

## Intel Outside

an Interview with  
Genevieve Bell



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**Gerry Gaffney:**

My guest today is Genevieve Bell. As a child, she lived on a remote Aboriginal community in Australia where her mother was an anthropologist. Later she studied at Bryn Mawr College in Pennsylvania in the USA, and obtained a PhD in anthropology at Stanford. She now works at Intel as Director of the User Experience group, which is part of Intel's Digital Home platform. Genevieve, welcome to the User Experience podcast.

**Genevieve Bell:**

Thank you very much Gerry.

**Gerry:**

Can you start by telling us a little bit about the purpose of Intel's Digital Home Platform Group?

**Genevieve:**

I think one of the challenges as we move into an era where there is greater bandwidth to the home, when consumers have increasing amounts of technology in their lives, is really to start thinking about how we develop technology that is specifically purposed to live in our homes.

If you think about the history of computers and computing technology, I think it's safe to say that in many parts of the world most of that technology started off in an office

and started off with all of the assumptions and infrastructure that offices bring to bear, and over the last 15 years or so we've seen that technology steadily creep into our homes but not really take into account what it means to be there.

So when I think about the kinds of technologies we're designing I think we have a series of challenges that are specific to the home. So for instance if you think about the kind of PC platform in its traditional sense it's really designed to be in an office, it's designed to be somewhere that is climate controlled, that has built-in infrastructure, that has a service department, people who can fix things. I don't know about you but there's not an IT guy lurking in the basement of my house waiting to just troubleshoot my machine when it breaks down. And I think part of what we've really seen and I think increasingly this sort of area of potential and concern is that we've built a lot of technology but it wasn't ever built with the home in mind.

So really, for Intel, the purpose of having a Digital Home Platform group is to start thinking about what it means to build technology with the home in mind and all of the things that make it a home. Both in a pragmatic sense so, smaller than an office, larger than a breadbox, it's a place where people have a very different life than they

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do in the offices. Our homes aren't about centres of productivity and efficiency and work in quite the same way that offices. So ... for us thinking about having a Digital Home group is really about trying to get our heads around, in a technical sense, what it would mean to purpose build technology for the home.

### **Gerry:**

I guess on a slightly related note it was interesting to see Apple recently dropped the word 'Computers' from their company name.

### **Genevieve:**

I think they understand that computational power is important but what people see is the experience and I think it's no surprise that their product lines talk about music, talk about experiences, that it's about what the technology does, not the technology itself and I think one of the things we're really seeing in this decade is a shift away from technology for technology's sake much more to technology for the experience that it delivers. And I think the challenge for technology companies is learning to adapt to what it is that the markets we sell into really want. I think for a long time we understood that the things that made the technology important within our companies were things that consumers wanted too. It was all about megahertz, it was all about speed, and I think Apple's been a really nice example of leading the way in taking much more into account what people actually want from technology. And you know part of what people want is [for] the technology part to be invisible. They just want to have an experience, they want to do the things they do, they want what it is they care about to be immediately apparent and available to them.

### **Gerry:**

Many people would say that you've got a very enviable sort of job travelling the

world and exploring different cultures and you know gallivanting around the place basically, do you enjoy that or does it become a chore?

### **Genevieve:**

[Laughs] Well that's a total setup question - "Your job sounds like it really isn't very much of a job!"

How can I not love it, right? I think you're absolutely right. I do get to spend time all over the world and it's an extraordinary privilege. And I think one of the things I most love about my job is that I get to spend time in other people's lives and I get to see the world from someone else's perspective and someone else's vantage point, and it's an extraordinary way to get to know a place. To encounter different countries and different cultures from people's living rooms and kitchens and front verandas and cafés is a really rich way of knowing other people and other places. But for me it also comes with this extraordinary responsibility. I think if people are prepared to let you into their homes and their lives and tell you, really, surprisingly intimate details about their aspirations and their dreams and their hopes, it puts a big responsibility back on me and on my team to tell those stories back to Intel. And this is not just about being a tourist, right? It's about being a researcher; it's about trying to understand those places and bring those stories and hopes back to Intel and do them justice and keep them alive inside the company, so that what you're doing is telling these tales of other places back into Intel so that it changes the place.

### **Gerry:**

In December of 2006 you were keynote speaker at OzCHI in Sydney. I didn't actually get a chance to talk to you after that but I must say that I enjoyed it enormously, and the people that I spoke to at the conference enjoyed it enormously. But at

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one point you said that when observing users, the point at which they engage technology is precisely the wrong point to begin observing them. Do you recall that statement of yours and can you tell us a bit about it?

### **Genevieve:**

I do recall it, yes. What I meant there is that it has sometimes been the case when people research technology that the point at which you start that research is the point at which someone picks up the telephone or starts typing on the keyboard and for me that's already far too down in the process. You want to know; Where does that PC live in someone's home? How did they acquire it? What else is around it? And even one step back further than that: What do people care about? What motivates them? What gets them up in the morning? What do they do when they get up in the morning?

So that really for me the context is as important as the actual act with the piece of technology because I think if you don't understand that larger context it's hard to really make sense of what people are doing with technology. Part of that comes out of my training as an anthropologist, where really what we're interested in is these larger patterns of meaning-making. I think for me as a researcher one of the challenges is always to hold in abeyance my own sense of what's going on because I think - and I'm sure we all do this - I think we've all stood in an airport or on a train platform and watched two people have an interaction and made up the back story in our heads about what's going on. And that's not an unfamiliar activity, right? You sit there going 'oh, interesting', and we're all making a little story to make that interaction make sense.

But every time you do that what you're bringing to bear is your own cultural narrative to make that interaction make

sense, and I think one of the challenges as a researcher is to hold in abeyance one's tendency to make that story up. Because as soon as you make that story up you bring your own perspective and baggage and history and cultural practice to bear, and for me, what I'm always seeking to do is bring the right interpretation to that exchange, and I think when you want to look at what people do with technology, you're also trying to do that. And it's so tempting because we all, or many of us, have technology in our lives to bring our own understanding of it to bear. And what I'm always trying to do is take not one, not two, but about five steps back and try and see the much bigger picture.

### **Gerry:**

I guess when you talk about what people are doing with technology, we all do tend to generalize from our own experiences, as you say. You had some great stories about different uses of technology. One of them was you were talking about mobile phone usage in Ghana in West Africa. Can you tell us a little bit about what you found in that arena?

### **Genevieve:**

It was the work that one of my colleagues had been doing and one of the things that they had noticed and indeed one of the things that was happening in a kind of a larger sense was that local community were all adopting cell phones so there'd been a real kind of explosion in people buying mobile phones and taking them home with them, but the local mobile phone companies weren't making any money.

And there seemed to be this big disconnect between the experiences of being in the streets and cities and towns of Ghana, where everybody had a phone, and the phone companies who weren't making any revenue. One of the things that was

happening, and I think it relies on a practice that's probably familiar to some of us. Even if you grew up in Ireland I'm prepared to imagine this was true there too, which is that back when we were all kids - in the dark ages before mobile phones - we all had a practice [that] when we went somewhere else [we would] call our parents and tell them we'd gotten there okay, or call our loved ones and tell them we were there okay. The practice was you called, but your loved one didn't pick up the telephone, and you had a pre-arranged code of 'I'll let it ring three times and then I'll call back and let it ring twice and you'll know it's me'.

And it was all about saving money. That should sound familiar. And I think you know one of the things that we found was happening in Ghana was exactly the same thing. People were making these incomplete phone calls and of course cell phones, mobile phones make that much easier. The number appears on the screen so you know who's calling so you don't have to do the thing that our parents inevitably did twenty years ago which was pick up the telephone! You know who's calling, and so what you had was an entire country of incomplete phone calls. And when the phone company actually went and looked at their phone traffic what they discovered was something like 96% or 97% of phone calls in Ghana went unanswered.

And in fact what people had done was developed an entire workaround system of paying for phone calls by using this system that we all had as kids. The code words there for it were 'flashing' or 'peeping' so that the number flashes on the screen or peeps thru your screen so there was this whole kind of set of local practices that were about using the phone in a way that was kind of unexpected and unintended.

**Gerry:**

You also had some photographs that you showed, I can't remember whether it was Ghana or another African nation where people had their mobile numbers written on their physical address - on their homes. What was that about?

**Gerry:**

Also about some of the same things, where your phone can become a proxy for your address, you know we certainly see that in other sorts of places, we're not shy in Australia or the States about putting our numbers on some things. You sell a car, you stick your number on that, you have office hours at a university, you might put your number there. It's a little more uncommon for us to put our telephone numbers over the threshold of our doors and I think that there you start to see some really interesting differences in how people are imagining the technology and I think for me that's part of the challenge and the joy of my job is that you get to see these kind of re-workings and re-imaginings of cell phones. Similarly I've certainly been in places where the equation of one person one cell phone doesn't quite work. I've spent time in Indonesia and I've spent time in a set of families who kept their mobile phones in a basket by the door and when you were leaving for a day you took whatever phone was charged and had money on it. There were a limited number of phones, and more people in the family than there were phones, and if you were inside that family you could call any other number and know you'd get data about the family. If you were calling from outside it didn't matter who you called, you'd get only as much information as was appropriate. So rather than me having your number Gerry and calling you and getting you I could get your mother-in-law, your auntie, one of your cousins, and because I was outside that network they'd just tell me as much as I needed - as they thought I

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needed to know. So there you have this really interesting thing where a whole cluster of phone numbers get associated with a family, and where information is parcelled out in very different kinds of ways. If you're inside the node and the network, you get as much information as you want. If you're outside it's totally kind of regulated and censored.

**Gerry:**

That's very different to the individualistic notions that we'd have about cell phone usage.

**Genevieve:**

Yeah, but I suspect it sounds a lot more like the party line system that I bet you had in Ireland as a kid the same way we had in rural Australia.

**Gerry:**

Before my time, Genevieve.

**Genevieve:**

Oh come on, I'm not that old! [Laughter]

But certainly in rural Australia party lines were still around when I was a kid. Party lines probably needs an explanation here - it doesn't sound as interesting as it might otherwise be. It's really the system of having multiple households on one phone line and where a different number of rings cue different households into it being their call rather than someone else's.

**Gerry:**

And provided great support for gossip.

**Genevieve:**

Oh absolutely. When I was growing up in central Australia there was something in the afternoons on the shortwave radio called the 'Galah Session' and it was a two- to three-hour bracket in the afternoons when the radio was basically open and anyone could get on. It was like being in a really

noisy pub and everyone having conversations at cross purposes with each other in this kind of... the equivalent of cyberspace, really, before there was cyberspace. And you know it was an extraordinary time to catch up on what everyone else was doing, catch up in a kind of intentional and unintentional way.

**Gerry:**

You've spoken about the connection between technology and religion. Can you talk a little bit about that?

**Genevieve:**

It's simultaneously surprising and in some ways very not surprising to see new information and communication technologies supporting religious practice. After all, in the west, and indeed in many other parts of the world, there's been a long connection between technology and religion. There's certainly been a long history of religious institutions taking on new technologies as way of promulgating the word and their mission. Perfectly in some ways to my mind quite reasonable, given the purpose of those institutions and what we've really seen over the last 5 to 10 years, and in fact in some places a little longer, is those religious institutions and individuals taking these new technologies on to enhance their activities, their purpose, their mission. And it can be anything from the current Vatican and the Pope who has a text messaging service where for a nominal fee a day you can receive a text message from the Pope once a day that you know brings you either citations from scripture or texts taken from his most recent talks and it's all about creating a connection between Catholics around the world and the Vatican. You can text the Western Wall. You can in many Muslim countries use your mobile phone to find Mecca. There are services in most mobile phone companies in those places that allow you to download a simple application that sits on your cell phone and

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you type in the name of the place where you are and an icon will appear on your screen that will let you orient your phone to Mecca. The same phone can be programmed to remind you when it's time to pray so suddenly this tool of information and communication also becomes one of devotion.

### **Gerry:**

I thought it was interesting when you spoke about the call to prayer also being associated with an auto turn-off on phones in some instances.

### **Genevieve:**

There are a series of phones that are available in Saudi Arabia in particular but also the United Arab Emirates that will also disable themselves so when the call to prayer happens your phone then turns itself off for 20 minutes.

You see similar things starting to happen in other places. It's not uncommon now in Mexico, Korea and increasingly in some parts of the United States to have churches with cell site dampeners so that your phone doesn't actually ring inside the church. So again this interesting tension between the sacred and the profane of how do you create and almost police in some ways sacred spaces. Does a sacred place have room for technology in it seems to be an ongoing and interesting question. And clearly we've seen technology move into those places and it's different kinds of technology. It's not uncommon in many of the mega churches in the United States at this point to have the sermon in PowerPoint, which is an interesting development (it raises novel questions when it crashes!), to have MP3 files for music, to be using flat panel displays to have pictures up, to have your church service recorded, cached and available on your church website. So we see lots of that stuff going on and I think different religious communities are finding

their level of what's appropriate and not appropriate. Some of them definitely know whether that tension's right. There's a well recorded case in the Philippines about three and a half years ago when the local Catholic establishment had to really start to scrutinise practices around confession and issued an edict that one could no longer confess by email, fax or cell phone.

Also I think you know we see these kind of interesting tensions and adoptions and accommodations in that space and for me it's an interesting place to be doing research partly because it's incredibly rich, a rich area, there's just a lot of stuff happening in that space, and partly because I think it's also, in spite of this long history of the strong ties between religion and technology, I think it continues to be a place that surprises us because our expectation of the technology is that in some ways it's so much about rationality and science and productivity, where of course technology, particularly in the home, has often not been about any of those things. One would hardly describe television as being a tool of rationality, science and productivity now. In fact it's in many ways quite the opposite of those things yet it's obviously a beloved device so I think part of it is also about constantly wanting to interrogate in a critical way the role of technology in society and to try and offer a more honest accounting of that.

### **Gerry:**

Now you've also been talking about moving between the religious and the profane you've also been looking at people's sheds recently I believe is that right?

### **Genevieve:**

[Laughs] I like that we can talk about religion and sheds in the same breath. You know, I'm a good Australian girl. I recognise the value of a shed in people's

lives. And I managed to find a way to make that into a research project, which was really coming out of critical standpoint theory, coming out of both feminist and Marxist theory of thinking about the ways in which objects around the edges and the peripheries of a social space or a set of practices often tell you more about that practice than standing in the middle does.

And so I was really interested to think about the ways in which sheds function in both Australia and the United Kingdom as a site of domestic activities. So, what is it that people do in their sheds that they won't do in their houses and vice versa, and what might that set of 'shedly' practices [laughs] tell you about notions of domestic-ness.

And the sheds were interesting in Australia in particular too because they often become a repository of old technology. It's where you stick your aging tellies, it's where your transistor radio still lives, it's where things go in the hope that they might one day be repaired. It's the cache of old posters and things like that. And also, sheds were interesting as this kind of site of a little bit of dangerousness, because there are always things that aren't quite working there. I'm interested in that opposition too between homes are safe and sheds are unsafe which is of course culturally relative.

**Gerry:**

Many people, Genevieve, would think of Intel as a company that makes chips to run things that other people design. Does this mean that Intel can't have a significant social influence?

**Genevieve:**

Wow! okay that's a big question.

**Gerry:**

Is that an unfair question?

**Genevieve:**

No I'm just going to have to gather my thoughts here for a moment [laughs]. I mean, you're not wrong. Intel produces microprocessors. That's what we do. And we produce very fast microprocessors [laughs] and, yeah, we've been evolving that form for 35 years, from by today's standards fairly unsophisticated stuff from the early 1970's to the multi-core and quad-core chips that we released a week ago. We've clearly evolved that form over 35 years.

And you're right, we've evolved that form and it has powered other things, things we often ourselves as a company didn't make. And I think for me there's this interesting element of almost magic there, right? You know, microprocessors have allowed a remarkable flourishing of technologies that weren't possible at the point that Intel started. In fact in the early days we had microprocessors before we even knew what they would go into [laughs]. You think about those early calculators and digital watches, the kind of first points to today where it's everything from televisions to mobile platforms to handheld devices to servers and desktops and sensors and stuff in the medical space... It's an incredible range of range of things that microprocessors now power and as a result of that I think of Intel as in some ways central to all of that. I mean, we make all of that magic possible, right?

As a result of that is being at the heart of an industry that is constantly creating and recreating the future. I don't think you have to make the devices to be instrumental in making all that magic and future-ness happen. In some ways because Intel always has an eye to the future and because it takes a long time to design your microprocessors; that's not an overnight process. I think we're always thinking out into the future and when you do that you have to think

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about what the consequences of those acts are. It's no surprise to me that you then see Intel involved in things like trying to do stuff around bridging the digital divide, about helping to put technology into rural and poorer communities, about thinking about what kinds of technology would be appropriate in emerging nations. how do we design technology that can help in rural Indian villages and not require constant electricity? How do we develop technology that's appropriate in Latin America and sub-Saharan Africa?

You see us working in all of those spaces and similarly you see Intel thinking about what is technology going to look like in the medical domain? We know health and wellbeing are important parts of people's everyday activity; how do we think about the role of technology and enhancing that stuff? As well as the more mundane spaces around work and productivity and also in the home. So I think implicitly in some ways Intel has a stake at least in thinking about the future, and thinking about society as well, and societies of course, it being a plural there.

### **Gerry:**

You've suggested that social scientists' responsibility extends to educating your clients. What do you mean by that?

### **Genevieve:**

Ah well! That's another good question.

As an anthropologist in particular one of the parts of my training was that part of what one is always doing is trying to educate the people you work with. Before I was at Intel I was a Professor at Stanford University in the States and my role there was as an educator and I think part of what anthropology brings to the table and to the conversation is this great willingness to engage with people and to help expand people's thinking. I think one of the critical

things that anthropologists can offer is this way of helping people think through their own cultural practices and their own cultural located-ness. For me, one of the real joys of having been a professor and one of the continuing joys of working at Intel is that moment when you can watch people realise that what they know is not the truth for the whole planet.

So you said a moment ago that we have a tendency to generalise from our own experiences of technology to everything else. We also have a tendency, not unreasonably, to generalise from our own lives to what everyone else might want or should want, and I think for me one of the real moments of success is when you manage to get people to realise that they can't do that, and that generalising from your own life and your own aspirations and hopes and experiences and expectations to everyone else's is to minimise and ignore other people's hopes and aspirations, many of which are deeply cultural. And I think part of the role of being an anthropologist is to engage constantly in that act of helping people understand their own locations and of the consequences of that.

I think the moment that I can see the light go on for people there is always a really good one, and that's what I mean when I say part of the role of being a social scientist in industry is to help people understand their own locations and the consequences of that.

For me, in a really simple way, that's about not assuming that the rest of the world wants to be American for instance, and I work in an American company. That the rest of the world doesn't necessarily want to live that way and that's not a bad thing. That there are other ways of being in the world there are other things that people might care about. People have other hopes for their families and for themselves and



what we need to do is develop technology that lets all of those things happen.

**Gerry:**

Genevieve Bell, thank you very much for joining me today on the User Experience Podcast.

**Genevieve:**

It was absolutely my pleasure. Thank you for having me.

**A note on the transcripts**

We make verbatim transcripts of the User Experience podcast. We then edit the transcripts to remove speech-specific elements that interfere with meaning in print (primarily space-fillers such as “you know...”, “um...”).

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