**Naseem Ahmadapour – Fitbits: healthy habits or expensive accessories?**

>> Welcome to the podcast series of Raising the Bar Sydney. Raising the Bar in 2017 saw 20 University of Sydney academics take their research out of the lecture theatre, and into bars across Sydney, all on one night. Here on this podcast, you'll hear Naseem Ahmadapour talk about Fitbits, Healthy Habits, or Expensive Accessories? Enjoy the talk.

[ Applause ]

>> Thank you. And thanks for having me, and thanks for coming out tonight. It's very exciting to be speaking at a bar. It is my first time doing this, and first time speaking about my research at a bar, so it's a really cool combination. So my talk tonight is about tracking, self-tracking, Fitbit, personal informatics, some people call it all that. So I want you guys to think about this. How many times have you heard someone talking about the number of steps they've taken that day? The distance they walked? The calories they burned? The calories consumed, points accumulated? I want to--I want you guys to think about these numbers, and I want to talk to you about those devices that collect information and measure those things. I'm talking about your Fitbit, your smart watch, your Samsung gear, your Garmin, all that. So almost one in every two Australians now owns a wearable device. These are often designed in terms, in the form of gadgets, like a watch, a wristband, or some sort of accessory. Some of them look like jewellery. They collect different information. Some of them collect steps taken, stress level, mood, some of them even tell you when you feel happy. So why do we spend so much money on these devices? Each of these devices, they cost something between $99 to $700. That means every day, every year in Australia, we spend at least one billion dollars on these activity trackers. That is a lot of money. So why do we do that? What motivates us to buy these expensive devices? Why do we want to track our every movement, every day, every second of our day? Well, these days, we are increasingly depending on new technologies for getting things done faster and more effectively. We use our cell phones. We want to live a life of efficiency. We work in offices, and we want to stay healthy at the same time. We live miles away from our loved ones, and we still want to stay connected to them. So we use a lot of different technologies to get these things done, so why not do that to keep track of our health as well. That's why we are seeing a lot of transient campaigns around wellbeing and tracking these days. We have the quantified self campaign, have you guys heard about that? Anyone here knows about the Quantified Self movement? It's a movement that seeks to understand oneself, objectively. They call it self-knowledge through numbers. So you sort of describe yourself with numbers, objectively, and quantifying yourself. It is interesting, but not surprising that we would want to describe our life. Ourselves, through numbers, quantifying it. We use numbers quite often in a lot of context in our everyday life, we describe some of our everyday activities in terms of numbers. We would say "I walked for 2 kilometres today," or the Sydney Opera House is 2 kilometres from here, I slept for six hours, even when we use technologies, we use a lot of numbers. We would say I have five percent battery left on my cell phone, and everybody understands that. So I understand the appeal of wanting to measure things, and wanting to describe your health, also, in terms of numbers, and those measurements. And that is why we spend all that money on these devices. They give us that measure, that number that we are using so often these days. And that is why we are doing a lot of research on this. A recent survey by Price-Waterhouse-Cooper, at UWC, and multinational corporations, showed that the number one reason people buy these devices, people use these devices, is because they want to learn about their health, and that is a very important point for my talk tonight. We want to use these devices to learn about our life, learn about our activities, our health and wellbeing overall. But here is the thing. For all that enthusiasm, surrounding quantifying yourself, quantifying your health, the enthusiasm surrounding self-knowledge, over 30% of the owners of these devices abandon the device within six months of purchase. That's pretty quick, over 30% of them. And only half of the Fitbit owners are actually active users. So the other half, they just own the device, and even those who actually say they're still using the device, some of them confess they're using it out of a sense of attachment to the device, because they've been using it for a while, and now they feel like it is part of me, it's like my watch, it's like my cell phone, it's like a piece of jewellery, so I just keep wearing it. It is not because of its functionality. So are these surprising facts? Are you surprised that we spend so much money on something, and then there are so many people who are not paying that much attention to it? Are numbers not doing a good job at keeping us motivated and teaching us about our health? Are quantifying things not motivating enough? These are some of the questions that really sort of bug me, and really sort of inspired me to think about this research. So two of the concepts that I really want to talk to you guys about tonight is information, that quantifying those numbers, and motivation. My name is Naseem Ahmadapour, as they introduced me for, and in my job, I am a lecturer in design, computing and interaction design at the University of Sydney, and recently I've been really interested in thinking about these expensive accessories, and why people are spending so much money on these things, why there is such a craze about these devices today. A lot of these devices paint a very complex picture of our health. They also make claims about how our health, or our attitudes, or our behaviour might change, as the result of owning and using these devices, as the result of constantly monitoring our activities, and our movements. And the thing is, with the new sensory technology, it is quite possible now. We have a lot of sensors in a lot of our devices, and it is very advanced now. So it can measure your movements and activities with good accuracy as well, across different devices. So doesn't matter if you're using one model or another, they're all quite accurate as following you, and telling you about your movements, and measuring them. But the thing is, there is no real evidence supporting the claim that using these devices actually makes a huge impact on your self-knowledge about your health or actually making a huge impact on health itself. There is no research showing, at the--well, that's not true. There is research showing that there is no significant link between using a Fitbit, and losing weight. So it's not really happening. Why? Looking at user engagement trends, and some of the things that I just told you about, users who are just using it, but not really paying attention to it--users who buy it, then abandon it within six months. I'm wondering if the idea of quantifying your health is a good idea in the first place? Is it a good idea to try and quantify our lives? Our activities? Our movements? Ourselves in general? Is that really helpful? Is that something that would provide us with the self-knowledge and insight that would really make a huge impact in our life? I think perhaps it was too simplistic and too optimistic in the first place. So what kind of information? If it is because of the quantifying of things that we can't stay motivated in using these devices, is it because of the form of the information that is communicated to us? Is it because of the way it's displayed? Is it because it's a number or a diagram? Is there a link between information and motivation? Well, what happens, and what was interesting to me was that when you look at our everyday activities, our everyday occurrences in our relationship, in our work, in whatever we do, usually what we do is that we look at the situation, we look at our circumstances, and we think about what is going on, and we compare it to what we know about ourselves, about our past, and then we somehow analyse it, we synthesise it, then we form an opinion, then we make a decision, right? That happens to a lot of us naturally, subconsciously, automatically. We do this quite a lot. So why not apply that to design of these activity trackers as well? So in my opinion, what is missing here is sort of that space for reflection. We do reflect on our everyday activities somehow, we do reflect on what we do and what we don't do. We do reflect, what went wrong in my relationship? What went wrong at my work? Why did this work, and not that? I'm trying to lose weight, but what I'm doing is not working. So we do that quite a lot in our everyday activities. We do reflect on what is happening to us. So why not apply that to the design of these activity trackers, so that we can start thinking and reflecting on that information as well. So that is the third concept that I'm going to talk to you guys about tonight. The information, the motivation, and the reflection. What do I mean by that? Reflection is this process of reviewing our experiences, especially past experiences, past events, then comparing it to our current status, current circumstances and situation, and somehow synthesise it, then analyse it, and draw some sort of conclusion and insight from it. The thing is, when it comes to our health, when it comes to our physical activity, that bit is very important. Because our lives are very different. We have different types of bodies. People with different age groups, different health conditions, people with different lifestyles. Their body reacts to physical activity differently. So it's a very personal and subjective thing at the same time. So if I know how many steps I've taken today, it would mean something to me, and it would mean something else to someone else who is 18 years old, it would mean something else to someone in their 50s, or someone in their 60s. It depends on what I'm eating in my everyday life. It depends on how many hours I'm sitting at my desk. So there's a lot that are connected to that information, and without putting that information, that number, or that personal information into the context, there is no way we could understand the meaning behind that. So how can we do that? How can we use this quantifying and self-tracking, and create a space for reflection? Well to do that, we probably need to think about different qualities of reflection as well. First thing we need to know is that reflection is a process. It's an ongoing process. It involves a lot of reviewing. It's not a conclusion that we can arrive at, and say okay, I'm done, I know what is going on in my life, I know what I'm supposed to do, and that is it. We can't do that. Reflection, like every other reflection that involves our everyday activities, about physical activities too, about our health too, it's an ongoing process, not just one conclusion. So we need to put things into perspective. We need to think about the history of our life or the context of our life. Let's say you've done that. You've done that properly. You arrived at some kind of self-insight through the process of reviewing, and you're just doing it well. What are you going to do with that information? Well, reflection also needs to create some sort of opportunity, right? You know what you've been doing in the past, you've been reflecting on some of the things you've been doing. And your status at the moment, your situation at the moment, then you somehow have to create a plan for your future. How are you going to use this information? How are you going to create an opportunity for your future? So that needs to be considered when we think about reflection. So when it comes to activity trackers, one way of doing that, one way of putting things into perspective, and into context, is by personalising these devices. So if these devices are designed well, and it could capture some interesting information about lifestyle, then we could personalise it, and that would provide us with some more contextually relevant information. What is interesting, though is that the way we communicate with these devices, or let's say the way these devices talk to us is through feedback right? So we use it, it will track us, and then we get some feedback as a result. So what happens is that if you are someone who is in training, you are exercising, or you have been training for something, you're trying to run a marathon or something, then that kind of high level information could be pretty useful to you. That kind of feedback on your training and your training is very useful. That is why a lot of these devices actually do have features for coaching and for training. It works for those people. But what about the rest of us, who are not athletes, or who are not planning to achieve anything in particular, not running a marathon, not participating in a particular sport. So that probably doesn't work. What else? Some of these devices, they have those goal-setting features. Fitbit will start you off with 10,000 steps. It will tell you that you have to make that 10,000 steps go for it. Well, sort of, again, if you're someone who knows a lot about their exercise and their physical activity, that may potentially mean something to you. For the rest of us, for all those other people who are not really that health conscience, or exercise--sorry about that, exercise conscious, that is just an arbitrary and abstract number. What does that mean? Okay, 10,000 steps. I've done 2,000 today, I've gone 5,000 today. What does that mean to me, with all the things that I know about my life, about my lifestyle, about what I do every day, about my family history, about all the other things. In the context of my life, what does that mean?

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>> So the problem with goal-setting is that if you are not paying attention to that 10,000 step goal, it means that the device itself, or the manufacturer of the device, the designer of that device, they would have assumed that you already have some other goal in mind. That is why it is a goal-setting feature. They would assume that you are ready to set a goal, that you have been reflecting on your life, that you have been reflecting on your physical activity, that you have been reflecting on your health, and now you are ready, you know what you want, you know what that goal is, so you're going to set it, and then you're going to work really hard to achieve that. So it would assume a state of readiness. It would assume some level of motivation. It would also assume that you want to make a change in your life. That's why you are setting that goal. And you know what that tells me? It tells me all the other people who are not really there yet, all the other people who have been buying that device, because they wanted to gain insight into their health, they're ignored in that scenario. And remember, that survey, it was 2016, it was just last year, more than the majority of people who have been purchasing that device, have been spending money on the device, they just want to learn about their health, not necessarily change anything, at least not now. So looks like the goal-setting feature is not necessarily the most successful strategy. At least I'm connecting the dots, and I'm thinking perhaps not. So if that--if knowing about your goal, or feedback on your training is not the type of feedback that works for you, what does work for you? Should we curate that kind of feedback in a way that makes more sense? Should we think about what we are offering these people something other than that number, that raw information, that would just ask for people to look at it, and make the interpretation themselves, not knowing what it means. Well, there are some interesting ways of doing that. And a lot of these things are being experimented with, and a lot of it comes from motivational psychology. People have been thinking about what motivates people to do something, especially exercise, especially learning, especially education, for decades. We can give feedback on the efforts people make toward something they want to achieve. So let's say you know what your goal is. Okay, so let's say, let's assume that you are that person who does have some sort of goal in mind. Even for that person, if they just get the feedback that you've been trying harder, and harder, and whatever you do, you're not really meeting your goal, you're failing your goal, how motivating is that? It's probably quite discouraging. So giving people feedback on the effort they've been putting into achieving something is probably more motivating because it will tell them about the progress that they have made so far, as opposed to how far from the goal they are. You could also give feedback on the strategies people have employed, in trying to achieve something. All these things, they're known to sort of contribute to the growth of people, that's why they're associated with this theory of growth mindset that Carol Dweck, the famous psychologist, has been working on for decades. It will tell you that you haven't gotten there just yet. You haven't reached your goal yet. But you are trying, and here is the evidence that it is working, you are making progress. You are not there yet, but you will get there, because I can see your progress. And some of these kinds of thinking, they are being experimented with in design as well. There is this app called UV Fit Guard app, that would show the progress, visualise your progress and physical activity by just creating more and more flowers in a garden, in a visualised garden. So it is feedback on the progress. So, so far, we talked about motivation. We talked about information, and that reflection might be the missing link between these two. We said that reflection is an ongoing process. It's about reviewing things. It's about analysing things, and it is up to you, as the person, as the user, to do that. We also said that reflection has to create some opportunities for your future. So how are you going to use that information. Next time to think about is making an impact. How are you going to sort of work on those opportunities and make something of them. Again, an example from these activity trackers, the training things, they tell you, they instruct you what to do. They sort of give you--they try and direct you towards where you should be heading. But you know what? In most every day situations, we don't really like instructions. We don't want to be told what to do. We normally do things when we feel like there is a good reason for doing that. We do things when we endorse the value of those things, when it's in education, I've gotten my PhD, it was hard work but I did it, because I thought it would contribute something to my life. So it wasn't easy. It wasn't enjoyable, but I did it, because I saw some value in it. So what if we apply that, that kind of thinking, to activity tracking as well? People don't want to be given instructions in terms of what to do. They need to understand their health. They want to gain self-knowledge. Perhaps sometimes, in the future, they device plans and then sort of self-regulate their behaviour a little bit more. So how could we facilitate that? How could we help people to do that by themselves? Well one way of doing that is providing them with some opportunities, with some sort of visualisation, so that they could look at their movements, their activities, and say uh-huh, there is a trend, there is a pattern. I can see that I've been behaving in a certain way, moving in a certain way, my activities have been changing in a certain way, and there is a pattern. And I can think of the reason why, why this has been happening, and that is probably a good trigger for making a change, or at least thinking about regulating yourself a little bit differently. So this also has been experimented with in design. So my colleagues at the University of Sydney, Leeming Tang, and Judy Hay, they've been working on visualising physical activity in a more interesting way. They've shown people sort of a summary of their physical activity over two years, and they've shown these visualisations, and told them, look, this is how your activity level has been changing over these 24 months. And looks like you've been more active at some times, and less active at other times. What has been going on? And that sort of starts this inner dialogue, thinking okay, what was happening in January and February when I wasn't so active? You start connecting the dots. You start thinking about what you've been doing, as a person, thinking about the context of your life, all the other things that have been going on in your life. And making probably some sort of plan, or at least thinking about your health differently, because your reflection was empowered in a way. So visualising the impact of the activities. Visualising the impact of the activities on health. Giving people some sort of summary that is probably more effective than giving them instructions, telling them what to do. You want to help them understand what they want to do. What else can we do? Are there some more interesting ways of empowering that kind of reflection? Some people have suggested that including a feature for note-taking might be a good idea. So I haven't been so active in January and February, maybe I could put down a note, and sort of remind myself why this has been happening so that I don't do it again. And you know what? We do this quite often. We do it in our work, we do it in our personal life, a lot of us have been keeping journals when we were younger. Some of us still do keep journals. We do it at work. We have reminders, and we have calendars, and they all sync up on our cell phone, on our computer, so it sort of comes naturally to a lot of us. So why not apply that to activity tracking as well. Even if you don't go back to that note and read it, and think about it, the very act of taking notes sort of triggers some kind of processing in your brain, and that could probably be more helpful, helping your reflection, helping the reflective process. What else, what else? Notetaking, summaries, visualisation. Well, there are also some suggestions in terms of creating opportunities for people and connecting them to their social media, to their social networks, to their communities, to people that are important to them. I've been recently looking at some of these activity trackers. I've looked at 13 different activity trackers. And four of them had features for sharing personal information on social networks, on Facebook and twitter. What if it is some other kind of circle that is even more important to you. People that really matter to you. People whose opinion really mattered to you. And there is good reason for that as well. Again, in motivational psychology, there is such thing as the experience of relatedness, and the impact it might have on your motivation for doing things. We are more inclined to do things if we know it will bring us closer to other people. So why not again apply that to activity tracking in a way that is effective. So to give you a summary, I talked about reflection, and I talked about this processing of information that we do every day, that somehow has been neglected in design of these activity trackers. The thing about it is that it needs to be acknowledged by design. It needs to be empowered, and it needs to be facilitated. We can do it. We have all the power, and all the capabilities for doing that. We just have to be enabled, because first of all, we don't have access to all the information about our activities and our movements all the time. Our memories, the capacity of a memory is quite limited, so it's good that we have these sensory technologies that can provide us with a lot of additional information because we can look at it, and devise some sort of insight. But we need help. We can't just look at numbers, because it's very difficult to make the connexion between those quantified measures, and the context of our lives, all the things that we know about ourselves. The connexions between the number of steps and what I've been doing at work, what is my social life like, what do I eat, what is my family history? All of that. We also need help with recognising patterns. If it is about our personal lives, if it is about something that you've been paying attention to since birth, well it's probably easier. But when it comes to physical activity and keeping track of your movements, and things like that, we do need a little bit of help. So these technologies, if they can do that, if they could support your reflection and your investigation into your health, they could probably contribute a little bit better to your health. So for the most part, as I said, we use these devices because we want to know a little bit more about ourselves. We want to know a little bit more about our health. We need insight into our health. So we need information that is meaningful. We need information that is impactful. And that we could use to make an impact on our activity and our health. And the technology in this area is really rapidly changing and the research in this area is very rapidly changing. So I think we're not quite there just yet. We have all those people who are buying the device, then ditching their device. But I think that the few--I'm very optimistic about the future of this technology and the possibilities that it will bring to us for learning a little bit about ourselves, a little bit more insight into our health. So next time, look at your step count, think about the meaning behind that number. Think about the number of steps you've taken, the day before, and the day before that. And think about the trend, and think about what that means to you, for you, and your life, and all the things that are going on in your life. And that would probably be a good start to your reflective journey. Thank you.

[ Applause ]

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