



## 17-10-2024 RICHARD BASKERVILLE – TRANSCRIPT

### 2 SPEAKERS

Michael Gau  
Richard Baskerville

Duration

34m 55s

### START OF TRANSCRIPT

#### **[00:00:02] Michael Gau**

Welcome to another interview within the DSR class. My name is Michael Gau, and I'm delighted today to have Professor Dr. Richard Baskerville here. Richard, you are a Regent Professor Emeritus in the Department of Computer Information Systems in the Robinson College of Business at Georgia State University. I was looking at your track record, and I hoped I could identify some stars that I would like to highlight. But unfortunately, your track record is so large that it's kind of impossible to identify a couple of stars. So, I would probably miss out on some important work. Also, when looking at your citation numbers, it's over 32,000 citations. That's just amazing. I would kindly ask you to introduce yourself to the students in the DSR Academy, and maybe how you got into design science research would be interesting.

#### **[00:01:04] Richard Baskerville**

Okie dokie. I'm an American. I was born in the Blue Ridge Mountains just north of where I live now, which is in Atlanta. Left there at the ripe age of 19, started traveling with the military. Fell in love with what you call wanderlust. After that, began to engage other cultures. So, I've traveled around a lot. I ended up at one point working for the US Navy at a headquarters building in London, which is positioned exactly where Winston Churchill told us to put it. Where the Royal Navy could keep an eye on us. That gave me an opportunity to study at the London School of Economics. So that's where I did my PhD. And after that, I've spent quite a bit of time in Europe. I worked in. I won't torment you with a list, but I've worked in many universities across Europe and enjoyed it thoroughly. Again, because of the cultural experiences. I've lived in Japan. I've lived in the UK for many years. I lived in Denmark. In Australia for quite a bit of time. A lot of time in France and in Italy as well. Oh, I've never been to Liechtenstein. There was a hid for you. I am a recovering engineer, which a lot of people would understand in that my first career was in engineering with designing electronics, electronic circuitry. Did circuit design and then moved to systems programming. Kind of an outcome of that, as the digital world started taking over. Began to do more systems development, systems software. Literally designing the programs for the hardware that I had also designed. Then I ended up with a degree in management and a lifetime experience in engineering. And what do you do with that? Well, okay, informatics, information systems tied the 2 together nicely, and that's what I studied at the London School of Economics. I was particularly interested in security because I was working with secure systems. Again, they're military systems. So, it was very early days of security. They were so early that, as a researcher in that area, I could not earn a living. Trying to publish work in security, nobody cared. Security was just not an issue in these very early times. To survive, I had to publish, or else I would lose my positions in the universities. So, I became interested in action research as a research methodology. This was because I believed that I would have better luck studying security empirically in a consulting mode. Consulting designer mode, if you will, and then be able to publish those kinds of results. Now, I was only slightly successful at doing that. But I began to study 1st research methodologies of action research and then later other forms of research. So, I'm really better known for early publications and action research as a methodology than I am for the security

research that I was trying to publish, having done it with action research. And you may find in other writings, for example, those of Järvinen, that action research and design science research are really quite closely related. As a matter of fact, my first encounter with action research was with a request from a researcher who wanted to use one of my action research papers as an example, as an exemplar of design science research. And at the time I said no because it was action research, and whatever design science research is, that's not what I was trying to do. So that was an honest response. But then my curiosity was piqued. I worked in a department, and at that time I was chair of a department at Georgia State University, which was rather technical for a business school. Some of the names you will encounter routinely in design science research were either working there or passing by. That would include Vijay Vaishnavi and Samir Chattergy, Sandeep Purao, Matti Rossi, and Maung Sein. All of these characters were passing through the doors, and many others. And at that time, we were working on. They were working on something. I considered myself part of that group. They called Improvement research. So, they were trying to improve business and commerce through the use of technology. And then, at about that time, Alan Lee came through as an editor working with Alan Hevner on something that they were calling design science research. That registered with that whole group. So, the word improvement disappeared, and design science research took over. It was really a kind of, what would you call it? A greenhouse for early work in design science research. The names I've mentioned went on and sort of went out from Georgia State and worked in other places, but always kept in touch. And I was able to kind of cling to that group. It was so close to action research but had that engineering flavor that I was very much incentivized to become part of that. It just registered with everything I've done in my life.

**[00:08:14] Michael Gau**

Wow, Very interesting and a very lively past. And I can imagine it was an exciting time to work with all these other design science research big names that you mentioned. So today, we would like to talk a little bit about a paper with the title Genres of Inquiry in Design-Science Research: Justification and Evaluation of Knowledge Production. You published this paper together with your colleagues in MISQ in the year 2015. Can you briefly summarize what's the main contribution of this paper? What did you want to communicate back then?

**[00:09:02] Richard Baskerville**

Yeah, sure. In my mind the problem, can I talk a little bit about the problem?

**[00:09:08] Michael Gau**

Sure. Yeah.

**[00:09:10] Richard Baskerville**

One of the problems was in these early days there were multiple views of what this design science research was. Some people thought it was a methodology. The winning view, I think, in the outcome was that it was a paradigm with multiple methodologies within it and multiple approaches. But in that environment, it was really difficult to publish the results of design science research. Because there were so many differing views. So, you might send a paper in for review and the reviewers would either accept or reject it for really quite different reasons. And that made it very complicated to try and revise a paper that would satisfy multiple viewpoints from different reviewers. Required a lot of expertise from the editors, and in many cases it was new. The expertise in the editors just wasn't there. So, the problem we were tackling was not just that the methods could be different within this paradigm. But the fundamental ways you would go about producing models and producing the knowledge were different. It could be different at different stages of a design

science project. That meant at one point you might be doing design, and it could be a very creative act, a very generative act, an artistic act. If you think about it, you're creating something there, but you're creating it conceptually. At another point, you would have this mode in which you are really doing an experiment. You're implementing this design and then testing it to see what it produces. And the idea behind the testing of it, the evaluation of it, is that it would validate the whole project. If the designed artifact worked, then the design was also validated. But yet the design may have been done in one knowledge creation mode and the evaluation, the construction, and the building would be done in a different mode. This was tripping up the reviewers. I think, to a large degree, the researchers didn't fully understand what was involved in it. In one point it might be engineering; at another point it might be construction. So that was the impetus behind it was as a study of the different ways in which any design science project could produce knowledge. The idea there is, then it could be evaluated in each stage or in each form. And it's proper philosophical grounding. That would be the backstory. What we ended up was in this; it's not really a 2 by 2, but it's 2 dimensions of the knowledge. I have the paper in front of me. One end was the kind of scope of the knowledge being produced, which is whether you were producing these kinds of normative laws. Law-like, there were no laws in sociology or even in engineering that would sustain themselves over a long period of time. Or you're actually maybe doing an experiment. An experiment is very much looking at a very specific context and developing knowledge relevant to that. And that's called ideography. The law-like is called on nomothetic knowledge. So, at different times in the project, you might be trying to make these sorts of global law-like statements. At other times, you would be narrowly explaining the understanding of a particular situation that comes out of this project. The other dimension was simply the dimension between design and science. Design being something that could be theoretical, not necessarily anchored in reality; it's also prescriptive. This is what you should do. That brings in all sorts of ethical issues when you use the word should. It also could be very artistic. So, there could be questions of beauty involved in design. Then, on the other end, you've got this scientific part where you are adopting a knowledge mode of science. And that's where you're dealing, perhaps empirically, with a real artifact that's being created and positioning it in the environment. Then testing it to see what effect it has on the environment. How did it react to the design? So that gave us these kind of 4 modes of knowledge generation. And we could take projects. And we do, in the paper, design science projects and map out how they moved from one mode to another. Again, the idea here is that if you want to evaluate a design science project, you have to remember that the project will operate in different modes of knowledge generation at different times in the project.

**[00:15:34] Michael Gau**

That's a very interesting perspective. And of course it's about design knowledge. And there are different types of design knowledge I would say you describe in your framework. So, what is your take on design knowledge in general? Why is it important? Should we care? And how is it related to designing an artifact?

**[00:15:56] Richard Baskerville**

Well, you know, I won't talk about that much design knowledge. And the reason is because we're talking about design science research knowledge. I think, in the field of design science research, we should be careful to use all 3 of the terms. It has these different modes of knowledge, of production. But design and science—in some ways those 2 terms are oxymorons. Because science originates in the study of nature, of the environment, and natural laws. That's the basis of science. We have sociological science as well, but in behavioral science, I think we like to call it from the DSR perspective. But it's still science. It has this goal often of replicability, validity, and reliability. It has this notion of method. And that's quite different from design. In the sense that the design is creating a—I don't know—a recipe for a future world. Now that's a

very philosophical thing to say, but the design is a recipe for a future world. There are many possible future worlds. That can be quite, how do I say it, that can be quite global in a sense that you realize that you're trying to put something back in nature that wasn't there before. This is why I don't think, I'll back up a notch. Okay, there is a field of research of academic study called design research. And that's much older than design science research. Design research is purely looking at the way designs are created, how people go about it. They're interested in the results of design, but not so much in how things are designed on their own. Design Science research goes on to kind of use scientific methods or scientific ideals, I would say, to validate those designs by creating the artifact that's been conceptualized in the design and dropping that artifact into the natural world, our environment. That artifact, when you put it in the environment, then becomes subject to natural laws. So, subject to physics and scientific testing, for example, in that mode. Once you've got it, it means that the natural world has changed as a result of creating the artifact that was designed. That can be studied in a different way than the design would be studied. So, when you ask me to talk about design, I can do that. But then it can become confusing because in design science research we don't separate the design from the science or either of those from the research.

**[00:19:50] Michael Gau**

Yeah, no, thanks for clarifying. I think that's a very important point. And I agree.

**[00:19:53] Richard Baskerville**

I hope I didn't confuse you more.

**[00:19:58] Michael Gau**

No, I don't think so. I think it's very important to be careful with designing and design science research. As you said, yeah. I think it's worth to talk about that.

**[00:20:07] Richard Baskerville**

So, I'll mention something else. The design research community changed, I believe, along the time that design science research began to develop. Before that period of the development of design science research, the Design Research Society, for example, had idealized that little book by Herb Simon, *The Science of Design*, as a kind of, I don't know, an epitome of what design research should be. Looking at research or researching design in a kind of scientific way. But I think that community looked at what was coming out of design science research and decided, No, that's not what we're doing. We're really only interested in design. About that time, that community started to distance itself from Simon's notion of the science of design. Because it was maybe a little bit too much, integrating science and design. It made the study of design itself a little more cloudy.

**[00:21:27] Michael Gau**

Yeah, interesting. Coming back to your paper. Would you do anything different if you write it nowadays? Or is there something you would change with the knowledge you have? Now, for example, how to handle AI or different technology in the knowledge creation process. Just as an example.

**[00:21:52] Richard Baskerville**

I'm not sure there's anything I would change at this point in time in the paper. It seems to be enduring what's there. Because it's about knowledge production. There are things I wish we had the space to put in that paper. Of course, I have 2 very knowledgeable co-authors. I think a lot of the if I were to apportion it out, I think a lot of the background in knowledge production that was the Brainchild of Mala Kaul, my co-

author, and a lot of the engineering angle of it probably came from Veda Storey and myself. I would have liked to talk about this notion of generating the design more and the artistic aspect of it. Because I think it's rare that a designer is following some formula about how to do the design. I think it's a much more creative kind of act. I can't use the word. So a generative mode of discovery. You learn by doing something, even in the design end of it. That kind of creative act often involves a sense of appreciation of the beauty of something. Even if you're designing an algorithm. The algorithm, in my view, can be a beautiful thing. When you talk about AI, we could discuss the beauty of the various algorithms that are there. I doubt I would put anything in the paper today that might include AI. But that's simply because I think the work in AI in terms of knowledge development is in a very early mode of development. So, you can sort of see what's coming down the road for us from the work in AI, but a lot of it, for instance, now, is still algorithmic as opposed to a learning kind of mode where the computer technologies are actually developing the knowledge rather than just regurgitating it. But that would be the main thing from my viewpoint. I wish I could have done more on the kind of artistic element, the creative element that's in there. That's also the action researcher talking, a generative discovery; love that.

**[00:25:05] Michael Gau**

That's indeed very interesting. Based on your experience. What would you recommend young design science researchers? To get into design research projects, and specifically how to publish such work. Do you have any recommendations?

**[00:25:26] Richard Baskerville**

I think, based on this particular paper, that...

**[00:25:31] Michael Gau**

Or in general.

**[00:25:32] Richard Baskerville**

We've identified them. One of those is to be aware of the basis of your claims in the paper. Claims that come out of your research. What's the basis of those claims? Be sure that those arguments are actually very plainly in any reports you might generate, or, for that matter, by the way, you should think about them. So, you know what you know. You know why you know this. I'll repeat that you know why you know this. Then make sure when talking about publications that rationale, that justification, that argument is very clear in the paper and as simple as you can make it. Design Science research is a very complicated approach. It's a long approach. So, being aware of how to make it look simple is a writing exercise. So, your job is to make the complex look simple. Not the other way around. That means you actually have to be a good writer. So, if you're a lousy writer, then you need to team up with someone who is a good writer to make it very clear. You can kind of look across some of the authorities in the field and their ability to communicate. Those 2 things go hand in hand. My favorite example is a management researcher named Detmar Straub, who was editor-in-chief of MISQ for many years. He has written many papers on quantitative methods. That's what he's best known for. But his 1<sup>st</sup> doctorate was in English, English literature. He was a chaucerian scholar. His real talent is being able to not only understand the quantitative approaches but then to explain them in a very simple and straightforward way. That's a particular skill, and it can be a learned skill that researchers need to publish what they're doing. Not just to do something really good, but to publish it. I also have a favorite reference. Let's see if I can remember this.

**[00:25:05] Michael Gau**

Can you share it?

**[00:28:37] Richard Baskerville**

Oh, sure, I will. It's very well known. It's written by a philosopher, I think, named Murray Davis. In 1971, Murray Davis published a paper called That's Interesting. And if you want to find the paper, open Google and type That's Interesting. And you'll get the Murray Davis paper. What Davis was explaining is why theories are interesting. But he did more than that. He also explained why they were significant. Because I believe interesting and significant are the same thing. Read that closely. When I read that way back, that really changed my life as a scholar. Because I had a fundamental understanding of what it means to be significant. I think a lot of starting design science research scholars don't pay attention to what's really interesting about the artifact they have designed.

**[00:30:00] Michael Gau**

The last question. What is your desire for the design science research field? So, any recommendations for the community? What would you like to change, because in the beginning you mentioned, there was this tension between different views on design science research? And do you still feel this is a current debate or?

**[00:30:26] Richard Baskerville**

No.

**[00:30:27] Michael Gau**

What would you wish in general for the field for the future?

**[00:30:30] Richard Baskerville**

No, I think the paradigm view has won out. That we have some leading methodologies now that are within that paradigm. So, it's well understood that we have different methods. I think at the moment, the pendulum has almost swung in the opposite direction. So, most of the work that's done in design science research really anchors itself to about, I don't know, maybe 4 different methods. I'm not going to list those, because I don't want to argue with my colleagues about which are the 4 best, but from my readings, there are about 4 methodologies that are very common. I think there's room for more than 4 common ones. So right now, the sort of survival instinct is that you have to be able to follow one of those 4 methodologies or methods. I think it's about time for us to grow out of that and begin to accept that there are many different ways to do design science research. The method is important because that's another feature of science. Science is very methodical. That gives you some hope of doing something like replication. But you know, we don't have to have one method or even 4 methods. I think there's room for more than that. That's something for us as a field to grow out of. And I think that will happen in his very nature. Simply, someone somewhere is going to come up with a better method, and it will begin to attract more and more followers. So, it's kind of an area that I've been forced to work in for so many years: studying research methods and then occasionally inventing one. So, what have I got? Michael Myers and I worked on design ethnography. We've worked on that as a complete method. And that's a push forward. People are using that method. Not to the degree, though; it's not one of the 4, but it's worked out really well if you're trying to do an ethnographic study of a culture, and you haven't got a lot of time. What we think of from an engineering viewpoint as a long, complicated process design science research because you have to design, you have to build, you have to evaluate. In anthropology, they see that as a shortcut because they're used to studying another culture by embedding yourself in it for a couple of years. Where you can do a design science

research study as a means of conducting an anthropological study. You can do that in 6 months, or 7 or 8 months. So, there are opportunities to develop more. More design science research methods that are based on well-established methods elsewhere in science. I see that as an area where the field is likely to go next.

**[00:34:20] Michael Gau**

Design Ethnography sounds very interesting. I can imagine we could fill another interview just talking about this really interesting method. Unfortunately, we are running out of time. I want to say thanks again for taking the time to share all your valuable insights about the paper. And your opinion about design science research. Thank you very much. Again.

**[00:34:52] Richard Baskerville**

Oh, you're ever so welcome!

END OF TRANSCRIPT