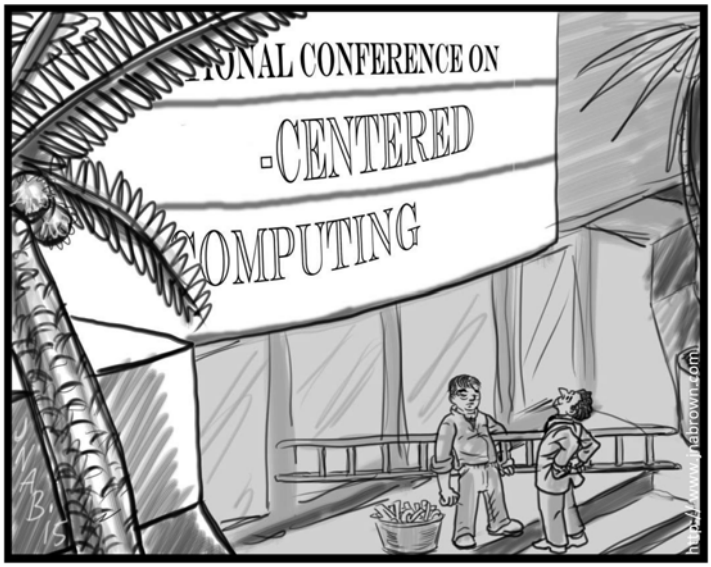
Part II
Anthropology-Based Computing: Bringing It All Together, for the First Time

Putting the Human Back in Human-Computer Interaction Is as Easy as ABC



"Ran out of letters, eh? That's okay, I don't think anyone will notice..."

Introduction

"You have to stop saying things like that!"

He was pointing at me from across the table, wagging his finger like in a cartoon. The others sitting with us, the rest of our research team, suddenly grew those blank expressions that people can grow when they don't want to be pulled into either side of an argument, and he continued.

"You always do that! You just say some idea as though it's true, without doing any research to test it! That's not science! You have to test your ideas before you can claim they're true!"

We were on a research retreat at a ski hotel in the Austrian Alps. I'd just returned to Austria after a year in Catalunya, and I was in the middle of presenting my research goals for the coming year. Suddenly, it didn't seem to be going very well.

Two years earlier, I'd come to Europe to join a consortium of five universities in the first cohort of the Erasmus Mundus Joint Doctoral Programme in Interactive and Cognitive Environments. I had applied with the hopes of being able to specialize in Human-Computer Interaction, and to focus on developing my replacement for the computer mouse and my idea to use weak haptic signals to trigger rich emotional responses [1]. During the interviews, it had become clear that I would more likely be working either on social robotics with a primary base in Barcelona, or on something more human-centered and affective based in Eindhoven. When the invitation finally came, my position was based out of Klagenfurt in southern Austria. My work there went well during my first year and now, after a subsequent year in Spain, I was back. My work was starting to be recognized internationally. I'd been invited to give a plenary lecture at a conference in Australia, and other lectures across Australia and Europe, including the IEEE Region 8 anniversary celebrations in Malta, the Digital Inspirations lecture series hosted by Telefonica in Barcelona, and even a keynote lecture at the IWANN conference on artificial neural networks in Tenerife. To put it mildly, I was feeling pretty good about my ideas and my work on them so far.

In that meeting room in Austria, I had just finished proposing the theory that I had developed over all of that time touring and speaking with experts around the world. I suggested that it might be possible to use the brain's natural filtration system as the basis for designing alarms and alerts. The example I used was ringtones on a phone, and I was suggesting that it should be possible to design a ringtone that could be heard and understood only by one person in a loud and crowded room. That it might even be possible that the ringing of the phone would inform the intended recipient of who was calling, without interrupting whatever work they were doing at the time.

This was when my colleague had pushed back his chair and raised his voice.

"You can't just say any idea that comes into your head, and then decide to base your thesis on it! Your work needs to be based on established theories not fantasies!"

Red in his face now, he waited for an answer, and red in my face, I tried to think of what to say. Everyone else at the table was trying not to notice the conflagration, except for the fellow to my colleague's left. This man, more senior but not the boss, holds a MSc in Psychology and a PhD in Computer Science. He turned slightly to face the finger-wagger, lightly cleared his throat to get everyone's attention, and then spoke softly.

"This idea that John wants to use is called the Cocktail Party Effect. It has been well understood in Psychology for more than 50 years."

There was silence around the table for a moment, and the finger-wagger pulled his chair back up to the table, and he grunted a little and shrugged, and then our boss told me to continue my presentation.

In the end, my proposed plans were not approved for inclusion in the programme.

In this section, I will present the underlying theory and the models of interaction that led me to use the cocktail party effect in designing new means of interaction for humans to use with simple or complex tools including computers and computerized devices and environments.

At the end of the section, I'll talk a bit about the way I applied these theories to my PhD work, and about the use I made of the Cocktail Party Effect in my first postdoctoral project 2 years later in Portugal [2].

References

1. Brown JNA (2015) "Once More, With Feeling": using haptics to preserve tactile memories. Int J Hum Comput Interact 31(1):65–71
2. Brown JNA, Oliveira J, Bakker S (2015) I am calm: towards a psychoneurological evaluation of ABC ringtones. Interact Des Architect 26:55–69