. And they connect the two together but they didn't realize the arc that Steve went through. Why did they miss it? The reason they missed was that once Steve went through this change in his life and he figured this out about 15 years ago, then basically everybody that knew Steve stayed with Steve for the rest of his life. So we all witnessed that part of Steve.

He was always intelligent and incisive in what he did, but his way of working with people changed. So when it came to the mythologizing about Steve, and people would call me, for instance, to talk about him; well, I was not going to psychoanalyze Steve while he was alive. Nobody would.

Tim Ferriss: Why was that?

Ed Catmull: Because he was still our boss.

Tim Ferriss: Right.

Ed Catmull: And he's our friend. So Steve's my friend.

At the end, he wasn't actually my boss; he was on the board of directors at Disney. But for all those years afterwards, he still checked in all the time and talked, and he had this passionate interest in what was going on. He was a caring person. When I was in the hospital with my hips being replaced, there was Steve in visiting and checking up, and wanted to make sure that I had the best medical help.

So that image of Steve was not conveyed to people because the people who knew about him viewed him as just their private relationship with Steve so nobody talked about it. So the mythology about Steve was actually a mixture of things without recognizing that, as you point out in Campbell's book, there was this hero's journey. And Steve went through that journey. And by the end of his life, he was a very different person than he was at the first.

Tim Ferriss: What were the reasons – this has been an itch that I have to scratch but what were the reasons for IPO that people were skeptical of that he had?

Ed Catmull: We're now making the first film. And to then become a public company for the rest of us, because none of us had ever been even in a public company, let alone knowing what it means, it was like this could be a major distraction. And you could hear stories about okay, what does Wall Street expect; does this actually kind of mislead you into the wrong direction, or you have the wrong values in place?

So there was the view of let's make some films and prove our worth and get that under our belt before we go public. But Steve had a different logic. He said right now, we have a three-picture deal with Disney. The financial terms of the deal, while they were as good as we could have gotten under the circumstances, once we were a successful company, then our share of the profits were actually pretty small.

So Steve wanted to renegotiate the deal, and all of us had a very good relationship with Disney. But Steve said at the end of three years, if we then split off as a separate company and we're no longer with Disney, we will be their worst nightmare because they will have helped launch a successful competitor. So what will happen is that when *Toy Story* comes out – all of this is before it happened so we're guessing what's going to happen. But this is Steve prognosticating because he now believes the film is going to be a big success.

So he said what will happen is as soon as the film is out, that Michael Eisner will realize that he's helped create a competitor so he will want to renegotiate. And if we renegotiate, then what about we want is to be 50/50 partners.

I should say right there, that's a different Steve than years before, where Steve sort of shot for the fences and tried to get almost everything for himself. He now has reached the point where he said that is not a good place to be. A good place to be is a 50/50 partnership. So it's like a good standing. It's a high road to take. But if we're 50/50 partners, it also means that we have to put up half the money. Well, Pixar doesn't have any money.

Tim Ferriss: Right. You need a war chest.

Ed Catmull: So we needed a war chest. So if we go public, we will get a war chest. Then, when we renegotiate, we can come in and go for the kind of deal which is a 50/50 deal. So the film came out, and within a few months, Steve got the call from Michael Eisner saying let's renegotiate. So Steve says okay, we want it to be 50/50. All of that happened as Steve predicted it would. For me, it was rather amazing. Wow, he completely called it correctly.

Tim Ferriss: That's incredible.

Ed Catmull: And it was coming from a place of the high ground of a true partnership. That's the way he wanted to think about it.

Tim Ferriss: It's a more sustainable structure.

Ed Catmull: And through all the years, he ultimately had trouble with Eisner but it was because he didn't think Eisner was a partner with him.

Tim Ferriss: Why did he think that?

Ed Catmull: It had to do with certain things that Eisner never said in the public, and about Disney. HE just didn't feel like it was the partner relationship that you would expect. And at this time, Steve had now placed value on equitable partnerships; in other words the value he brought to the table. And in bringing that, because it was a value, it was actually one that we could hang onto. But he was always very careful to say Disney itself as a corporation, is one that we really admire. They've done a great job of marketing our films.

They've done a fantastic job with the parks and so forth. So through all of this, he worked very hard to keep a great relationship with Disney because he believed in the end that it was going to lead to something good. No guarantees, and Steve was always realistic about that. But he believed if we behaved well with them as partners, that we would end up in the right place.

Tim Ferriss: Amazing. I really enjoy these stories. And when you get into the war stories, I think people would look at Steve, or they oftentimes would look at Pixar and say, well my God, they're batting 1000; they've always gotten it right. What I'd love to ask you is sort of a two part; it won't be one of my eight-part question.

But what was the hardest film for you to make and why? And then secondly, related to George Lucas, I've heard on numerous accounts that he was hospitalized at least once during the making

of *Star Wars*. He was a really young guy at the time but it was just from overexertion and panic attacks and whatnot.

That's at least what I've heard. Which has been the hardest for you to make and why, and then do you think for a film to truly be a landmark film, that it is necessary for at least one person to make a sacrifice of that magnitude, where they just are at the brink of falling to pieces, or not?

Ed Catmull: I'll answer them in the reverse order. First on George, I wasn't here for the first *Star Wars*. But in fact, I never heard that so I don't know whether it's true or false. I just didn't hear it so I don't know. But the bigger question, which is the hardest? They do vary in their hardness. I would say there have been several which were extremely difficult, and some were only difficult. I think we originally thought if you do a sequel, it's easier. But we found out if you're going to do something original, it's always hard.

Tim Ferriss: Right, even if it's a sequel it makes it, I would imagine, more difficult in some ways.

Ed Catmull: Yeah, because you have to take them in a different place and you're constrained by the certain world that you've got but you're expected to add something in terms of that world that really is interesting and not obvious.

The only thing that makes a film hard is if you keep going at it and it's not working, so you can't solve the problems. And then what happens is for all directors, they are emotionally invested in their films and they also get lost in them. It happens to everybody. It doesn't matter who they are, whether they're new or whether they're experienced.

And what we have found is since it happens to all of them, what you want is this collection of people – we call the brain trust but essentially it's a group of colleagues who have been through it to help navigate it when you're kind of lost in this swirling mass because it's very difficult. So the most difficult thing is on the people themselves.

We've had some films where the original director who had the idea got lost in it and couldn't get out. So we had to make some changes in order to get the film done. So in our view, we've had failures but basically we try to keep the failures inside. And it's not that it's a secret that we've had failures but we don't release the film that failed; we will abandon it or we will restart. And we've

had several restarts. We just get to the point where we say it's not working; we have to do a major rethink to get this to be where it is.

We had to do that with *Toy Story 2*. We had to do it with *Ratatouille*.

Tim Ferriss: Wow, no kidding. I've seen both of those movies dozens of times. At what point do you stop trying to fix something and abandon it? Are there cases of total abandonment, or shelving something permanently? In which case, how do you decide to go completely scorched earth, blank slate as opposed to reworking something, if that's been done? I don't know.

Ed Catmull: Usually there's a buildup. Since all of our films to begin with suck.

Tim Ferriss: Why do you say that? Just the rough draft is always really rough?

Ed Catmull: This is like the big misconception that people have, is that a new film is the baby version of the final film, when in fact the final film bears no relationship to what you started off with. What we've found is that first version always sucks. And I don't mean this because I'm self effacing or that we're modest about it. I mean it in the sense that they really do suck.

Tim Ferriss: Is this at the storyboarding level? How is it appearing? What's the form for that sucky first version?

Ed Catmull: You're going through phases. The idea is you pitch the ideas, you rework them, then you do a script and you have a script read. So you have actors read through it. And then you go through a couple of versions of that.

Then you start to storyboard it up, and you put it up. It isn't until you get to a few versions in that you begin to find okay, these elements of it are sticking, they're holding. We now have the tent poles for them film that we can build around. But it's discovery process. The reason it takes so long is because you're trying to do something that's new. If we just want to throw up a story, it turns out we know how to do that really quickly, and we know how to make it quickly.

But it's not a good movie unless you can try to find some way of touching people's emotions or bringing something new to the story. The reason we go out on field trips and research trips is that we're trying to take ourselves and the directors into a place where they bring something that they didn't know or the general audience

wouldn't know. I'll use an example of *Ratatouille*, where the filmmakers went into the three star restaurant in France, and they went to Thomas Keller's French Laundry, and so forth.

A lot of people have seen the cooking channel but the cooking channel is not like the inside of a real restaurant. The thing is, almost nobody has been inside of a real high-end restaurant so they don't actually know what goes on inside there. So when we take elements of the way they work in the audience and we put them in the *Ratatouille* as elements, then the audience doesn't know whether they are true or not, because they haven't been there, but they sense that it is.

So when you're watching those people in that kitchen, the way they're working and the way she's talking because she was teaching him how to cook, you had the sense like oh, this is real. And you only get that by going out into the world and finding something new, and then you bring that in and you have to meld it into a story. And it's a long, slow, painful process and it involves a lot of people and a lot of time.

So now the question is, or what your question was, what do you do if you abandon or restart; how do you do that? In our history here, we have only abandoned one film. The other ones, either they evolved into what they are or we did a restart. The one that we abandoned, the only reason we abandoned it is that we realized we needed to bring fresh blood in.

The person we brought in said yes, I will do a restart on the film but since we're restarting, I have an idea which I think is even better, which is a completely different idea. We pitched that idea and we said, you're absolutely right; that's a brilliant idea.

Tim Ferriss: What movie did that turn into?

Ed Catmull: It's the one that's coming out next [inaudible] –

[Crosstalk]

Tim Ferriss: Okay.

Ed Catmull: So rather than being a restart, we said okay, this is the film you're going to do because we believed it was a brilliant idea. But for the others, it was restart.

If you compare it with baseball, baseball has got this notion that you've got the starting pitcher, and then you've got the relievers, then you've got the finishers. So you've got multiple pitchers in a game. So there's an ideal, and the ideal is that you'd like to pitch the perfect game. So one guy takes it all the way through the game and finishes up with the win. So that's the ideal. But the ideal rarely happens. The concept which we accept is that there are multiple people that do it.

Now, in film when we do something, we have someone who starts it. But their ideal, which is to take it all the way through, if they don't take it all the way through then they think of themselves as having failed. But if you step back and say, you know, they launched the idea, they had a good idea, they couldn't finish it because it's a different kind of thing when you finish and when you start. The value of the world is that frequently you devalue the first person and then you give high value to the second person.

But the reality is they kind of all part together and you have to acknowledge the fact that the contributions came from a lot of people over a great length of time. It's what makes it painful. That in this world if you have to make that change, it's a personal thing that somebody has, and that's where the pain comes. It's not the work; the feelings.

Tim Ferriss: Definitely. Ed, I know that you have some time constraints. I'd love, if we have a few more minutes, just to ask a couple of rapid fire questions.

Ed Catmull: Yes, okay.

Tim Ferriss: They are very short form. You can answer them as briefly as you'd like. The first is what is the book you've given most often as a gift?

Ed Catmull: The book that I've given most often as a gift. I wouldn't say there is a single one. It's actually customized every time to who the person is.

Tim Ferriss: Okay, got it. Are there any you have given more multiple times than others?

Ed Catmull: I would say there are certain children's books I've given a few times, like *One Monster After Another*, by Mercer Mayer. I love that book.

Tim Ferriss: Perfect. What is your favorite documentary, or any favorite documentaries?

Ed Catmull: I used to go to Sundance. I love documentaries. Is there a favorite one, though? Honestly, I can't remember a favorite one. For me, the documentary gives us a slice into something we don't see. Actually, I like them as a class. I've been so busy the last couple of years, I haven't watched many recently.

Tim Ferriss: That's okay. Are there any lectures specifically from the Teaching Company that stick out in your mind?

Ed Catmull: They have a range of things. Some are video, they're science oriented and so forth. They've got them on economics, Shakespeare, and so forth. The thing that had the greatest impact on me was the set of them which was the whole suite of world history.

You have to take it a section at a time to do it. Although, I must admit there was one which was around the time of King Henry VIII, the Tudors and the Stuarts. I was so blown away with that that as soon as I listened to it, I listened to it again. The Tudors and the Stuarts. I loved that particular one.

Tim Ferriss: I'll have to check that out. I will trade you one, which is there's a podcast that only puts out an episode every three to four months called *Hardcore History*, and there's a series called *The Wrath of the Khans*, which I highly recommend. It might have the same effect on you.

Ed Catmull: So it's called *Hardcore History*?

Tim Ferriss: *Hardcore History* is the podcast, and there's a series. There are four or five parts called *Wrath of the Khans*. And it's about, as it turns out, Jangis Khan as opposed to Genghis Khan. It's incredible.

Ed Catmull: I did read a book on Genghis Khan, which I thoroughly enjoyed. So this sounds great. So it's all the Khans?

Tim Ferriss: It covers a number of different Khans but provides the pretext, the then current context and the delivery is a synthesis from many different sources. But give the first episode a listen and I think you will very quickly then devour the entire series. It's amazing.

Ed Catmull: I will do that.

Tim Ferriss: When you think of the word successful, who is the first person who comes to mind?

Ed Catmull: The way I view success is actually in terms of people's happiness so they aren't people others normally know about.

Tim Ferriss: That's okay.

Ed Catmull: For me, that's the real success and they're friends and so forth that I think wow, they've achieved this equanimity in life and I like people.

Tim Ferriss: Do you meditate, by chance? Not that you have to; I'm just curious.

Ed Catmull: I do. I meditate between a half hour and an hour a day, and I have for several years.

Tim Ferriss: Do you do that in multiple sessions or single sessions, typically?

Ed Catmull: Single sessions in the morning.

Tim Ferriss: Any particular type of meditation, Vipassana or TM or anything else?

Ed Catmull: It's Vipassana. I actually got started because of visiting the Symbol of Man Center, which is Tibetan. But in fact because I lived in Marin, although now I live in San Francisco. We're close to Spirit Rock.

Tim Ferriss: Oh, wonderful.

Ed Catmull: I've become quite engaged with the community out of Spirit Rock, which is of that particular style.

Tim Ferriss: Fantastic. Two last questions. Second to the last, if you could change one thing about yourself, what would it be?

Ed Catmull: It's a hard one to ask because I view myself as constantly needing to change as I deal with others and looking and saying okay, how can I do a better job? So it's not like this one thing. There are a whole bunch of things where I would like to evolve or improve and alter the view, and look at the world in different ways.

So for me, it's not so much changing something as can I take on a different perspective so I understand or view things I didn't see before.

Tim Ferriss: And perhaps related, if you could give a piece of advice or a few pieces of advice to your, say, 20-year-old self, what would that advice be?

Ed Catmull: That's a tough one because to some extent, if I had told my 20-year-old self a lot of things I know now, just about life, I don't know if I would have understood it. The reason I wrote a book was to try to explain things to people, like to explain things to myself at 20 years old. But the way I view this or any other book is that you read things or you learn about them because you want to figure out how to address issues and problems in life. But the danger is always that, whether it's me or somebody else, is that we can look at these things as a way of somehow sidestepping the problems.

There's a subtle distinction there, and not everybody knows which they're doing. But I think advice is actually one of you always face towards the problem. You actually can't avoid the mess in the middle, which you want the mechanisms to deal with the mess. And in doing that, you will end up in a better place and you'll get experiences that you can't get any other way than by experiencing them.

Tim Ferriss: What do you think the advice, whether he would have taken it or not, your 20-year-old self most would have needed to hear would have been?

Ed Catmull: The reason it's hard is because I have so much enjoyed my life and the people around it. I'm aware that if you make a change, then the little, miniscule changes can actually send you down radically different paths. And so I say okay, even if I've made mistakes at the time, would I want to give myself advice which would have had me avoid that mistake because the mistake was part of what made me who I am.

So I can look back and say some of those things were painful, I wish I hadn't done them or done that or said that. But it's not like I could say avoid doing that because to some extent, going through the pain of that mistake helped alter me.

Tim Ferriss: Right, make you who you are.

Ed Catmull: It makes it really hard to go back and say do something differently.

Tim Ferriss: Right, the unknown butterfly effect, or the unpredictable butterfly effect of what it could do to the rest. Ed, this has been a lot of fun. I really appreciate you making the time. Where should people learn more about you or what would you encourage them to go check out? Of course, I will also put in the show notes links to the book and other resources. But any parting thoughts?

Ed Catmull: We've only touched on the topics, of course, and we've been 50 minutes on this. But for me, all the issues of what it means to engage with others, and dealing with uncertainty, and how you address fear, and how you make safe environments are critical ones.

And how you look at the world and perceive it and our moral and ethical position in that environment are all really important. I don't have any short way of saying them but to me they're important, and I hope I have at least touched on a few of them in the book in talking about some of our experiences as we grew as a company. And I want to make it clear that we haven't figured it out. The challenges in front of us are every bit as big as they've always been.

Tim Ferriss: As it should be, right? Mountains to climb, I suppose. I can't wait to see what you guys produce next. And given how many mutual friends we have, hopefully we'll at some point bump into each other in the Bay Area. But for now, at least, I will let you get back to your day and thank you very much for taking the time.

Ed Catmull: Alright, thank you very much, Tim. I enjoyed talking with you.

Tim Ferriss: Alright, thanks Ed. Take care. Bye.

Ed Catmull: Bye.