

How Futurist Trends Will Drive UX Design



A conversation with Apala Lahiri Chavan
Chief Oracle and Innovator
Human Factors International

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Apala Lahiri Chavan, Chief Oracle and Innovator of Human Factors International, talks about the impact of the futurist perspective on user experience.

“What is useful is a clear understanding of how we can combine the futurist approach with the user experience professional’s typical use of tools and techniques.”

What is the futurist approach to user experience?

On a fundamental level this means whatever we do as user experience professionals we continue to do, but we also bring in the specific perspective the futurist brings to the table. This means envisioning the future. We need to be able to spot trends that are currently happening in the world around us, and then make sense of those trends. Based on these insights, we can make informed decisions on whether a particular design needs to factor in the future state of the world, or if it’s more appropriate for the design to be based on a shorter term view. Some projects are shorter in terms of their existence and application, so we don’t need to look at the future too much.

The futurist approach to user experience brings another tool to our toolbox of user experience methods and techniques that are popularly used. What is useful is a clear understanding of how we can combine the futurist approach with the user experience professional’s typical use of tools and techniques.

A futurist does not predict the future precisely, because if we could know the future with that much certainty, it would mean the future could not be changed. And the whole point of forecasting—of looking at the future from the futurist’s perspective—is to give insights which allow us to make the future better.

I look at the future so I can say, “This is what I’m seeing today in terms of trends in a particular area of interest. What these trends are telling me is the future state of this particular domain is going to have a certain outcome. Is this outcome desirable? Is this the future state we want?” If we don’t want that future state, then we need to work towards creating a better world by going in a different direction.

There are many examples of this having happened. Futurists have looked at the future and said, “Based on these trends, 10 years from now there is going to be this kind of event.” And everybody has taken notice and said, “Oh my God, we don’t want that event to happen.” So people started working well in advance to

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make sure that the progress of the world went in a different direction. When everybody works towards it, then the event is avoided at its basis and taken care of.

So that's what the futurist is trying to do all the time. Not trying to predict with certainty—because we need to have enough room to change what is going to happen. That's the goal of the futurist. The trick is to blend that in with the work we are doing as user experience practitioners.

It sounds like this would be very applicable in political and social structures, but how does this impact user experience work—design, research, etc.?

There are many practical examples of how a UX professional can take the future into account in their designs. Very recently we had an instance where a client was designing ATM machines. We were interested in the future of ATMs to make the design ready for that reality. If we did not bring in the future perspective, we would have hauled off into designing a different kind of ATM, designed only around today's constraints, today's opportunities, which would have been very normal and successful today. However, because we are bringing this futurist perspective into all our work, the client said, “We want you to look not just at today, but tell us about the future of the ATMs.” As a team of user experience professionals, it opened up a completely different vista of design opportunities.

We discovered that not only are there very different directions that ATMs can go in the future, but also others in the world are similarly looking at the future of ATMs. They are already designing ATMs for the future. If we hadn't brought that perspective we would have never known about all this. So, that's the value this perspective brings.

When you are designing a product for the future, can there be a conflict with what is needed right now in today's market?

Yes, that could be very possible. The designer needs to realize that this is something that is not happening yet, but will be happening five years from now. Then,

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when you design, you need to have two alternatives. One is we are designing something which can be used today, but is scalable enough to change for the future. Or you can design keeping trends in mind, and have a strategy to make users change their way of thinking. In this case, you have to work additionally to come up with those strategies.

Now, this is a different kind of scalability than what user experience professionals are used to. Usually, when we think of scalability, we are thinking about expandability in terms of content, number of users, etc. This is a different approach.

Futurist scalability means you have to wear the futurist lens, which brings additional techniques you have to employ. A futurist looks at a project through a different filter altogether.

What things would a futurist do?

There are several different methods, but a good way to start is by what futurists call environmental scanning. They continually scan the media, research that is coming out from academic institutions, and they also look at real-life events that are happening today. They scan popular media for hints as to what the future could hold. They look at academic institutions that are already looking at things in the future from an academic perspective. They scan the ecosystems far and near to see if any new patterns of behavior are apparent.

So futurists will scan these three sources of information, put them together, and then create a model. They ask, “Do we see certain patterns emerging among what we see via the media, academia, and the environment itself?” That’s the first step.

Then a futurist will pick up an interesting pattern. For example, just a couple of weeks ago I was looking for some signals of what was going to happen in the future. I was doing some environmental scanning and noticed that within a span of just five days, I got three different signals which indicated that in the future our real and our digital selves are going to be very blurred. Real life will barge into the imaginary. It’s no longer going to be fictional stories that we watch in films, etc. It could be a blend of our real lives that will all be put together into some kind of play of fiction and real life.

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I saw these signals in several places—one with a very famous theater company in England that produces Shakespearean plays. They stage the play in an empty warehouse and create a set there. It’s a version of Macbeth. As the audience comes in, each person is given a mask to wear, and they are told the play is happening in several different rooms in the warehouse. It’s up to you where you want to start. There is no beginning and no set end to the script. You walk into a room and you can interact with the artifacts in that particular area of the set. You can decide if you wish to interact in any way with the actors who are doing their part of the script. Everyone’s experience of Macbeth is now different from everybody else’s experience. Now it’s a blending of an individual living in this world with a fictional character from a story.



One of the rooms in "Sleep No More," a site-specific Hitchcock-Shakespeare mash-up, is filled with vegetation, jars and dried flowers.

The photo and annotation are from this site: <http://www.nytimes.com/2011/03/20/theater/sleep-no-more-from-punchdrunk-transforms-chelsea-warehouses.html>

Similarly, I saw a news report about OXFAM charity stores where you can record a little story about any item you are donating. Then everything is RFID tagged, so when someone comes in to look at these items, they can use an RFID reader that the OXFAM store gives them and hear your story. So again, it’s a blend of

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someone’s reality—practically fictional to the buyer—but somehow impacting the buyer’s decision.

And then I read the following, and this was the 3rd signal! “The gallery performance artist Marni Kotak, will be giving birth inside of Bushwick’s Microscope Gallery for a piece titled, *The Birth of Baby X*. Beginning tomorrow, Ms. Kotak will be living in the gallery as she waits for her contractions. The birth is expected to begin within the next five or six weeks.”

(http://blogs.villagevoice.com/runninscared/2011/10/marni_kotak_gives_birth.php)



Marni Kotak/Microscope Gallery

Performance Artist Gives Birth to Baby in NYC Art Gallery

By Aylin Zafar | @azafar | October 26, 2011 | 1

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Performance artist Marni Kotak delivered (literally) her most personal work of art yet on Tuesday: a baby boy. Kotak, 36, gave birth in front of an open audience at the Microscope Gallery in Brooklyn, an act she calls the “highest form of art.”

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“We need to see if a trend is recurring. If it’s a recurring trend or theme, then this is something that you need to look at and investigate.”

Baby Ajax was born at 10:17 a.m. New York time, weighing in at 9 pounds, 2 ounces, and 21 inches long, the Associated Press reports. Before Tuesday, he was known as “Baby X,” the unborn star of Kotak’s “The Birth of Baby X” piece which began its run Oct. 8th. Kotak met with visitors at the gallery to discuss motherhood and art, and collected contact information for those interested in being informed when she went into labor, so they could rush over to be a part of the very personal piece.

Kotak transformed the gallery into a home-birth center, painting the walls a calming blue color, decorating the walls with photos of babies, and even put up a 10-foot trophy to honor her baby’s birth.

Once again, this was about the very unusual blurring of lines between real life and art!

Now I am intensely scanning the research from the social sciences, the media, and the ecosystems far and near so that I can find first- or second-hand information about...to see if my hypothesis can be taken forward, and if yes, what are the implications for User Experience?

So, if a user experience practitioner starts scanning the environment and starts picking up these trends, what do they do next?

We need to see if a trend is recurring. If it’s a recurring trend or theme, then this is something that you need to look at and investigate. Then you analyze what you see and extrapolate that to the future. The idea is to blend fact from today’s world with some imagination of where these trends will lead in the future. From that insight, you create scenarios.

This is another tool the futurists always employ—and it’s a very familiar tool for user experience professionals—it’s based on the extrapolation and creation of scenarios. If the trend goes in this direction, what impact will it have? What if there is a slight change and it goes in a different direction? We create scenarios to explore the entire gamut of possibilities.

This is not something user experience professionals do all the time, but it is something futurists are quite used to doing. They create the scenarios, then

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construct a survey which they send to experts for their opinions on the scenarios. Then they analyze the opinions of all the experts collectively. This gives another data point from the perspective of all of the experts collectively in a given field. This is another form of validation. When you have a group of experts who all feel that there is a specific scenario which will happen, then you can pay special attention to that one.

So, you don't have to create a design for every single outcome?

No, no. Because as a futurist, I understand there are things which are always unknown. All I can do is narrow down the realm of possibilities. But based on my research, I can create a model of what that future will look like, how people will behave in that future, and what we will design for people in that future. Then I can start taking action to create products and services for that future scenario to meet the needs of the consumers within that model. I can go into as much detail as I need or want.

So, how far into the future do you actually look to balance a company's present needs and future scalability for a product or website?

The futurist normally looks at these things in a longer term. They usually don't consider anything that can happen in a time frame of less than 10 years. The future is already in motion, it's already happening.

But for a practical corporate scenario, a 10-year time period is a very long time to look at. Therefore, we have worked on projects where we looked 5 years ahead. But we also did some secondary research to look beyond.

When we were looking at ATMs, we started to wonder if cash would still be used after the year 2020. Perhaps everything would be electronic. The further you look out, there is a higher chance that cash will disappear. But that's not a concern for the immediate future—say, the next 5 years. We wanted to deliver practical information for the company to use in planning their next developments in the immediate future.

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“There are many complex factors that we take into account—political, economic, social, and so on. We mix this in with design developments.”

How does that affect the design of the ATM?

It is very clear that when you look further into the future, there are only two possibilities. One, there would be no cash—every payment would be virtual. Or there would be a continued coexistence of cash and electronic payment methods. What we are trying to resolve is the way we design for these future methods of transaction. Our designs should be prepared for both scenarios. No matter which comes true, the company needs to be prepared. Without our projections into the future, the bank would have never known that. That’s where the impact is on the designs—you prepare for those scenarios which are highly possible in the future.

What other techniques do you use?

There are many complex factors that we take into account—political, economic, social, and so on. We mix this in with design developments. This gives us insight into what kinds of developments could be strategic in the future. For example, a more strategic model could look into possibilities in emerging markets, and the way those markets will change in the future. To do that, you have to take political, social, and economic scenarios into account. Sure, you also think about the way things are changing on a technical level, but you have to integrate all of these insights to create a holistic picture. It’s that angle that gives you the ability to use more complex models—simulations, mathematical tools, analysis of competition, and so on. We look at how all the variables could interact and create scenarios for what is likely to unfold.

This sounds similar to, but also different from, the ecosystem research we have discussed in previous white papers.

You are right. This type of research looks at an entire ecosystem in all its complexities—how a user is affected by social circumstances, political institutions, and cultural values—we are always looking at how these factors affect the overall picture. We’ve been doing this sort of research for a long time. But we have been looking at these factors in the present—the way the situation is today. We do not look into the future.

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“When we add a futurist perspective to ecosystem research, we create additional insight into how all of these factors will help create the markets of tomorrow.”

We can see what is important today using the normal ecosystem research approach. But when we add a futurist perspective to ecosystem research, we create additional insight into how all of these factors will help create the markets of tomorrow. We can project and model how those factors will play out as time passes. We offer these services depending on the needs of the company.

And how do clients respond to this?

Most clients are more concerned with how the markets are working right now, in the present. But we have had a few companies who are also interested in the future. It is particularly companies who are trying to capture a new market. Usually they need insight into a customer base who they do not understand very well—in a different country, for example. These companies are more interested in looking at a longer term vision.

We always like to establish an understanding of the current ecosystem. This is the foundation for the future. On top of this, we can model a vision for the company based on future projections.

Is this something that every user experience designer should know about? Is this something they can use in a practical way? Can they get training in it?

I feel the question of the future is becoming increasingly important for user experience professionals. They need to be able to look into the future and model the important changes that could happen within their field of expertise. They need to be able to prepare their companies for the changes that are ahead.

Do you know why I feel that seeing the future and being able to create for the future is so important? Because of technology and globalization, everything is so interlinked today. And that is impacting even societal and political structures as we have been witnessing this entire year. Where will all this lead? As UX professionals, we should be thinking about this question. This is not just about your design skills. It's about your ability to have a vision. It's very important for user experience designers to have a vision and know how to create that vision for themselves and their organizations.

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“You need to have a model for your organization. Otherwise, you will find that you lack the perspective you need to make your designs effective to changing user circumstances.”

As far as training is concerned, there are programs which actually teach people how to look at the future. There are lots of these, in fact. HFI offers a course, *How to Design for the Big: User Centric Innovation and Strategy*. Part of this course looks at the importance of taking the future into account, and how to model it for ourselves. We talk about HFI’s model, *The Light and Connected Model*. This is our model of the future. But you need to have a model for your organization. Otherwise, you will find that you lack the perspective you need to make your designs effective to changing user circumstances.

Can you tell us about The Light and Connected Model?

Our vision of the future, which we call *The Light and Connected Model*, is based on the fact that we—as humanity—are living lifestyles which are very unsustainable. We are like a family that earns \$100,000 a year, but spends \$150,000 per year. There’s a discrepancy between the level we consume, the resources of the planet, and the lifestyles we are living. We have already seen mother nature respond with all of the natural disasters, climate change, etc.

If we do not want utter chaos to happen, if we want to take action and find a direction that leads to a sustainable lifestyle, everything has to change—from our attitudes toward consumption to our attitudes toward happiness, and so on. The research is already here. Just because you possess more, that does not mean that you are happier. There are many things which are much more important—a feeling of community, of belonging, contributing toward society’s well being. These things are much more important than owning three cars and wrecking the environment.

What we are saying is that attitudes will have to change around the world. Our concept of success will have to be reoriented away from the number of possessions we own to other things which are actually much more important to our level of happiness. Our job as designers is to redesign everything so as to cope with this reality effectively.

Imagine—today a car is designed for individual consumption. But, under our Light and Connected Model, cars are designed to be shared. It’s already happening. We need to redesign the car so it can be used by many different people. For example, there could be biometric tracking which will help to keep track of each car-user’s contribution to fuel consumption and insurance costs. Adjustments would

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“It all starts by understanding your environment. Then you can analyze data, extrapolate what you see, and create scenarios for the future.”

also be made to the seats, etc. to make the ride more comfortable for each user.

The future impacts everybody—every company can use this kind of model to prepare for it. If you know what the trends are for the future, you will start moving toward that. As designers, we need to start moving toward this kind of thinking—how we will redesign things more effectively for that future.

The Light and Connected Model sometimes makes people feel uncomfortable, perhaps slightly disturbed. Depending on the geographical region of the people, the reactions are different. Some people think that it makes a lot of sense. Others react negatively and don't want to hear about it.

In terms of consumer products, the importance is clear. But, how does this knowledge change the nature of web sites, or a kiosk design?

It's true there may be things which will not be affected as much as others. That's very possible. But websites, for example—you will find they will become more about sharing. You see today an incredible number of websites which are designed around sharing products. You can find people who are willing to share an apartment, willing to share a car, or exchange their clothing, and so on. Websites are popping up to make this happen. By connecting individuals with things to share, you can see a very tangible change to the way that people relate to their possessions.

Is it just about looking at trends, or are there specific steps a UX professional can take to educate themselves for these changes?

It all starts by understanding your environment. Then you can analyze data, extrapolate what you see, and create scenarios for the future. Then, based on the scenarios, poll the experts and see which scenarios they feel are most likely to happen. Based on that feedback, choose the models which are most likely to play out. Populate that scenario with all of the relevant data on the key factors you have identified—especially the factors your organization could be involved in.

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Once you have that, you can create a big picture. You can look at the vision and take action to prepare for those possibilities. You go step-by-step from gathering information—seeing trends—to creating a model, and then using that vision to make concrete plans about the future of your designs.

I see two futurist perspectives. One is based on intuition, the other on a systematic approach to identifying change. Which perspective is more successful? Steve Jobs comes to mind. Didn't he mostly work from the level of inner knowingness or intuition?

I think Steve Jobs began by constantly scanning the environment. If you are good at that, then you can pick up the trend signal. Once you pick up this signal, you have the information you need to think about the future. In several of the interviews published now, Steve Jobs talks about the time he spent in India, how he studied Zen, and he talks about the fact that he used philosophy and intuition to help understand the needs of his company. I think the training of his intuitive abilities also came from his desire to scan the environment and understand the needs of the future. I think both factors were important in his effectiveness. Of course, it helps that he was so brilliant.

But we need a more reliable and successful method. Everybody is not at an advanced level in terms of intuitive abilities. It is therefore more reliable to follow a systematic process. Then you are not depending only on individual ability, which is going to be very different in terms of effectiveness from person to person. No matter how much you trust your intuition, it's always beneficial to go through this process of scanning the ecosystem, extrapolating the future, developing models, consulting experts, and creating a vision.

Can you give some examples of the signals that you look for? How do you determine which signals are important to future trends?

Signals depend on the situation. I would only call something a signal if I find the concept is constantly showing up. It may show up in different ways, in different domains, but the concept is the same.

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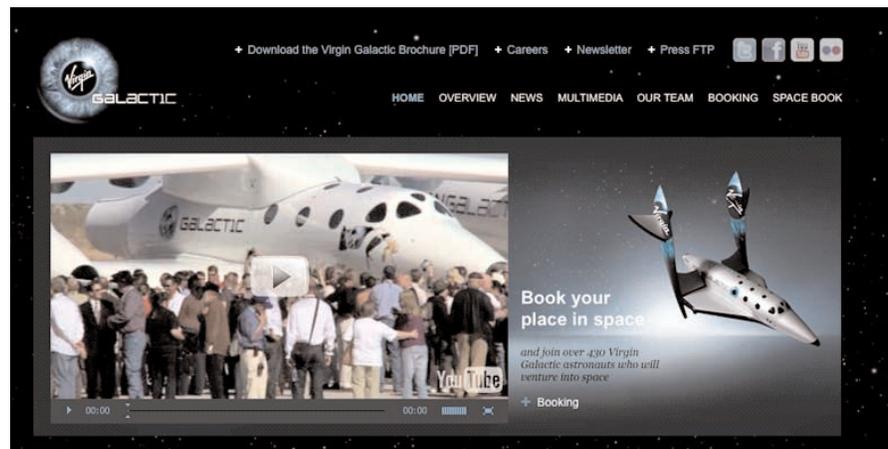


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“In fact, some of the forecasts that many futurists are making are very interesting, particularly for user experience professionals.”

There is a news article, for example, about how 18-year-olds have become adept at social networking. Is that a signal? Not until other elements also point to that conclusion. We want to see that there are several different data points validating a certain thing—that there is a whole generation which is unexpectedly taking to an emerging technology, for example.

In fact, some of the forecasts that many futurists are making are very interesting, particularly for user experience professionals. One prediction, for example, is that commercial space tourism is going to be a reality. Many companies are working on this. There are predictions that by 2021, there will be 13,000 suborbital passengers annually, resulting in \$650 million in revenue. (courtesy: World Future Society)



So airlines will need to have an expanded sense of their market?

Exactly. Imagine the whole experience of going to space, starting from the time you first start thinking about it. What are the user profiles of people who are likely to travel to space? Will there be special and exclusive “space travel portals?” How will the needs of the booking system differ from the current air flight booking systems? And many other transactions and interactions will have to be considered.

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“There will be a lot of work to do from a user experience perspective. There are already some forecasts which will really change the way we do things as user experience professionals.”

Well, I would imagine that if you need to change your plans or cancel the journey, it will be quite a bit more expensive.

[laughs] Well, many such things will change. The actual aircraft will be different, the locations of the airports, or “space ports”—there is a whole host of things which are very interesting for us.

Another forecast is that learning will have nothing to do with sitting in classrooms. You will be wherever you like, and you will have access to information from all parts of the world. It will actually expand your horizons. You won't be limited to what is in your local region. You can pick and choose from whatever you like, and learn at your own pace. The concept of the classroom will disappear. But, people will still want to interact. So how do we cater to that? There might have to be better video conference features, better information organizational structures. Will there have to be new hardware features? There are lots of things to think about. The fact that learning may become less formal means it will become more like a game. Youngsters do very well with games. So, there will be a lot of work to do from a user experience perspective.

There are already some forecasts which will really change the way we do things as user experience professionals.

So, it's really a very exciting field to be in.

Absolutely. I think it really stimulates you as a professional to think beyond what you are doing all the time. All of a sudden, somebody opens the gates and asks you to jump out of the airplane! But, it's very exciting.

Another prediction which is very interesting is that in future human society, we will have a new form of segregation. This will be due to advances in biotechnology. Those who have the wealth to be augmented or have their DNA changed, and those who don't have the resources. Will there be a differentiation between these kinds of people? Will the augmented individuals be so altered that they can't have a normal human relationship with those who choose not to use this technology?

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When you look at the future, you can spot a trend which seems exciting. One scenario might show a dark future. That's a point of opportunity, where we might think to take action. Either way, it's very important to user experience.

“With all of the economic growth and resulting power shift to emerging countries, there is likely to be a shift in value systems.”

It seems like the designs of the last 60 years were oriented around consumerism. What do you think will be the orienting factor in the future?

This is indeed one important thing to think about. With all of the economic growth and resulting power shift to emerging countries, there is likely to be a shift in value systems. Many are forecasting a shift to a more spiritual, less physical focus. What will be the influence of this value shift? Will this affect the way we relate to consumerism? And, will the rest of the world follow this trend?

The futurist perspective is so interesting. It seems like there is a whole new world for future designers to explore. I encourage all user experience professionals to explore ways to improve their skills in designing for the future.

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About Apala



Apala Lahiri Chavan, MS, CUA, CXA
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Apala Lahiri Chavan, MA, MSc, CUA, has been responsible for growing Human Factors International's UX consulting operations across Asia (Mumbai, Bangalore, Pondicherry, Shanghai, and Singapore) since joining HFI in 2000.

She is an award winning designer (International Audi Design Award) and specializes in the area of Cross Cultural Innovation and Design.

Beginning as Managing Director–India and Vice President–Asia. Apala has taken on a new role recently in HFI as Chief Oracle and Innovator.

Apala and her Contextual Innovation team have helped designers, marketers, product managers, and ethnographers in Fortune 500 companies apply her innovative techniques to develop exciting new concepts and products.

She systematically guides the ideation process to uncover subtle patterns in ethnographic and market data to reveal the exciting breakthrough ideas that can drive business and generate more revenue and profit on the one hand, and improve quality of life for users on the other hand.

Recently, her focus has been on the emerging markets. She has co-edited a book on this subject, *Innovative Solutions: What Designers Need to Know For Today's Emerging Markets*.

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