Beyond Star Wars

By Kevin Kelly and Paula Parisi

What's next for George Lucas.

No Director has fast-forwarded filmdom into the 21st century as far as George Lucas has. His popular galactic fairy tale Star Wars is the classic saga of a charming princess and brave knights, but also of very unclassical warp drives, Wookies, bots, and droids. Lucas's mythmaking is a novel convergence of Hans Christian Andersen and Isaac Asimov, the blending of soul and tech, the meeting of inner child and inner nerd.

**In the late '70s, Lucas fleshed out the scope of his interplanetary opera with a new cinematographic technique: computers married
to cameras. He used technology not to make his tale unbelievable, but to make it ultrabelievable. Each new installment of the trilogy - The Empire Strikes Back*, then* Return of the Jedi - revved up the cinematic wizardry by making the special effects more potent yet less visible.**

This Month Lucas and company have reissued the first Star Wars episode with additional scenes and superior effects, in effect declaring that a movie is a dynamic creation (like a Web page!) that can be forever tweaked. Ever the rebel, Lucas is busy conjuring up the next revolution - an innovative way of "nonlinear 3-D filmmaking" that we bet will become the dominant form of cinema production on the other side of 2000. Soon in the future, Lucas predicts, in a garage not very far away, two guys will use digital video technology to make a movie you'll never forget.

Wired: What has surprised you in the last 10 years?

Lucas: A lot of the things that I believed in in the past are coming to pass.

Such as?

What I call 3-D filmmaking. In 3-D filmmaking, I can take images and manipulate them infinitely, as opposed to taking still photographs and laying them one after the other. I move things in all directions. It's such a liberating experience. It's like you said "I wish I could fly" and then the Wright Brothers come along, and then you can fly, and you can't get over the fact that it is so astounding. I am still in that phase of saying "This is so amazing."

Everything seems to be going digital. When do you expect to make a complete movie using just a videocamera and no film?

Well, we were going to do the next one with all video, but we're having a little problem with the wide-screen format, so we may not be able to accomplish it on this film. But the next one we will. Definitely. If I wasn't doing wide screen, I could do it today.

In two years you'll make a completely digital feature with no film?

Yes. Two or three years.

In *The Empire Strikes Back* there was a snow monster you didn't really see. It was just shadows and sounds; we always wanted the creature but were never able to accomplish it. Now we actually have a creature there. We have a lot of new shots in Cloud City to make it be bigger and look better. And the snow sequence was one of those state-of-the-art things at the time - doing white mattes on a white surface, which nobody had ever accomplished. Now, with digital, we can do that much better. In *Jedi*, there was a sequence in Jabba's palace that was meant to be a musical number. But it ended up just a little tiny thing with this dancer, Ula, that was maybe 15 seconds long. Now we've turned that into about a minute and a half. There's a bigger band and backup singers. It is what it was meant to be originally; we just didn't have the wherewithal to do it then.

That makes new films cheaper, too! You were once trying to cut moviemaking's economies of scale down to one-tenth the normal cost. What will your *Star Wars* prequels cost?

I'm hoping to do the new *Star Wars* films for between US$60 and $70 million. These are maybe $120 to $140 million movies.

That's amazing! A talking-head drama like *The Bridges of Madison County* costs maybe $50 million. How are you making a new *Star Wars* installment for only $10 million more?

This first film will be a big experiment, because we're taking a lot of the ideas I've learned from doing the *Young Indy* TV series and moving it to this larger level to see what happens. Some of it is going to work; some of it's not. The reason I'm directing the first one is so I can learn how to do it myself. We're going out there in a whole different style of filmmaking.

You say you don't intentionally set yourself up as godfather of the digital era, but is what you are working on the paradigm for 21st-century filmmaking?

People ask me about it more, I guess, but other people are doing it, too. Imagine having to publish a story the way films are made. The publisher does the outline, then turns it over to you, the "writer," and says, "OK, write the story." You write it, but once you've written there's no such thing as being able to take words out and change them around. Then you turn it over to me, the editor. The editor says, "Now, I'm going to put it in my wordprocessor. I'm going to move everything around," and he does. You get to check in once in a while and say, "No, no, that's not what I meant. I meant this." "Oh, really, I had no idea that's what you were talking about. OK, I'll put that." And then you turn it over to the printer, the printer retypes it however he wants, and then prints it that way. Then you say, "But you can't do that!" That is the way it's done in movies.

We've all got a wordprocessor now, so why not just let one person do the whole thing? You can say about halfway through the story, Gee, we should add this new section in the outline and put it in there because that's even better.

Writers say they write to find out what they think. Are you saying that you can't determine what the movie is really about until you film it?

It's very hard to have planned out at the very beginning what is going to happen at the very end. Obviously real life comes into it, personalities come into it, and the process of doing it sequentially forces you into making certain kinds of decisions in a certain way. Instead of making film into a sequential assembly-line process where one person does one thing, takes it, and turns it over to the next person, I'm turning it more into the process of a painter or sculptor. You work on it for a bit, then you stand back and look at it and add some more onto it, then stand back and look at it and add some more. You basically end up layering the whole thing. Filmmaking by layering means you write, and direct, and edit all at once. It's much more like what you do when you write a story.

How exactly does that change what you do while making a movie?

Everything is different. The actors, the contract, the crew is assembled in a different way. We work a lot in Hi-8 before we get to the actual movie. It's a little more like animation, where you are

storyboarding and writing and shooting and editing - all happening all the time. I have been writing [the next *Star Wars* episode] for two years, but I've also been shooting and editing, exploring different kinds of actors for different kinds of parts, and shooting and figuring it out. It's not done sequentially at all. I'll be able to add more things and change more things. Then I can go back and finish shooting. Then as we cut that together, I have already scheduled another three weeks of shooting six months later to add more stuff and change more things, and rewrite it in that period, and then I've got another three months, and then I've got another two weeks of shooting after that. I'm shooting now, and I'll be shooting three years from now.

Sounds like the film is never done!

There is no such thing as "the film." The film is the thing that gets spit out at the very end. Whether I'm doing notes on paper or doing notes electronically, it all comes down to the same thing. Except now I've a very, very clear picture of what it is I'm doing. It's like a painting. You rough it in. You say, Oh, I was going to do this, and then halfway through you change your mind. You can see it evolve; you can sort of be with the work, rather than draw.

That kind of uncertain approach must drive some people in the film industry crazy.

The film business is designed in a kind of industrial way, vaguely the way buildings are built. The architect does the blueprint and turns it over to the contractor. The contractor then follows the instructions, and if nobody is there to say "wait, wait, wait," and if nobody goes in and makes those change orders - which, of course, nobody wants to do because it's very expensive - you end up with a building that's only sort of interesting.
I'm of a carpenter mentality. I have a rough idea of what I want to do, but I'm going to start hammering, and then when I get along here, I'll look at it and say, "We should move this wall here, it would be even better." A lot of Victorian houses were built that way. They weren't built with plans, just by the carpenter saying, "Well, all right, let's measure out the room, it will be 20 feet this way, and it will be 40 feet that way, and when we get the first floor built, we'll figure out what's going to be on the second floor." If you are a good craftsman, you really know what to do, and you understand the structure, you can build a very nice building, but it's very organic. It feels better than something that someone who had a set of plans bolted together.

You take visual notes and some of them - rewritten or not - eventually become part of your film.

The important thing, something Francis [Coppola] taught me, is to go through and do a lot of different layers. He said, "Look, when you write a script, just go as fast as you can. Just get it done. Don't ever read what you've written. Try to get it done in a week or two, then go back and fix it, and then go back through as fast as you can, and then go back and fix it - you just keep fixing it. But if you try to make each page perfect, you'll never get beyond page 10."

Do you think digitalization of film changes things much?

Digital is like saying, "What kind of camera are you going to use? Are you going to use Panavision or an Arriflex? Are you going to write with a pen or on your little laptop?" I mean, it doesn't change anything.

On one hand you are saying digital technology doesn't change much, and on the other hand you are saying it will make a huge difference

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Everyone seems to think that digital technology devoids the medium of content, but that is not true at all. If anything, it broadens the content. There were vast numbers of things you could do in a literary medium that you couldn't even think about doing in a movie. If you said, "There are 10,000 people trudging over the hill," well, to accomplish that in real life is a very, very difficult undertaking. To do a movie like *The Ten Commandments* or *Ben-Hur* would be cost-prohibitive now.
But digital technology allows us to do even more. Until this point in film we have been limited to the short story in terms of scope. Digital technology allows us a much larger scope to tell stories that were pretty much the grounds of the literary media.

Digital technology is the same revolution as adding sound to pictures and the same revolution as adding color to pictures. Nothing more and nothing less.

Yes. Digital in film is just like digital in writing. It makes the medium much more malleable; you can make a lot more changes. You can cut and paste and move things around and think in a more fluid style - and I love that. We're just getting into that on a grand scale in film. I don't think I'd ever go back to analog. I haven't used an editing machine with film on sprocket holes for almost eight years. I hardly even know how to hold a piece of film anymore - I don't think I could do it. It's just too much work: It's too cumbersome, too slow, and you can't manipulate it enough. It would be like going back and scratching things on rocks!

It doesn't make any difference whether you're digital or analog: somebody can recut your movie and make it completely different than what it is. The issue is artists' rights. In book publishing, usually the artist owns the copyright, and therefore it's impossible for somebody to go back and rewrite the book. But in film, the copyright is owned by a studio, and they can go do whatever they want whenever they want. One of the things that's being pushed through Congress is to try to allow the artist in the film industry to have the same rights that a painter or an author has, which is the way copyright was intended. It wasn't intended for a large corporation to own copyrights; it was intended for the artist to own the copyright. The thing that is problematic in film is who is the artist? Who is the author? Writers claim authorship; the director claims authorship; the producer claims authorship. Ultimately, somebody should be designated the author - not the corporation that owns the copyright that sells it to another corporation that sells it to another corporation. It has nothing really to do with technology.

I'm not completely sure whether it's the producer, the director, the writer, or all three. It's up to the world to designate an author, because if you say it's the producer, then a lot of directors will become director-producers. That's what I do. I solved the problem by owning my own copyright, so nobody can screw around with my stuff. Nobody can take *Star Wars* and make Yoda walk, because I own it.

That's what I'm doing! I'm doing that with *Star Wars* right now.

You know, we didn't have artists' rights in this country until about three years ago. It's my artistic vision. If I want to go back and change it, it's my business, not somebody else's. Somebody bought a Henry Moore sculpture and painted it white - it was a bronze - because it fit better with her backyard. Moore was just absolutely furious. The fact is, in this country you have a right to do that. Well, you shouldn't. If Henry Moore came and said, "I'll paint it white," that's his business because he's the artist. Whoever's name is on the work, whoever's reputation is on the line has the right to alter the work.

An artist has a legal right to say, "You can't do that." That's how copyright got to be developed in the first place - to protect the artist so that people couldn't exploit his work without him getting something for it. People can take material and then reconfigure it for their own personal needs or turn it into

something else. But where you cross the copyright law doing that is an issue that is being debated in court. It's the same issue as somebody taking a famous photograph and then making a sculpture out of it.

I mean, who owns the copyright? The guy who took the photograph or the guy who made the sculpture off the photograph?

Some people even claim that the scene the guy photographs and the sculptor re-creates - say, a building or a face - is itself a copyrightable work. Some owners of public buildings won't allow photographers to take a picture of the building without permission.

I'll probably get in trouble for this, but I am an ardent subscriber to the belief that people should own their own image, that you shouldn't be allowed to take anybody's picture without their permission. In the film business, that's the way it is. If I come in here with my Panavision camera, and I take pictures of you guys and then put it in my movie without getting your permission, it's against the law. Now ABC News isn't any more or any less commercial than
a Paramount picture, but if I come in here with the same camera, do the same thing, and give it to ABC News, I can do it. My feeling is we should just simply make it all the same: nobody is allowed to use anybody's image unless they give them permission.
It's not a matter of freedom of the press, because
you can still write about people. You can still tell
stories. It just means you can't use their image, and if they want you to use their image, then they'll give you permission.

Many people further believe that their informational image, so to speak - say, their address - should also be just as private. Do you think others should need my permission to use my name and address?

I think so, but the one that gets abused most, actually, is the image. That people should own their own image, which is true in the most primitive cultures, is something we've given away. It's just become a cultural thing. Obviously, the electronic media would go nuts if you couldn't take people's picture without asking permission. But how do you rationalize a supermodel who makes her living posing for pictures at $5,000 an hour, yet the paparazzi can come along and take her picture and then turn around and sell it for, say, $50,000 to the cover of *People* magazine, and that's legal. And you don't need to pay her.

Computers make this more fascinating because someone could create a working model of your face, that is, a 3-D virtual likeness of you. The artist would have spent a lot of time doing it, so they would think they own that likeness, and you, as the subject, might think you would own it.

Unfortunately, in this country the issue is where does it go? If you put it on the show *Friends*, you'd get sued. But you wouldn't if you put it on *Entertainment Tonight*, which is considered news. And what is the difference between those two shows? Nothing.

Are you surfing the Web these days?

When I'm interested in something, I'll look it up, but I don't have time to just spend on the Web.

So do you think there's anything worth paying attention to on the Web, or is it just a fad?

I think it's very important. It's a great asset for education and for school and for anybody doing research. The social aspects of it are very interesting. It's a kind of new town square - a place where people go and meet. Our society doesn't foster that kind of thing, which was the center point of most communities 100 years ago. The Net, I think, is renewing that whole concept of social interaction.

Are you using the Net in that way?

Not very much. Again, my issue is I've got a lot of stuff that goes on in my life.

Do you use email for that?

No. No. For being sort of a state-of-the-art guy, my personal life is very *un*state-of-the-art. It's very

Victorian, actually.

I like to sit on a porch and listen to the flies buzz if I have five minutes, because most of my life is interacting with people all the time. I interact with a couple of hundred people every single day, and it's very intense. I've got three kids, so I interact with them whatever's left of the day. The few brief seconds I have before I fall asleep are usually more meditative in nature.

When you were growing up, films were something that everybody stood in line for. Of course, these days, with big screens in our houses, the crowds are going to be hard to replicate. Do you think that's a big deal? Will we lose the association of movies and a crowd of other people?

I don't think we will. That's the experiment I'm doing with reissuing the *Star Wars* trilogy. What we're doing is to say, "Here is a movie that was designed to be seen on the big screen with a lot of other people. It's a communal experience and something that needs overwhelming size to make it the kind of experience it was designed to be, and it was. It was designed to be on a wide screen with full surround sound, with a lot of other people sharing the moments." There's something about the shared experience of everybody laughing at the same moment, everybody gasping at the same moment, everybody yelling and cheering at the same moment that takes it to a whole different level than just sitting and watching it on a TV screen.

We will see what happens, because nobody has tried to reissue a movie on the scale we're doing since video has been invented. When we started, there was a lot of skepticism about whether all the money poured into refixing the movies would ever be recouped and all that sort of thing, but my feeling is it's like going to a baseball game or a rock concert. You can see it better on television or hear it better on the album; but there's something about the experience of being there that lifts it way above just listening to the CD or watching it on TV.

So will you shoot your future films for the large screen, or the small TV screens that are more ubiquitous?

I love television because you can tell different kinds of stories that you could never tell on the big screen. The big screen is very demanding in a very particular kind of way; on the small screen you can actually tell a more intimate story with more intellectual content.

I can foresee a third screen happening, a home screen somewhere between TV and a movie screen in size.

What's happening is the movie screen is becoming that "third" screen, and the big screen is becoming the IMAX or the next 3-D, super-engrossing experience. They're building more and more of these. Before, there were like 20, and now there's more than 200 IMAX, OmniMax, 3-D experience theaters. And their films are getting a little bit longer and a little more dramatic. Most multiplexes are probably going to end up with one of those, and you're going to see more people making movies for those screens, so that's going to be this kind of super-encompassing experience. Then at home you'll have a TV screen, which will be, you know, 5 feet by 2 feet.

And someday it will be high-definition TV. Will HDTV change the nature of what is shown on television?

I don't think it will change content much at all. HDTV is just a sharper image - but not that much sharper. Going to a movie theater to see an image that is 20 feet high and 40 feet long while sitting with a thousand people in a room is a very different experience from watching TV - even HDTV - alone at home. Content is much more influenced by market forces than by technology. Stuff made for television is different because the market is different. It's free for one thing; people are less discriminating about what they watch. So the creator can be more adventurous. You can tell more interesting stories on TV than on film because there are more outlets, cable and such. Feature films are so expensive that what you make has to fall into three or four market niches or it is simply not going to happen. Digital technology allows us to cross media. Normally TV is limited by resources to talking heads. But I was able to do grand scale on TV for the same budget because I was using digital technology. And digital technology allows me to make stories for film on a bigger, epic scale, with a grander sweep, than was even conceivable before.

Definitely. Definitely. That's what we did in film school. So far nothing culturally significant has been made in a film school, but it's all relative, of course. On my first film, *THX-1138*, there was a very, very small crew. I mean, it wasn't two people, but it was less than 20, so it was a very small group. It was made with very, very little money. Now we have things like Hi-8 and Photoshop. Some of the special effects that we redid for *Star Wars* were done on a Macintosh, on a laptop, in a couple of hours. And they look exactly the same because they're intercut with the old shots. Obviously, they were done by somebody who's brilliant. But at the same time, the mechanical technical wherewithal to do it exists today. I could have very easily shot the *Young Indy* TV series on Hi-8. *Young Indy* looks like big, giant movies. I mean, the quality is just as good; no one would have known the difference. So you can get a Hi-8 camera for a few thousand bucks, more for the software and the computer; for less than $10,000 you have a movie studio. There's nothing to stop you from doing something provocative and significant in that medium.

So why aren't there more guys in garages doing great movies?

It's hard. Why aren't there more people writing great American novels? I mean, that's what it comes down to. All the stuff is there. Everybody in this country who has graduated from high school, in theory, should be able to write the great American novel. Why don't they? Or at least a bad, sleazy novel that can sell for hundreds of millions of dollars to the film industry.

That they're doing!

Yes, but not even many people do that. The thing that stops it now is the marketplace, the distribution thing. Of course, it takes talent and courage and most people don't want to attempt it, but you're going to find more and more people - especially as the Internet-cable configuration begins to become more accessible - start doing it. Once distribution frees itself up and more people have access to the distribution channels, you're going to find more people doing that; if you can sell a "view-on-demand" movie for 50 cents and it cost you $50,000 to make, you could find enough people - 100,000 - who will watch it. The big problem is doing marketing and trying to figure out what your thing is; but if you can develop a channel that has a certain cachet to it and if you can continually pump that kind of material out, you've suddenly got yourself a channel.

We've heard this promise before in the technology of the '90s - interactive, CD-ROM stuff. What happened to that?

That was a nonidea to begin with.

Yes, but you guys at Lucas were pretty involved with it on some level.

We have a games group. Interactivity is games - how hard is that to figure out? Everybody said, "Well, you're going to have to have interactive movies." You don't have to have interactive movies. There's games, and there's movies. Movies are storytelling; you tell somebody a story. A game is interactive; you participate in some kind of an event with a lot of other people or with yourself, or with a machine. Those are two different things, and they've been around forever. Games have been here since the Greeks, and so has storytelling.

You don't think those two are going to cross over at all?

No! Because by definition they're different - storytelling and games are two different mediums. The fact that games are going to look more like movies, and you'll be able to interact with cybercharacters that look very real, and you'll be able to have conversations with them, that doesn't suddenly make it a movie or storytelling. You're using the same techniques that you're using to make movies in a game environment, but it's still a game. I don't care how you do it, once you have no story to tell, it's different. If I'm interacting, then that's a whole different kind of experience. We're talking, and I don't know what you're going to say; you don't know what I'm going to say. If I punch you in the nose, I don't know what the reaction is going to be because it will be different every time it happens. That's a

game. If I'm telling a story, and the interest in it is the fact that I'm telling you something, and you are listening because I can tell it to you in an interesting way, that's why you're there. Psychologically, it's a different kind of experience.

We agree they are different, but perhaps there's some imaginable hybrid. I don't know how big a possibility space it would be, but I could see semidirected stories. Like improv dinner theater where you become part of a mystery while you eat. It feels like something in between a story and a game.

Yes, but it's so marginal. You're doing one for one reason and another for another reason. I mean, that's the difference between playing catch with your son and reading a book. You're doing them for two different reasons. The idea of combining reading the book and playing the game isn't that interesting. It's like trying to swim and fly at the same time - um, I guess they call that diving.

Is there any technology you're working on today that has the potential to revolutionize film a few years from now?

We are still pushing the envelope to get a really good and well-run all-digital post system.

What's holding it up?

We developed a system called EditDroid, but we didn't want to be in the hardware business, so we sold it to Avid. They are focused on the mass market. It's a matter of getting their enthusiasm for something that is considered to be a high-end item, even though obviously it would trickle down into the mass marketplace. In EditDroid we were able to store over a million feet of film. It advances every year, but we always need more storage.

This [holding up pencil] is an imaginary magic wand. You wave it and it does whatever you want. It could be a black box - only it has to be something that would help you and not help others. What would you have it do?

That's hard, because most of the things I do are to help others.

Well, it could be that editing system you always wanted.

If I could have that magic wand, I guess what I'd love to have is infinite storage.

You think a lot about education - indeed, you have been producing educational materials. You even wrote an essay on education for this magazine ("Access to Education," *Wired* 2.09, page 92). Do you think that the online networks and educational software that currently complement schooling will ultimately replace it?

You need an educational system. I can't fathom how it would work without one. One of the more important parts of education is socialization - learning to cooperate and work with other people, particularly in the workplace. Interpersonal relationships are very crucial to the educational system, and they need to be done in a communal environment, which means you will always need an educational system.

Like a lot of kids who read science fiction, I thought I knew what the future looked like - it was stainless steel and clear plastic. Yet, one of the most surprising things about your vision of the future in *Star Wars* was that it was filled - for the first time - with grime and dirt and wear and tear and cheery dilapidation. It took the sterility out of the future. This high tech lowlife changed how a lot of people thought about the future. That was a very profound insight; where did it come from, and when did it come to you?

I wanted to tell a story. I wanted to make sure that what I was doing was not construed as science fiction: This was space fantasy. This was like opera. This was a genre of fairy tales or mythology. But although it was completely made up, at the same time it had what Kurosawa would say is "immaculate reality." If you are going to strive for immaculate reality, obviously everything is kind of dirty in the real world, and everything is kind of beat up, and everybody doesn't drive around in a brand-new car. *Star Wars* is a completely made-up universe; it doesn't hold to any scientific rules, really. But at the

same time, it is very logical in a certain kind of clock way. Once you've set up a particular kind of rule, you don't break that rule, so I was very careful to make it as realistic as possible even though it is a completely fantasy world.

I've heard you buried a time capsule here at Skywalker Ranch. An interesting fact about time capsules is that a significant portion of them are lost, even within 10 years of being buried. Are you are sure you know where it is?

Yes, it is in the corner of the building.

Do you know what's in it?

I don't know everything that's in it. There are a lot of artifacts from *Star Wars*, and from the company. It's just trivia stuff, basically.

When is it due to be resurrected?

Never.

Never?

Well, I mean it's for some archeologist 2,000 years from now to discover. There is no point in raising it. We have an archive, over there [points out the window to another building], and it is very big. But after a few hundred years it will be gone, so the only thing left is the time capsule.

Why did you make it?

I don't know, just for the fun of it. When we are all gone and the microbes have taken over, and they begin to speak and think and do things that we have done, they will dig it up some day, and say, "Look, humans were here."
You have a pretty extensive library here, which is a bridge to the past, and you have a time capsule, which focuses our attention on the far future. That extremely wide span of attention is very unusual for a modern American. Where did that come from?
I'm a history buff. I started out in anthropology. I am very interested in culture. Most of what I do centers on that.

If we gave you one round-trip ticket to go to the past or to the future, which way would you go?

Well - that's an interesting question. That would be a struggle for me. Can I get two? Boy, I don't know. I'd probably go to the future.

How far?

At least 1,000 years.

Why 1,000?

Because my feeling would be that if I went too much further it would be incomprehensible. A thousand years isn't going to be that different. I would at least have some kind of sense of what it was I was looking at. If I was born 1,000 years ago and I came here, it would be pretty amazing, but it wouldn't be so much so that I couldn't sort of adapt. If you brought someone from 5,000 years ago, they probably could not adapt. It would be so overwhelming that they would be at a loss.

Well, one thing they will probably have 1,000 years from now is virtual personalities that are viable, bankable commodities. If somehow you had a 3-D digital Luke Skywalker, you could be putting him into movies for the next 100 years.

That's what I'm doing anyway. I can put Yoda in a hundred movies.

You can rent him out?

I can put him in the next Jim Carrey movie if I want to. I could work him just like an actor. Conceivably you can get to a point where you can create a character that anybody can use, and you can put him in any kind of an environment. Kermit and some of those characters are the same way. Bugs Bunny, though not quite digital, could be a digital character. He looks as much like a digital character as Woody or Buzz Lightyear does, and they would argue about who is the better looking of the group.

So how do you imbue them with spirit, and soul?

It's no different than what Tolstoy did. You are going to be able to take Anna Karenina, turn her into a three-dimensional person, and put her into a particular environment instead of just a bunch of words on a page. The fact that eventually you'll have artificial intelligence that will be able to take on a particular persona is a whole other issue; it won't happen in our lifetime, so I'm not too worried about it. But we will be able to create the 3-D character. That's going to happen in a few years. The 3-D character is animated by a human being to make it react in a particular way, and that's Tolstoy. The real question is when that character starts to think for itself ...

Who owns it? And who owns what it says?

It's not a matter of who owns it, but what are you going to do with it? How are you going to relate to it? What happens if you fall in love with it? The question will be when do they start asking for their own rights? They'll say, "I have as much right to be here as you do, and the problem with these humans is that are they are too dirty." And they will.

Speaking of digital characters, why did you sell off Pixar?

I had Pixar for 10 years. At that time it was primarily a hardware company that developed a lot of technology: digital printers, the first nonlinear editing system we developed, high-speed graphics. I wasn't particularly interested in being in that business. I'm a movie company. But I had companies that needed those technologies, Industrial Light & Magic and Lucasfilm. A couple of guys at Pixar, Ed Catmull and John Lasseter, wanted to do computer-animated movies. There was a lot of investment that had to be made there, and I wasn't really interested in spending $50 million developing animated films. I would much rather take that $50 million and develop a game company, or a lot of other things, than push the special-effects company. It was basically a hardware company with a couple of guys whose hearts were into the animated films. So they went off, and Steve [Jobs] bought it, and after a few years Steve sold the hardware company to somebody else, and he took John and Ed and a few of those guys and said, "OK, I want to make movies, too, so let's all get together and make movies," and that's really where it started. ILM is exactly like Pixar, except we don't do animated movies. We do animated pieces in feature films. I didn't need two companies that were doing the same thing.

You've listed Japanese samurai films, *Flash Gordon* serials, and Joseph Campbell as the influences that inspired you while writing the first *Star Wars* trilogy. As you begin this prequel series, are you finding any new sources of inspiration?

The influences I use are just the way I live my life. A lot of this stuff I've been gathering since I was in college; the basics were done 20 years ago. In the case of *Star Wars* I had studied mythology in my cultural anthropology class for a year, so I knew something about it, but then I went back and started doing a lot more research in that area, and in history. I just keep going through it. I'm obviously reinterpreting it for today, but the core of it is actually pretty old.

At one time you said, "Technology won't save us." Do you think technology is making the world better or worse?

If you watch the curve of science and everything we know, it shoots up like a rocket. We're on this rocket and we're going perfectly vertical into the stars. But the emotional intelligence of humankind is equally if not more important than our intellectual intelligence. We're just as emotionally illiterate as we were 5,000 years ago; so emotionally our line is completely horizontal. The problem is the horizontal and the vertical are getting farther and farther apart. And as these things grow apart, there's going to be some kind of consequence of that.

So would you say your films are a bridge between those two curves of emotion and intelligence?

Storytelling, art, mythology has always been an attempt to bridge that gap. I'm not doing much better than Sophocles did (if I could only aspire to that level). Even after Freud, we're still bouncing around with so little sense of what controls that intellectual part. But I'm very optimistic. We managed to get past a nuclear era that was the perfect example of a stupid caveman with a club, a club that can destroy the planet. You can't keep the intellectual side going without expanding emotional intelligence, too. Intellectual intelligence is not fair. It just gives you a bigger club. It doesn't at all tell you how to use it. We're still just figuring out how to make a bigger club.

A futurist in our magazine said Yoda was his hero. Who are your heroes?

I won't answer that. It's too revealing. Yoda is just one of my kids.