

SCIENCE OF THE NOOSPHERE

Shima Beigi

with

David Sloan Wilson

David Sloan Wilson: Okay. Well, hello, Shima. I'm so happy to be talking with you about your book Mindful Smart Cities.

Shima Beigi: Hi David. Thank you so much. It's great to be here. Thank you very much for having me.

DSW: So as you know Shima, this conversation is part of the science of the Noosphere project, which you are involved with. And so it's centered on the ideas of Teilhard de Chardin and his concept of the Noosphere.

And very often that's discussed in the context of the whole earth and the idea that the whole earth is going to become some sort of thinking unit. But for me, to focus on cities is very insightful because the concept of the Noosphere can be applied to any population of any size from a small group to the earth.

And cities are such a nice intermediate scale. Before the earth can be a Noosphere, cities have to be a Noosphere. And that's pretty much the same thing as saying that they have to be smart. And according to you, mindful. So this is one reason why I'm excited to talk to you about cities in the context of the Noosphere, the science of the Noosphere project.

But to begin, could we learn more about you as an individual, please tell us who you are and how you became one of the very few women to be involved in the smart cities movement, something that we'll be elaborating upon.

SB: Well, thank you so much, David. Of course, I am also really interested about connecting the ideas of Teilhard de Chardin to smart cities first and foremost, and first for cities. Because, as I mentioned in my book and also it's been mentioned in the United Nations report on human settlement. By 2050, more than 65% of world population is going to live in cities.

And that would put an enormous amount of pressure for managing the future of these settlements. And especially for those populations that are displaced, this poses an enormous challenge. In relationship to connecting it to the Noosphere, I think as the Noosphere being as you also clearly mentioned just before, the Noosphere being an accumulation of units of thoughts. I think also looking at it in a context of cities can really provide a lot of insights and I think also freshness for smart city thinkers.

Having said that, for the second question about myself. I always find talking about myself a little bit difficult. Because, I don't know where to start. Who am I? And really how to introduce myself, but I think I take it step by step. Well, my name is Shima, my family name is Beigi. Of course, some people pronounce it as Beigi but it's Beigi in my own language which is Farsi, I'm originally Iranian.

I studied in the UK and precisely in University of Bristol and University of Oxford, I managed to finish my studies. My background, it's quite diverse. I started by studying environmental engineering. I was really interested before engineering in medicine. But, somehow I ended up in engineering. After that I left Iran in 2008 and I started studying again in the UK, civil and environmental engineering.

When I finished my masters, I applied for a PhD and I was accepted to do a PhD in civil engineering. But then, meanwhile at the time I was really kind of spiritually, if I can say personally, very troubled. I was coming out of a really bad divorce. I was really kind of trying to find myself, reinvent myself. So I was searching a lot about different schools of thoughts and spirituality or psychology, things like that.

And I ended up leaving the UK and going to Nepal and staying there for quite some time and learning about meditation. And then I came back to the UK. I started my PhD in purely civil engineering, at the time it was tracking the behavior of elements, I think nitrates in River Thames in London.

And I studied for a year and a half and then I had this very peculiar feeling that this is not for me. So I was really troubled internally. So I quit and dropped out. And then that brings me to the second question that you're asking me, how did I find myself in the smart cities movement and discipline? The reason that I quit was that well, basically there was a really mechanical point of view to everything.

But the problem that I was looking for at the time of the first PhD was not really of an engineering nature. Nobody would listen to me because I said to my previous supervisor, first PhD supervisor, "Listen, I think this is a really different, it's like a human nature problem is not an engineering problem."

I don't think that if we design a mathematical model, as I was developing at the time, we could really kind of provide a framework. So I think he was an engineer and he was really interested in doing that. So I think there wasn't much there for us to be together and continue on a journey of finishing that PhD. So I think I rightly decided to come out of that frame of mind. I think it was a paradigm that didn't fit my thinking.

And then I think six months after I found myself still in the same department, but under another umbrella, of complexity science research domain. That then I picked up on a second topic, second PhD, which was about resilience of complex adaptive systems. There I really immediately found myself, it really captured my imagination, because it provided a systemic approach and all of the problems and discussions that I had with the previous supervisor, all of a sudden made sense.

So for me, it was this I think not a really good start in my PhD that kind of shifted my path to embrace systemic thinking and then complexity and resilience. And then I think right when I finished my PhD, the last section of my PhD about future direction. I realized well, this resilience that I developed in the PhD can't be realized if I don't find a space for it, I think materialization.

And at the time I noticed that thinking about cities and basically cities are the place that resilience and these ideas can be experimented with. So then I changed my direction also to study a little bit about cities and I went to Oxford and I restudied again on cities.

And there I realized that well, actually the discipline of cities doesn't really talk about this. The same questions that I had in my first PhD came up again. That well, cities are more than just building blocks of classical urban planning. I found myself really wanting to change something there because I thought that maybe I can have an impact there. So I became interested in that. And since then I'm working on that domain. So this is a little bit ups and downs of my journey, but I'm happy to elaborate a little bit more.

DSW: No, I find that very helpful Shima, that's always wonderful to know the intersection between one's personal journey and the intellectual world that we apply it to. And a lot of these themes, I know that we're going to return to.

Well, let's turn to cities and I want to begin with a provocative question, here it is. Why aren't cities automatically smart? Why doesn't this just happen? Why is it that we need to do work in order to make cities smart or mindful? How would you answer that question?

SB: Well, first of all I think this is a really good question. First of all, I don't think that cities aren't smart. I think they are smart as I speak about, it depends what do we mean by smart? What it is that you're searching for in defining a smart city, but if you really wanting to look at smart as a category of intelligence, I think cities are already smart. When we look at the history of human trade, it starts with little markets in the Middle East and people were trading.

And at the time, that is a collective kind of cognitive intelligence that is being shared and citizens are trying to extend what they think and their natural intelligence into the fabric of a city. So I don't think that cities aren't smart, they are smart, but it depends on whether the kind of smartness that they are exhibiting is really serving the direction of their development, the trajectory of their development.

And when we're speaking about for example, sustainability or when we speak of inclusivity or resilience and all these highly critical, important topics and really hot topics right now. Then I think the smart question that why we need smart cities and how we can make cities smarter. I think that becomes much more evident. But to answer the question that why do we need smart cities, I hope that I recall the question correctly, is that I think cities are already smart.

We should really recognize that. Why we need them to be mindful? Then I think we need them to be mindful because of the challenges we are facing. Because of the... I presume the collective desire to make these places much more livable. And because as I mentioned earlier, we are going to be living in cities.

At least the majority of most populations are going to live in cities and because of the challenges they're facing right now. So I think to make them mindful is just a way of becoming more intentional in directing the fate of ourselves and our communities. And I think cities as an accumulation of communities.

DSW: Yeah, that's a great answer Shima for a difficult question. And I think the idea that maybe cities are a glass half full and half empty with respect to their smartness is a way to put it. We want to take note of the half full part or the part full part, the wonderful aspects of cities, but there is the part empty part.

And so many cities just talk about equity or extreme inequality, squalor, sanitation, traffic. These are all things that are when just left to their own devices. Imagine that there was no regulations at all in terms of putting up buildings or things like that. And some cities are like that, then that leads to a form of dysfunction. And at the same time, something about cities often leads to a vibrancy and people flock to cities.

So noting both the glass part full and the glass part empty part, I think is just the right thing to do. And when it comes to mindful efforts, urban planning almost by definition, you'd have to call it mindful. It's basically people intentionally trying to make cities better. And it goes all the way back to Sir Patrick Geddes, who was a big fan of Darwin. And one milestone along the way that which I was very happy to see you cited in your book was Jane Jacobs and her book, *The Death and Life of American Cities*, where she was writing basically a scathing critique of the urban planning of her day, which was very top down command and control engineering, mechanistically oriented and careless of the actual human communities that were being disrupted for example, by the highway system and things like that. So I see you in many ways as maybe operating in the same tradition as Jane Jacobs, arguing for a more human face to cities. Do you think of yourself that way?

SB: Thank you so much, David. I don't think of myself in that way, but I think what I think of myself is that I was deeply impacted by the way that the majority of works being done and sited on cities that were really kind of void of humanity, the softness of humans. As I speak about in my book, the emotions, the feelings and all these softer sides and the depth of being a human.

I think it's just missing from the practice of smart cities and also engineering. That's why I changed my own PhD to another one. So at the time I wasn't aware of Jane Jacob's work when I was doing my PhD, but then when I become familiar with her work when I was studying about cities.

I could relate to her, but I then realized that well, the call that she has, could be really generalized to many disciplines that are actually business as usual, as you said, also command and control. I wasn't thinking of myself as someone like her, but my feeling and my thinking is really inspired and I think fused by my own experience as a person that left her own country and her own culture and trying to adapt to

different cities and also moving in different countries, trying to learn different languages and constantly being adapted to different kinds of frames of reference. I found that myself, to develop a kind of personal relationship with cities, every city that I would go, I would try to see myself as a part of it, and that was a really intimate process of I think societal and kind of psychological integration with the urban setting.

And if I can add, I think one of the moments that I actually was kind of as they say, the penny really dropped for me was that I think around 2016, it was before actually the terrorist attacks took place in Brussels. I was in a region of Brussels that is not really a kind of very developed part, developed in a sense of being investments in that sense.

I saw many kinds of immigrants and refugees just sitting in streets and kind of doing nothing and trying to make sense of their urban environment and try to find their relationship and establish themselves again. And that really touched me. And that really made me think about this subconscious mind of a city, if I can call it that.

That it is as if there is this ongoing mediation and dialogue between different kinds of people and also different ways of designing and formulating the city. So for me then city became a continuation of itself, as something that people would relate, as something that can be called a frame of reference.

DSW: While you talk about Belgium as a city which is it's an old city, but it's still partitioned as you write about it in *Mindful Smart Cities* into neighborhoods or sections, which are still very ethnically segregated, you might say. And so here again, I think we have cities being representing both the best and the worst. In some cases you can go to a city and there'll be a wonderful melting pot.

We use the word melting pot and whatever culture you might've come from, you still see part of the culture that has been created in the city or maybe not. Maybe you'll be shoved into a ghetto and it will go in that direction. So talk a little bit about Brussels as what you said about being an old city that's still not a melting pot in some ways, segregated into different parts of the city.

SB: Well, for me first of all, I speak of Brussels as a geographical kind of planning that basically consists of 19 different communes. And each commune has its own, let's say its own kind of functioning units and it acts like a different organ compared to different parts of the city. A majority of them are actually French speaking. There are three languages in Belgium.

But what happens is that because these are 19 different communes and the dominant language is French, but then different communities choose different communes to settle. And then each of these communes then develop their own personalities and their own kind of, they become mini Portugal or mini Spain or mini Morocco or whatever country or whichever country that their inhabitants are from.

And that would create a kind of a mini culture and culture of cultures or system of systems within a system that would make Brussels quite a unique place to study smart cities. And I actually consider myself very lucky to be able to experience this and to explore smart cities in this context. I think the complexity comes in when a lot of different, the diversities are such that there's not really integrated into a whole and it's the communication between these diversity is not really very well facilitated.

And that would create a lot of segregation. So parts of Brussels and I speak about Brussels in particular, because at the time I was living in Brussels now I live outside Brussels. But parts of Brussels remain kind of behind in terms of technological adoption and also in terms of the societal evolution that is happening.

And that doesn't mean that the population is slower in terms of rate of adoption. It just means that it's just left behind in terms of new policies or changes that are being negotiated at the level of a city. And also, I think it puts certain communes and communities also at a disadvantage because of this accumulation of problems that happen in particular communes, that would harm communities.

And I think this isn't really discussed in the context of Brussels smart cities that I hope to give voice to these communities. I personally don't live in those particular parts, especially Molenbeek that I discussed in the book. But these communities are also very unique in terms of their profiles, compared to the other communes.

So for example, if you look at Ixelles or Uccle which are two communes that are in terms of GDP and the amount of talented skillful workers that they attract is significantly higher than communities such as Molenbeek. This doesn't necessarily mean that there is something inherently special about them that makes them different. It's just the reputation and a little bit of geographical location that they have, I think puts one at disadvantage compared to the other.

So as I said, Brussels is especially unique because it provides a very multidimensional, multisensory experience of living in a city. A place that when you pick up a tram, you could be exposed to easily five or six languages. Your ears just really kind of get used to hearing different languages.

And I think many people here are at least speaking, three languages very easily. At the same time you see a city that is struggling with a lot of problems. I think we have a lot of internal kind of lack of organization that if otherwise, would make Brussels a unique place to experience urban life.

DSW: Yeah, that's great Shima. And I think that it makes me want to reflect a little bit about the basic nature of cultural evolution and which Teilhard was a pioneer of. But now has advanced. And so now the modern study of cultural evolution teaches us among other things. Although we think of genetic evolution is slow.

Sometimes it can be very fast even taking place within a single generation. And we think of cultural evolution as fast, but actually cultural evolution can be slow. And if you really look at the long stretch of human history as a process of cultural evolution, then you see that cultures evolve over a period of centuries and often millennia.

And they evolve in ways that the people involved are unaware of. These cultures, they've been selected by circumstances and they work in ways that the people don't know why they work.

And so you don't shatter cultural identity that fast, something that you grew up in. And nor should you be required to when the idea that for a city to function well, it does not require homogeneity. That diversity can be an asset as long as it's oriented in the right way. And so I think that and there has to be some sense in which those communes and those different cultures could maybe celebrate their differences, but at the same time see themselves as part of something larger than themselves, a phrase that you use.

And that there's really two identities. Who would be your commune identity and it would be your city identity and you might need both and you might need to coordinate the lower one so that it contributes positively to the higher one.

And of course the city is still a middle range unit compared to the nation and the world and so on and so forth. Or we could say that all of this with respect to religions as opposed to city state. So these are all, this concept of multiple identities that evolved over many generations and make up who we are without us having really any conscious awareness of it, I think brings to mind once again, the need for mindfulness.

Because if you just kind of behave according to that, then it doesn't automatically lead to benign outcomes. I think this is where I love the title of your book, Mindful Smart Cities. Actually, I think we can both agree on this. I said it can't be smart if it's not mindful.

And maybe we should just turn to that key word mindfulness as to why did you include it in the title and can we say something as strong as in order to be a smart city, a city will have to become a mindful city.

Let's shift the topic to the concept of mindfulness. What does that mean for you? Help us understand what mindfulness means for you.

SB: I agree with what you mentioned. I think smart cities cannot be smart if they aren't mindful. I think that's a great description that you mentioned. For me, mindfulness is about awareness. It's about becoming more intentional. It's about observation, it's about consciousness and it's about also becoming more systemic in our relationship to our surroundings and becoming aware of the relationship and the connections that we have with others.

And also the relationship that others have with us. So for me, this is the meaning of mindfulness, applied in this context of Mindful Smart Cities. Well, mindfulness has different meanings. I think as many are aware of already mindfulness has a spiritual meaning also, also it has application in psychology, also trauma recovery.

My interest in mindfulness was of mindfulness meditation. So I learned that and I practiced that for quite some time, right at the time that I actually left the UK and I lived in Nepal for some time to learn about Buddhism. And then I learned about meditation. And after that, I continued with that. Mindfulness became a way for me to really bring forth what is really authentic, the most authentic version of what I actually can bring to reality. So this was my understanding of mindfulness.

And then applied to cities, especially smart cities is that, well, we have different forces interacting. Here is a force of technology, also urbanization, globalization, at the same time population displacement and also a lot of shifts in terms of the shift of time and paradigms that are happening right now. So I think in this kind of climate, mindfulness is really something that is needed.

So in my perspective, I thought that well, if one can say in a practice of mindful meditation can bring inner calmness and inner serenity to become more intentional. And very often the thought processes that are going on inside, why not the same thing when you're thinking together about future of technology? So we can really meditate on the future of a particular technology that's going to be introduced in the fabric of society.

We can consider ourselves meditating in that state, put ourselves in that situation and extend this inner calmness and meditative state into a larger domain such as urban design and urban planning. And hence I call it, I bring this mindful attachment to smart cities. So this is a kind of attachment that I thought would make smart cities a little bit more intentional at the same time open the discussion to different experts from different fields. Right now the majority of discussions are formed by engineers and I think tech developers and computer programmers.

But when we think of mindful smart cities, then it's just not a city that is data driven. Cisco or Google would be able to deliver that. Then a psychologist, a biologist, a anthropologist, all of them are really welcome in the conversation. So the mindful tool smart cities is also, serves as an invitation for collective thinking and collective doing and designing their cities.

DSW: Yeah, Shima. And another impossible question for you. The very concept of spirituality, how would you define that? And then I'll give my own version, which will make sense of why I'm asking you the question. So how would you define spirituality? Just as a word and since you say mindfulness has a whole spiritual dimension to it, so what do we mean by spiritual?

SB: I think spiritual for me, it means to be conscious of relationships that we have to life and to be conscious of the force of life that is running through us. And I think also becoming conscious of the responsibility of our actions. I particularly do not follow any religion. I studied many of them because of interests and also because of the work I do on consciousness and spirituality and in Noosphere.

But to me spirituality is about relationship and it's about becoming conscious of relationships that we have with ourselves first and foremost. And then with the world as a place that allows us to actualize our potentiality. I think that is spirituality, becoming more conscious and aware of our actions.

DSW: I've been lucky to study religion very deeply as an academic, quite apart from my personal experience. And I think that spirituality by its very nature is other oriented and highly prosocial. You wouldn't call a person spiritual if they were self-centered. I don't think there is such a thing as a spiritual narcissist.

If you're only in it for yourself, then you're not spiritual. So there's something inherently systems oriented, other oriented and then to be spiritual is just to really on your own volition, to want to become part of something larger than yourself. And so spirituality is systemic by definition.

And when you look at Buddhism to pick that example and the Four Noble Truths, what are they? First of all, life is all about suffering. Suffering is based on craving and desire. So basically people, individuals or maybe groups that are just craving, desiring, placing themselves above other people and groups, that's the cause of suffering.

And is there a path to end suffering? Yes, there is. And so that's so systemic basically, the whole idea is that you abandon your sense of self and then you become part of some larger system. It's systems thinking before science and technology. And a lot of indigenous thought is like that because people back then didn't have the luxury of being reductionistic and all, they had to be relational. And to be thinking in terms of systems.

And so when you have this whole spiritual impulse, which has only recently become global, I want to say. So if you look at our religions, the idea that the whole world would be one cooperative group that was inconceivable for most of human history. And before technology, it was beyond the imagination until early in the 19th century, the Bahai Faith, which originated in Iran, didn't it?

Iran or Iraq the Bahai Faith. Was arguably the first to be all-inclusive. But now it's the only thing that makes sense. So now you have the Dalai Lama, beyond religion and ethics for the whole world. You have the Pope, our common home, not just for Catholics, for the whole world.

So you have this whole spiritual dimension and then side by side, you have the more engineering, technocratic, economic, political, which in some ways seems to be the polar opposite of spiritual. You seldom use the word spiritual to describe those people. And yet they're all kind of trending towards the same thing. There has to be some sort of global governance and so on. And so I think that those are now becoming integrated.

And then it's one of the themes of your book is that engineering has to become much more integrated with spirituality and soft values as you put it. Human values and so on. So part of what's happening is an integration of what we call spiritual with what we call science, technology so on and it can't come soon enough. So I think that's one theme from your book that I resonate to. And so happy to accentuate it and this conversation. Do you have anything you'd like to say more on that?

SB: I agree with a lot of things that you mentioned. I also think that spirituality is not separated from science. Because, the mind that perceives both is the same mind. We don't have a special, separate mind for spirituality and a separate mind for engineering or economy or whatever, whichever category that we want to discuss. There is only one mind that we have. But the mind that we have, the way we utilize it, I think that is different.

That makes the difference between an engineering mind or a mind that is more spiritual. So I think recognizing the connection between, the key similarities and common grounds between spiritual values that are as you mentioned, other centric becoming more conscious of others and integrating more of

others in ourselves. In design, I think that would make a dialogue between different disciplines, much easier.

And also the idea of becoming more spiritual, and I think spiritual maybe is a bit of a loaded concept. I think mindful, I like the word mindful or maybe conscious or more intentional would become more fashionable for an engineer to become more intentional in their design.

Really having a good impact on communities and delivering value to communities just beyond the economic services that are in the set of their balance sheets, so to speak. So this is something that I thought that maybe I can add to what you said.

DSW: So Shima, let's talk about the best examples of mindful smart cities. So give us some examples of how this is supposed to work. In your book you talk about MolenGeek as part of this. But anything you want, just some of the best examples of mindful smart cities that you've encountered, perhaps you've been involved in them or perhaps you've just observed them.

SB: I give two examples actually in my book, one of the examples that I discuss a little bit more extensively is that of MolenGeek that is located in Molenbeek, one of the 19 communes of Brussels. I need to give credit also to their founders for their incredible work. And also for the time that they actually devoted to me to explore their vision and the conversations that we had together.

Well, I think the practice of smart cities that I witnessed in MolenGeek was mindful in that the founders recognize that the ICT driven consciousness or Noosphere or the field of thoughts that were functional in different parts of Brussels weren't really functional for communities that were X generation immigrants.

And therefore having recognized that, they studied their needs and they came up with this new model of creating technological labs and innovative labs. And they were extremely successful in attracting the young talents that would otherwise not be able to have a voice in classical ICT driven language of smart cities that is strictly present right now in Brussels.

So the practice that I think they had in my perspective is an example of a mindful smart city that is recognizing the difference of culture, and recognizing different needs of communities. And also recognizing that one notion of smart might not work for another part of the city. I think that was quite mindful of these leaders. I think another example that I have in the book is actually from Indonesia.

Part of my book, I travel to Asia and I lived sometime also in Indonesia in Bali. I found this really amazing concept cafe that would attract, I think I would say 1,000 people per day, maybe even more, from different from different backgrounds, different languages, different cultures, they all are digital nomads and entrepreneurs that would sit there and work together and talk.

So it was a coworking space, also sharing of values, sharing of values about food, sharing of values about spirituality, their belief system, the changes that are happening in the world. So I think if I can say the examples of successful smart cities, a majority of them, they have this incredible capacity to observe and to recognize that what works for one part of the community doesn't work for their community. So it's this, I think agility to understand that smartness and being smart needs to be adapted to the needs of communities.

DSW: Yeah, that's great Shima. And I'm glad that you mentioned Bali and let me, Bali could be used as an example to illustrate a number of points. There's a wonderful anthropologist named Steven Lanson, who studied the water temple system of Bali. He has a wonderful book on it. And so Bali is a very polytheistic culture, and there's a whole religion devoted to agriculture, it's called the water temple system.

And what he worked out is how functional it is. That basically this is a religion that orchestrates rice agriculture. The planting, the irrigation, the pest control, amazing functionality to this religion that it

evolved over a long time. And when Westerners came in with their green revolution plants and so on, they just swept that away.

And they substituted their agricultural practices, which turned out to be a disaster. So there's an example of a dysfunctional form of development. But now what you're saying is, with your example, is that now in the digital age of course, everything is much faster. And now we have in Bali, the very same Bali, we have this innovation center, that's super inclusive.

People can come from all different cultures and they can feel part of this and then they'll experiment like crazy. So one point is that the pace of cultural evolution has become so much faster as indeed it must be. Because the new solutions, we can't wait generations for new solutions to come about. That has to be much more mindful. And that's where we get into innovation, entrepreneurship.

What would that be about rapid experimentation, except that too can go wrong when it's too market and capitalistically oriented. Because if all you're trying to do is a startup that maximizes profits for yourself and your shareholders, that's its own kind of pathology.

So I'm putting a lot out there, but I think that there's the pace of cultural evolution and there's the target of cultural evolution. It's got to be fast, it's got to be diverse, it's got to be experimental, it's got to be inclusive. And it has to have the whole earth in mind. It has to have the global good in mind is the way I would put it.

SB: Absolutely. I think one of the things that I really admired in this food concept cafe, I would say like digital food concept cafe was that there were inherent value systems there, that were I think globally appreciated by everyone. And of which I think the respect for planet and the earth was on top of the agenda.

So you would see different cultures being there, different religion feeling included in the vision, because the vision wasn't about let's practice our own religion, or let's just all direct ourself toward a particular frame of reference. It was this shared frame of reference of earth, but also human wellbeing, peace and sustainability. And also this passion for technology and also the change that is coming.

And I think also awareness of business as usual is not working. So I think this was very present and the majority of people that I met there and I made contact with I would say that 95% of them were entrepreneurs and were fully conscious that well, is nine to five work or really working for someone or top-down command and control is not the way anymore. It's not the sustainable way. And there has to be another way that would be more inclusive.

So I think in designing smart cities, a framework that I put forward in the book is, giving voice to the opinion of people, that is something very critical. But also I think bringing a critical mass of mindful conscious people is another driving force behind designing a mindful smart city. So if there are examples, but then if you want to develop more of these examples in the world there has to be a particular level of awareness among players as well.

That once we become conscious that these previous classical models are not doing us any good or they're not providing us the outcomes that we desire as communities, I think the task of designing a mindful smart city or cities is not very complicated. It becomes a learning journey together.

DSW: Yeah. I want to mention someone named Victor Hwang and his book, *The Rainforest*, in which he talks about what makes an innovation zone like the Silicon Valley and they're all over the world. But there's many places in which they don't exist. So what's the secret sauce, the magic ingredients of a truly innovative zone?

And what you described for Bali, Shima would be an example. And he points to two ingredients, which actually the reason it's not so common is because these two ingredients don't go together very well. One is diversity and the other is cooperation.

Typically, we cooperate with people that are like us. And so you get cooperation without diversity or you get diversity without cooperation. But the magic formula is to have a culture, which is very diverse. But nevertheless, people feel safe and are in some kind of cooperative mode so that they can easily cooperate with each other.

And that's just what you described for this cafe in Bali. But I also want to add Shima that very often, these innovation zones are inclusive in some respects, they're diverse in some respects, but not in all respects. And in the case of Silicon Valley for example, they might be ethnically diverse, it wouldn't matter if you're Chinese or Indian or whatever, but probably not gender diverse at all. And so I think that to be fully diverse is something which doesn't come automatically. And I just have a question for you that cafe in Bali, was that gender diverse or was that mostly males? I was just curious to know.

SB: I think that's a really great question. And I really thank you for bringing that conversation in this direction. Well, I would say actually it wasn't really gender diverse when I think about it in terms of the majority of conversation that I had about technology, were with men. Very few women were involved in this kind of maybe smart cities or artificial intelligence.

So I think there has to be a systemic kind of problem there, as I also address in my book, that the view that we have on innovation and technologies is very much male dominated. We don't have a lot of women visionaries, futurists or philosophers I think yes, but I think visionaries and tech developers, I think these are professions or positions that were unfortunately occupied by men.

And I think Bali is the same in some respects, although I have to say that the founder of this cafe concept is a woman, Japanese woman. That spent some time actually in California as well. So she might have picked up some of the spirit of innovation there, I think Sayuri Tanaka, is her name.

But then, if I want to look at the same kind of climate in for example, Brussels or where I was invited to speak for example, some of the smart city or innovation or artificial intelligence places, I would say 95% of participants were men. So it's not a gender friendly place I have to say, unfortunately. But I really hope that it's going to change.

DSW: I think it is changing and fast. Needs to change and is changing and with all the values that come with it. Although I have to confess a kind of a resistance to the idea that there's some kind of feminine nature that's different than a masculine nature. I think that when you talk in your book, for example, you talk about compassion, where is it here? As a kind of a feminine value, but there might be a big average difference between genders.

But of course there's compassionate men and non-compassionate women. And so I think really all of these things that we associate with different categories, gender or ethnicity are really, they're basically properties that have been selected by some evolutionary process and can change yet again.

So I like to think that there's a sort of a universal human nature and that we're also very flexible that we can develop in ways that are more or less compassionate, more or less sympathetic, more or less this more or less that, that's what evolution is all about. And that when we're being mindful about cultural evolution, we're selecting compassionate, prosocial, mindful, spiritual properties in everyone. And everyone can respond to that.

SB: I fully agree. I don't think that there is a specific kind of a female oriented version of a city that would make it more mindful or a masculine or male driven model that would make it less mindful. That is very much clear for me as well. And in my book I also discuss the lack of women present in the technological narrative.

I actually do not mean to create just a place for women to speak about cities or make them a woman oriented vision. I highly believe that cities are about everyone. I think what is happening in the narrative is it's... well, it's male dominated. This is not to be argued, because these are facts and majority of literature is being written by men.

But nevertheless, I think what I discuss and I would like to emphasize is that, men and women think differently. So they have different views of intelligence. They use intelligence differently. And I think this is a difference that should be celebrated and should be integrated when we think of how we can design for example, write algorithms or how artificial intelligence can be framed for future.

I think these are capacities that I think can enrich our future cities. So I think that would invite more women to the narrative and to dialogue. At the same time, the compassion, mindfulness, empathy, love, I think these are universal. They're genderless, they're just highly valued properties and capacities that we all seek to have in one form or another in our lives. So these are genderless universal building blocks on which our cities should be built.

DSW: Here's one last thing, Shima. And it's on page 51 of your book. You say, "Perhaps one of the most smart interfaces that we have is out of our own bodies and mother nature. All information that permeates into our bodies is shared and it is this smart sharing that shapes our reaction and colors our experiences.

A hallmark of well-balanced sharing is a sense of wellbeing that is generated by balanced and intelligent trade offs between the human ecosystem and its surrounding spaces. In developing mindfulness engineering my frame of reference for a smart city is mother nature, looking at natural ecosystems for instance, trees." So on and so forth. So what you've done here, is you've actually pointed at two biological units. One is a single organism, okay. And the other is nature at large, like a whole natural ecosystem.

And what I want to assert, and this is a very big part of multi-level selection theory is that actually we need to distinguish between those two, that the metaphor of the single body is exactly right. An organism, a single organism is beautifully coordinated and so on and so forth, exactly as you say. And what we need to do is actually create that concept of organism at the scale of a city or the whole earth.

But if you look at natural ecosystems, they're more like an unregulated city than a single organism. And so the pathologies that we associate with human populations also exist in nature. What the Buddha said about suffering caused by craving and desire, exists throughout nature.

And I make this in complex systems terms by distinguishing between two meanings of complex adaptive systems. Number one, a complex system that is adaptive as a system and number two, a complex system composed of agents following their respective adaptive strategies.

And when you have a complex system composed of agents following their respective adaptive strategies, you have a world of suffering as the Buddha said. So often set at odds against each other. And that's what we mean by nature, red and tooth and claw. You actually look at nature, animal societies and animal ecosystems, not always, but often they're just horribly despotic.

There's nothing we would want for ourselves. And so I think that the whole challenge, of course, is to create complex systems that are adaptive as whole systems, and what we begin with are complex systems composed of agents following their respective adaptive strategies.

And in some ways the whole problem is how do we go from that second meaning of complex adaptive systems, which is full of suffering, to that first meaning which has the harmony of a single organism. And so those two meanings of complex adaptive systems, I just would love you to reflect upon from your own perspective.

SB: Well first, I really like how you look at complex adaptive systems. I never thought about them in these two different ways of looking at adaptation in the way that you put, I think it's very insightful. In terms of adaptation, individuals adapting to their own internal drives. If I want to answer this question, I think maybe I go back to the beginning of our conversation.

You asked me why cities need to be smart and mindful? I think they need to be mindful and smart because of exactly what you have said. Because of exactly what you mentioned, because we live in complex adaptive systems.

Cities as an example of complex adaptive systems consist of adaptive agents. And if we are not mindful, as you mentioned, these agents would just follow their own adaptive strategies. It's not a whole anymore. It's not a complex system anymore. It's a dis-integrated whole that is not cooperative, that is not synergistic. That is not harmonic and it's not resilient and it's definitely not sustainable. So the metaphor of modern nature is being used by many of course. But at the same time, I think it's a great frame of reference because... and our own bodies of course, is that if we take a city, if we think of a city as a body, as a single organism, then I think our driving force would naturally change.

Because it's kind of a paradigm shift that if my hand decide to function on its own, my leg decides to function on its own. My head decides to function on its own, there wouldn't be anyone here sitting to be called myself to become me or to become you or to become Alan. So it's this orchestration of different parts together that would deliver a single signature that would be called a self.

And I think a city is similar. And I don't think I can it any better than you. But I would just say that, that's why we need mindfulness. That's why we need to become more aware of these interdependencies and connections.

Because the kinds of complex systems that we need for the future, definitely they are the kind of systems that are more capable of adapting to... not only to themselves, but also to the changes of the environment and also are able to be cooperative as well.

DSW: That was a wonderful end to our conversation Shima. And so happy that we had it and that we could make it available. So congratulations on your book and I look forward working with you on realizing the vision of your book, which is also very close to my own vision.

SB: Thank you so much David, it's been a great honor to actually to sit with you and to discuss with you. I really thank you for reading my book and having this time to have a conversation about it. It really means a lot for me.

And I'm also really keen to collaborate. I read what you sent and I think there are so many connections that are so much shared. I think there are so many resonances between what I think and what you think. And I think there is a great opportunity for collaboration definitely.