

ILLUminate Blog Transcript: Eric Fang on Our Digital Transformation

Recorded Jan. 18, 2021. Listen to it [here](#).

- ANNOUNCER: 00:02 This podcast is brought to you by Illuminate, the Lehigh Business blog. To learn more, please visit us at business.lehigh.edu/news.
- JACK CROFT: 00:14 Welcome. I'm Jack Croft, host of the Illuminate Podcast for Lehigh University's College of Business. Today is January 18th, 2020, and we're talking with Eric Fang about digital transformation and the new Center for Digital Marketing Strategy and Analytics he is launching at Lehigh. Dr. Fang is a professor of marketing and the Iacocca Chair of Marketing. He is also the founding director of the Center for Digital Marketing Strategy and Analytics. His research focuses on digital marketing strategy in data-rich environments and international business. His research includes online community, user-generated content, online advertising, digital customization, and online platform strategy. Welcome, Dr. Fang.
- ERIC FANG: 01:03 Thank you.
- CROFT: 01:04 The COVID-19 global pandemic has had a profound effect on business from an international to a local level, making digital strategy a top priority for companies across the board. What are just a few of the most significant trends you've seen over the past year?
- FANG: 01:24 Thank you. I mean, Jack, first of all, I mean, thank you for inviting me. It's truly my great pleasure to be able to talk to the audience about the research that I'm working on and the impact. I hope that my research can help the businesses, particularly during this COVID-19, this very unusual period of time. Yes, I mean, indeed. Let's think about it. Just maybe just a year ago is hard for us to imagine that we would be talking this way on Zoom, right? But now--
- CROFT: 02:02 Right.
- FANG: 02:03 Yeah. Now, I suppose, I mean, we are all getting really comfortable by talking, by meeting people on this digital platform, which is Zoom and other platforms. So, indeed, COVID-19 has fundamentally changed the way businesses think about their digital strategy. For lack of better words, I think businesses are forced into embracing digital transformation in three fundamental ways. Number one, businesses are embracing digital tools to enhance worker productivity. Because of social distancing policy, many firms, they are really adopting work-at-home policy so that forces businesses to really embrace digital tools to enhance their worker productivity. That's one trend we are seeing. The second trend we are seeing is that businesses, they're increasingly developing new tools to engage not just with their employees, but more importantly, with their customers. So we are seeing some very interesting business models adopted by McDonald's, by Starbucks, etc. It's called order online, you pick up on the curbside. So because of this COVID-19, many of the restaurants, many of the service outlets, they have to close their doors. They cannot really host customers, so they have to use the digital ways to engage their customers. Right? So that's the second trend we are seeing.

FANG: 03:56

The third trend we are seeing is really now the supply chain side. Okay? So from the consumer standpoint, that's not really visible. Just we go to the store, okay, we pick up something, we book something online. We don't really pay attention to the supply chain side. But actually what is dramatically changing is because of the COVID-19, the global supply chain got really hit really, really hard. So businesses now, they have to communicate with their suppliers more and more through digital tools. So digital becomes a collaborative tool between business and the suppliers. So what we are seeing, there are three fundamental ways businesses are "forced" into adopting digital tools, if you will. Number one is to improve or at least maintain their worker or employee productivity with the social distancing, with this work-at-home policy. Number two is really to engage with their customers on a variety of different forms of digital platforms or digital tools. Number three is to really push businesses to engage with their suppliers in this particularly interconnected global supply chain, which has been very heavily hit by COVID-19.

CROFT: 05:29

In the introduction I had mentioned that a lot of your research is focused on digital marketing in a data-rich environment, and we certainly are in probably the data-richest environment we've ever been in. And that seems like a good place to start. By 2018, seven of the 10 largest global companies were based on platform business models. So how has data driven this revolutionary change in global business?

FANG: 06:04

Jack, that's a terrific question. Yes, I mean, if you look at the top 10 companies on the Fortune 500 list, seven of them, they're actually-- we call it data companies. Apple, Google, Microsoft, Amazon, Facebook, Tencent, Alibaba, the latter two being companies from China. If you look at those seven companies, there are three common attributes they occupy. Number one, all those companies, they have massive data about their customers. Number two, they are all based on some type of-- we call it platform model. Number three, they are all based on building what we call connections. The connections between customers, the connections between customers and the servers, and the connections between customers and information. So if you know, I mean, I think those are the three common attributes those top seven companies, they all occupy. In addition to that, we are seeing Netflix, we are seeing Disney, we are seeing Zoom. I mean, we are seeing Tesla. All those companies, they have those three common attributes: massive data, building a platform, and really to engage connections.

FANG: 07:36

Okay. Customer-customer connection, customer-service connection, and customer-information connection. So those are the common themes. What power does data give them? That's really the key question. I mean, of course, there is a dark side of data, a problem I think we'll talk about it in a minute. So what power does data give those companies? Okay? I think there are three things data provides businesses. Number one, data gives those companies massive insights into customers that has been unimaginable 20 years ago. Data gives the businesses a weaponry to know their customers, okay, at a much faster pace and a much deeper level. Think about our personal example when we go to Netflix. Netflix do that called personal recommendations. Netflix is going to recommend the movies, Jack, you may like. When we go to Amazon. Amazon knows what product we have purchased and Amazon makes predictions about what other products we may like. So think about that. Without data, it's almost inconceivable to think about businesses have that deep insight into consumers.

FANG: 09:10

So that's the first thing power-- I mean, the power that provided by the data, which is deep understanding of the consumers. Number two is data provides businesses a tool to build connections. Think about example about Facebook. Facebook use consumer data to build social media website. Building connections among consumers. So that increases consumers' we call it loyalty or stickiness. All your friends are on Facebook, so that builds your habit. You have to be on Facebook to get connected with your consumers. That's the first connection. Second connection, as I briefly talked about. Let's think about Google. Massive data. Google build connections between consumers and information. Any time you search something, Google leads you to that information that you may need in less than-- right? Less than a second. So that's the second one. The third one is data gives you the tool to build connections between customers and the service. Think about Airbnb. Think about Uber. Right?

FANG: 10:36

Airbnb connect you not with just a typical hotel chains, but Airbnb connect you with maybe a landlord in Spain who happens to have a spare bedroom to rent out. That's a service. But think about 20 years ago, that's inconceivable. Without data, there's no way. Right? Uber can connect you with a service provider that may be in Spain, that may be in Korea, that may be in UK. So that's the second power provided by the data. Data allow business to build massive connections. Number three, data gives the firms tools to really improve their efficiency. To really improve their efficiency. Think about Uber as example. Uber is trying to replace the traditional cab service. Think about a traditional cab service. There was a lot of-- there was a high level of inefficiency in cab service. Why? We as passenger, let's say you go to Chicago or you go to New York City, you are trying to board a cab, what do you do? You either pick up the phone and call the 1-800 number to call a cab or you wait on the curbside to wait for a cab to come and you wave.

FANG: 12:08

There are a lot of time you are waiting. There are a lot of time that's being wasted. Think about a cab. Imagine if you are a cab driver, how do you get a passenger? You either wait for the call center to call you saying that you got to pick up a passenger at a certain location or you just drive around the street hoping to see a passenger. There was a lot of we call it matching inefficiency. Match passenger and cab driver. With Uber with what we call LBS, called location-based service, has massive data. Uber is able to match cab driver and passenger in a very efficient way. So to sum it up, in a more generic or general term, there are three things provided. There are three things the power provided by data. Okay? Number one is, I said, deep insight into consumers. Number two is called broad connections with other customers, with services, and with information. Number three is really to improve the efficiency of a business operation.

CROFT: 13:33

Right. So that lays out, I think, pretty well the benefits for both the companies' marketers, certainly, and consumers with this explosion in data. The flip side is, you had mentioned, the dark side of data. And what are some of the main concerns raised by so much data being collected and companies knowing so much about their customers now?

FANG: 14:08

Jack, that's a terrific question. Of course, I mean, the dark side of data has received a lot of publicity recently, particularly about those big tech firms. Right? About the massive data they occupy. I mean, the names I just listed. In a generic speaking, we kind of see three dark sides of data really being controlled by those selected few big tech firms. The first dark side everybody is talking about, this is called a new norm or

new form of monopoly. Right? So monopoly. The traditional form of a monopoly is based on some technology, is based on some capital, or is based on your huge market size, etc. But new form of monopoly is really driven by data. So that's one dark side. Think about the examples I just gave you: the Google, the Facebook example. I'm not in the position to say whether they have the monopoly power or not - that's not the position I'm taking - but we have to look at it from the business standpoint.

FANG: 15:40

Think about that with massive data Facebook and Google occupies, as I mentioned, they're going to understand consumers better. The product or the service it provides, okay, can better fit with consumers' idiosyncratic needs. As a result, they gradually build up consumer's habit. So that's a new form of monopoly. So it makes consumers very hard to leave their platform. So that's power of monopoly. So think about Google as an example. Do we have alternative option? Of course, we do. Right? We have competitors. You don't have to use Google. You can use other, right, players in the same industry. But why Google still has the majority of the market share - many people say 85% or 90% of the market share in the search market - is because of the huge data Google occupies. As a result, the search engine result tends to be more accurate from Google. Right? Facebook is another example. Of course, you don't have to use Facebook, right? You can leave. But think about it. If you leave Facebook, all your friends are on Facebook. Okay? Or Instagram. So if you leave Facebook, you leave that social environment. You leave that digital social environment.

FANG: 17:08

That makes it very hard to leave. So that's one dark side if you-- let's call it "the new form of monopoly." The second, of course, is many consumers are getting increasingly concerned about the privacy issue. It's the flipside of the same coin. On one side, massive data provides businesses the power to recommend products that we may like. That's good side. But, of course, there is a perception of intrusiveness, or perception of privacy infringement. Right? So, for example, I mean, if you buy something on Amazon and Amazon instantaneously recommended something to you, some consumers, including me, sometimes get a little bit uncomfortable. Sometimes I receive a notification from Amazon saying that, "We just launched this new product. You may like it." And why? So sometimes consumers get a little bit offended. So that's, of course, the privacy issue. So the third issue, the third dark side of data, which is a little bit kind of counterintuitive is we call it algorithm-driven tunnel vision. It's called algorithm-driven tunnel vision. What I mean by that is, I mean, more and more often, particularly with those kind of news feed-- I mean, news feed is a new form of getting information.

FANG: 18:44

Best example would be Twitter. Consumers go on Twitter to search for information. Okay? Or you go to the news feed like Google to get more information, you go to Facebook to get more information. There is an algorithm embedded in those apps - applications - that they will recommend the news that they think that you will like. As a result, consumers are less likely to get very diversified information, rather, consumers will get information the algorithm knows the consumers will like. So in other words, they will feed you the information that you will like. So we know that's not a healthy way of absorbing information. The healthy way of absorbing information should be the way that we get different perspectives, even sometimes conflicting perspectives. That's healthy debate is about. That's healthy learning is about. Imagine a world, you are only feeded-- you being consumers are only feeded with information that they like. That's going to strengthen whatever view they already have. Does it makes sense?

CROFT: 20:08

Yeah.

FANG: 20:08

So the algorithm-driven tunnel vision, that explains-- that at least partially explains why the United States, the political views of the Americans become so polarized. Social media plays a role in that. If you are a Republican, they will always feed you with conservative views that strengthens your political view. In contrast, if you're Democrats, they will always feed you with liberal viewpoints that strengthens your liberal political views. So those are the three things I see as emerging, if you will, "dangers" of big techs having massive data. The new form of monopoly, the infringement of consumers privacy, and the tunnel vision driven by this algorithm-based news feed. Does that make sense?

CROFT: 21:16

Yeah, it strikes me as you were talking about the algorithm-driven tunnel vision, you've also talked in the past about how our economy has moved from being product-centric to customer-centric. And you've said we now live in the age of the customer. And as I was listening to you talk through that, it struck me that you can make the argument, I think, that these companies - Facebook and Twitter - their explanation is they're giving the customer what they want and not what they don't want and they're serving their customers. Whereas once, I think, particularly with news organizations - and I worked in newspapers for two decades - the sense of pride was in putting out a great product. A great newspaper with news, unbiased as much as possible. And now, you can see that that whole philosophy is, "Well, what do people want? That's what we're going to give them."

FANG: 22:26

Exactly. Exactly. So, Jack, I mean, that's an excellent point. Yes. I mean, we call it unbiased news. Unbiased is really in the eyes of beholders. Right? If you like it, you think it's unbiased. That's one way to put it. But, I mean, a more serious note, Jack, the way I would like to put it. Yes, it's customer-centric. I think we are moving to the customer-centric, but there are two different types of-- I mean, let's use analogy. There are two different types of love. One is called mom's love. One is called dad's love. Okay? The news feed or the tunnel vision, the algorithm-based tunnel vision, I think it's more like a mom's love. My son is nine years old, right, and my-- I mean, my wife and I, we have different philosophy. Right? My wife is call it more like a mom's love. Always gives the son whatever he likes. Dad's love is more like tough love. Right? I only give my son which I think is better for him.

FANG: 23:32

It's not what he wants, it's what I think is good for him. So there is a fine balance. If we only give consumers whatever they like or whatever they think they like, okay, I think that goes too far. We have to balance to meet consumers' needs - that's one thing - and also to tell them the truth. Does it make sense? I think there is a fine balance between the two. It's not like we just sugarcoat everything, we give consumers whatever they like, okay, make them feel comfortable. Yes, for the time being. Right? But they are only going to be living in the bubble which they like to hear, only get the message they like to hear. That's not the healthy conversation our society needs. I don't think that's a healthy conversation, right, the whole country needs.

CROFT: 24:29

Right. Now, another term we've heard a lot about lately, and you mentioned it toward the beginning, is digital transformation. And I think that's a term a lot of people hear and perhaps even use, but may not fully understand what that is referring to. I think that part of that is because the definition is a little bit fluid, but

what is your idea of what digital transformation is and what effect is it having on business now?

FANG: 25:04

Oh, that's a big question. Yeah, I think there are different levels, different layers of digital transformation. Right? I mean, let's go from the technical level to really the strategic level. Right? So from the technical level, digital transformation simply basically means using digital tools to enhance the productivity of employees within organization. Right? That's a simple way. So we can say Zoom, right? I mean, adopting Zoom, that's part of the digital transformation. Right? Using digital collaborative tools, use software as a service. Called SaaS, S-A-A-S. So embracing this IT infrastructure. So that's the technical way that we call it digital transformation, but that's really the basic way. So really that's one level. So on top of that, we call it digital transformation from the strategic standpoint. It goes beyond the simple adoption of digital tools for the enhancement of productivity purpose, so it really involves the whole strategic change across the whole organization, okay, to move into the digital era. So I see two strategic changes empowered by data and digital tools.

FANG: 26:47

The first is we are seeing the U.S. economy, with the help of digital tools, is increasingly moving from the product-based into service-based. Okay? So let's use Tesla as example. Okay? Tesla, unlike traditional auto manufacturer-- traditional auto manufacturer, they make their profit based on the autos they sell. Tesla, okay, the revenue model will be, to a large extent, based on its service. Okay? Tesla is just a gigantic moving iPad. Okay? Tesla, the car, is a digital tool, with big iPad, right, with the autopilot driving, etc. So Tesla's business model will be based not just on selling Tesla, but on all those kind of service-based items. So that's one strategic change we're seeing. The second strategic change we are seeing is really moving into this customization. Traditionally, the U.S. economy from the monopoly standpoint is based on this kind of segmentation. Okay? I want to develop a cell phone to target the audience, which is aged between 25 to 35, etc. Okay? But in the future, we are seeing that trend happening. It's not just going to be for us, it's just going to be for me. American consumers want product and services just for me, which is called digital customization. So on the strategic level, we are seeing digital transformation reflected in two strategic changes. One being reflected in the service transformation, the second being reflected in the customization. Makes sense?

CROFT: 28:53

Yes.

FANG: 28:53

So that's the second level. Really at the top level, digital transformation means building an ecosystem. Not just you, your firm as a separate entity. It's building an ecosystem to provide value to the consumers. What I mean by that, let's think about examples like Uber. Let's think about examples like Facebook. Okay? Let's think about WeChat coming from China. Using data, they build massive connections with third-party vendors. Okay? As a result, they can provide better services, better products, and better solutions to business and the consumers. Business users and the consumers. So actually there are three different levels when we are talking about digital transformation. The basic level is the adoption of digital tools, including IT infrastructure. The second level is organization-level transformation, reflected in service transformation and customization. And really the top level is to build an industry-wide ecosystem to connect with stakeholders in order to provide solutions to the consumers. Those are the three levels of digital transformation I'm seeing.

- CROFT: 30:26 That certainly sets the stage. And I think, in a sense, everything we've talked about so far today provides context for the new Center for Digital Marketing Strategy and Analytics that you're launching in Lehigh's College of Business. So before we run out of time here today, I would like to talk about what your vision for the center is.
- FANG: 30:50 Jack, that's a good question. I mean, I really want to get a message across about the way I think about this center. First of all, it's really not my center per se, it's really the college's center. So I'm just helping to run the center. So that's part of the reason I decided to join Lehigh, and I really appreciate the support from the Dean, Georgette [Phillips], and the whole marketing department to buy into this idea. And so I mean, the way I think about this center is really I want the center to serve three fundamental roles. As we are seeing-- as I mentioned previously, as we are seeing American businesses, is really moving into the digital transformation, I have to say, accelerated by this COVID-19 and that momentum will continue even after the COVID-19 is over. We are clearly seeing that has been happening. So we envision the center to serve three different roles. Number one is we want the center to help research in this whole domain. So research really, if you will, is the lifeblood for anything that's built upon that. So we want to help young scholars to build their richest dream alongside the "big domain of data." So that's the first role.
- FANG: 32:34 The second role is really the teaching side. So the center is willing to work with the executive education center, so we are planning several executive training programs around big data and around digital marketing, etc. So those are the-- I mean, that's the second role. I think the third role, which probably at the end of the day will be the most important role, is outreach. So we want the center to be a hub to connect the Lehigh research and teaching with businesses, particularly those businesses who are kind of feeding the urgency to do digital transformation across a variety of different industries. So we are already in the dialogue with some businesses in the Lehigh Valley area and also in the greater Philly area, in pharmaceutical and financial services, etc. So we are thinking about building some type of a coalition to connect businesses, academia in really working on some questions of managerial importance to the businesses but also it can enhance our faculty research. So those are the three things I more or less envision the center to have, research being the foundation, teaching being the way we're going to provide the service we're going to provide to the relative stakeholders, and outreach to build a brand to connect businesses with, I mean, academia. I think that's really the core mission.
- CROFT: 34:29 Well, thank you so much. There's a lot more we could talk about, and as this all progresses, we'll have to have you back and talk about some of those things that we didn't have time to get to today. But thank you, Dr. Fang. You've been a fascinating guest.
- FANG: 34:45 Let me know if I can what else I can do for you.
- CROFT: 34:48 Great.
- FANG: 34:49 It's truly my great pleasure.
- CROFT: 34:51 I'd like to once again thank Dr. Fang for being with us on Illuminate today. Dr. Fang has published more than 30 articles in leading marketing and management journals, including Journal of Marketing, Journal of Marketing Research, Marketing Science, MIS Quarterly, Organization Science, and Journal of International Business Studies.

This podcast is brought to you by Illuminate, the Lehigh Business blog. To hear more podcasts featuring Lehigh Business thought leaders, please visit us at business.lehigh.edu/news. And don't forget to follow us on Twitter, @LehighBusiness. I'm Jack Croft, host of the Illuminate Podcast. Thanks for listening.