

# **Appendix**

a companion to

## **Witnessed Presence in Networked Wearables**

a Master Thesis by

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# Interview with Joao

**Bio: Joao Ferreira** is a senior UX/UI designer with close to 15 years of experience in digital media, an alumnus of *BBDO* and *YDreams* – a leading interaction design company. He has been involved in the *BOND* project since its inception. He is also an Assistant Professor at the Faculdade de Belas-Artes (Faculty of Fine Arts, University of Lisbon). Also, a devoted family man.

[00:00:00]

Alright, let's go, you understand that you're here for, what I'm trying to achieve here for my thesis, is to understand the social connections that have been empowered by technology. So if you look at a car, yeah cars allow us to travel faster and further, but cars are also status symbols - whether you own a Ferrari or a Toyota, it affects how people see you. So there's a social dimension to a car on top of the technical capability of the car.

So I'm trying to find the social dimensions associated with communication technologies. My first question then is, I want you to reflect from your own experience and life, how the social aspects of technology has evolved over time, in your life and in your work, what are the advances that you've seen?

Before the internet, before computers, when I say I'm connected or I know that person, it meant something completely different from what it means now in the FB age. Please tell me what you think has been the social impact of technology.

[00:01:57]

I don't know if I'm prepared for this.

[00:02:03]

It's not something you need to be prepared for. Just reflect, we'll create new meaning.

Ok let me narrow it down then for you. Tell me how long you've been working in the web industry and what are the trends you've seen in the social dimension?

[00:03:31]

Okay, so in the last.... I've been working full power in this digital world for the last 14-15 years. Of course, 14-15 years ago, things were quite different. The Internet was not something that everybody had. So staying connected that everybody seems to have the need for today, didn't happen then. So what did happen is, people found the Internet. You had those weird, now-weird services like mIRC, those chatrooms where everybody could see what everybody else was saying. It went kinda crazy that people could see each other's conversations. With this new powerful Internet, you felt the need to, scaling up, you felt the need to create this privacy, and started diving things into groups. Even with people that you trust, you just felt that need to start diving your friends, family, close friends, not-so-close-friends, your acquaintances... And that's actually a way of I would say digitally-social stratification. We naturally started doing this.

[00:05:29]

I like what you've identified here. I've personally never thought of it this way. And it's true, all communications used to be equal in a sense, and now we have the capability to do it, we've created the option and the importance to segregate communications into these real-life-analogue circles.

[00:05:56]

One way is because we can, of course. Sometimes these kinda things happen because you can. Sometimes you don't feel the need for something before you're presented with it. This is a bit of what happens with this new digital-social life, cos you're presented with new features in the main social network, and then you just get connected, and you feel the need to use them. So that's something that really happens sometimes. For example, Facebook is

probably the biggest one. So once in a while, FB changes. They have this strategy very well-created, it's not occasional they're changing this just because. They change once in a while, but they don't change but they don't present those changes to everybody. They present in groups. See how they react, and then either they open it to the rest of the world or they don't, depending on the results. The thing is, when you change something on Facebook, everybody complains! Where are my buttons, this is the muscle memory and the things you're used to doing. If you're used to something, and someone removes it or puts it somewhere else, you just start complaining about it. After a while, what you do is, you get used to the new conditions. It's what even socially we do. We don't question either the real real-social, digital-social life very much. We just get used to them. It's like playing a game. You just get used to the rules and you play by the rules. Some people of course just want to defy the rules, and some are followers always looking for new rules to follow. And you have people that just want to have new rules...

[00:08:48]

That's another very interesting observation. Kwame said something similar. He told me that I keep saying digital-world and real-world, but for him they're the same. There's only the world, and there're different tools, and different means to communicate. We don't make distinctions and say, I'm going to behave differently here and there.

[00:09:24]

It's an extension. Of course, there're overlapping zones. There are some things you only do in the digital world, some things you only do in the physical world. But that's actually normal. There's some things I only do here at the office, and some things I don't do at time, cos it's about different circles. But what might happen, it will happen soon. I'll invite everyone here to my place and we'll have a party. And that might be kinda weird for everyone. The things that I do at home are different from the things I do here, and it would be weird, just plain disruptive. Or if I threw a party here, and bring my out-of-office friends here, it's different. You behave a certain way in every circle, but you're still the same person. The different energies in every circle make you behave a certain way.

[00:10:30]

So you've reflected on this aspect as you've perceived it in your life. So tell me, what is intimacy, what is closeness, what is friendship to you? And I want you to consider this from a technology perspective. So given we have email, and Skype and wearables and whatever else might come out, has the definition of friend/family changed for you?

[00:11:13]

Of course there are changes because everything is dynamic. It's just a matter of how much you see a change, how much are you willing to accept that change or every new thing that you get or lose. Either you're ready for that to affect your life and embrace it. That's probably the most important thing. Some people are just scared shitless of FB; everybody will see what you're doing. And it scares them right? Some people are more just well by themselves, more reserved. And once you see a tool that (we never actually read the privacy agreement right? Everything you post is no longer yours. It's theirs first, and the world's after.) And I have a pretty good idea, I was discussing with my students, what happens is if you're willing to accept that change that you will have new hardware/software/new ways of connecting with people, that will change the way you behave socially. If you're willing to accept that, you're probably more willing to change phones, new services just to test them, out of sheer curiosity. The thing is, if you're more of a reserved person, you'll be afraid of everything. If you're just scared, if I were to wear a wearable, "they" in inverted commas, will track me down, see whatever I'm doing, where I am, my wife can see I'm not working late but drinking beer with my friends, will bitch at me when I get home. So if you're just willing to just embrace that, people will see where you are. Like you're walking down the street, and you're drinking beer, and maybe one of your wife's friends sees you drinking beers and calls her, "hey your husband is drinking beers here".

[00:13:48]

And now technology is taking that role.

[00:13:51]

Exactly. And that's not automatic, but something will do it anyway.

[00:13:57]

That element of self-reporting.

[00:13:57]

Exactly. So that's what happened a few years ago, in the villages. You'd go out with friends, and some friend of your wife will tell her, and she'll come there grab you by the ear and you know? As much as these new systems are not spying on you, this openness brings about 2 needs.

One, the need for security.

[00:14:36]

What kind of security?

[00:14:39]

I mean the kind of privacy we reserve for profiles and certain circles. That's one of the things that will change. It's changing. Or you can embrace what happens, it will become public, if not today tomorrow. Or you can do it because you feel you have nothing to hide. Of course, everyone needs their secrets. It's a legal thing.

[00:15:47]

So what's the second thing?

[00:15:52]

I forgot. Ha, I'll probably remember when I don't need it.

It's a bit different from that, but what I was telling you is we have this need for privacy right? Because you know that everything is registered somewhere. You will have your profile from the day you join some digital life, social network or whatever, because it will record everything. You can't erase it because it's not yours anymore.

[00:16:54]

On the other hand. It's interesting you bring this up, an Internet researcher was reporting the exact same point. But he said the fact that it is registered, you might think it's not your own data anymore. But even in the real world, the analogue wouldn't be your data. So if you say I went to this place, and the bartender or the waiter saw you, that's also a record but it's not your possession, it's the other guy's.

[00:17:32]

That's the point, I wanted to tell you. At the beginning I have to tell you I was skeptical of all this and valued my privacy above all. But right now, I find friends on the street that I haven't seen for the last 5-7 years, and they tell me "Your daughter's so grown up." They've never even seen her, but... Have they been spying on me? But no, they saw it on FB. Oh. Okay... Okay! So I don't have... Maybe I should, I don't know. I just don't care that much, I just embrace it. I'm willing to share whatever, but I think it's more for me than for others. Not a bragging thing. Just acknowledging that this works this way and it's kind of like you having to prove that you're not guilty of something that you're being accused of. It's kind of that feeling, I have nothing to hide, why should I hide this?

[00:18:40]

okay! That example you gave is very incisive. Here's my take.

The Internet researcher I was telling you about, he says in the real world, if you go somewhere in the presence of others, people are witnessing you. In a court of law, they can bear witness. That's why eyewitness testimony is a primary source in a court of law. Online though, you can have your own webpage, millions of images of yourself, but those in themselves don't count as evidence of your presence. Because it could be a fake website or profile, it could be photoshopped or rendered images etc. What does signify presence online is what you were skeptical about - the transactions that you logged in, logged off, did this, like that. That is your online presence, a record of your activity, that dictated that you exist online as a presence/force.

So he gave an example. A friend of his, active on FB, passed away unfortunately. But no one knew the password, and no one could delete his account. And even to this day, on his birthday, his friends wish him on his wall, and so his online persona exists even though the man himself has passed on.

He gives this as an example of how your online self only exists through transactions.

[00:20:39]

That's very similar to what happens in real life as well right? Because you need approval from people. For you to exist, you have to get relationships with other people. Even if it's by someone seeing you. Sometimes that's really interesting. You exist because others see you (not just as an moving object)



but they see you and they look at you. They create something about you. They create an image.

[00:21:30]

That's very true. Fantastic.

[00:21:30]

My image of myself is one thing. But my image created by you, or another or another person are all different things.

[00:21:55]

And that depends on what you did, when they made that image, what they were looking out for, what stuck and was meaningful for them etc. How you're related to them, everything.

[00:21:55]

Exactly.

[00:22:05]

In scientific literature, what you've arrived at intuitively, is described as the phenomenon of witnessing. For you to exist, you need someone to see you and look at you - that's witnessing. To witness to be witness and to bear witness.

Imagine you get on a tram and you look around. If you see a friend and share a ride together, maybe 10 days later, it's still a memory, I got on a tram and saw my friend. But there were other people on the tram as well.

[00:22:43]

But you don't notice them, remember them, so they don't exist for you.

[00:22:44]

Exactly. That's to be witness. To bear witness, imagine I'm walking past a city square, and I see a random person I wouldn't have otherwise noticed, suddenly breaking into dance. So I might tell my friends about it, this thing out of the ordinary. As I transmit it, my conception of what the dancer was doing may not be what the dancer himself was thinking or intending to transmit. So when I transmit that he was dancing, I create new meaning to the deed I witness: "it was a funny guy dancing on the square", "it was a crazy

guy dancing on the square" etc etc. Being witness, I just recognize. In bearing witness, I create (my) meaning.

Like you say, the closer you are to someone, the more you need to be witnessed. We want to witness and be witnessed.

[00:24:23]

You need to be with someone and feel that that person is looking at you and taking your picture and creating an idea of you. Something is being created, of you.

[00:24:39]

Exactly. Do you think, then, an action online, be it email, a FB poke/like or Twitter reply, or a BOND Touch for that matter. Would you consider that a deed, an action?

[00:25:03]

Different medium, same results.

[00:25:07]

Please elaborate.

[00:25:11]

You're just not using your eyes to see someone, you're using your eyes to see what someone did or wrote online. And you create your own idea. In that sense, it's the same; when you look at someone's Twitter/Tumblr, you're creating an idea of that person. And depending on the medium that I've expressed myself in, your impression of me will be slightly different, because I might be a bit more formal in one place more than another.

It's the same thing. If I used BOND Touch, you'd get the same idea as you would get in a physical relationship. I think the only thing different there is a medium.

[00:26:05]

Really? That's curious. Wouldn't you say there's something very different from being a relationship over Skype (say in a long-distance r/s) vs being face to face, no?

[00:26:23]

Those are different things, don't mix these two things. You're trying to pull this from a more emotional perspective. In regular social settings, I don't think there's a big difference, or at least you don't have that many expectations - you won't feel that much difference. Imagine it happens that someone is a cool guy in real life, someone you can chill with, but online, he's a bastard. It's quite rare that it happens. You find the balance between the two most of the time.

You're not one person is on the digital world and quite another in the real world - it's just different aspects of the same person. Giving an example, she's probably going to kill me. I was talking to my mother on Facebook the other day. She wasn't on FB until a year ago. What happened is she wrote exactly this on an active discussion about a photo-post, she doesn't usually comment but this time she did. She commented something relevant to the other comments and ended off a way typical to her, but perhaps not typical to the Internet, "Well I have to finish up dinner, your dad is almost home."

So it's quite nice to see, especially my mother, whom I would think wouldn't be comfortable on a medium like FB or Twitter, what she was doing was like, imagine she was living on a small cosy street in a building with lots of windows and curtains and everyone looking into your house. She just opened up on FB. In a way, I don't think she had a clear perception of what she was doing, that that FB post was public, that others could see - others who weren't necessarily family or family-friends. But that's another interesting thing. For me, the word of the moment, for the past few years, is relevance.

[00:30:49]

Maybe I would just extend one little bit. Think of it this way. You can meet someone in a bar for 2 minutes, then maybe there's a 50% chance that you would add them on Fb.

[00:31:28]

Nowadays yes, that's perfectly normal.

[00:31:28]

Exactly. 2 minutes.

[00:31:33]

You even add people on FB that you've never actually physically met.

[00:31:33]

Sure, but what are the chances of adding such a person? Much much lower than the case where you've met them, even if it was the barest of acquaintances. Why is that? What is that 2 min difference that an extremely honest truthful profile doesn't offer you.

On the other hand, in MMOs people become such good friends and companions, that they get married in-game, people they've never actually physically met... So people do build trust in an online environment.

Both are possible, both are happening. What's the difference, where's the line at?

[00:32:59]

I don't think there's a line. We always want to draw lines everywhere, you implicitly have lines. It's different from one person to another, you don't know where the boundaries are until they're crossed. The lines will show up when someone crosses them, but mostly we never even think about them. I add this person I've never met on FB and now he can see everything about me. I'm relatively open, but I don't do that. I only add people I trust at a minimum. So I do believe people can establish that kind of emotional connections, and taking it a bit to the BOND field, the way we thought of BOND is a way to extend your emotional connection through digital-physical device. It's not exactly the digital world, you don't have a BOND social network.

And this is important. BOND is one-to-one. You know exactly who's on the other side. Like the example we discussed the other time (little boys playing with cups-connected-by-string), you pick one end and your friend picks the other, it's quite hard to hear anything the other is saying. But you know someone's there, from the fact that there's a sound, there's that tension on the string, and that alone makes you happy to connect, without actually communicating actual content. That's it. BOND is the same. If you feel something, you know WHO is on the other side and you know they wanted to connect with you.

You know there's a stereotype of couples that finishes each other's sentences. They've been together for so long, they have a big overlapping zones, their heads are really one head, they've been together sharing so long that they can literally tell what the other is thinking. When couples get together, there's the bathroom test. You're willing to share most things, but not the toothbrush. So the bathroom is the place, it's the place. It's really private. You're not willing to share the bathroom.

It's the same here, you know? What are willing to share? What are you willing to give up, how much are you willing to overlap with the other person? That has to happen, otherwise it would be two strangers living in the same house.

[00:37:21]

So again, you're saying many interesting things. What you're helping me do, even by these anecdotes, is witnessing, transmitting your perception of the role of technology in our lives. And in bearing witness, you are giving rise to new meanings and that's how new meaning is born.

[00:38:11]

Yes. Let me see if I can structure this. We bear witness a lot, and that's where the word of the moment keeps coming back to me, "relevance". So a few years ago, given I'm still of the generation when I was born, there was no TV in my parents' house. I got my first TV when I was 4 or 5. I grew up with that, and for a long time that was the most technological thing I had in my house. So everyone was crazy around it. Then I got a colour TV, it was crazy all over again. When my grandparents got their own TV, I inherited their old TV for my bedroom. It was "fuck yeah!"

So we've in the last 30 years, it's pretty obvious the evolution and especially the amount of information that we are more and more, almost every day, thrown in front of you. You don't even have to go and find it. When search engines came out, Yahoo was the biggest one where you had an index and the Internet was accessible there. But what happened is, the Internet grew exponentially and now we'll never see the entirety of the Internet in our lifetimes. Google transformed search engines all over. They found a way for you to get content relevant for you. If you think of that, it's almost a privacy invasion in itself.

[00:40:31]

Yes sure, They know more about you than you.

[00:40:31]

Of course they do. But they keep everything, and when I search for something completely new, something I've never heard of, something out of my experience that I would have otherwise never clicked on, I can't! Because it's locked. I'm almost forced to use other engines that don't know so much about me, they'll get to know me soon enough.

[00:41:05]

Yes! The dangers of the filter-bubble.

[00:41:05]

If you want to get out of your filter bubble, you have to explicitly query and take the 10000th page so you're sufficiently sure it's not custom-fit to your previous data.

[00:41:23]

Maybe we should have a tool just for that, to explicitly display results outside of your filter bubble. Maybe someone else's filter bubble.

[00:41:37]

I would love to have that.

[00:41:42]

I just want to show you an image, of the YUTPA framework. ((show the graph))  
In the past, to know someone or to be friends with someone, you didn't have internet, Skype, telephone, letters nothing, you had to be connected to someone is to share time and place with them. But we were a lot like fish in water, we don't question what water is.

But now we've been talking about communication technologies and how people get closer thanks to/because of or even in spite of the technologies that allow us to connect. We can connect despite not being in the same place or the same time, despite not sharing a common background or experiences. So thanks for that. Let's continue a more BOND-specific discussion at a later time :)

# Design History Questions

[00:00:04]

Were you involved in the decision-making throughout the BOND project?

[00:00:06]

Some of them yes.

[00:00:11]

Let's start with the Indiegogo campaign.

[00:00:17]

Oh but when the Indiegogo campaign started it wasn't modular yet.

[00:00:22]

Let's stick there then. So the Indiegogo campaign was in August/October 2013, and this idea came in February. So between February and October, how committed were you in the hardware side. Because in the video, Kwame demonstrates a prototype, but was that prototype already working?

[00:00:45]

Yes. That prototype that you see on the video was working. So it was bulky, it wasn't meant to wear yet, it was meant to test if the hardware and the experience worked. And those first experiences that we did, with just interaction, we weren't even using the modules. The first ones, we use phones. We had these big phones on our wrists and we were testing that. So we had some answers from the interaction perspective. Then we moved to the hardware, those big modules that you see and we still have them, that's still working.

[00:01:40]

And how committed were you to the hardware development? Were you planning to make it super sensitive? Or was it supposed to be... in the sense of pressure sensitivity and haptic response, were you exploring all those ideas?

[00:01:50]

Not exactly pressure. The pressure is simulated by time. So the time, the amount of time that you kept a finger on the sensor would emulate pressure.

[00:02:00]

And it was a button or touch-sensitive?

[00:02:06]

It was capacitive sensors.

[00:02:10]

Ah okay so it was almost like multi-touch.

[00:02:10]

Yes yes. And the vibrators were simple rotating mass types, the small vibrators that you can find on phones.

[00:02:27]

Do you remember what happened when... why did it change from BOND Touch as a standalone to less prioritized module?

[00:02:38]

The modular concept kinda started, I guess, when we started approaching possible investors. And this touch-thing and the one-to-one thing is very short in terms of sales; if you want to sell this idea, it's quite short. I think that happened when we started looking for investment. And people also mentioned that what are the features? What does it do? And that's when the idea came, that we would have that Brain module, we keep that idea until now, and each module would have a new feature, you would connect them seamlessly.

[00:03:32]

How quickly did the modularity idea come about? Did you investigate, did you do some kind of feasibility studies?

[00:03:40]

The idea itself, happened like every idea. it just popped up, let's do it like this, what do you think, oh okay.



[00:03:50]

How about the feasibility?

[00:03:52]

i think the first feasibility test that we did, we had Lisa who was working on the hardware, we just asked her how could we do this? These decisions didn't take big meetings, and set-in-stone notes. We just talked with each other, reached agreements or disagreements. Is this possible, I think so, I'll investigate, ok this is possible, it's just a matter of trying to shrink the hardware, we can do it like this or that and so on.

[00:04:32]

Ah so Lisa Winter was the one who said it was possible to connect them side by side.

[00:04:42]

Okay. Given that there has been a lot of interest on Tumblr, Twitter for the core emotional idea behind BOND Touch, why do you think the Indiegogo campaign didn't have the viral support?

[00:05:03]

Oh. we looked at it, we analyzed it a lot. And there's several things I mean. On one side we lacked the features. On the other side, the communication wasn't the right one. We were promoting an emotional product, but the video was very techie, so we had some disruption between the message and the goal we intended. The way we tried to pass the message and the message itself, they weren't playing together.

So I think it had something to do with that. And the object itself, at first we were just showing the modules. We didn't show the pretty thing that you could wear as a jewel, that's something that came out a bit later also.

[00:06:00]

But I mean even initially, there was of course an emphasis on design right?

[00:06:07]

But that was always vague. Not a problem but a big issue, we never found, we never reach that design, or looks that we wanted to have, that I think we have now.

[00:06:24]

Now that modularity has taken up the main focus, Chris for example seems to think the BOND Touch module itself is just a gimmick now.

[00:06:40]

No no no not at all. I think that's a balance. If you balance it out. We were lacking balance all the time. So in the beginning, we were all about emotions, then we were all about features. I think this is the moment we're reaching balance. Where we're balancing the emotional part with the BOND Touch, and the features with the modular approach, and that's where I think we have the value.

[00:07:06]

Okay. Did you plan any immediate timelines for this device?

[00:07:26]

Do we have a specific timeline as of now? We're depending a lot on a lot of factors, especially manufacturing. The next step is to go to production.

[00:07:44]

Don't you need to prototype first?

[00:07:45]

The main prototypes that we have, still work. They're the proof-of-concepts. We have to shrink it now. So in order to do that, we have to go directly to the manufacturers, and they do have the experience and the knowledge of hardware that they will need to make smaller hardware. But we're quite depending on investment for that.

[00:08:18]

Because it's very expensive.

[00:08:22]

Yes, very.

[00:08:26]

And you might also need that hardware expertise.

[00:08:28]

That I think the hardware manufacturers have.

[00:08:34]

So would you want the hardware manufacturers to be partners? When Chris discussed with the South Korean manufacturer, they wanted exclusive rights to distribute within South Korea.

[00:08:38]

That's a tricky question. But distribution is only one thing. You can only distribute if you have product and if you don't have product... We need to create it and manufacture it.

[00:00:00]

When did you decide to make it the jewellery concept? On top of modularity, now it's also a style icon, a jewellery kind of thing. How did the fashion designer come in? And how are you pitching it now?

[00:00:22]

So I think we always had in mind that this would have to be a design piece. That it would have to be pretty.

[00:00:47]

Cos you wanted the product to be exclusive right?

[00:00:47]

Yeah we wanted people to want to have this. So I think that was always on our mind. So that's the thing, we're always around the same concept, and we were also trying to include those values that we have for Fairphone, like fair-trade products, etc etc. And I think in a way we're back to balance. We never balanced, we never reached the looks that we wanted.

[00:01:29]

And now you feel you have reached the looks you want?

[00:01:29]

I feel we're close, yes.

And then the designer Eric came to BOND at the end of last year or beginning of 2014, around there. He was introduced to us by Francesca, the woman with the last name that I can't pronounce. She was the design leader for Tiffany's. And she introduced us to Eric.

[00:02:15]

I'm guessing you know her through your work with Tiffany's?

[00:02:15]

We know her through the Tiffany's work yes, but also Ben who works with us, so. We had the sportsmanship workshop with them, and it was very easy cos we had pretty the same ideas on what we think is fashionable and what would be a design piece that people would want to wear. And kind of timeless. So it was kind of easy, to reach what we have now.

[00:02:50]

So you keep saying balance. We didn't have balance and now we do. Was there a specific time you can identify that this was the point when the balance came?

[00:03:10]

I think we kinda realized that when we had all that buzz on Tumblr. Cos at first we had the emotional part which didn't work. We thought okay this is not the way. So we went to features features features features and features weren't working and we didn't know why. We had some people interested in the emotional part in the beginning but not that interested. And once we saw that buzz come out on Tumblr, the buzz was about emotion. And the features were there. Cool, we'd probably use some of them cos you can't make all the features ready for everybody you know?

And that I think is where we realised that we would need both in a balanced way. So the way you communicate this would have to be the emotional way, but when you really start to explain in detail what this product is, so we have all these features, this is not only a one-to-one thing, you can also do these things.

[00:04:20]

It's a lifestyle device.

[00:04:24]

It's a real product for your lifestyle that can adapt to you, but there's always that emotional part that you can connect with.

[00:04:41]

Okay, thank you :)

# Interview with Dominik

**Bio: Dominik Seeger**, senior communication designer skilled in graphic design, branding and UI. He has passing acquaintance with *BOND* so far but has acquired valuable marketing acumen for new media. He is afraid of shaving.

[00:00:00]

So, hi Dominik. I'll briefly explain what I'm trying to do in my Master's thesis. So BOND is a very unique concept and that's what interested me about. It is the starting point to understand, we are almost not substituting but equating nonetheless some kind of intimacy digitally with touch with a close partner. And BOND is not the only one doing that. A few days ago, I heard this term called tele-dildonics, which was coined in the 1970s, so they already had visions of wireless dildos that husbands and wives could control from far apart.

[00:00:58]

True. Your cellphone vibrates also in your pocket, so it wasn't out of the imagination to take that leap.

[00:01:02]

And you like it. So we have some ideas about intimacy and what it means digitally. So let's take a moment and reflect on that. That idea of reflection is very important to my thesis as well. I do Policy Analysis so this is a concept called witnessing. so some authors have written that when Martin Luther King fought for black rights, when people fought for civil rights, when people fight for LGBT rights, some would say these are minorities seeking recognition. But some others could disagree with that. If you just recognise, oh you are a

minority and you don't have these rights and I recognize that, then there is still a power relation.

[00:02:04]

Of course. it's from top to bottom.

[00:02:07]

So the better variant of that is to understand these movements as a quest for witnessing. Feel how they feel, being empathic, try running a mile in their shoes, then you'll see. And when you do that sort of witnessing, it is a more equal power relation. Now witnessing has two parts - being witness and bearing witness and both are equally important. [tram example]

[00:02:59]

It becomes an event.

[00:03:03]

Now let's consider bearing witness. [square example]

[00:03:38]

You create your own interpretation.

[00:03:38]

Exactly, my interpretation created the new meaning. It is important, and that's why witnessing is important even in a court of law, it's a primary source of getting information. There is weight and responsibility to being a witness. This responsibility is very important. If you're witnessing something unethical, and in that sense, liable to bear witness in a court of law, then you will also feel ethically bound to try and intervene, even at that spot. If someone's questions you about what happened, they will also ask why didn't you do anything? That witnessing involves you intimately.

[00:04:35]

Nowadays people record it on their smartphones and don't intervene (physically).

[00:04:47]

That's a funny line between doing something and not actually changing the situation - almost passive-aggressive. It's similar like giving FB Likes for increasing donation amounts to charities. It seems to me like a thin line. Now witnessing doesn't just have to be about people and what people do, it can also be about things and phenomena. So now let's try witnessing, in your experience in your career so far. I'm interested in the social aspects of technology, let me just clarify what I mean there.

So firstly, we accept that things have politics. [car example]

So let's think about the social aspects of technology; in say 1950s, when you didn't have the technology of the Internet, and I say I'm connected to you, if I call you, it implies I've physically met you and shared time and place with you and I can vouch for your existence and behaviour, either way. But nowadays, when I say I'm connected to someone, maybe I met them for just 2 minutes in a bar, and I connect with them the next day on FB. Even the definition of the words "socially connected" has changed. So I would love to hear you reflect on your experience how technology has changed, how people connect to each other.

[00:06:36]

Well, I started quite late to interact with media, with computers. I was in a school where computers were not well-seen for quite a while, in an "alternative" school in Germany. So my only first touch to technology, like we use it nowadays, was when I started to do a praktikum in an agency. I'm not really someone who grew up \*with\* technology, PCs, hacking and stuff like that. I got in touch quite late with them.

Besides technology itself being a chain with many locks nowadays for me, that's how I feel.

[00:07:44]

What do you mean?

[00:07:44]

At least in my profession as a designer, there are several ways to approach a concept, or a solution or an idea but because of comfort, and safe zone and a timing, people including to myself, go directly to the machines, which many times I think is, it's not about being wrong but it's not really necessary.

[00:08:35]



There's an apt idiom, like "if all you have is a hammer, everything looks like a nail".

[00:08:39]

Exactly. So this is something I feel sometimes, and I feel the need to break out of that. But that's something very conscious because nowadays I have to make it an inverse approach, I have to make it conscious for myself. "Hey I'm not going to type right on the PC now. First I'll sit down for an hour and I'll make some sketches and then I'll go the PC." So that's what I mean with the chain, which technology brings.

On what I did lately here at Kwamecorp, brought a little perspective that we try to do things that are meaningful. I did many many works which have their purpose of course, but at the end of the day, they are not really meaningful. I worked for example during many years creating events for big brands, and their purpose is to have a vehicle to communicate with people and to influence people, so the people see the brand as something very cool and associate it to music for example. It's not really... I mean it's there it's fine, you get the money, the client gets his contact with the customers and that part's okay. But at the end of the day, if it hadn't had happened, that'd be okay as well, nobody will miss it. What technology, and that's what KC is more focused on - bringing technology to people and connecting people with technology in a meaningful way, it's for me interesting because it brings a layer of meaning to the creation of design and all of it.

[00:11:41]

Yes. How about communication and connection specifically? Have you experienced big changes?

[00:11:59]

Yes of course. Tremendous, I mean. I remember when I was calling the girlfriend's house, and you had to talk first to her parents because you were talking on a fixed line, and there was only one access point to the whole family. But nowadays, you have an access point to each person and the old situation has vanished. So you have individual access points, even 6yo have cellphones, access points. And they are their own privacy points as well, they're privacy-devices. Or entry to the internet or whatever.

So this openness on what's happening with the others around you, in terms of communication is completely changed. Everyone has his own private channel,

and in this private channel and everyone can carry as many secrets and theory as he or she wants. So this is something that's also changed in my own life.

Like on all of us, to be available 24/7 is something completely, something I didn't grow up with. From 10pm to 9am, nobody called you at home. In Germany, it was like a rule that after 10 in the evening, in the night, you usually don't call anymore at a friend's house, because people go to bed. So you might be disturbing someone, and so you'd better have a really good reason.

[00:14:07]

A kind of etiquette.

[00:14:07]

It's an etiquette, yeah. It's quite funny to think about it. These are the behaviours we had. So these behaviours completely vanished, overwritten by technology.

[00:14:34]

That's very interesting!

[00:14:34]

I remember something that Christoph told me. But this is a little bit different. It's about the perception of media and on what media says to you. Christoph came from East Germany to West Germany, and shortly before the wall broke down. Anyways they got at home, a letter. and this letter said they had won a million German marks.

[00:15:13]

Spam? Really?

[00:15:17]

It was spam, it was one of those schemes, like the film Nebraska. [a guy who falls for a scam] This happened to them, but via letter. They got super excited, they started to read it. For half-hour, they were in complete ecstasy, their whole family thinking it was incredible! Why? Because in the system they lived in, there was no faulty communication via mail. Of course the

government at this time, they gave only the information they thought you should know, spinning it, but something in your mailbox was something official. And an experience like this, suddenly a concept like this...

[00:16:37]

It's like when lying was first invented.

[00:16:37]

Of lying, of marketing, of monetary system which is really focused on that. It's cyclic.

[00:16:52]

Thanks for that, that was very interesting.

So let's get closer and closer to BOND okay. For a technology perspective, if you think about the Internet unconsciously you think about search engines. I don't have to tell you to think about search engines, it is your primary means, a GPS of sorts to get to the rest of the Internet.

From a conscious technology perspective, what does intimacy mean, what does closeness mean, what does friendship mean now? has technology changed what a friend means to you?

[00:17:52]

Luckily, not for me, no. One nice thing is which FB and so on brought to me for example, is that I found people in a certain way. Found them again, or at least I know what they're doing and where they are via technology. And I'd lost this trace for several years. Doesn't mean that they are again my big big friends, or that I communicate very often with them, but it's nice to keep track and remember someone from Brazil where I went to school and suddenly I know that this person has a pizzeria in Sao Paulo. Nice!

[00:18:46]

Maybe let's expand on this. What exactly is nice about knowing these details. Is it nostalgia?

[00:18:50]

It's a mixture of nostalgia and memory-refreshing moments. Of course you had your history with someone at a certain point and you connect to that person

again, you see a little bit of his life and you see... it's like a feeling of happiness almost, for you. Sometimes even without yourself interacting with this person directly at this moment.

[00:19:36]

You just see their photos or posts.

[00:19:40]

Exactly, there's a feeling of happiness when you see okay this person is doing alright. When you see your ex-gf and she has a kid, and you see hey at the end, everything turns out well. This is something I really like on the social aspect of the internet. I like very much the idea of everything is available in terms of information. It's a marvellous concept and everything has a downside, right? I mean when people do their thesis and only copy-paste information from the internet, that's a downside. But in terms of democratic knowledge base available to everyone, it's wonderful.

It's sometimes too much.

[00:20:56]

Are we still referring to the connections?

[00:20:58]

Yes, talking about connections being too much because the information load you're taking. I mean, I look at myself and I have to concentrate myself and focus myself not spending too much time with this device, with technology. I think that's something as well technology teaches yes and has taught us in the last couple of years. That people try to reduce and minimize and optimize the way they receive and handle information. And that's something I think is a aspect of evolution, something we will learn.

[00:21:55]

So I have 2 questions when you bring that up.

Firstly, compared to before we didn't have this social information at all and now we do and it is an information overload, so is it a problem with the technology that we have to address, or did we just go crazy with the capability that we have to stop soon?

[00:22:27]

Yeah I think the problem is not with technology right, it's just a result of supply and demand - I only take what I want. But of course you want to take part of it, to not be excluded.

[00:22:48]

The fear of missing out. FOMO.

[00:22:48]

Exactly. That's something that's an easy trap in the beginning of something. And then you learn a little bit, you look over your shoulder and then you get a little bit conscious with yourself and say "hey I don't need all this."

[00:23:10]

So would you say even 5-10 years ago, there were new services to sign up for everyday, to the point where you have extreme sign-up fatigue nowadays.

[00:23:23]

Of course. I mean, newspapers were a daily thing, weekly journals were more interesting, monthly things were more compressed where you really read everything from one page to another. But this is not something new, I mean television's the same thing. And television has been around a long time. Even for television, I got to a point where I said I have to filter what I do with my time. And that's the same thing, nowadays with a computer and some day, with some other kind of media. Because there are things around you which cannot be substituted by technology.

[00:24:24]

Now let's revisit, I want to combine two things. You recall you said you have a mixture of nostalgia and happiness when you keep track of friends via technology that you wouldn't have had otherwise. Actually there's been research where they found what an article jokingly called the monkeysphere, where research on monkeys found that an average monkey can only keep track of 50 unique faces/monkeys and above that number, the empathy drastically falls. We're just more evolved monkeys with a higher number, but a finite small number nonetheless. That's why when your friend breaks his arm, you feel something but 100s of people dying on the other side of the planet doesn't elicit as much a reaction as it should. You want to care but you don't know how to feel. We have a limit to how many people we care about.

So when you say I have to now keep track of friends that I probably will never see again physically at least, do you think technology is expanding that monkeysphere? Do you feel empathy for your friends still?

[00:25:32]

It's possible that technology's expanding the monkeysphere, yes. Of course. I don't know if I really feel empathy for these people or not because I didn't talk to them for a long time. Maybe these friend I had when I was 7 might be a complete asshole now I mean, who knows? I mean his FB posts won't tell me that. Maybe it will, and just as possibly, not. Because you don't really see the real character of someone. So, what was your question again?

[00:26:16]

Do you care about more and more people now that FB allows you to keep track of more and more people.

[00:26:25]

I think so because even though there are too many people, 500 people I know. I know many of them, I remember most of them, but they're not really my friends, I just get glimpses of their life and I'm getting tired of it.

[00:26:58]

Really? Why?

Considering MIT recently built an app, it allows 2 strangers to follow each other's lives for say 20 days. if you're in this location, it doesn't totally violate your privacy, it shows a Street View of the area maybe 3 streets away. And it tracks your activities and activity patterns - oh you went surfing, or you went shopping. You get a kind of empathy of the other person, an idea of their life and the things they do in the place where they live.

[00:27:34]

This can be very nice. Sincerely, in this case, I would do it with someone or because of someone in a completely different environment than mine. Because then I learn something, I see something new. I see some streets in Singapore, and I see what this person's life is like. Or if I follow someone who lives and works in New York or Barcelona, probably it wouldn't be so sexy to me.

[00:28:21]

Okay.

We've already talked about witnessing right, and I think you've bore witness to technology in your life. Thanks for that.

Do you think when people do an action online, does it count as a deed?

When I say you danced in the square, that's a deed right? A deed means I can go to a court and say you danced in the square, I attest to that. it's a bit of that Zen question: if a tree falls in a forest and no one sees it, does it make a sound? So a very good example would be, you're chatting with someone and you get the acknowledgement as "Seen!". So that machine has decided that you've seen it. So do you feel incriminated when it says you've seen it?

So digital action.

[00:29:37]

Well to take something as deed is something I'm very skeptical about. I mean I come from a business perspective, it's easy to manipulate and influence and direct information right? So this takes on TV, journalism, on written texts and the Internet itself is a mixture of image and text basically.

[00:30:31]

So you're saying that those calls to action can be manipulated easily?

[00:30:33]

Yes of course. If you look at how FB and Google and so on, how they make their studies, is by taking you to that link or to look at this area, with heat-maps and so on. So I'm very suspicious.

[00:30:59]

So when you say that, it's true, but I get the implication that it's a question of trust. You don't trust that interactions online are always sincere and heartfelt in that sense. How do you negotiate that trust, how do you judge manipulation?

[00:31:25]

Ah I try not to bother too much with it because it's all over.

[00:31:36]

But we do it on a daily basis. If you get an email from a friend with happy news, you will let your guard down and feel joy but if you get from the same friend a FB-generated invite, your joy barely registers on a scale.

[00:31:46]

Yeah of course. You create your safety barriers and your safety barriers get more sensible as you use it, from experience from day-to-day. Sometimes you feel cheated or you felt trapped and it didn't happen to me, but there are TV shows where people feel in love with FB personas. So it's a reality I don't understand much but yeah, people don't question enough.

That's a media thing. Nowadays it's more one-to-one thing. Before it was, media-to-person thing, but nowadays it's a person-to-person thing through media as a vehicle.

[00:33:20]

it's true. What you brought up earlier about people falling in love with fake personas, that's called Catfish. If you consider a non-technology scenario, it would be really hard let alone the psychopaths, it would be really hard to maintain a fake persona over a long period of time. Maybe in a physical presence condition, our senses are subtle enough and strong enough to detect these kinds of dishonesty, but on mediated avenues, it's easier to be a psychopath.

[00:33:59]

it's much easier! of course I mean it happened by letter-writing. People also established connections, false identities, when postmen were still ringing on your door. So the concepts of not trusting something or someone, not even not trust, just being cautious and not being so naive, it's just shifted to technology, to whichever platform we interact on nowadays.

The concepts are old, just like the schemes are old.

[00:34:38]

Yeah. Now I'm going to introduce you to a theoretical framework that my Professor has done. It's called YUTPA which stands for Being with You in Unity of Time and Place and Action. What that means is, we used to think connection is about sharing place and time to build and share trust. And because that aspect of it was so prevalent, we couldn't have shared presence otherwise, we didn't know that trust meant something else.



But now technology has come along, and now we know that you can not share time and still enjoy presence and trust (like email), not share place and still enjoy presence and trust (like Skype). And that's also funny how used we are to these technology. At the bottom of it all, my friend on Skype isn't my friend, what I'm looking at are just coloured pixels on a screen. But in your head, you are "there" with your friend, we've learnt that schemata.

What she has done with a set of 4 dimensions, [explain YUTPA graph]. Time Place Action Relation.

So let's look at the black region, you can affect or change anything in this region. If you're not physically there, not at the same time as the thing that's happening, don't have the power or authority to change/influence that event, then you cannot act at all. It's as good as you were not present.

On the other hand, if you are physically present, and at the right time, and you can step in and influence the event, then you have changed the course of that interaction in however small a way. Most of life used to be in the light area. But now, with merging realities, the digital media that we have, we can explore these shades of grey here, more and more.

And that's where we have to start negotiating trust. Previously trust was relatively easy to build in the light area, in physical presence. But now in mediated presence, not sharing time place, it's shifting and you still need to get things done and you still need to interact with other people, how do you build trust. She has tried to put those aspects into an explicit framework. Now I'm going to talk it out with you, based on this framework, we'll see how BOND responds to this framework.

Let's start.

You have BOND on your wrist, that's a given. Now let's talk about who the person on the other side has to be for you to feel comfortable getting a vibration. What kind of r/s would you have to share with the other person?

[00:39:37]

Well, there are several scenarios right?

The comfortable scenarios are very close people, like girlfriend, friend, family, and eventually if you are on the lookout for someone special, the proximity/match of someone compatible.

[00:40:58]

Oh? That's new.

[00:41:04]

Why not? I mean, it happens a lot with dating apps, and profile-matching.

[00:41:18]

Let's explore this. Some algorithm has told me this person shares 84% of my interests...

[00:41:31]

I would have to trust the algorithm of course.

[00:41:36]

You trust the algorithm, but why would you trust the person.

[00:41:43]

I don't, I don't but I could. I could on the second step. Technology's always for me the first step, the second step is confirming and then trust. First there isn't trust. I don't trust right, even if technology says to me you can trust because it's all about the meeting someone. But it's a first step that can be tolerated.

[00:42:16]

Just to clarify then, this person who's matched to you, would you first need to have some interaction with them before a BOND-type vibration?

[00:42:34]

No probably I would be fine getting the vibration first thing. Because it's something I permit, if I do it by my own consciousness to say this happens here and now, then I trust my decision and this is a natural consequence of my decision. Not if it's automated, or intrusive, I never would do that, if I couldn't turn it off, and decide.

[00:43:13]

So you would definitely need a sense of control.

[00:43:14]

Of course.

[00:43:16]

That sort of leads directly to my next question. Does your impression of the other person matter, like of course if it's a loved one, you have a good impression of them. But let's say there's someone you don't have a good impression of. Let's use your example, high match by algorithm but maybe you know them in person and you don't have a good impression of them. Would you be comfortable getting a vibration from such a person?

[00:43:45]

Of course if I have a bullshit-detector, or the inverse maybe, which tells me "hey, here in the proximity of 100m there's someone you really don't want to meet."

[00:44:23]

Ok so you get a vibration. What does it mean? Did you sit down with your partner and create a language or a meaning?

[00:44:39]

This is something we talked about, and I was always a little bit skeptical on our learning pattern of vibrations. Because the range of possibilities are quite vast. But I'm not quite sure about the learning curve of the vibration, I don't know how many distinct vibration types you can have, and then you have to think "oh this vibration is from my gf and it means I love you and this other vibration is something else, a notification from a different module." Because BOND is about being a multi-use device with multiple sensors, functionalities etc.

So I'm not quite sure about it.

[00:45:56]

So here I have a question, which is because in my head the thinking was opposite. For me, my understanding was that it's a standard mobile-phone vibrating chipset transplanted into BOND, it matters how long you hold it down, but it doesn't matter whether you stroke it or whether you press very hard or something. In that sense, that nuance of the touch is lost, it's just the duration of the touch that is effectively carrying the weight of the communication. I was going to ask, whether you think it would have to be a lot more sensitive.

[00:46:41]

We ran a couple of tests, with a phone itself, and we had quite a huge range of vibrations - they can be very soft and they can be hard jarring vibrations, the interval between vibrations can vary. There *\*is\** a big range of vibration patterns you can create if you really wanted to. If this is possible, and people accept it, then you have a product that gives you a very big range of communication. If you only limit it to one kind of vibration, equal for everything, then it's only a alert to do something else.

[00:47:50]

So it goes from a language to an alert signal.

[00:47:51]

Yeah, which then means probably, I have to look at my phone. I thought a lot about it, I thought about Morse code, but who the hell nowadays wants to learn Morse code? My grandpa did because he was in the army and they were in a war. It's a very complex and very rich language. I doubt that we should go this way.

But I love you is dam, daaam, dam-dam.

[00:48:41]

On that note, in an earlier conversation with Joao, he mentioned he would be against dictating some kind of grammar for the users, but how about you?

[00:48:58]

Well I think there's a thin line. I think there are people who would, imagine a couple a little more geeky, more interested in this kind of product, "hey this is great, we can establish our own little language code", I tap you 3 times means I love you, 4 times means I hate you, 5 times means come home soon etc. And then this is clear for them, and maybe the learning curve is even quicker and they both agree on that.

But on the other side, you have to give people who don't want to have a steep learning curve the possibility to have an immediate use, that means to create predefined actions on whatever the interaction is. And then open the door to customize - it's like when you buy a mouse nowadays for your PC. There are predefined settings for a lot of the buttons but you can customize it if you want to.

[00:50:43]

How involved do you have to be with a person before you agree to use BOND with them?

[00:50:52]

Well I don't, yeah quite involved. I wouldn't use it... I don't see the use-case at the moment for interacting with many people, so it's a one-to-one thing. Being a one-to-one thing, it must be someone very close to me.

[00:51:23]

But if you're working with Joao closely on a project on a day-to-day basis, spending a significant part of the day with him and you share a good friendship, you probably wouldn't use it with him.

[00:51:36]

I was thinking of the same thing just now, but no, why should I? I mean, if I want to communicate with someone, at work, then I have to really say something to this person. So there's content importance which I don't think BOND is able to build the bridge, at least as far as I know BOND at the moment. Why should I tickle my co-worker, just to ambiguously let him know something is going wrong? I pick up my phone and say "Hey this and this is not correct." So the complexity of information for BOND, I think, at the moment is quite reduced the complexity which can be supported or transmitted. In terms of meanings.

[00:53:01]

It's nuanced, I get that. Would you say it's not much limited. Because one of the pitches for the BOND Touch module is touch can say a lot, and I believe that, like if you're sad and you get this reassuring vibration that I'm here for you, it is a lot of communication.

So while it is true that content-driven communication is not for BOND, so if it is a content-driven relationship, BOND is the last thing you need. So but I don't think it's because touch-based communication has little meaning, or Bond... it's about shared meaning, you don't share a meaning.

Let's try to explore this, what's your best formulation of why BOND fails when you use it with your co-worker rather than a loved one?

[00:54:13]

I have to communicate something very clear, I probably will find the pattern of say 10 meanings on it and these meanings are not whole phrases/clauses, they're very short messages, even if expressed verbally. So yes, if I find in my environment someone who is not in a close relationship with me, but in a working mode or a friendship mode, I could establish of course meanings and codes which could be useful eventually but even there I don't see at the moment the use-case to tickle a colleague with meanings.

You know what I mean, with a person who's close to you, you establish a kind of communication base, this kind of meanings and there is your level.

[00:55:49]

My take on this is as a product pitch, we're making this for couples, it sounds good and you can market it that way. And yes there is a fundamental difference between how couples communicate and how colleagues communicate and this is how you can communicate with BOND. So yes the quality of the communication and the emotional content of the communication is completely different, but I can also see use-cases where... imagine you're in a very routine busy factory job where you cannot be distracted, and trying to multi-task your attention with different information from different screens would hurt your flow, then imagine people could transmit multi-modal messages (like a tap on the back, or a whistle or...), giving messages like "problem", "ready and waiting", "all gather" and you have established meanings, it is possible.

It's not going to be in the marketing pitch for BOND, sure.

[00:56:59]

You can also send an alert to a phone and the phone blinks.

[00:57:08]

So it's very much about the shared meaning you establish beforehand. Would you say then it is unique because in a professional context, you would \*have\* to establish a clear shared meaning beforehand otherwise it means nothing. Whereas in a personal relation, it's so contextual, you can and you might but you don't have to sit down and create explicit meanings. It can be a lot more spontaneous.

[00:57:50]

In the business meaning/side, there would be more need to establish rules (a dictionary) than on a personal level. Because I feel... it's easy to create to code for something general that everyone understands, but you don't have the simplicity of communication on the working levels for example. But of course, if BOND has several modules with fixed arrangement and you know which module is which, when it vibrates on the professional one you \*know\* it means get to work right now, then it's clear and short and established and it would work of course.

I don't know, it would be a thin line of not creating too many predefined functions, because then it would be the opposite. People would get tired of it. And can get stressed with remembering what the meaning was supposed to be, overload of interpretation.

[01:00:09]

True. I was reminded of what Wall Street bankers do at the stock exchange, they make signals to each other to communicate over the noise and chaos of the floor. I'm sure there are use-cases where, due to noise or safety or whatever other reasons, that these kind of multi-modal messaging might be more intuitive, safer even.

Moving on.

These 4 questions so far were about YOU, your relation to the person and how it would affect your interaction with the person. Now let's talk about PLACE, the sense of sharing a place. So in general, the fundamental aspect of BOND is you're not sharing a place, otherwise you wouldn't need the product in the first place. On the other hand, I could rephrase BOND's pitch as a substitute for sharing place, touch as if you're sharing place. So let's explore that.

If you get a vibration, and you know it's from someone you know, maybe you're happy and you get a vibration or you're feeling sad at that particular moment and you get a vibration, do you get a sense of the person being there with you, or you momentarily being there with that person?

Like maybe compare it to Skype, in a chat window, you are momentarily sharing a place with the other person.

[01:01:45]

Yes in Skype, you can definitely feel a connection. But connection is not always positive right? You can also be further apart or not really like/enjoy it

at certain moments. I mean, it's like Skype as well. Sometimes a Skype call brings intimacy, but it doesn't always go well, because the other person is bored or angry. The thing with BOND is it brings intimacy, but it's still very detached, neutral. There's no voice, image, nothing written. Very very reduced information. So I can imagine if the girlfriend tickles 20 times a day, I might get bored by the 21st tickle - it's like okayyy I get it I love you too yeah but not right now.

So I can imagine there are sweet spots.

I can be happy by it, I can feel any emotion.

[01:03:54]

When you say something like, firstly (constant) connection is not always the best thing, and you mentioned even on a medium like Skype, if both persons are not engaged and participating or participating positively, it

based on those examples, BOND is detached in a sense and there's some information missing, would you call that a bit dishonest because what you make of a message might be a fabrication in your head. Maybe your gf is angry and sends a vibration which you might interpret in your good mood as a gesture of fondness?

[01:04:56]

Yeah, but in this case, there should be some difference. Because otherwise the only thing you will transmit is proximity, or the feeling of proximity and nothing else. It's just a tickle, always a tickle, and so always equal. It can mean anything and everything. The only thing it means with certainty is this person is thinking of you, because when she does the touch, one way or the other, is thinking of you - it can be fondly or not...

This is the first level, and then it's up to you how you interpret it. Then of course with the establishment of certain codes, you can create good/bad/maybe signs, coming to a second level of meaning.

Honestly I don't know if it makes sense to me to give/create all these codes, but come on because then it's too simple a product for me. if I can't say in a certain way with this device something a little more specific, then it wouldn't be really interesting to me.

[01:07:13]



So the next question, we've already covered partially. But let's think about it explicitly. There's an emotional sense - you or the other party might be in different states of mind, but the BOND medium itself is detached. So do you think the emotional sense of the other person comes through?

[01:07:40]

Of course, if there's some kind of code, or a sad-o-meter which expresses instead of a smiley.

[01:08:24]

But how sensitive would BOND have to be for touch alone to communicate the emotion?

[01:08:51]

Quite sensitive.

[01:08:59]

Earlier this year, BOND was featured in a Future of Wearables booklet, and just beside it, there was a dedicated haptic wristwatch - a very detailed touch differentiation between light and heavy touch, and the corresponding pressure. Now that's a dedicated touch device. That's not the impression I get from the BOND pitch.

[01:09:19]

Me neither, me neither. To be honest, I would need to experience it to make an opinion on it. I have no experience so far, I don't know. It's a thing you have to try, and see what's your reaction on it? I don't know if I would be happy with just one vibration mode or if I get bored with it and I want it to find nuances and play around with the nuances. People are so different, and communicate all in a different way when it comes to intimacy. There're both reserved people and upfront people; this device could give them the openness to be concrete or super-basic.

[01:11:18]

Okay. If you're in the office, or you're at home and you get a vibration. Or you're in a club or maybe your friend's place? Would the place you're at influence how you perceive a vibration and why? Or vice versa, if you're a stressful place and get a vibration, does it change how you feel?

[01:11:45]

All possible. I could easily imagine this. It's nice that she thought of me, but in that moment the touch ruins my moment. I can imagine that BOND works very well for someone who travels a basis. For daily bases, we have already so many means of communication.

[01:14:25]

Oh yes I agree, that a diet of text and calls alone might not be enough after a certain period of time.

That part reminded me, I was speaking to a PhD candidate, who is working on designing evolvable spaceships, for long-distance space travel. He has worked with NASA even, spending an experiment isolated in Mars simulation environment. He personally reported that after a while everyone did anything they could to make the place more familiar. The nostalgia becomes so great that it began to affect their morale and productivity.

I can imagine the sense of touch being a great leap to spark that sense of familiarity after a long separation.

You're not physically there with your partner, and she isn't physically here with you. If I were witnessing a not-cool move in person, I might step in or say something. But would a vibration from BOND, as you're making a decision, make you change your mind?

[01:16:54]

Yes of course. Maybe BOND can prevent me from lighting up my cigarette - by getting me conscious. Maybe BOND makes some tickle when I'm starting to speed in my car, and I could slow down.

[01:17:36]

That's interesting. Those could be easily programmed - imagine you could program some sensors to buzz you when a certain condition, in this case your car speed, has been exceeded. Chances are, you'll switch it off. Like the UAC feature in later version of Windows, which was intended as a safety feature but completely switched off due to the overuse. I could imagine, if it was a reminder I could switch off, I would.

In this case, I see that it is precisely the unpredictability of the tickle, its occurrence at that particular moment, that makes the biggest difference.

[01:18:26]

Correct. Now how would this work?

[01:18:37]

We'll explore that in a bit. So it would change your decision? It makes you conscious.

[01:18:37]

yeah probably, it would alert my consciousness and it would make me reflect on the thing I'm doing that I maybe shouldn't be doing.

[01:18:58]

Now let's get to ACTION, all the things you're able to do, as if they're here or you are there.

How important is tuning, a kind of syncing in a BOND communication? Say you have jet lag or a horrible headache and your partner starts talking to you - your approach might be completely abnormal. Or a time zone difference or a sudden busy part of your schedule invites tickles at an inappropriate time. You need to be tuned, right?

[01:19:54]

You need to be tuned, you have to be able to set it up, to disconnect or enter a kind of sleep mode or offline mode.

[01:20:18]

Let's explore that. Do you think that option, since it's a familiar one-on-one relation, should have a dedicated button or gesture that says Not Now?

[01:20:38]

No that would already be too late. To reply Not Now, I'm already awake from sleep. So I should be able to make a certain gesture which signals to the other person, ok I'm off for now.

[01:21:40]

I see the same thing. Maybe a light-indicator for use-status: available, busy, away and so on?

[01:21:40]

Exactly, green orange red whatever colour. We had it in a project with [redacted], it was a portal. We had the same kind of impressions on BOND, being always present.

[01:22:01]

Does a BOND interaction make sense if it were one-sided?

Imagine a FB message you send get a Seen! notification. You might expect some response, depending on the message. In terms of BOND, do you \*have\* to respond? What does a response even mean?

[01:23:10]

I don't know where the sweet spot is, here. My behaviour, the way I communicate with my partner, I see it mostly one-way, sometimes both, but mostly one-way. I have a moment and I tickle her and vice versa.

[01:24:05]

Would you need some kind of notification like Seen?

[01:24:09]

No I presume that BOND is direct. Something we discussed earlier, either you're away or not wearing it, do you mean to ask that the tickle is 'stored' and plays the next time the other user wears her device. Because I don't think that would work.

[01:24:30]

I agree. I think the communication should be real-time.

[01:24:58]

Not only real-time, but also not stored and replayed either.

[01:24:58]

Definitely. But let's explore why. Why does it have to be real-time? Why does it lose meaning if it is stored like an email?

[01:25:06]

Because it loses its transience, its sexiness.

[01:25:41]

The fact that the catch-it-while-you-can aspect of it is also a compelling factor.

[01:25:50]

It's part of what makes it very appealing and beautiful thing. We try to eliminate so many layers of communication with this device, and introducing an almost caveman concept.

[01:26:35]

To tune yourself, and in general have a healthy back-and-forth flow, there's an element of negotiation. How is that negotiation done in real-time playing by ear the context, outside of BOND? Do you have to sit down and discuss it explicitly?

[01:27:25]

Depends very much on the kind of interaction you have in real life with this person and how rules are established. There are people who are very curious about other people. There I can imagine, to have a piece of mind with this device, the other person won't accept not being responded to within the expected time.

[01:28:50]

So the nature of the relationship will influence the way you use and feel about BOND and its tickles.

[01:29:25]

It's just another device on us, another means of communication. If it causes stress, and adds nothing to life, I'd rather get rid of it.

[01:29:49]

Alright, last 5 questions! Here we go.

If you get a vibration of BOND, is it significant, or does it depend on context? Whose context, yours or your gf's? Imagine you're at work and stressed, and she's at home and had a touching moment. If either sends a tickle, what is perceived by the other?

Is it significant to you the same way the touch was significant to the other person?

[01:30:23]

Probably it's always significant if I get it wherever I am. I might be more open to this feeling of this person or not.

[01:30:40]

Would it come up in a conversation or it's a passing incident. Leaves in the wind, BOND tickle.

[01:30:44]

It's possible it comes up later... It depends a lot on how it's used. if I only get a tickle once a day, then I probably have a reason to talk about it, and ask about. But I'm getting 20 tickles a day, i might not bother with the reasons why.

Many of your questions depend on the individual use of people.

[01:31:36]

Definitely, but it's okay, try to answer from your perspective.

[01:31:36]

Yeah.

[01:31:41]

Do you think this can be affected by how sensitive the BOND device is, if it correctly transmits gesture and pressure and perhaps emotion behind the gesture. Or is it fine to be simple, the way it is.

[01:32:10]

Again it has to be tested. I can imagine that the wider the range of information/gestures I can send with it, the more interesting and nuanced it can be, in many ways.

[01:32:35]

if you're going to use BOND, how do you see yourself using BOND? All day, or you negotiate a time to wear the device. I've even considered its use in conjunction with a Skype call, adding a touch layer on top of Skype's voice + video + chat. What about you?

[01:33:38]

In my day-to-day, wearables for me, would only make sense to wear them all the time if it's generically useful, or specifically helping me such that I decide to only use it when I'm traveling and abroad.

[01:35:30]

Ah yes, that makes sense. Like a dedicated use-case, the same way you only wear soccer boots when you're playing soccer.

Now there's something we keep coming back to. if I get 20 tickles a day, its meaning is somehow diluted whereas one tickle a day and it becomes very significant. In presence design, there is an idea of empty time, like signal and noise. If you're overloaded with signals, you can distinguish significance, it all becomes noise. Similarly, too many tickles, makes the significant tickles not stand out as much. To build up trust, we need the signals of connection but also 'empty time' to reflect on the connection.

How important you get a vibration and you have time to engage back. How important is rhythm in this communication? Can you do it one after the other or does it make sense to coordinate touches to occur together (some elements of gamification)?

[01:37:12]

It depends on what you're saying with it. If it only vibrates, in one way, and you don't have much to say, there can't be much confusion and you can tickle each other and you can do whatever you want. If there are different meanings in the vibration, there's probably more back and forth. That's how I imagine it.

[01:37:59]

It's about how much of a language the BOND interaction becomes.

[01:38:04]

Because otherwise you start talking at the same time, you're confused.

[01:38:29]

Well in chat messengers nowadays, say FB chat window, if the other party is still typing, you get some indication that indeed the other part is still typing. So you can hold off on your premature reply.

[01:38:43]

But most times it's blind anticipation and there's never a message sent.

[01:38:57]

so should BOND have a similar kind of indication? Or is it even possible, is there any kind of delay or lag in a BOND communication? Or does that change the user action. Would you need to control whether a message is sent or does it automatically ping every time pressure sensors pick up a signal, regardless of whether it's your hand or a wall or a pocket?

If you were to control the sending of a message, it implies the composition of a message. So you could record a pattern of touches, even with a little complexity, before you send it. A language begins to grow from there.

[01:40:00]

That's a lot of stuff for a small device.

[01:40:32]

So one of my initial ideas, which I pitched to Chris, was to avoid the route of the Fb poke. The first time I poked someone, there was an emotional exchange associated it but it drastically diminished going forward until it meant nothing at all to poke someone. it was just another possible button to press. So how could we prevent a BOND Touch from becoming a FB poke? Let's say if every time the signal was unique. One of the reasons why we quickly find and get irritated by spam is that it has the same pattern over and over again. FB poke is similarly a consistent pattern, and it becomes too generic. So you want something unique each time. If a friend SMSs often, you may not be annoyed by it if the conversation is interesting, if the pattern is nice and also unpredictable.

[01:41:56]

Because the content is always different.

[01:42:02]



Exactly. Imagine if BOND were to record a 2 second heartbeat as vibrations, your heartbeat at that particular moment. And that becomes the base that you can manipulate by tapping or 'remixing' in that sense. The idea is, \*each\* time it will be unique.

[01:42:29]

Yeah, maybe. To be honest, I don't know if I would be willing to do the work. To be creative every time I want to transmit something.

[01:42:44]

Uhuh, true, that's why a heartbeat recording would be seamless and it's from you but you didn't have to spend time thinking or creating it. It's uniquely you, still.

[01:42:52]

But heartbeats are usually the same thing. A bit faster, a bit slower. Hopefully the difference is not that big.

I like the basic idea, but it's a different point of view. In the way it doesn't get boring, you find a way, whether it's by heartbeat or anything else, you might find a different way for tickles to vary. if this is satisfying for the other person, that's good. I'm not so sure - it's a very limited sense.

I wouldn't expect from people to only communicate from the device in this way.

[01:45:37]

We act differently, even online and offline, with different people. You're going to use BOND differently with different people - but the vibrations being sent are largely similar, generic. How much of your uptake from a tickle is genuine sharing of emotion and how much of it is you inventing a meaning?

[01:46:36]

I think we would talk about it and then establish a meaning. I would probably press 3s to my gf and that's our code for "I love you" while talking to my mum, when I explain to her, a tickle means I'm thinking about you. It's negotiated, of course.

[01:48:00]

Would you be conscious of whether the meaning you're inventing is mostly in your head but the vibration itself is neutral.

[01:48:47]

I think I'd be thinking about the relationship itself. No?

[01:49:07]

Ah I see. That can be both a good thing and a problem. To bond with the BOND concept, it would help if the module ceases to be a device and instead presents only as a portal to the other party, just like a wedding ring *\*is\** the spouse. So you're not touching BOND, you're touching the person themselves. On the other hand, you might not want to be dishonest in some sense.

[01:50:31]

Of course it depends on the range of the haptic sensitivity. If it's one standard pattern, then it will always depend on your interpretation of what the other party wants to say, if I haven't established beforehand what they're trying to say to me. If there is a big pattern behind it, or nuances or variations of light, then it's easier for me to pick up if I recognize what it wants to say. Or if I don't remember what 3 blinking lights + 2 short vibrations + 1 long vibration was supposed to mean.

[01:51:33]

I think we keep coming back to whether it's a language or not. Do you think maybe it's okay to not have a language, or not get it? Let's consider a glitch. You press for 3 seconds, but BOND glitches and sends a random vibration, would it matter?

[01:52:22]

So it's very abstract, and has only one-way communication which has only one meaning. The medium is already reduced, and on top of that the message is random/arbitrary, the net effect is there is only one meaning left to you. It becomes a gimmick.

[01:53:36]

I'm leaning both ways. The idea of creating a language is cool and can work if you have a reliable repeatable unit of communication (like phonetic alphabet/syllables etc). Or on the other hand you can make the device very

very sensitive, imagine 3 modules side by side that gives you a more realistic sense of touch, but there's no explicit language and yet (or because of that) it's more emotional. Which would you prefer?

[01:54:53]

That's subjective. I would definitely have to try it first to see what how I react to it. In my head I think it should be multi-nuanced and very well thought of in its nuances. It can't be too nuanced though you get lost in million interpretations. There must be a sweet spot in the usage.

[01:55:40]

Last question! So when I talked about empty time, signals and noise, the signals that stand out and made even more significant by time spent reflecting, that's a moment. And the more rare the moment, an anniversary, festival, it becomes very very significant. Is a BOND moment something significant?

[01:57:02]

Well for sure not on the same page as communicating on FB. It's a one-to-one, limited group with reduced communication. If there is a tsunami warning, and you get a warning visa your BOND bracelets. If this module vibrates, it's been established I know I have to run. So of course this means I would need to define beforehand the significance.

[01:58:27]

Nice. And so we've come to the end of our interview. Thanks so much Dominik!

# Interview with Eduardo

**Bio: Eduardo Ulrich**, UX and motion designer with a background in psychology; gravitated to new media and interaction design naturally. No formal involvement with *BOND*. He is extremely enthusiastic about surfing, body-boarding and collecting guitars.

[00:00:09]

Okay, so, I want you to reflect, in your own career and your own life, how the social aspect of technology has developed. We are not talking about how fast or how quick, but if any of these developments have affected the social connections that you've made. How close do you get to your friends? Whether you Skype with your friends in lieu of actually going to meet them. Things like that.

Reflect on your experience in this industry and tell me a bit of your take on it.

[00:00:43]

Hmm. As in how it used to be, how it is since I started working and whatnot?

[00:00:55]

Your personal experience.

[00:00:55]

My experience, throughout my life, how has it changed? Without an opinion, it's hard.

So I guess before we would always make time to be physically present. I mean, I'm already from the phone-age right, so having the phone would always be more support. Technology would always support real physical interaction so

I would call a friend etc to be with them. Email, when the Internet came around, we had IRC and everything. IRC already started making everything a ... we would spend some time talking there and sometimes book it through IRC to be physically present, as with email.

But I think it started always with more and more, as it became harder, because sometimes it was harder to be with somebody, but you got the same value of the interaction in the sense that you could talk with the other person. Since it was written you kinda thought more about it. So it was a mixture between a phone call and a written letter. As you thought more about it, you had to spend more time dedicated to it, I think it became more meaningful I guess than a phone call. At least because it was also a novelty. So I guess in the end, that's how it came out to everybody just talking on Messenger, because also you could interact with various groups of friends and various groups at the same time. So in the end, we always preferred the fastest way to communicate.

[00:02:46]

It's interesting when you say that... firstly I like that you mentioned we used to create time to be present and that's a point we're going to touch on later. But it's interesting when you say the fact that things are written, you spend a lot more time reflecting on it and to you it feels more meaningful than a phone call.

[00:03:08]

Yes because at least you have an advantage for sure. Christ, I was in my teens right so picking up girls was much easier because you get to think before you write, well before you tell me something actually. So it's like that comic book that pops up online on 9GAG right, is the guy writing something then he erases it, writes something then he erases it and then in the end he just says "Hello!". And the girl writes something then erases it writes something and then erases it and then says "Hi!".

Of course you're losing one set of layers here, but at the beginning when the technology is new, it's a traditional story right it's borderline magic. So talking to lots of different people, talking at different moments, being able to talk in the middle of the night and all that, it made it different. It made it sound like something special. And you got something out of it I guess.

[00:04:00]

Yes you expanded on it. I don't have an opinion, I'm trying to keep as open a mind as possible. When you say, yeah we think before we speak in the writing medium, is that a good thing when you're trying to communicate personally and intimately? Like if I'm sitting here with you, I do "um" and "ah" and that's also a part of me.

[00:04:27]

Very true. Yeah yeah yeah, you lose those. So let me say, nowadays I think it's different because it's lost its novelty and you're using it in a new way and a different way. So it's an extra level of meaning and I mean, for instance, me and my girlfriend rarely talk online. Whereas in the beginning which was ten years ago, we used to talk a lot, because there was always much more to say. And the advantage of written communication is that I'll write something and whenever you read it you read it. You don't have to be completely present. Meanwhile I'm talking here with you, we have to pay attention to each other. If somebody comes in, you're distracted etc and then I forget what I was saying. But if I was writing, oh okay that's what I was saying and get back it. So there are advantages and disadvantages obviously. Being calculating and controlling is obviously the big disadvantage but you can also nowadays, even though it's lost its novelty, we're writing worse than ever right now. The crap that we write nowadays is horrible, we're killing every language. I don't write in Portuguese nor English as correctly as I use to, because you're just try to blah and hopefully the other person gets it. You just want to communicate now, whatever comes.

So it comes with every technology I think. There's a novelty and you're trying to figure out where it fits in and there's a point where you become a mature user, and you know how to use it, and you know what the pros and cons are and it has a space in your head that you learnt how to use it, and then that's how it goes.

[00:06:09]

That's interesting, so you say these things. In literature, there are names for these things. When you say the user has matured and in that sense, we have negotiated how to communicate over these things, that negotiation is called media schemata. So we learn whether an email is more formal than a chat. We learn if a train is coming towards you in a 3D screen you don't have to duck. That's all schemata, we negotiate and we understand how to use. Nice.

So tell me, what is intimacy, closeness, friendship, things like that? I'm asking still from a technology perspective. Has technology changed the definition of it for you?

[00:07:13]

Not the definition. But it has allowed me to do different things. For instance, in 2005 I went to Indonesia right? And for instance, being able to communicate at a distance with my girlfriend, at that time, was outstanding. I would always be looking forward to the end of the day because on the other side of the world on a different time table, it's night-time there and the day's beginning here, and I could just go and write an email. Catch her on Messenger and just say hello. It gets you that closeness because you know that the other person is there with you at that time. It doesn't matter where they are in the world right?

Fast-forward a couple of years later, she was in New Zealand and I was over here. And I already had for instance Skype on my phone. I would be at the beach and I'd be talking to her about the great day and I could share the moment with her. Or we might even watch movies together; we'd have both the same film and we'd press play at the same time and we'd keep on writing. It made us feel close you see. So technology allowed us to do all that which I find is amazing.

I think it's the problem that you're always contacting, and sometimes and I can always understand it, you just communicate over nothing and sometimes it's just not important and there's no hierarchy of what's important and what's not. And sometimes you just start blabbering, you just have excess communication which is... you're communicating because you can which makes it special. But I do that more with friends because I just don't care so I'll just say something stupid. No hierarchy. If I did that with my gf, I would probably be going home alone. Quite possibly.

[00:09:02]

So you're saying that technology has just enhanced the connections that you make.

[00:09:09]

Yeah because it's for me, I'm from a generation that was always around new technology right? Because my brothers had the 48K Spectrum, so I was always curious about that. And when I grew up, I saw there were 5.5inch diskettes,

then the 3.25inch diskettes and the CD etc. There was always something new to learn. On TV, here in Portugal we had one channel and then you had two channels, then all of a sudden you had four channels. There was so much happening around that you always have to be on this, asking where does this fit in my daily life? Luckily my biggest passion is surfing so I was always out of the house. So I had the best of both worlds; I managed to make the most of Nature and also technology.

So I didn't find it odd when the internet comes around and all of a sudden I could see the waves in Hawaii live. I was just, this is the most amazing thing. And then, as it grew, okay now I have an email account, okay great. What do I do with this? Screw that we have mIRC... so like that, we managed to interact much better with it.

Yeah IRC comes along. Because that's the social aspect I guess, you always have various groups of friends in real life, you have your school friends, your neighbourhood friends, family friends, family, all these different groups. You don't interact with all of them at the same time, physically. It's impossible. Internet allows you to choose, interact with all groups and meet even new people at a certain level, at the same time. I can be talking to my cousin and my best friend and guys from work at the same time. And my mind will have to separate and treat each of them completely differently. And my boss, I can be talking to him at the same time while he's asking. And that would never happen, you don't have that physical capacity. And the Internet and technology in general allows that.

And it also nowadays, because you have Whatsapp, you have Skype, FB, Snapchat, but all of them have different ways of communicating so you'll probably have each group of friends in a different way. I have a close group of friends on G+, and then I have Skype which is mostly work and now diverging because luckily here we have friends even at work, but then I have FB where I have more closer friends. And it's always juggling like this. And I have SMS, which is also present to communicate with my gf, friends that I see every day, and all these things, they're juggling themselves and I don't think one is more important than the other. I mean, I could maybe isolate 2 channels that I would keep open over others.

[00:12:10]

In the same monologue, you identified that yes even in real life we create a lot of different circles and its fair to say we treat those circles pretty



differently. And maybe one of my initial questions was, do we treat everyone equally on the Internet? If you reduce people to bytes and bits...

[00:12:44]

Yeah, I see where you're going, but no. No way. I mean, for instance, I would never send my father, because I don't think he understands how he can use it. I would send him an email with a funny picture instead of talking to him on Skype and sharing a funny picture there. Even though I've already talked with him for ages, but it would be video, never written.

Yeah family, mother and father, my mother is completely the opposite of technologically challenged. She's completely aware of everything. But still the big channel of communication would be I would say email, SMS and definitely phone calls. Much more personal. I mean if I'm interacting with certain people who'd be immediate.

[00:13:44]

On that note, would you say that there are some communication technologies, some avenues that are explicitly or obviously more personal than others? Or it's something you negotiate?

[00:13:55]

Oh it's per person, not per channel I would say. Yeah for sure, I mean I can have a very personal conversation on whatever medium I choose, it's just depends on the person I'm talking to, the status they are in in their lives, what's happening really. I wouldn't say, oh I'm FB so if we're going to have a serious chat let's go to Skype.

I wouldn't change the medium of communication to fit... it's quite determined by the situation. Maybe the difference between written and spoken, maybe there it would depend completely on the stability of the system that we're using. So I know for instance I trust Skype more than I do Google Plus but sometimes it's the other way round. I just want to guarantee that I will have a connection with that person and not be interrupted. Whatever guarantees me that, I'll use it I don't care.

[00:15:01]

Maybe just a side-question. Do you think that the medium itself, Skype or FB in this case, the actions that it does allow, sort of shapes how you can communicate. For example, I read once an article - one of the reasons why

Snapchat became so viral and it encouraged people to be as spontaneous and messy, was because the interface itself was a bit messy. And so that encouraged that kind of spontaneity.

[00:15:42]

yeah I can understand that. Because I would say people who have Skype because Skype is the number one service that's popped up with video chat and voice chat as well. So people would tend to ... Skype contact. FB on the other hand, is social, so the interactions people are expecting from FB would be different. Even though I think it's again you've already come to terms with it, whatever technology allows me to do, messaging, video chat and what not, because all of them do them now right? So there's no real way...

[00:16:29]

There's a homogeneity in the services now.

[00:16:31]

Yeah everybody understands these are our basic needs to use these services. It's like having a phone and you always expect that the phone is used to talk. If you can't talk on the phone, it's not a phone, it's a portable computer. If you have a car, you assume a steering wheel. So these assumptions I think become part of the services. If it's a communication, social app, you'll assume it allows at least to voice chat or written chat or at the basic level. Slightly above better would be it allows you video chat.

[00:17:10]

Why I asked you to reflect on your experiences so far is so I can see if the theory of witnessing applies. To witness is to be witness and to bear witness. Firstly there's an ethical component there. If you're just recognizing stuff, like civil rights, animal rights movements, some people might argue those were movements for recognition. Black people wanted recognition, people wanted recognition. But if it's just recognition, then it's still a power distance relationship. Oh I'm more powerful than you and more privileged than you and I'm recognizing that you exist. But I still have the power. Whereas witnessing balances that out, because, to witness is to sit down, to be present. You take responsibility to listen and perhaps act on their behalf. And that's why also an eyewitness is the prime thing that is accepted in a court of law. Because to be witness, means you were there, and you saw with

your own eyes and can confirm it, and you have interpreted. So by being witness, you've recognized something.

If you were to get on a tram, and don't recognize anyone on it, you won't bring it up some time later as an incident. But if you were to get on a tram and see a friend, it becomes an incident. Ten days from then, you'll say the other day I met my friend on a tram, right? That means you've recognized something in that incident that isn't present otherwise. That's being witness. But you can also bear witness. If you're walking down the square, someone starts dancing. It's something out of the ordinary and you've recognized it and you're being witness to it, but maybe that guy started dancing to cheer you all up. Maybe he was stressed and wanted to cheer himself up. Those were his meaning, but you don't know what's in his head. When you bear witness, when you tell your friend a crazy guy danced in the square, then you've introduced your own meaning there. You say he's crazy, you say he was dancing well, stuff like that. So that's where meaning is born, in bearing witness.

So when you reflected on your experience on technology...

[00:20:15]

Yeah in psychology we call it projection yeah.

[00:20:18]

You sort of bore witness to technology in your life and that makes it valuable for me so thank you.

So something very crucial to understanding witnessing is, if you do something and no one saw it, it's like a tree falling a forest, does it make a sound? But if I see you doing it, it becomes a deed. It becomes something that you did and I can attest that you did that.

Do you consider online actions in any sense a deed? If I like something on FB, if I send someone an email, and it is not physical, it is not in front of you, is it still a deed?

[00:21:10]

Yes of course.

[00:21:14]

Hmmm, would you draw a line somewhere? Would you say it is as significant or less significant?

[00:21:24]

If I see it personally, I'll always remember it more, because I'm there in the moment and the whole context around will be shaped by me being in that context. So simple example would be, I'm surfing and I see a great wave roll in. If I'm there, I'll be screaming my head off, I'll probably have taken pictures and I'll probably be sharing and I'll tell everyone here once I get here. If I see it online, I'd just say, yeah that's nice. I still saw it and it still happened, but if you're online, you're assaulted by so many things happening at the same time. Everybody's bragging you know and yeah it's nice, it's nice to know what other people are upto but it's much better being there in person.

[00:22:08]

I'm still trying to understand where you stand here. For example, if you tell someone in person you like their dress versus, there's a photo of them on FB and you Like it. Comparable?

[00:22:28]

No in person would be completely different, because the whole... I'm one of the many that will press Like in FB so it's completely indifferent. You know the person will not hear me specifically saying, with my tone of voice, with my emphasis, that I like it. No. Especially a Like, I hate Likes on FB btw. If I write a comment, it's already a different level right, because it's a personal message from me. But even that is in the middle of all the other noise from other people.

And I'm a shy guy so doing anything online is much easier. For me to tell somebody in person that they have a very nice dress, it's completely different. I would have to step out of my shell, you have to interact with the other person, you have the possibility of reinterpreting how the other person reacts, there are various complicated stages, whereas online, you just drop a note and then you away. And that's the great thing of online communication, that you can do things and let them get a life of their own. Whilst in real-life you have to take responsibility for your actions immediately.

[00:23:34]

Based on what we just discussed on witnessing, do you think that has anything to do with why in real-life, you have to stick to your deeds and online we don't necessarily have to?

[00:23:45]

It's the way that we interpret things. Because online they'll stay there if you don't pay attention to them and you can always look at them whenever you have space in your head. Whereas in real life, if you don't look at the guy while he's dancing right there, and he stops, you will never have seen it. If it happened online, yeah I'll see it now or I'll see it later or in a year's time, but I'll see it. And I think whatever is online is never urgent. I mean it's like the other day, my cousin was hospitalised and he posted it on FB. I was like WTF. I would like to know in the moment, call me when it's like that. Don't leave a message for me on FB oh I'm at the hospital. Especially if it's important. That's pathetic. That's not the kind of thing you use Facebook or any messaging for. People worry about you and those people should be notified first. It's a different level.

Urgency, if it requires immediate action, I would never use social networks for that. Unless I don't have any other way of communicating I guess.

[00:24:54]

Now I'm going to introduce you to my Professor's framework. It's fairly simple. It's called the YUTPA framework: being with You in Unity of Time Place and Action. So I'll just quickly explain it, it looks like this.

So in the past, like you said we had to be physically present, sharing the same time, to actually know someone. We shared time and place, and we were a lot like fish in water who don't even know what water is because you've never had to think about it. So we shared time and place and we thought that's what makes for a connection and trust and all these things.

[00:25:33]

Exactly.

[00:25:36]

So if I shared time and place with you, within 2 seconds, I generally know if I want to continue talking to you or not. Or maybe that's judging.

[00:25:46]

Yeah it might be. Still, go on.

[00:25:48]

But think about it. Even now, even in a FB age, or maybe we're not fully there yet, you can go to a party, spend 2 minutes saying hi to someone, and chances are likely you might add them on FB the next day. Whereas, if someone randomly added you on FB, and you've never met them, you'd say who's this weirdo right?

[00:26:18]

Yep.

[00:26:18]

What's the difference? 2 minutes with a person allows you to completely know them, trust them enough to add them on FB? What, why? That's something I want to understand.

[00:26:27]

That's easy I guess. For me at least. The amount of information you get off a person right off the bat is astounding. You can say if they're stressed, they're relaxed, their energy basically, the way that they react to you, how they look, what they're talking about, the colour of their shirt and where they bought it. There's so much story behind the person from the phone that they're using to... in 2 minutes I can judge a lot from a person in the sense that I absorb a lot of information and based on that I'll see common points or not.

Whereas online, based on the picture or on a name, the information is so narrowed down that it's pathetic and you don't know if it's real or not. It can be a lie in person but I'll take the person if there are enough common traits. You know, you can access literally from the tone of voice. I met a guy like 2 months ago, randomly started talking because I had my dog with me and we spent the whole afternoon talking. Never saw him again, bumped into him again amazingly a month ago, talked again and we never exchanged any communications because it's just that kind of thing. Yeah I'll bump into him probably again. Nice guy, but I don't even know his name. But it's perfect, we're in complete sync. And at the end I thought why didn't I ask him for FB or anything else? But well, in the end, it's much more fun like this. And that's the thing.

Personal communication is not just a name and what the person says. It's so much more information, it's insane the amount of things that you get.

[00:28:21]

Nice.

So what my Professor identified were 2 other dimensions, other than place and time, that allows us to build trust. And it becomes more and more apparent that we use these other dimensions as well when we have merging realities, mediated worlds, online and offline worlds. That's when maybe you don't share space, but you share time. That would a Skype call. So things like that is what she's interested in. She's interested in presence, how can we increase presence in technology and services and so on. And how presence helps to build trust. Like you said, if you're physically there, it helps you build trust very fast. But her research has shown that in physical conditions, you build trust first and then based on that trust you can have a lot of transactions. But online, it's the other way round. You have a lot of transactions first, it's very slow, but as the reliability of that person through those transactions is constant, then you build trust.

[00:29:55]

True, yeah I follow.

[00:29:55]

Then she has identified these other dimensions. So other than time and place, we have relation and action.

[00:30:01]

What is Action?

[00:30:01]

The ability to act.

[00:30:08]

Oh okay literally.

[00:30:08]

And relation is your role and your position with respect to the other person. So if you have a look at this... [introduction to the YUTPA dimensions]  
Now more and more, we can start to expand on these areas as well. And depending on how we build our services, anything from insurance to railway car design or architecture for that matter. Everyone is talking about how to make mediating spaces, whether it's online or physical space, how can we get

people who are strangers to feel and to connect better in that space. So a framework like this allows us to understand and go from there.

So I'm go through the 4 dimensions and each of the 4 have four sub-dimensions. It's very qualitative. I would like you reflect on BOND, this one-to-one connection. Maybe imagine that you and your girlfriend are using it. What is your role when you're using BOND? Do you feel equal, do you feel higher or lower in status?

[00:32:32]

Not following sorry.

[00:32:36]

Hmm, definitely you wouldn't use BOND with your boss right? And that's partly because of the role, the hierarchy and the distance you want to preserve.

[00:32:57]

More or less. I would say because of my role. For instance here, we might use it for fun. It's more of the exclusivity. So if I can only use it with one person, I would probably use it with just my girlfriend. Or if it's a group thing I might use it with a group of friends. So it depends. If it's an exclusive thing, then yeah definitely be easier with my girlfriend.

[00:33:20]

So coming back to role, how would you rate it?

[00:34:13]

If we're talking about connection, then BOND is an exclusive channel to connect with her. So yes, i rate it highly.

[00:34:24]

Okay, reputation. This is supposed to be a generic framework that can be applied to a lot of services, even among strangers. For example, if you were doing internet banking and you want to design that service, then you can ask a potential customer, how do you feel about this service, what is its reputation and you can start to design around that.

[00:35:40]



If you're asking me about the reputation of BOND, if I trust it enough to use it as an exclusive means of communication with somebody that I care about, then I would say it would definitely depend on the whole story behind it. Because in my opinion there would be a complete bias. I'm here, I see the development, I've been through every single phase from conception to the latest, so it is harder for me to imagine something that I've never heard of. Let's take any of the many wearables out there, if I didn't know what was being done with the data and I guess if I knew there was no GPS and that stuff, I would trust it, in a sense because I hate the whole control deal.

[00:36:30]

So if a big brand like Apple released BOND, would you trust it?

[00:36:34]

I would easily be convinced to use it, yes. But Kwamecorp releasing BOND, I'm actually here. If I'm not here, and I wouldn't know who Kwamecorp are and it would be a leap of faith. I don't know if it works or not, who they are, what the brand means even. Nowadays I guess, because of the articles that were released, if I go and I find reviews about it and they're good and everybody's saying yes, then maybe sure.

[00:37:06]

Okay, I think maybe this became a bit easier. So I think we can safely say that we're not talking so much about your connection with your gf, but the connection that BOND allows. So we're trying to rate the service provided by BOND, not how you feel about your gf.

[00:37:29]

So you mean how BOND allows me to fulfil that connection, because I have various means of communication already so why BOND, at the end of the day.

[00:37:43]

Yes true. Thanks!

Let's go to communion, which means shared meaning. Do you think BOND allows you to create shared meaning? How so?

[00:37:49]

Definitely.

Because we have to develop our own code, because the tapping would be... a tap is just a tap until you add meaning to it. And the time and the history that we have, everything that do between the two of us. All the technology that's present, there's BOND.

Let's say I'm walking my dog and I give 3 buzzes and she's in the middle of class and she's about to write something for students, and she gets 3 buzzes. She'll be laughing and it'll be a story based on that. Because of the technology we have that makes a moment.

Or I'm in the States working there, and just before I go to bed, I give 2 buzzes and she knows exactly what it means. So you know we develop our own code.

[00:38:52]

I like how you point out in this case, technology helps to create a moment.

[00:38:55]

Easily.

[00:38:59]

Okay engagement. How involved would BOND make you feel?

[00:39:14]

At the beginning it would be a lot and then throughout time it would be every now and then. So it would vary a lot, and I think the advantage of it is that it doesn't demand too much attention from you. The phone, you always have to stop think and see what's the mode (is it a message, is it a phone call, is it FB), and you have to decide what to do about it.

This is just a buzz, I don't even have to stop what I'm doing, I don't have a screen. I felt it, I know it, I'll reply. I guess there might be interactions on the phone later but the basic of it is just that. I'll feel it, think about it and then interact with it as I see fit.

And it will always reflect the relationship you have with the other person. It doesn't try to substitute it in any way, I guess that's the best part of BOND.

[00:40:11]

That's interesting, if it's just a buzz as you say, and in itself it has no content and I don't have to think about it. In that sense, is it empowering because

you don't have to think about it, or because you can have your own meaning? Because it's two sides of the same coin.

[00:40:30]

Yeah, it's true. But for me, it's putting your own meaning, because it's personal. It's completely personal because if you find a meaning for it, it's completely... it's not telling you anything more than a buzz. And whatever you decide it means, that's what it means. And hopefully, people will decide that between themselves and it'll be that for them and nobody else. Because nobody really will be there when they decide that's the meaning.

When you're young, or I mean when it's a new relationship, it's completely different. Every single thing that you do is full of meaning and everything is special and everything is ... and that is the time when you have something like this, you'll go nuts. With all the things that you can do about it. I see that as the biggest potential.

But it'll change over time. If you gave it to me now, now in my r/s, yeah I'd use it but not as much.

[00:41:22]

Nice. Nice. Okay.

Now we'll go to Place. You might think wait, if you're using BOND, you're necessarily not going to be sharing the same space, so why are we even talking about it? But some of the sub-dimensions of place, I think you can perceive even if you're not physically beside the other. Like if you're on Skype, you can feel like right there with them even though you're really not. So let's talk about place.

Let's talk about body sense. It's like literally when you share a space with someone, and you get a sense of my presence.

[00:42:40]

So it's presence basically. Again if I'm in the States and my gf's here, and after a while, I really miss her a lot. Sometimes when you're far away from your comfort zone and your safe place and all that, and you're in the middle of stress and everything there. So the slightest bit reminding you of home, will always help you to behave differently throughout the day. So I guess in the end, just feeling a little buzz that yeah she's there for me and I'm here for her. That's the thing I find BOND gives.

It's something simple. It's a simple touch, it's no more no less, it's just saying I'm thinking of you. That's it and you know, with that you can say a lot. Compared to Skype or something, BOND would give me a lot. Because it's a completely different context. Sometimes you can't talk on Skype, sometimes you can't be anywhere else, you can always give that tap and say I'm here I'm thinking of you. It's like getting that personal psychological hug if you will. Another person just saying don't worry, everything will be okay. That's all that matters.

[00:44:43]

Emotional space. How would BOND make you feel that emotional space?

[00:48:03]

Even though the vibration is transmitted by touch on the other end, I will always interpret it through my emotions, and not through the physicality of it. So it vibrating to me won't make me feel like she's holding my hand or anything. It'll make me just think of that time when she touched BOND and we talked about something or the other. Not the fact that she's literally touching me at the time.

[00:48:21]

That's great! You want users to stop thinking of BOND as a gadget, and BOND as the other person.

[00:48:34]

I would always picture it like that. If somebody would touch it and my hand vibrates, I'm not imagining oh yeah he's just touching his wrist. That's not what it means, it means something completely different. It will be either be I wonder what the other's doing, or me looking at the time to figure out the other's schedule.

We always talk about the example, when you're in the car at 8 o'clock, and we're still going home, I can just give two taps and she'll know, oh he's on his way. I can relax, I don't need everything else. I can relax, there's no emergency.

[00:49:27]

So, maybe on a side-note, the fact that you negotiate your own language and the fact that in itself it has no content, allows you to meaningfully

communicate even though the connection itself has no content in it. Do you want to comment on that? Maybe from a psychology perspective, anything special going on here?

[00:50:03]

I think it's basically pretty simple. Humans are trained to detect patterns on everything they look at or involve themselves in. You look at static, TV static in the old days right and you'll see patterns. You start imagining things happening there. You look at the clouds and you start seeing faces because you're always projecting something, and those things that you're projecting will depend on if you're happy or you're sad.

So therefore a bunch of vibrations will immediately have to have some sort of meaning, otherwise they're just disruptive, and if you can't have that meaning then it will be useless to you so that you don't waste any time adding meaning to those vibrations. And you won't interact with that object if it does not add added value to your life. It can be bragging rights, like the Nike bracelet, basically everyone wore it for bragging rights. Yeah I have one. And that's something I find that BOND, since it's a pair with someone else, it always demands you create a code, and it's always that. A code which you have to decipher. You know you have to find a special place in your head for it to justify having it.

Because otherwise it's just going to be something there, and it's buzzing and you don't have any meaning towards it, what's the point? Why would you have it?

[00:51:34]

Okay!

Environmental impact. Does the connection via BOND help you feel the ambience?

[00:51:56]

Yeah if I'm feeling stressed and I get a buzz from my gf, I'll always feel more relaxed or I can be more pissed off because it's at the wrong time and we had a fight and maybe it doesn't matter. It'll always have an impact, because it will always affect my outcome.

If I'm stressed in a meeting and she's not here, and I wish I could just talk to somebody, you know, you get that buzz that just reminds you that somebody's there for you and gets you that.

[00:52:21]

So it's as if she's there, would you say?

[00:52:21]

No no no no, it's just like a nice message. You know I care for you. if somebody says that at the right time, it can do wonders for you. I can do the negative easier. If I'm pissed off with my gf and I'm having a good time with my friends and nagging messages that you get sometimes with your phone, then it can spoil your mood. The environment around me is going to change.

[00:53:12]

Okay, so whatever ambience that you share in the physical, it might actually bleed over to your actual situation.

[00:53:28]

Exactly. It can happen, not saying it must.

[00:53:39]

Ohkay nice.

Situated agency which means you're there and you can change things. Agency just means you have the freedom and ability to affect something. Imagine you are with a friend, and imagine you're choking. Sorry... but in this case, if I'm right beside you, I have the situated agency, I can try to save you. But if you're choking and you just sms me, I can't do anything about it.

[00:54:28]

Oh in that case, BOND won't do anything for you. In the context of what can you do for a person, nothing. Unless you can type Morse Code typing SOS, you're screwed.

[00:54:40]

But like you said, if someone says the right thing at the right time...

[00:54:57]

Yes... I don't know. Saying the right thing at the right time is such a random occurrence, the other person might never know. Maybe if I told my gf I have a

big meeting tomorrow, and before it she'll touch me, and like that it will affect me. It'll help.

But at the same time, I would say most of the time, I wouldn't say anything. I would just buzz, which to me means I'm thinking of you at this moment, and she buzzes back and that's it.

[00:55:55]

Do you think you can sync with your partner through BOND?

[00:56:00]

To a degree.

[00:56:08]

How about reciprocity, and this is all in Action, it means your ability to act. If yes, there is reciprocity, you send a buzz and she sends one back. Would you consider that a deed?

Let's re-tread an earlier question. You create a moment that didn't exist before, something happened you witnessed it and it was an incident. Whereas it would have just been another day otherwise.

But would you recall a buzz as a deed? Or would it have to be coupled with something else that's happened?

[00:56:24]

Of course it can be. It can evolve meaning over time. It can be just a simple use case: if I know where she's at and she gives me a buzz, I'll find it either funny or silly that she buzzed me at that time. She should be at class right now, why is she buzzing me? And then we talk about it later. And like that you can always have extra meaning.

[00:58:03]

Negotiation?

[00:58:14]

I don't know if we can negotiate through BOND. Because it's so random. The first one that stops wins? You need more detail.

[00:58:31]

Quality of deed. Quality in this sense would be how significant.

[00:58:49]

Yeah I suppose you can. The length or rhythm, it depends on how it evolved. It depends on habits, it depends on how deep your engagement is.

[00:59:00]

Actually here my Prof would divide this into two parts. Activities and actions. Activities are small stuff, chores. They are small transactions that add up. And you have big actions, that you have very few of but even that one big action says a lot. They are both deeds. For example, if you see someone saving a kitten from a tramline, that's an action, that's a big thing and you might trust that person.

[01:01:33]

BOND then can convey actions and activities. Yeah sure of course. An activity could be just a kiss goodnight or it can be an action like giving lots of buzzes and I would understand it's an action and I would need to react to it. Because I would need to give her a call but always external to BOND. But it can convey the two.

I can imagine the code being that elaborate, that's what I mean.

[01:01:41]

So last one, Time. Duration of engagement. Is it going to be everyday or specialized seasons when you use BOND?

[01:02:00]

Every day. it's simple enough to not require a lot of time and energy to interact. I can see myself happily using this daily.

[01:02:19]

Rhythm. So there's a slight different between the tuning of action and the rhythm of time. Earlier in Action, we had tuning and syncing, that's physical syncing. Rhythm in Time is something different. Even if you don't share time, you can share rhythm. If you're chatting or talking, there's a rhythm there. You stop talking, and I pick up. I stumble and you pick up. It's a rhythm. And in any communication you can have a rhythm.

[01:03:24]



So you're basically talking like a walkie-talkie. I don't think BOND is asynchronous really. It can't be, I imagine. I get 2 buzzes and that means a kiss. If I were to get two buzzes two hours later than it was sent, I'm not relating to it as I should be. It's two different instances. So I think BOND has to be synchronous.

[01:04:14]

I definitely agree here.

So making moments to signify. Would you say BOND slows you down in the moment to make a moment more special? Parties, anniversaries, wakes, all these are kinds of solemn rituals, that we go through. Because you're taking time out to celebrate its passing. We may not be mindful of it, but going through the occasion, that in itself makes us mindful, that in itself is sometimes enough.

Basically, these rituals, these moments to signify, punctuate the duration of engagement, in that sense. Regardless of any service you're using, even if you use it every day or once in a while, especially the latter, you want to have some intermediary moments to say "I'm here and I'm working for you."

[01:04:57]

Yeah that's true. I think BOND could do that, once in a while. It's random.

[01:08:23]

Alright then, we've come to the end of our interview. What we've done is you reflected on technology, your experience, so you bore witness to what technology has brought to your life. And you bore witness to what value BOND might bring. Thanks so much!

# Interview with Guillermo

**Bio:** **Guillermo Landin**, UX director, now full-time CEO and champion of *LokLok*, a *Kwamecorp* venture. (*LokLok* is a simple, intuitive shared cover-screen app for *Android* smart phones.) *LokLok* shares many core notions of connected intimacy with *BOND*.

[00:00:11]

Ok, what I'm doing for my thesis, to explain again, I'm looking at sociological theories of technology, like Bruno Latour. Artifacts have politics right? The car, for example, takes us a long distance, and because of it, the way we live and the cities we've built are configured uniquely to complement the car. But independent of the technical capabilities of the car, it still matters whether you own a Toyota or a Ferrari. There's a socio-political status this technology gives.

So I'm trying to understand how the explosion in communication technologies in the recent decades have sociologically changed the ways in which we connect to each other. That's the domain of my thesis, and to do that I'm conducting these interviews. Let me explain my methodology in a bit and I'm using *BOND* as a case-study.

[00:01:48]

You know I'm a sociologist right? Supposedly, on paper.

[00:01:48]

That's right, I remember. So I'm really looking forward to your answers to some of my questions.

Ok first I want to talk about the concept of witnessing because it's central to my thesis. Why am I conducting interviews, anyway? The notion of witnessing,

what is that? To witness is to be witness and bear witness and there's a difference between the two.

if I get on a tram and I don't see anyone I recognize, I forget about the incident. I won't remember it out of the blue ten days later and state that I got on a tram and absolutely nothing happened. But if I got on the tram and saw you, then yes, ten days later I might still remember and recount the incident: I got on a tram and I saw Guillermo. It was an incident, something happened. So what's happened here? I recognized something and it became more than a mindless chore. That's being witness.

Imagine now I'm walking across a square, and I see a crazy person who randomly decides to start dancing in the square. Maybe that person has a good reason to do so: he was stressed and wants to shake it off; or I want to make the people around me laugh for a bit and starts dancing funny. But then, when you witness it, you can't read his mind, all you can do is observe and find out your own meaning out of it. And if I were to tell you that someone was dancing funny in the middle of the square, in the telling itself, I create new meaning adding my perceptions, my observations, my opinions and my adjectives to the event. Which is scary in a way, you quickly realize people might interpret the same event very very very differently. In a court of law though, witness testimony is one of the primary sources of proof.

But witnessing doesn't mean people talking about what other people did. It can be people witnessing things as well, and those things may have happened over a longer period of time than you would call an incident. They can be trends and phenomena.

I'm interested to understand what you have witnessed and how you've seen the rise of social communication technologies.

[00:04:58]

So this is, you're interviewing me as someone who works in the field, as a user?

[00:05:10]

As a designer in this field primarily, but I honestly don't see that there's a significant divide in all these different roles, because they're all you.

So the first question: please think about your experience, your life, your work and how the social aspects of communication have changed with the introduction of these technologies. How have people started connecting differently?

[00:05:28]

In my personal experience. First of all, communication. Whereas before, I was limited to talking on the phone as my furthest reaching channel and that was limiting because it was only national, pretty much. Now I can communicate with anyone in the world that is a huge difference that I do make use of in practice every single day.

[00:06:28]

Just to clarify, you certainly can, but do you really?

[00:06:30]

Yes! I mean, at work, we do it all that time, communicating with international teams all the time. You could argue that at a personal level I still talk to the same people on a daily basis as I did before this era. Could be but, for me the mind-set knowing that there's absolutely no limits, that I can talk to anybody in the world as long as they have FB or email or whatever, that is a huge difference in my mentality.

What else? There's Angry Birds...

[00:07:30]

I think there's a lot more depth to this. If you just summarize with the word communication, that's glossing over. As a sociologist, have you made any observations about social networks? Have you noticed things that would make no sense whatsoever to older generations of sociologists that the new generation has to deal with.

[00:07:59]

Yes I see there's a huge information nowadays. I mean, for me it seems like an overload. I'm sure that for younger generations, it doesn't.

[00:08:16]

In what sense? What kind of information overload do you mean?

[00:08:16]

For instance, I'm thinking now of younger generations. I grew up without the Internet, without these mobile devices and now I see generations growing up with it, not knowing a reality where these don't exist. And I see that there's a

huge difference there. For instance with high-school kids. When I was in high-school and I had to meet people, we would have to plan it in advance and all the details in advance and you actually had to turn up and be there because there was no way else to find each other in the middle of a crowd. Nowadays, that doesn't really exist, because everyone has a phone so I could just call if I'm nearby.

[00:09:17]

So it's very ad-hoc, impromptu.

[00:09:17]

Yes, there's no preparation needed. Before you would have to coordinate it if you wanted to meet physically, and now the coordination happens and you can keep adjusting it.

[00:09:33]

Maybe to relate this to something you said earlier, you said the mind-set of knowing that I can call someone far away at will has dramatically changed how I communicate. Do you think the mind-set of being in a networked society makes us behave this way, without preparation?

[00:09:58]

yeah yeah. Before I would probably honour compromises more. You know when you make a plan to meet up with somebody, you made sure you were there. otherwise you're just commuting for nothing. Nowadays it's so much easier that you just play it by ear, as you said, you improvise a lot more. I notice that more and more whenever someone wants to make plans with me I won't say that definite yes or no immediately. I'll probably say, yes let's talk tomorrow and we'll see if we meet in the afternoon.

[00:10:44]

Even this interview was postponed multiple times, we both did that!

[00:10:44]

Yes, exactly. I know I can always change the plan and that didn't use to happen before. So I'm sure that has changed a lot in the way I socialize with my friends for example.

[00:11:05]

I think we're on to something here. When you say I can always improvise, and feel this freedom, do we want it, do we like this flexibility? Is that why it has been adopted?

[00:11:28]

Yeah, I think all of this overload of information and possibilities make us not cherish so much what we do have. Before, if you have fewer options, when you make a choice, you cherish it. If you have a lot, then you have an incentive to keep changing your mind, then you don't really care and it's a lot more trivial. I think that happens a lot with social relationships. Whereas before, even contacting, even talking on the phone was not trivial. Something that you wouldn't do so lightly. Nowadays talking on the phone or communicating in any way is completely irreverent. That is different. And the same thing with social encounters and appointments. I remember when I was in high school, we would meet at 10PM at the train station, we would go out and have drinks. It was something I knew that that is the commitment, and I would always honour that, I wouldn't really think twice about it. I would just implicitly commit to it. Nowadays, I know that it would be a lot harder for me to go there and meet friends, I would probably say at the last minute that I'm tired, let's meet up tomorrow or I might join you later and end up not doing it at all.

[00:13:19]

That's very interesting. What I get from that, we used to have routines, unquestionable social commitments. So firstly, these routines seem to be disappearing. I see the factors - we are so spoiled for choice, we are instantly connected all the time, and we don't honour these routines - as connected. We used to honour such routines because we had space from them, space in between. And that routine allowed you to re-connect with them. But now you're always connected, that you don't see the special need to set aside time for them.

[00:14:13]

Yeah, it has to do with routine. Before, you would respect the routine because it had a purpose that you could feel. Nowadays the routine doesn't really serve a purpose because you keep in touch all the time and you can meet up

any time, and so yeah you don't respect the disappearing purpose of the routine.

And I think it also has to do with what you invest. Before, it was a bit of an investment, a commitment, to say you're going to meet people at this standard time every week. Before I used to go because the routine exists and we all committed to it because we wanted to keep the routine alive. Nowadays we don't care because the routine can die and be re-created in a matter of seconds. It's not even a routine anymore, nowadays routine has less value or solves a smaller purpose.

[00:15:25]

I have some special questions for you, since you're a sociologist by training. What are your expectations of a friend, family or loved one in this day and age, that wouldn't have existed two decades ago? In short, I'm asking how friendship and intimacy have changed their meaning for you in the context of the technology we've seen in the past two decades?

[00:16:11]

I guess the way we relate - it comes down to communication again. The way we communicate now, because it's so easy, I think I expect my inner circle of people to contact me more frequently.

[00:17:09]

Let's keep it simple. Which communication medium drastically changed the way you relate to your inner circle?

[00:17:48]

I definitely think the first one was the telephone. I remember the telephone being an essential tool. It was the landline at my parents' place and it was the way to communicate with anyone I don't meet on a daily basis. Doesn't mean I used it every day but it was an essential tool for it.

When I started having the freedom to go out and make my own plans, that's when the telephone really took on an important role for me. At some point, you become aware that you can call your friends' house and talk to them on the phone.

[00:19:23]

I'm guessing you did meet these friends on a day-to-day basis?

[00:19:23]

Yes, but I called them it was something extraordinary, when it was something outside our routine.

I had an 'aha' moment when the Internet came along. My 'aha' moment was in 1996 when I first had contact with the Internet and when I created my first email account in the University, which is where I had Internet access. I remember the 'aha' moment. I had a bunch of friends here from foreign schools, English German etc, and I knew them for a couple of years in high school, and they went off to University abroad. I remember in 1996 when I created my first email account, I remember exchanging emails with a friend of mine who was in London. I remember feeling, I think it was something like I emailed him and he emailed back within like 5 minutes and suddenly I realized, holy s\*\*t, we're sitting in front of a computer and we're connected by... something and it just felt so magical. I remember reply to him saying "hey I'm sitting in front of a computer as well, how are we even talking?". There was nothing before that, no chat, no IRC, just email and he replied saying "me too!". It just felt amazing.

[00:21:15]

That was a nice story! Thanks for that.

How about other means of Internet communication?

[00:21:30]

About chat/IRC. I remember for a while, I didn't understand what the Internet was. Ok so you have a company and you put up information about your company. Who would want to see that? I couldn't see the practicality of it. And I remember when my friends started talking about mIRC, I didn't have Internet at home so I couldn't try it. I remember going to a friend's place, he had it and he would go into chatrooms and then talk to people he didn't know. I remember that being quite amazing as well. Okay he's talking, typing here and people are replying and you see this stream of chaotic conversation that you can't understand but still could feel the magic. You could feel that each one of those lines were other people at their computers all over the world. There was absolutely no use for it, and after you get bored insulting people and having pointless conversations, what does this actually do?

[00:22:51]



Then again, this is the kind of place where Anonymous was probably born.

[00:23:01]

Ha yeah. But I personally wasn't using it. I don't really remember but I think I started using Yahoo Messenger as the first messaging app I really related to, talking to friends of mine who were both abroad and in Portugal itself. When I started building that little list of contacts and you had more than one that was online at a time, oh man I was actually connected to people and that felt amazing, because you don't really have to start a phone call anymore. People are just there and you can see them and you can just say hi.

[00:23:49]

When you highlight it that way, that makes a great point. For a long time, I used to have a hiccup myself about not calling people because they might be busy and the call might otherwise distract them. I myself would not appreciate being disturbed when I'm doing something I'm really into. But I've never felt that way about chat, because it explicitly tells you these people are busy, available, away from computer. You never feel bad about disturbing someone and equally, contacting them never feels like inconveniencing someone. There's no guilt because there's no guessing going on.

[00:24:14]

Yeah, the pressure is gone because on a phone call there's quite a lot of pressure. First of all, the other party might be busy and what you have to say might not really be that relevant that justifies you bothering them so you have to be almost prepared before you call, you have to set some goals and then just go from there from beginning to end, because there are no interruptions. With chat, people are just already there, and you're not necessarily interrupting because they can just ignore you and even if they reply immediately, you can take your time and think it through.

[00:25:04]

That reminds me. When you say, in a phone call you wouldn't have the same dynamics because you have an outcome, do you think it's still like that? Is it still so goal-oriented?

[00:25:22]

Phone calls are goal-oriented, but they're also a lot more affordable. I mean it's a lot easier to reach someone on their phones, before you would call their landlines. If they weren't home or if the line was busy, there could be a million reasons to not be able to catch them so you better use that opportunity well because you don't really know when that might happen again. Nowadays, I can just call you up, and I can even say, oh I forgot what I wanted to say, let me call you later. That can happen. You have a lot more options, lot more chances.

[00:26:03]

That sort of brings me to the idea of time. Like you mentioned, the opportunities were scarce and we had a lot more time. Now chat and the possibility of phone calls at all times, and email, all these different ways of communicating, all different avenues, at any time, not even bounded by the day-night cycle nowadays, everything's 24/7. What consequences and changes do such practices have in how we deal with people?

In a way, getting up every day is implicitly writes off some portion of the day to deal with communication. Before, the opportunities were scarce and when they did arise, you either knew and anticipated it beforehand, or it was an extraordinary circumstance which demanded the time it took. Now though, there's some portion of the day you give up to communication, not knowing what it is going to directed at, but knowing for certain that there will be communication, there will be a ping or a buzz that you will have to respond to.

[00:27:16]

Definitely. I mean nowadays it just happens as you go. You don't really need to stop and do it. Even though it ends up taking a lot of your day, here and there if you add it all up. But yeah, going back to the old telephone on the landline, that reality, I remember there was a kind of working hours for communication. Hours at which you could call. I remember at my parents' house, after 10pm, or maximum 10.30pm, there were no more phone calls. You weren't allowed to make a phone call because it would be ridiculous, who were you going to call at that time anyway? No one was allowed to call our place after that time, or my parents would be crazy! "Who is that and why are they calling at 11PM?"

Nowadays even that is a lot easier. You can call someone, at any time, even if they don't pick up, they would see your missed call which acts as a

reminder. You can also text people and they'll answer whenever they want. You can email them at night. There's a lot more freedom. You only have to think what time you want to reach out, not about what time the other person will be available.

[00:29:23]

(That makes me wonder how subtle but significant the concept of "silent mode" has changed our concept of communication! Hmm.)

We have a lot of freedom, we have so many means of communication and you can do it whenever you want. While previously you had to anticipate the other person's availability (to respond back), not just your convenience, it's respecting the other person's convenience as well. When we used to accept that there should be no calls after 10PM, it's not because the wires shut down after 10, or you \*can't\* call after 10PM, you don't want to disturb the other person.

[00:30:10]

Yes, we had to coordinate both sides. And now, not really. You only have to think about yours.

[00:30:22]

True. Don't you think that makes us sound a bit selfish? Previously, the other person's convenience is clearly on your mind; it wasn't just about getting your affairs in order, it was a genuine effort to connect with the other person (at a time when they are able to respond back. This responsibility of proper response was once the onus of the initiator, and now it has been outsourced to the responder.)

Now it's like your convenience is prior, and I'll do everything at my convenience and others can catch up at their own pace.

[00:30:54]

Yeah yeah I'm trying not to judge it, not say if it's good or bad. But it is definitely different. That's the thing. Before it was an event. If you call someone up, you wouldn't do that lightly and you would focus on it. Now it's a lot more trivial, you communicate left right and center without thinking too much about it. Of course you have the other person in mind but you know they're going to be in the same situation as you; they're multitasking, and doing all sorts of stuff at the same time.

[00:31:34]

Now let's sort of juxtapose this. Before, communication via technology was an event and now it is trivial. But let's compare it to face-to-face communication. We treat tech-mediated communication as trivial, but do you think we would communicate the same way if we were face-to-face?

[00:32:07]

Okay, I don't want to side-track here. But I just had one thought. We're always talking about 2 people communicating, always one-to-one. I think one of the biggest differences which technology has brought into our world is the ability to communicate with a thousand people at the same time. That I think has a big impact in society, so I have this theory that human beings are supposed to be in smaller communities, and that is something we can manage and handle and when it becomes too big, that's when you lose control. People get anxious because of their social media activity, people get anxious to project a different image. So that I think changes a lot. The fact that you can get feedback from a thousand or even a million people, you have the possibility at your disposal. Before that was inconceivable. Before you could only communicate with the people you were physically with or maybe a bunch of people that you talked to on the phone only, but you wouldn't communicate with a hundred people in a single day like you do now.

[00:33:55]

That reminds me a lot of McLuhan's lines. He said "mass media is not about the scale that the media can reach, but the simultaneity at which it can do so." So you can have a newspaper printed in 1950, and a million people can have opened it up since, the scale is huge. But when we say mass media, we're actually referring to the fact that it reached that many people simultaneously the day it was released.

[00:34:31]

But that was one directional. That was people consuming the same things from a single source. Now it's both ways. You can get information and put it out and interact with an audience at will.

[00:34:52]

Oh, this reminds me of something Kwame and I were discussing. So he considered this one-directional message as broadcasting rather than communicating. Because we relate in concentric circles of familiarity. Do you think that broadcasting model fits with that form of social structure?

[00:35:33]

No, I definitely don't think the adoption is smooth. I'm not sure it's ever going to happen. I don't think it comes naturally for anyone to communicate with that many people without having any human touch involved. When it all becomes Facebook likes and endless lists of friends. I don't think we can adapt to that. I think there are individuals who can deal with it very well and individuals who can't adapt, and others who choose not to. Like myself, I know I've never posted anything on FB because I don't like the fact that I have such a big audience that I can't see or relate. it makes me uncomfortable.

[00:36:43]

Let's now talk about the main framework I'm investigating in relation to BOND. Before, if I would say i know Guillermo, it would be the case that I've met you, I've spent time in the same physical space as you. In sharing time and place, I would decide whether I trust you or not. And this was the way in which our social radar has evolved for a long time, the same skillset civilization used to come into being.

So we were a bit like fish in water. Imagine a human passing by two fish who miraculously understand English. The human might say, "hey, the water's nice today.". The fish swim along, and after a while, one asks the other, "What the hell is water?" We used to think sharing time and place is how we build trust. Turns out maybe there are other ways, other dimensions on which we build trust, which are implicit when you share time and place. But if you can theoretically spread them out, there are other dimensions as well. This is precisely what my prof has done in her work. [Show the image of the YUTPA model]

What she has identified with these 4 dimensions, we can use them to open conversation spaces to explore how to design BOND. What connection and presence mean in tech-mediated relations.

So you're wearing a BOND bracelet, with a BOND paired bracelet worn by someone else. You get a vibration. Who would the other person have to be, for you to feel comfortable getting a vibration?

[00:41:37]

Who specifically, or what role or relation they are w.r.t me?

[00:41:37]

Exactly, the latter.

[00:41:49]

Someone very very close, who is as interested in talking to me as I am with them It should be a symmetrical connection.

[00:41:59]

Mutual.

[00:41:59]

Yeah, because I'm thinking for instance, it's going to sound a bit bad if I say this, if it were my mother, she would want to talk to me every hour of the day, or every chance she had. And that would be an asymmetrical relationship. I'd be like, there she is again, doesn't she know I have a life?

That's why the symmetrical bit is important. If it was my girlfriend, that's okay, cool. That's something I would welcome.

[00:42:48]

Maybe you can clarify you said someone close. What is the difference between your mum and your gf in this case? I know I know it sounds like a obvious question, but I'd like to hear your articulation of it.

[00:43:01]

Ah ha, everyone in my family is super close, but I would probably feel it to be intrusive, or at least a burden, because if they were doing it to me, then they probably expect me to do the same, and I feel like we're in very different realities. It would have to be a symmetrical relationship. If it were my girlfriend it would be fine.

Would there be another person where that would work?

[00:43:44]

Let's explore this. It's different for different people, and that's fine. Like you said, you're not a big fan of broadcasting on FB. And that's a personal choice. When you say it has to be someone intimate and close to you, why does a vibration have to come to you from someone intimate? If your handphone vibrates, it's not necessarily coming from someone that close.

[00:44:24]

Right, right. But with the phone, I know that it vibrates for many different reasons, and whoever caused the vibration also operates knowing that phones vibrate all the time for various reasons. So I can choose to ignore it. I'll see it when I see it and it's fine. I always have an excuse not to use, not to reply. As BOND is a dedicated device, it's a one-to-one communication, then I know that the other person made it vibrate for me. I know that it doesn't vibrate all the time and I have to acknowledge that it was them and they are probably expecting something.

[00:45:20]

This relates back to the idea of witnessing. You have to be witness and bear witness.

[00:45:36]

I see now, myself, it reminds me of the phone situation. In the old days if the phone rang, you would run over anybody because you *\*have\** to. Because it's so disrespectful not to. Nowadays, I start even ignoring text messages and I'll reply whenever I want to. Nowadays even when my phone rings, I feel the freedom to not pick it up, even if it's my mum or my gf, the closest people. I can feel very relaxed.

[00:46:10]

Let's explore that. We have the freedom to not witness it, to acknowledge we're getting the call. I think here, previously you would run to catch the phone call, firstly you don't know if they will ever call again because it was expensive or either party wouldn't be close to the phone at the right time to get the call. It was likely important, and you want to acknowledge what the new important information brings to your life. But now, you get it all the time, and you know who it is thanks to Caller ID, and the machines doing the acknowledging *\*for\** you be it voicemail, be it FB's "Seen" chat update and

you have automated messaging. The choice of dropping a call or ignoring a text comes in context of the infrastructure we have, that you don't even have to worry, or decide.

[00:47:29]

You don't even have to remember to call them back, because you'll see the missed call notification as a visual reminder.

[00:47:33]

Exactly. What is that? Do you think the machines taking over or supplementing the role of acknowledging, has in some sense, spoilt us?

[00:47:49]

Yeah, but only when we're communicating through technology. When you're talking face-to-face, it's rude to ignore people. That hasn't changed at all. You know that the person on the other side is in the same situation as you. They know the rules of the game, they know you get a ton of communication opportunities, so you feel a lot more relaxed, it's not disrespectful now.

[00:48:28]

It's neutral, it's not just you doing it.

[00:48:31]

Yeah, because we're all in it! And also it gets to that breaking point I was talking about before, you're communicating too much, and human beings can't process it all and so you necessarily start ignoring some. And that works out. In that sense, I think there's a different way of social rules that have been created for technology which don't translate into physical face-to-face communication.

[00:49:08]

So would you call it, if I jokingly said, it's a kind of social spam.

[00:49:15]

It is... it's socially accepted now if I said, you're spamming me. And you can say it to anyone. You're spamming me and I'll ignore you until I can deal with you.



[00:49:34]

Does your impression of the other person matter? Say you don't know who's on the other side. Or maybe you do know, but necessarily someone you chose. Would it affect the way you perceive a vibration from your gf vs a stranger vs someone you don't like? Would you react differently?

[00:50:06]

Yes of course, I mean this is all based on assumptions because we haven't tested BOND in the right context. It's pretty much like someone tapping you on the shoulder. If you know who that is and you get an idea of what they want, it feels a certain way. If you don't know, if you know it's a different person, or a different intention, it feels differently. So I think yes, knowing what that is, who caused it, would make all the difference?

[00:52:22]

Okay now if you get a vibration, a series of vibrations, or a length or pattern of vibrations, what does it mean? Do you take it in context of what you personally are doing at that point of time? Oh I'm doing this and the touch by the other person assures me while I do my activity. Or do you instead think of the other person and what they're doing? Or did you have a code, defining outright one touch means this, two means this and three means something else?

[00:54:06]

I would say it depends, none of the above actually. I wouldn't associate with what I'm doing right now, or even what the other person is doing. But I would associate it with the type of relationship that we have. If it was from my gf for instance, if I'm having a bad day, I wouldn't associate it with my personal situation. I wouldn't think she's "touching" me because she's in a good situation, but I would naturally think she's doing it because of our situation. Okay maybe this morning we were in a really good mood and so on, and that would translate into a vibration. If we just had an argument this morning and we left pissed off with each other, I would probably wonder what that means. Oh was that "touch" good or bad? So yeah.

[00:55:14]

I get that. it's a sense of what you share between you, and less of what's happening with you at that point of time.

[00:55:16]

Yeah, what's common to both, not what's exclusive to one or the other. And with regards to the code, which I've heard Chris and a few people talk about the code, yeah I'm sure people would develop a code, and we've even gotten messages from people [prospective clients] asking can you do Morse code? I think that is something that I would develop over time. A lot of times, in the beginning I wouldn't know what the vibration means, and the person on the other side wouldn't either, and we would be kinds talking without understanding each other. I guess it would be a trial-and-error thing, and I'll probably ask you did that what happened, and over time you figure out when this person is really nervous she taps a lot, or when you really want attention and so on. And I think it would adjust, as you do it and you get a response, you would learn.

[00:56:26]

That's so interesting, because it sounds a lot like how creoles and pidgins come into being.

[00:56:52]

Yeah, yes, it's not one taking it from the other, it generates itself and as it generates itself, it gets better.

[00:57:01]

That's a cool observation.

How much do you want to be engaged through your BOND device? Would you want it on all-day and get occasional taps, or would you wear it on weekends or?

[00:57:40]

I would want to wear it all the time, because having it and not using it, for me, adds value as well. I think of BOND a bit like I think of LokLok, in a one-to-one scenario. In that case, one of the things and because I always see this as a relationship thing, one of the things of it that I like the most, is the fact that you have an exclusive channel. I have to feel close to my gf. We have to communicate in some way throughout the day. And I think phone calls are a bit too much, because I don't want to interrupt her and say hi when I really have nothing else to say, I just don't want to go through the whole day

without any contact, so phone calls are a bit too much. Even text messages are so literal, basically I want to do the equivalent of a wave and smile and you can't really achieve that. That's why in LokLok, I kinda like that use case.

With BOND, it's the same thing, you get to the end of the day, and you have contacted, you haven't said a word, and maybe there was no explicit meaning there but you have connected throughout the day. So the fact that you have it on you but don't use it, for me, has value and meaning. So if I go through the whole day without touching it not even once, and I know the other person is there on the other side, it's like we're standing in the same room and not talking! That has a meaning, and you're communicating something, and so I think it would only make sense if you use it all the time.

Or I would use it all the time, and see no value and stop using it when we're in the same city or same town, where we're seeing each other everyday. But if I was to go abroad, I would probably use it and I would get a lot of value out of it.

[01:00:28]

Wow, that was great. The fact that you make contact, that you have made contact, but not necessarily with content...

[01:00:45]

Definitely, I recognize that as the gap.

[01:00:46]

We've finished the first section which was about YOU, your role, reputation and so on. Next let's talk about PLACE.

So you're wearing the bracelet, do you get a sense of being there with the person? When you touch it and you think that the other person is feeling it, or you get some notification/lights that the other person is indeed receiving it, do you get a sense of oh I'm there with that person? Or when you get a vibration, do you have a sense of the other person being here with you?

[01:01:53]

No, but I would probably imagine what the other person is doing at the moment when they sent the vibration. And I imagine what they're going to be doing when I send one over there. I feel connected without feeling that person

is with me or that I'm with them, but I feel that at that moment, wherever we are, we're both focusing doing the same thing for each other.

[01:02:31]

That makes me want to throw in a monkey-wrench and ask you this. The questions I'm asking you are my interpretation of my Professor's theory, shaping it into a conversation that both of us can explore. I perceive this body sense to be directly inspired by the concept of "immersion", in my opinion. We try to create immersive technologies like Oculus Rift, or specifically commit to immersive experiences in media. And the effect is, for at least a few fleeting seconds, you feel as if you're actually there. So that's what this question was based on, whether you have an immersive sense being there or the other person being here. But when you say that you don't have a sense of being there or being here but you do get a sense of both of us being \*somewhere\*, in your own space.

[01:03:58]

Oh, I guess I interpreted it completely physically. So let's imagine I'm having a meal, or I'm watching a show, and I tap my BOND bracelet, or I get a vibration from the other person, I wouldn't feel that that person is experiencing the same thing I'm experiencing, like the external factors of my meal or the show that I'm watching. But I would feel that we're both in the same experience, in the same "place" in that sense, we're both focusing on the same thing. I don't know if I know a good word for that.

[01:04:50]

Ah yes. But yes I agree, it's a very tangible mind-space.

[01:04:55]

Okay, how about we're in the same intent, to use an Android word. Sometimes we use it in code, but it actually makes sense. Yeah the same intent, we are wanting to do the same things for each other.

[01:05:15]

Nice. So you get a vibration. Do you get some sense of what the other person is trying to communicate, emotionally? Or would you be compelled to create that kind of code - are you happy and how many taps is that and so

on? And if so, how sensitive does the bracelet have to be for this sense to come across?

[01:05:47]

That's tricky. This is one of the things I think we haven't validated yet with BOND, and I'm not a hundred percent sure it would actually work. So my problem with it is that the vibration doesn't have that dimension to it. Apparently there will be some coloured lights, I don't think there's any intensity, but I think it really has no depth so it might have no meaning. We kinda tested having, you know, phones on us, and I got the impression that it would get to a point where... I mean the vibration itself it feels like such a technological thing, but we get no meaning out of it. We are assuming that you would get meaning because you know who's on the other side, but I think the manifestation of it might kinda ruin it. And then, I think it might be a problem that the actual manifestation of the other person's message or communication, if it's meaningless for you, if you can't really tell if they're happy or sad, if you can't really tell the difference, it might compromise the whole concept and the whole thing. This is one of main concerns about the whole thing.

[01:07:28]

But don't you think, if so, adding sensitivity, say pressure sensitivity, would add nuance?

[01:07:51]

Yeah that's a good word. Nuance. It needs nuance, I think. I don't think it has enough right now, I suspect because I haven't tried it enough, it's going to be end up being a bit meaningless after a while. Because it's not all about you knowing the other person wants to communicate, you get to a point where you kinda need a bit more, because otherwise you might kinda have very different experiences from each side. You might get, I'm thinking of a couple, let's be sexist or politically incorrect maybe, a couple where the man typically is kind of reserved and doesn't really need to be talking all the time and the woman needs to be communicating very frequently. So let's imagine that. After a while, if she keeps vibrating while 'm working, it would get to a point where I ignore it because I don't really know if she's happy or sad or doing it because she's bored. And that I think is going to affect the way we communicate a lot.

[01:09:10]

Oh, then I want to clarify, do you think then the sensitivity or the lack of sensitivity, would in a way shape how people use it? If it's not very sensitive, they're not going to be nuanced about using it either.

[01:09:31]

Yeah, in the end, it might get to a point where it has no meaning. I mean it means that the other person is trying to say something but you don't really know what. I think it would end up losing its value.

I know there's length as a variable in the vibration but I'm thinking what if we're connected in a way that, the closest people in my life, could turn the light in this room on and off. At first obviously it would be a surprise, ah look they're doing it it works! But after a while, probably not care because it wouldn't have meaning. That confusion about whether is this really important, is the person happy, should I feel happy for them? Are they just bored? So yes, I think nuance is something important here.

It definitely needs more. I think the single [...], just saying communicate does communicate something but not a lot. It starts the process of communication, but it lacks the content, and I think that's kind of what we're doing.

[01:10:58]

I agree with you. I did talk a bit with Chris on this topic. I mean, they did some amount of testing. Even though the phone has a powerful vibrator, they played with the settings to make the vibration intensity just right, so it doesn't feel too negligible but also not too strong and mechanical. But yeah it's constant now, I would definitely agree that it's within a range of intensities.

[01:11:32]

Well I'm sure there are different ways of doing it. I don't think it ever went through. But that was a similar thing, but I think it was more academic.

[01:11:45]

Oh you mean the product that was featured right next to BOND in the Future of Wearables booklet right?

[01:11:46]

Probably that one. I remember seeing a video when it came out, and it wasn't just a single rotor that makes it vibrate. It had like 5 pieces that would put pressure. So you could lower them all at the same time or just one or just swipe and it had that sense of direction and a range of localised pressure.

[01:12:22]

Oh that's great. I definitely agree.

Okay, environmental impact. Ha, I shouldn't have said the academic title.

You're wearing the bracelet and you get a vibration. Now does your location change how you feel about the vibration and vice versa does the vibration change how you feel about the location? For example, you're in the office and it's stressful, or you're in a club having fun, or you're at a friend's place, or at the beach, or back at home, and you get a vibration. Does the vibration change how you feel about the place, and does the place make you feel differently about the vibration?

[01:13:08]

And by place, we mean not only the physical space but also the context you're in. I would say the vibration wouldn't change my feelings about the place that I'm in. I can't think of a situation where that would happen. Unless of course it was an extreme case, like maybe I'm in jail probably getting a vibration, it might mean a lot to me.

[01:13:51]

That was extreme alright! That escalated quickly.

[01:14:02]

Ha it was an extreme case, true, but it's the only one that I can think of where a vibration would change the situation that I'm in. I don't see it happening generally.

Now the other way around, the place I'm in changing the way I feel about the vibration? It could happen, I could feel so connected to the other person, that maybe if I'm busy and it vibrates, I could feel hey come on you're being intrusive. That could be. Yeah I kinda doubt it.

[01:14:57]

I get what you mean, is this also because of our previous point, the lack of nuance? That's why you don't know.

[01:15:04]

Oh, probably, probably.

[01:15:06]

Would your answer change if the product were indeed a lot more sensitive and nuanced? Like you can feel the difference in stroke and pressure and what not?

[01:15:17]

In that sense, yes. Then the second situation I talked about would be intensified.

If I'm busy and the other person keeps trying to get my attention, then the place that I'm in would probably affect the meaning, or it would affect my relationship with the other person. Come on, you should know that I'm busy and you keep trying to get my attention. I know that because it's happened with the phone. Come on if I reject the call it means that I will call you back. It doesn't mean keep trying to call me 5 times in a row. Probably the same thing would happen with BOND.

[01:16:17]

Here, let's explore this. I get the feeling you sort of perceive BOND as primarily as a thing that gets your attention.

[01:16:36]

Yeah, yeah it is.

[01:16:40]

So it's not... for example if it's a hot day and you switch on the fan to feel the breeze, you felt it but it doesn't get your attention but you don't necessarily react to it. But you refer to BOND as it gets my attention.

[01:16:59]

Yeah because I'm assuming probably when I get a vibration I would tap it back, so that I would acknowledge that and the other person knows I felt it. I think it would be kinda rude if I get a vibration. I mean it's so easy to do this, it doesn't require much effort. It doesn't even have to open an app and type anything. I think it would be rude, I wouldn't feel comfortable receiving a



vibration and just looking at it. It's like someone talking to you, you're just staring. Not even nodding, nothing. It would feel a bit selfish.

[01:17:48]

So you're saying there's almost implicit etiquette that would demand that you respond back. So it does take your attention, and you perceive it as if I get a vibration, there's a duty required of me.

Which is good and bad, not morally of course. I mean it in the sense of advantage/disadvantage in how it grabs your attention or not. And in this case, if you perceive it this way, it can be an advantage because that means both of you have created a moment to witness each other. Despite not being in the same place, you're acknowledging each other. It's functionally similar to choosing to take the phone call or Skype call, looking the other person in the eye. Like you said, there's no content, so you're acknowledging their presence first and foremost. Which is super cool. That helps your intimacy.

But as you also acknowledged, it's not cool if you're busy and you don't have time to acknowledge.

[01:19:15]

Yeah, it doesn't take that much time but maybe you don't feel it's appropriate. I think it has to be very balanced. It has to be very balanced between two people, I can see a situation where one party is more eager to communicate and wants to do it more than the other, and it would eventually become a burden to the other.

[01:19:56]

You also mentioned it wouldn't be appropriate. Which reminds me of the bad flak that Google Glass has been getting, right? You can't wear it when you're driving or you get a ticket, or stares when you wear it to dinner, some respect for the ritual of dinner. So it went from Augmented reality - that's great! - to meh. So do you really think that tapping back is going to be inappropriate in any context.

[01:20:33]

I think it's very inconspicuous. It's kinda like, it feels like if I were sitting next to my gf and we were having a conversation with other people, but we're holding hands. Or I were to caress her. It doesn't take away from the attention I'm giving to the conversation. Some people might think it's weird

that you tap that if they know what you're doing, it might feel it takes away a tiny bit of the attention from the person you're talking to, but in no way does it compare to Google Glass for example, where you're talking to a person and you use your eyes, you know, eye contact is super important. Suddenly the other person is staring at something in between you two that you can't see. That must seem rude and offensive, come on I'm talking to you, keep your eyes on me during our conversation. Same with the phone, cos you have to look at it or you have to control it with your hands. You know if you're typing a message or you're reading, chances are you're not listening to what I'm saying.

I read about that effect with Google Glass, and I can just imagine it. If I'm talking to somebody and suddenly their eyes just wanders, staring at nothing. That must feel very rude.

With BOND, you're not really using the rational part of your brain, so it doesn't take away from the rational conversation that you're having. It's purely emotional and it's so inconspicuous that I think it would be fine. I don't think it would affect other people around me.

[01:23:11]

The next one is one of my favourite questions. So you're not physically with them, and they're not physically around you. Now you're making a decision and you get a vibration. Let's say in this case it might be a decision that the other person might not appreciate. Does that vibration make you change your mind or act differently?

[01:23:41]

Ahh, yes! The situation that comes to my mind, in the context of a one-to-one with a partner, let's say I'm cheating on my wife or I'm about to.

[01:24:08]

Wow, you certainly like extreme examples!

[01:24:08]

Yeah ha. In that situation, it would probably affect me yes. It would just make it harder for me to ignore the other person.

Let's think of not so extreme cases. Because you said decisions the other person might not like. Yeah it depends on what degree that it's important, right?

[01:25:03]

But it would make you stop for at least a moment and consider? You may not necessarily change your mind, but the opportunity would arise?

[01:25:04]

It would have to be very extreme to actually make me stop, and consider it. But it would probably change the way I'm thinking about it. It would remind me of what the other person doesn't like. I'm not saying I would act very differently, but I would probably feel differently about the way I acted. So let's say, maybe my partner doesn't know that I smoke, and I sneak away to smoke and they don't know that I do it. If I'm about to light a cigarette and I get a vibration, obviously it would remind me oh I shouldn't be smoking. I would probably still do it and feel worse about it, so it would have to be very extreme to actually influence the way I'm going to act.

[01:26:05]

See, for me whether or not you change your mind ultimately is a detail. Whether or not you're reminded of that person, like if you get a handphone vibration maybe, you don't even check it. But this is a one-to-one connection, the significance amps up.

[01:26:23]

Well I think maybe the same would apply, if I'm about to do something she doesn't like and suddenly she calls me or I get a message. Regardless of the message, it would remind me of her, and you know what is involved there and the reasons why she doesn't like it or the arguments we had in the past because of it and how our opinions diverged.

[01:27:11]

Ha okay, let's move on to the dimension of ACTION. Did you get a sense of PLACE in the recent questions?

[01:27:19]

Yeah, not physical place but more of that mind-space.

[01:27:24]

Hmmm, it's a bit of both. You'd think it wouldn't make sense to ask questions about place with a product like BOND. But if the person had been physically there, making you think differently about lighting a cigarette, and you get a vibration and you think differently about light a cigarette, then it's as if the person was there. I really like thinking about it in this way.

[01:27:49]

It does bring in a step, it does move it in that direction.

[01:28:02]

Hmmm, how important is tuning for you enjoy BOND with your partner? Let's say you've been traveling and you have jetlag and BOND starts vibrating thanks to the other person. Or you're having a stressful day, or you're sleeping at night, and the other person is sending vibrations. You'd have to tune that and negotiate a timing for that.

[01:28:44]

What I think would be interesting there, as we communicate and we're in different contexts and situations, would be for me to realize that she acknowledges that, that i'm in a different context, and I would do the same thing. It's easy for me to imagine that, I just have to think of the times when I go to the States and I spend there 2 months for instance. There's an 8-hour difference, and in that instance, if I'm sleeping with my bracelet, and she just starts vibrating it when it's her noon but only 4AM for me, then that would obviously piss me off.

Now the fact that she doesn't do that, and waits until my time is reasonable, that would also have a lot of meaning for me. So we have to be in tune with each other, but not in the same situation. We just need to acknowledge the other person is in a different situation.

[01:30:10]

Do you think it necessarily has to be done beforehand, perhaps using other avenues of communication? Or is there any way to negotiate it through BOND itself?

Imagine you get a phone call at an inconvenient time. Firstly you shouldn't be getting the phone call at all, but if you did, you can easily communicate you're jetlagged and quickly negotiate that. But on BOND, in the vanilla case, that kind of negotiation isn't possible.

[01:30:57]

I think you negotiate that via the relationship itself. I always think it's something very intimate, and the person would know whether I'm sleeping or not. Even if she doesn't know if I'm sleeping or not, she would at least suspect. So the communication could possibly happen via BOND by not happening at all, similar to a missed call. If she starts tapping when it's 4AM for me, and I don't respond, she should realize I'm not up. In that sense, that absence of communication would kinda have a meaning.

Yeah the lack of response should be understood on the other side, as a message in itself.

[01:32:09]

So that is one way to communicate. In this case, you didn't respond because you were sleeping, and arguably didn't get the message in the first place. But let's say you're awake and aware of the incoming vibration, is there an active way to negotiate, or is the passive non-response the only way to negotiate quickly?

[01:32:37]

I think that would have to be pre-determined. We would have to sit down and say okay if I tap five times in a row, or if I tap a lot in a row, that means stop bothering me I'm busy. I think from my experience, we would have to really decide that beforehand. Even with the phone call use case, it happens to me a lot that she calls me and I can't pick up for whatever reason and I reject the call. For her that means there must be something wrong with the phone, I'll call again. And I have to reject it again.

[01:33:30]

On that note. On the phone, you have the option of sending a preset message saying not now I'll call you soon. On the phone you have that.

[01:33:48]

Yeah I know I have that option, but I almost never use it. Because I just assume that she should assume what it means.

[01:34:00]

I was brainstorming. Don't you think, especially if BOND is going to come coupled with a mini-screen, you could couple some preset gestures which send visual negotiations?

[01:34:22]

A way that BOND helps you give it that meaning. Say I rub it, and the other party gets a red light, meaning I've changed my status to Busy.

[01:34:44]

Do you think that would work, like chat, having different statuses?

[01:34:51]

Yeah I think that could work. Not in the context where I go into a meeting so I'll switch to busy state, but the context where she's "touching" and at that moment I send a communication saying not right now. I think this gesture and its meaning should be preset by BOND actually, because otherwise it's confusing. You know you get a vibration, and for you it might mean let's play and for the other person it might mean let's not play.

[01:35:45]

Does a BOND interaction make sense to be one-sided? Meaning you get a vibration and they get a "Seen" at best. Or do you have to respond? If you do have to respond, what is the interaction flow? Back and forth, back and forth, when does it stop?

[01:35:27]

Good point. I think it has to be acknowledged always. By the sender and the receiver. I think when it's such an intimate relationship... that I think is the actual content of this type of communication. If one party does one tap and the other responds with another tap and it ends, that means something. If there's some combination of long taps and short taps alternating between the users, and you keep it going for a while, that probably has a different meaning.

So when does it end? It depends on the relationship.

[01:39:38]

Ah, wait. Of course I'm not asking in the sense of let's anticipate all the different ways potential users might use the device. That's completely up to

them. But from a builder's perspective, the acknowledgment - the "Seen", is that enough to relay back the satisfaction of the experience? If I send a vibration, on your device, a tiny green blip goes off indicating that I received it.

[01:40:27]

Ah, so who is lighting up the LED? Is it the machine?

[01:40:30]

Probably, let's explore.

[01:40:37]

If it's the machine, it's probably not fair. You know, I'm touching my bracelet, I would feel the other person then acknowledge. I don't know I guess I would have to test it. On chat messenger it works, the Seen status update. But with this, I'm pretty sure a Seen that is created/managed by the machine, is not enough. That's like you sending a message to somebody and you see the Seen, but they don't reply. It feels rude if you don't reply.

[01:41:29]

Especially if this is an intimate connection perhaps.

[01:41:29]

Yeah, if it was a button, that the other person taps to say Seen. Then it would probably be enough.

[01:41:35]

Actually this reminds me. Even on a chat, sometimes a Seen doesn't help. There was a FB meme: a chat message of a guy professing his love for a girl, and from the girl's side, all you see is a Seen and then nothing. In some situations, you want a response.

[01:41:59]

Yeah in some situations, the Seen is even worse. You know if there wasn't a Seen, you can imagine the person didn't read it yet. But if there's a Seen, it's a bit awkward.

Honestly it comes back to the people forming a connection even with, or especially with, this limited form of communication. I don't think a button or a

light or the device itself should take be in any part of that communication. That's a lot like your example, it's the third wheel. It would be awkward. BOND is a channel that's always open, and these extra buttons would put in more barriers.

[01:42:23]

Yes definitely, this is a bit tricky.

[01:44:08]

But one thing that I think about BOND that is something quite elegant and quite appealing is that you don't have all these different entities, lights and meanings and notifications and options. It's all one interaction and you don't need to think about the rules. I would do pretty much anything t avoid having a Seen light or an option where you terminate a conversation and all that. The fact that it's super simple is a feature.

[01:47:05]

So how is this "language" negotiated? Beforehand, or impromptu or preset?

[01:47:57]

Definitely probably impromptu I would say. Trying to create a preset language would be a bit like Morse code, you only have one signal, it's either on or off. And that I think takes away the human aspect of it, the nuances and the organic feel of it.

[01:48:23]

Touch-based email anyone?

[01:48:34]

If you could communicate that much, I guess it might be possible. So that brings us to an interesting side-question. Do we need to negotiate meanings? Do we need to communicate something coherent and why? If it's just touch, it's significant because it has some negotiated linguistic meaning.

[01:49:10]

Yeah, that's true too. Maybe you don't need to negotiate meaning. One thing we haven't yet brought up, but I think is pretty relevant, is that you always have all your other channels for communication. Probably if I se that the



other person is tapping my BOND, and I get some sense of urgency, I might flip out my phone and get to asking what's up, maybe without even saying hi because I feel like we already started a conversation.

If I wanted to transmit a very specific meaning, I would probably use my phone. This is for that part of communication less about specific meaning, things you can't really say on a phone call or a written message.

[01:50:18]

This reminds me of a research paper: since talk-time is expensive in India, the people have negotiated a complex social function for missed calls as a form of communication.

[01:50:43]

Oh we did that a lot here in Portugal. I still use it, not that much, but I do do it. yeah that is communication. It's very limited in meaning, and in that case, it has to be preset. I'll give you a missed call when I'm at the station, and that becomes a temporary signal. Or sometimes it just means call me back.

[01:51:20]

So this is pretty interesting. We have all these other communication media, that we're not going to throw away. You're going to use BOND complementary to the others. Do you think BOND is necessary then? I'm asking what does the touch-modality add, over and above, existing forms of communication?

[01:52:04]

Well, theoretically I can see that it makes perfect sense that it adds the type of communication that does not require words, that you can't do over phone or text message. When the main purpose is not to transfer content verbally, when it's just transmitting a emotion, a reminder of my thoughts of her, then BOND does a much better job than a phone call. Not a much better job than LokLok, which is amazing, but than any other communication channel.

That to me makes a lot of sense. It's like bonding with my gf, holding hands or giving each other a hug. That's hard to transmit, and it doesn't require words. You start a phone call with everything that it implies, you know, interrupting the person, having a purpose and all that. If the main purpose is not transmit a specific idea, not using words, then I think BOND could do much better job than any other channel.

[01:53:00]

So here I would add also what BOND could add especially when it gets more and more sensitive, is visceral sensitivity, which comes back down to nuance. It is limited when BOND is not that sensitive in transmitting, and it would be a big step above verbal communication. Comparing a text message and a voice call, the voice allows so much more emotion and tone to be transmitted on top of the content itself, and from that line of reasoning, a nuanced touch-based modality could be quite rich as well.

[01:54:52]

Right, yeah. BOND could have a lot of nuance, but no content. The emotional side of it is a great opportunity. Cos nowadays technology has given us all these way to communicate content, and some of these can possibly convey emotion, but not many ways to communicate emotion alone, specifically.

[01:55:28]

Is a BOND vibration significant? If you get it, are you going to remember it? Like the tram example, if I get on a tram and it is a completely uneventful ride to the office on an otherwise uneventful day, I'm not going to remember it ten days later, or worse ten years later. But would you talk about a BOND vibration, does it become one of the highlights of the day?

[01:56:07]

Probably not. The reason for that it's so easily accessible that I would expect it to happen a few times a day. it's not a special occasion. It's not memorable in the sense that you receive a phone call from a long lost friend - this is a big deal. A BOND interaction, is not a big deal. Holding hands, touching, hugging, caressing, all these do have a meaning but it's not that memorable. Because it happens all the time. So I don't see a situation where two people wearing BOND constantly, to find every single BOND interaction a distinct memory.

[01:57:36]

So you're saying it's not an action, it's not explicit.

[01:58:09]

Yeah it doesn't mean the other person went through a sacrifice to get through to you.

[01:58:12]

But is it an activity, is it a deed? If you clap your hands in a empty room, it didn't happen. But if I saw it, then as long as my memory serves, it did happen. So that's a deed.

So if you felt the vibration, it's a deed right? But it's not a groundbreaking action, it's not the kind of gesture that moves a narrative along. Like household chores, might not mean much on a grand scale. But in doing them together, a walk by the river every weekend, painting the house etc, over time these things take on significance. So in that context, do you think BOND interactions could take on significance?

[01:59:56]

Yeah it could. I know for instance, this situation comes to mind, when I'm abroad, when I'm in California for instance with an 8-hour difference, we have this ritual when I wake up I might say "good morning" and it's 4pm for her, and suddenly she knows I'm up. I can see the same thing happening with BOND. Even before opening my eyes, even before reaching my alarm to snooze it, I can just as easily reach my BOND and tap. And I can see that becoming a thing where it feels very superfluous, very insignificant, but if it doesn't happen one day, it could have a lot of meaning. Why didn't you say good morning today? That would be a big deal.

[02:01:09]

That's interesting. So in a couple of examples you've given so far, you actually make it sound that it's more significant when nothing is said than when something is shared or transmitted.

[02:01:23]

Yeah that's true. Yeah, now that I think about it that is my point.

[02:01:28]

So I had a side-question. So this is a constant connection, and in this case you're saying because it's a constant connection, the fact that nothing's happening informs me of something. Are these constant connections good for us, should we be constantly connected to someone else? I mean in the past,

if you went to a different country, maybe you don't see your family for months or years and you get letters months apart. You didn't even have the phone.

Is this even a conversation that's worth having? Whether we should be connected 24/7?

[02:02:41]

I think it is very important and it's one of the most basic ways of communicating. And I'm thinking from a different angle. So the way you communicate physically or the primary way of communicating is when you're with your tribe and you spend a big part of your day with them, even though you're not doing the same thing. Maybe you're not even talking to each other, but you acknowledge and feel each other's presence. In feeling their presence, you might not communicate any content at all but at least you know they haven't been attacked by an elephant, that the village is not on fire, that everything's okay. Nothing extraordinary or worrying has happened, and that is meaningful in itself. It's true that if they physically go away from you, then back in the day, you wouldn't hear about them and that was fine... but I do think that we can kind of ease that pain by feeling connected to one person. I think that is good for us, that is what people expect, that is how we build our model of co-existence and community.

But if it's one person. If it were a hundred people you're in constant communication with, I think it's noise and it would be completely meaningless. But if you have that one person, and as you say which I think is a pretty good conclusion, if you have the channel that is always open and you don't use it throughout the day, that's fine. It has a meaning in itself. But if you don't have it, you're cutting away that channel and you don't even feel their presence. So I think feeling their presence, just knowing that they have the opportunity to talk to you and vice versa, is already a way to feel their presence.

[02:05:29]

As you were saying that, I was thinking that it is so true. Maybe I'm myself influenced by living in cities all my life, with my nuclear family, and I moved when I was very young. I mean when we evolved, we weren't like that, we lived in big groups, spending a lot of time with each other days on end, entire lifetimes. So that's our default state of tuning inbuilt by evolution.

Me asking if it's even natural to be connected to someone all day everyday seems now to be a moot point.

[02:06:16]

Yeah I think that is our natural preference to communicate. If we take away the physical space, okay if you say back in the day if someone went hunting for 3 days, you wouldn't hear about them for that long. So yes modern lifestyles are very different, and in that sense, technology is kind of cheating, but I think we can do it an a way that it replicates the old model of communication.

[02:07:02]

Okay we've come to the last section. How important is rhythm in BOND communication? Is it one after the another, or can you both press at the same time? If they're hypothetically typing out something in Morse code, how do you know to wait until they're done? Do we need to establish a rhythm and if so how?

[02:08:26]

So as I said before, I think if you want to say complex messages with a meaning, and you want to be sure that the other person is going to get it loud and clear, you can use other channels. So I don't think there is that problem of that incomplete message. It's like saying there can be an incomplete hug, or an incomplete holding hands. It's such an emotional thing there is no incomplete.

In terms of rhythm, the way I can see myself using it, you use it to say hi every now and then while we're apart the whole day. And I would guess that it would eventually come downto, we would end up creating rules, if you don't communicate a certain length of time without saying anything, that has a very strong meaning.

[02:10:20]

Now I'm getting this impression you're getting these products just to boycott people.

[02:10:31]

Ha, that's very passive-aggressive.

So yeah the rhythm, whatever interval you establish in your relationship, would become the standard. And if you deviate from that standard it would gain meaning, and if you maintain that standard, it would have a different meaning. So for instance, if I'm physically with a person, maybe we're both working here side by side, but every now and then we make comments and remarks and we acknowledge each other. Then that would probably create a pattern. When we break that pattern, then that would have a meaning. If we're both sitting here and for the whole day I do not speak, that must have a meaning. Or if we speak, we communicate constantly on a particular day that would also have a meaning. So I think over time you would kinda create a standard of communication and when you break that there would be some significance. I don't know if that's what you meant by rhythm?

[02:12:05]

Well there's no right or wrong answer.

Now I want to ask about performance. In the sense that a Skype conversation with your sister will proceed very differently than one with your gf or best friend. Regardless of content, the performance aspect is tailored to each person. How do you match your BOND interactions uniquely to communicate with that other person?

[02:13:09]

It comes back to the nuance thing right? If you want to have these differences in performance, you need to have nuance. Or maybe not. One parameter for that the time that you take to respond. In time when do you act or not act? When do you respond to vibrations from the other person, when do you acknowledge, when do you initiate the communication yourself. That I'm sure could be one indicator of performance, and would definitely say something. The other person would perceive you in a different way.

Other than that, other than the Boolean true/false are you communicating or not, if there's no nuance, I'm not sure if performance would be an issue. I might be saying, you're so annoying I hate you, or I might be saying I love you so much my dear, or you know I absolutely don't care at all, and it all comes out the same way on the other side. And it all comes out the same way.

So performance is tricky here.

[02:15:10]

Last question! So is a BOND moment significant, or would you use it for significant things? Eduardo gave a great example. A close relative updated him on their hospitalization via FB and he said it felt inappropriate. Maybe a phone call would have been better. In that sense, that incident is seen significant enough to deserve a phone call over FB.

[02:16:14]

Yeah I see what you mean. I think we have addressed it before. There's little nuance in BOND, so you can't really communicate. There's not really that big a range of content that you can communicate with this. Also you have other channels of communication. So for special occasions, special types of communication, I don't think this would work. I don't think I would use BOND for that.

And it gets to the point where you can't really use it for anything special because all you can do is make it vibrate or not. So how can you turn that into something extraordinary? By special I mean something that doesn't happen that often. I don't think you would really use it for that.

Maybe you could use that for initiating a conversation with another channel. I could see myself using this in combination with a phone, if I was to call her or send her a message, I would use this to either signal that I'm sending, or signal my impatience for the reply and so on.

[02:17:39]

AH that's a kind of negotiation.

[02:17:42]

Yeah I'm sure it would be used like that a lot.

[02:17:42]

On a similar note, I was wondering, similar products with the touch-modality could sort of add a new dimension to existing communications in an active sense. Follow my logic, from text-based letters to telephone calls where you can modulate your voice. To Skype where you have audio and video, and now with a product like BOND, you can add the touch-modality to that multimedia experience.

[02:18:33]

Yeah now I'm thinking of other use cases. Maybe we're living in the same house, I'm in the living room and she's in the kitchen. So instead of shouting across the rooms, I could just "touch" her. or I could be inside and she's outside the home and I could "touch" her to find out where she is.

[02:19:18]

So a literal poke.

[02:19:22]

Yeah, exactly. It would take on a completely different meaning if she were physically nearby than if she was overseas.

[02:20:44]

Alright, we've come to the end.

[02:20:50]

Cool. Great interview. :)



# Interviews with Hugo

**Bio: Hugo Alves**, social media strategist and community manager, handling new media copy, marketing and outreach for a range of *Kwamecorp* projects, *BOND* included. He is trained in clinical psychology and has 2 years of experience in social media. He is also a voracious reader and a ‘mind-hacker’ whose hobbies are “failing and learning”.

## First Interview

[00:00:03]

Let's get started. As I've probably told you once or twice, the point of my thesis is to understand the social aspects of technology.

[00:00:21]

Yeah. I've got a great book for you.

[00:00:21]

Oh? Okay.

You probably know already that artifacts have politics, so it's not just the technology that drives progress. So we have the car, and the car extend the range that we can travel and the mobility that we have, and it changes the shape of our cities and everything. But independent of the technology of the car, whether you own a Toyota or a Ferrari, both are cars, there's a social status to it, and it affects how people see you, how you behave about yourself and so on.

In a similar way, any technology, any kind of medium, will have these social aspects, that we're trying to understand. And specifically, if you go back to Bruno Latour, he's one of the first STS researchers, and he's one of the people who would definitely agree that artifacts have politics. He's one of those ideators. And he came up with a theory called actor-network theory (ANT). Maybe before ANT, technology itself was a terrain and then humanity finds nice spots to settle down, but the terrain itself is unchanging and once in a while, changed by extraneous circumstances.

But there's also social constructivism, which is a socially directed form of technology adoption. So it's not just a new technology comes up and we arrange ourselves around it. But rather, we choose whether we want that technology or not. For example, when stem-cell technology came up, we chose not to pursue embryonic and we chose the more ethical pluripotent stem cells instead. So that's a social constructivism approach. In that sense, technology's not an unchanging thing, but in fact it's interacting with us at all times. And these interactions can affect our actions just like humans. So that's sort of the basis of actor-network theory.

When he says, I want to define what social is. We use the word social like ketchup. Social media this, social everything. But what exactly is social. So he went back to the Latin etymology, and socius means to associate, to be associated. So what is it associated to?

So if you say this is the social aspect of technology, then you're saying, these are the associations that technology makes with these things. And that's the thing that associates technology into this.

[00:03:22]

But do you think that, of course social means associations, but how I see it is social is always meaning that kind of associations between people. Because you can have all kinds of associations that are not necessarily social, because they're not between people. It's really hard to find examples that don't do that.

[00:03:54]

But here, we are the ones who make those meanings. So any time you say we associate, it's us doing those association, so in a way it's always going to be associated with people. But specifically the social aspect is talking about the association itself. There is no in-itself social science, or in-itself social media. It's not inherent, it's because the media allows you to connect to other people

and associate with other people, that's why it's social media. The "social" in social media for example lies in the study of the many associations people form with each other.

[00:04:26]

Of course, but, that goes back to Kant maybe. Do things exist pre-interpretation? Of course not, of course we give meaning to everything. We give meaning to all the artefacts and all the kinds of relationships that we develop so, in a way, it's not something that I would say it's an insight..

[00:04:55]

Ha we can have expand on this, but for now I'm just trying to put things into a context. Moving on, the central part of my thesis is my Prof's own work, which is called Witnessed Presence. So witnessing is this concept of being witness and to bear witness. So why a witness is so important in court is because you were there, you witnessed something and you recognized something. If you get on a tram and nothing particularly unusual happened, ten days later you won't talk about it. But then if you get on a tram and you see an accident, or you get on a tram and you see Joao there, ten days later you might say I got on a tram and I saw Joao. You recognized something significant there. That's being witness.

And the second part is bearing witness and that's where meaning is born. So you get on a tram and you see Joao. He may be doing stuff.

[00:06:05]

Weird stuff.

[00:06:05]

Ha, yeah, he may be reading a book, smoking without anyone else knowing, or he may be dancing on the tram. So you see that but when you tell me what he was doing, you invent a new meaning, you are creating your own meaning and that's the meaning I get. So whatever was in his head when he was doing it is not what you're going to tell me. You're going to tell me what you interpreted his actions as. So that is bearing witness. You create new meaning of a deed.

These two are predominant in physical presence.

[00:06:48]

But then being witness is the construction of reality, the process of construction and interpretation of reality is already there. In being witness. But if you're not transmitting, you're not reconfiguring the information.

[00:07:22]

Yes it doesn't mean anything if it's just an observation. It doesn't mean anything until you try to put it in words. I've had the confusion before as well.

[00:07:37]

Yes I understand what difference they are aiming at but from my background in psychology, there's something I know is that you are not a passive receiver of information. You're constantly interpreting it, so that construction of meaning already happened whenever you're seeing something. You have a lot of examples with eyewitnesses. If the car is one color, you think that the driver is guiltier than you would think if the car was in another color. If the car is red, you'd say the responsibility of the accident is of the driver.

[00:08:27]

So this is like subconscious biases, and so you're saying you've already interpreted a meaning even before speaking out loud.

[00:08:34]

Yes because you're not a passive receiver of information.

[00:08:38]

That's interesting, I'll tell my Prof about it.

So this is a lot like Kahneman's work right?

[00:08:48]

Yeah, for example. There's Elizabeth Loftus, who's the woman who does this kind of thing. She's really focused on witnesses and false memories and it all connects, because you think you're seeing something in a specific way but you're not. You're already interpreting it at a subconscious level. So that "pure seeing" is not a reality, and it doesn't happen.

[00:09:18]

Okay, I didn't know about her work. Nice.

[00:09:24]

Because there's so much stimuli in even an everyday setting, that you already censor a lot, you're already filtering and filling out gaps that you're not seeing. So that process starts, that meaning and construction process, even though unconscious, is starting as soon as you start looking at something. So I would not do the distinction but I get the point. It's reinforced every time you go back to your memory. You're not calling the memory, you're reconstructing it. So every time you try to remember something, the next time you're trying to remember it, you're not trying to remember the first situation, you're trying to remember the last time you tried to remember it. Every time you try to remember something, you degrade it a bit and you fit it to your expectations, to your beliefs. So... human memory is shit.

[00:10:22]

Ohkay. How my professor likes to use this concept of witnessing, in technological, sociotechnical systems, is she tries to understand it in a unique sense. We are right now in physical presence, in person, and for a long time before modern technologies, we used to be in person. To say that I'm connected to you as a caveman means I've seen you since the day I was born.

[00:11:30]

Of course. That's why we still shout at television, at football games in television, because our brain is not yet prepared to be able to see something that's not there. You shout at the movie, hide! Hide! Why? Because you're seeing someone and your brain is ready for, when you're seeing someone, that person is there and you can speak to them.

But nowadays we have technology and we have space and time delays and separations, and our cognitive machine still hasn't embedded that.

[00:12:10]

That's interesting that you say that. Actually I've noticed it recently, the shouting at the TV in Portugal.

[00:12:20]

Probably it depends. It would be different from culture to culture. In Portugal, we do it a lot.

[00:12:26]

Yes I wonder if there's some cultural aspect to it, which brings me to this idea, of schemata. The first audiences in a cinema, when a train is coming towards them, they flinch. But now we've learnt not to do that. In a 3D movie you might still flinch, and in a few generations, you might not anymore. So the way that you learn how to negotiate the technology in front of you, the experience in front of you, they call that schemata. So I wonder how culture and schemata are connected.

[00:13:14]

Are they interconnected or do they restrain each other?

In that kind of question, the answer is of course they do. It's a matter of degree. They do today restrain each other a lot or they restrain each other only in small amounts. I'm sure we're used to a lot of things that are not "natural" to the human being. One of the examples I was talking about, is talking to the television. Of course that's why I used the soccer game example. Because it's in real emotional moments that you do it. You don't do it when someone's doing something normal or something that you're not invested in. You do it when you're having high emotional reactions and of course we get used to the world as it is. So if I'm born at a time that we have already pictures, I'm not surprised to see someone's face in a sheet of paper. But if you take that sheet of paper, and you go to some place in South America or in some isolated tribe that has never seen a picture, of course we're thinking that thing is weird. How is a person in this thing?

[00:14:52]

They'll look behind to find the rest of the person.

[00:14:52]

They'll look behind and they find it strange. So of course culture constrains, or attenuates our what would be our instinctual reactions. At the same time what I was saying in the example of soccer, sometimes the emotion is so strong about something that it overrides everything.

[00:15:21]

Do you think that has something to do with the level of immersion that you have?

[00:15:25]

Of course. Kahneman's work you know, System 1 System 2, it says exactly that. We believe that we're so rational and stuff like that and most of the time, it's the emotion that drives us. We then can rationalize our decisions, but emotion is the driver of human behaviour. You can try to convince your friends to do something with all the arguments step-by-step and they won't. But if you do it in an emotional way, if you in some way can how does someone feel when he does x or y, that might be a better way to change his behaviour. Of course emotion is I think the main driver of human behaviour.

[00:16:38]

So are you saying, the quality of immersion engages the emotion more than rationality?

[00:16:57]

It's like... I worked with a researcher in ... and she went to a VR lab in the US. And she came back and she told us something quite interesting. She put on the VR headset and in the VR what she saw was a canyon, and just a small passage made of wood that she was to walk through. And she wasn't able to. And when she came to Portugal, she said I knew I was in a room with the floor all there, and I had nothing to worry about, but still I couldn't make myself to go through the canyon on the passage. Because I was so immersed in that kind of reality. And what we were saying before about we're getting used to technologies. Oculus Rift probably now, if I put it on, I would be completely amazed and some years from now we're going to look back at it and we're going to say, oh this was so bad. I can see the x, the y, I can ...

Because technology will grow from Oculus Rift and it will get better. Special FX in movies, we look back at movies in the 90s and you're almost like, oh how could I?

[00:18:28]

Yeah! I shouldn't have re-watched it because it was so much better in my memory.

[00:18:28]

Yeah. But that's it. We're constantly recalibrating around technology. Technology gets better and we get used to it and then it gets better again and then we... and when we're forced to look back it seems naive almost. Of

course what technology is doing in those cases is getting us in a higher immersion level. To connect with what you were saying. I really believe that immersion is one of the biggest drivers of emotion, because immersion means we're closer to what our perception of what natural reality would be.

What technology is trying to do when we talk about special effects, VR stuff like that, is taking out our ability to distinguish from reality, from falseness. The more technology can do that to us, the more it can provoke us, with emotional reactions.

So Oculus Rift, supposedly, is going to be able to create emotional reactions at the level that we can't with just scripts. That's why we want it, isn't it? That's why we want it. That's why we want colour TV and we don't want black and white TV, because we know reality isn't black and white, reality is in colour. Now we want even more colours, because reality has a lot of colours. Oh that's the screen in front of me... imagine if it's a screen all around you, that's what VR is. So what's technology's trying to do, and we're going a little Matrix here, is taking away the ability for you to distinguish between reality and non-reality.

[00:20:44]

Ohkay, that's a vision.

Let's get back to my initial questions. This was very interesting because I really like the part where you told me about your friend's experiences with VR. It's very useful for me.

What I was telling you about witnessing, right, it doesn't just apply to people witnessing people's actions, but in this case, it could also apply to people witnessing a thing, people witnessing a phenomenon, and then bearing witness to it. I would like you to reflect on you on your experience, in your life and in your work, about how people have started to connect differently and socialize differently because of technology.

[00:21:52]

Yesterday you commented something on the post Kwame had posted in our FB group. And most of the times there's something I would say. You're always looking at those headlines that say social media is making us narcissistic, or computers are making us lose touch with reality, or X is doing Y. And most of the time, I don't think technology is driving us, we are driving technology. That's why no matter the amount of money we put behind some projects they will never work, because they're going against human nature.



[00:22:43]

Can you give me an example?

[00:22:43]

Let me give you a fake example, but still an example. A fake website that came out some months ago, a social media website where you don't have the ability to have friends. You just make your profile and you don't connect with anyone. And no one can see your profile. You can put millions of dollars on marketing behind that website because it will never take off. Because that's not what people want. People want to be able to show their lives, to see each others' lives. No matter the amount of money you put behind a website like that, no one's going to go there more than one or two times.

[00:23:41]

Sounds like about.me...

[00:23:41]

No no this one, you can't see anyone's profile. You can do your profile, but you can't connect to anyone, you can't see anyone's profile.

[00:23:50]

What's it called?

[00:23:50]

What's it for? Why wouldn't we just want to have something like that? Because it's not our nature, we want to show our lives and we want to see our friends' lives. We want feedback on our lives, that's what comments and likes are. It's feedback on what you're doing, what you're saying, what you're thinking. And I don't know if you know Eric Fromm, he was a psychotherapist a couple of decades ago. And he has a great great great book that's called Games People Play. And he has a concept there, I went searching for it some time ago because Joao Alfonso was asking me, how would we call something in Impossible, strokes. He has a concept of strokes, and then we decided stroke wouldn't be a good example, because you think of heart strokes and um other strokes.

But strokes is every interaction you have with another person. It can be good, it can be bad, but we crave for interaction. And you see the negative patterns

we see in some people's lives and you think why the hell, the guy does everything wrong, treats everyone wrong, is always putting himself in weird and bad situations. That person, the only thing that he's doing, is the same thing that we do. He's aiming to have strokes, to have interactions with other people. He's doing it in a negative way. Because even being negative is better than not having any strokes, and that's what he's good at. Because sometimes we become good at having negative interactions, we're good at provoking people. We're good at saying nasty things to people, and since we perceive ourselves as being good at doing that, we keep engaging in those kinds of things.

[00:26:21]

Just to clarify, what is the analogy of the strokes? Why does he call it strokes?

[00:26:38]

Stroke is a stroke, like stroking your hand. It's a lightweight interaction. I think he uses stroke to mean every little thing that you do when interacting with someone else. It can be a thank you, it can be opening the door for someone, it can be just smiling at someone just across the street. That's why you use a stroke, just that small touch.

This was to say, that's why i don't think technology, or X is doing Y, because I think human nature is something that... I don't think, it's a fact. Some people deny it but it's a fact, human nature evolved for millions of years, we still haven't had the time to change it or for it to change, we can change it with social institutions like courts and police and stuff like that. But we're not changing it, we're just trying to contain it. If we didn't have police and courts and stuff like that, probably revenge-killings would be a lot higher than they are.

Not that we don't have the urge to kill someone when they do nasty things to our family, we still have it. But in a way, we've outsourced that kind of emotion. The thing is, what I'm trying to say, we haven't changed human nature. Because you still want to kill someone who does anything bad to your father, or to your mother. You still want to kill it. The only thing is you don't do it, because you know you will screw up your life also. So human nature is still there, what we've created is social institutions that in a way can control and outsource some aspects of human nature.

This is to say, I don't think that technology changes that much the way we interact with each other. What it does, sometimes channels to reinforce what we already want. This thing, oh people are addicted to social media, people are addicted to status, false sense of belonging or true sense of belonging and that's what social media nowadays can allow you.

It allows you to be in several groups of interests that you already had. But how the hell am I going to find people who like origami? Oh I go to FB and I search for origami. Everyone likes to go out and oh I love your clothes, but this doesn't happen. We have a series of cultural norms that people don't do that spontaneously. But I have a lot of people that like my photos, that don't know me, that just follow me on FB and they like my photos. They're doing something that we, for some reason, didn't do before. But that's something I think everyone would crave. You go out with some new clothes, it's something that someone passes by you and says oh I really love your shirt. But we don't do it, we have that kind of bubble.

And what social media, in this FB and Twitter sense has done, is created some channels, that because we don't apply directly the norms of the non-digital world, allow us to express what we already wanted to express.

[00:30:50]

That's interesting. I've had a similar train of thought.

[00:30:58]

There are a lot of people doing this. You know the sociologist who works for Snapchat, Nathan Jurgenson, the guy says exactly this. I just found out about it like 2 months ago. I was reading what the guy wrote and I was like, it's the guy that says there's no in real life. There's no "in real life". Everything is in real life. You're either doing it in a computer, or you're not. But it's real life anyway.

[00:31:32]

To summarize what you just told me, is that the kind of things people do online is the kind of things we would want to do even in real life, and in most cases, technology has given us the chance to do it that doesn't have the cultural taboos.

[00:31:58]

It also has cultural taboos but different. You don't put completely naked pictures on FB, first of all the platform doesn't allow it. But even if it did, most people wouldn't do it because I'm saying it's uncharted, but also not. There are some rules that transpose to online. Of course it's not everything goes. But since it's new, we can some way redefine and readjust the rules, and it allows for different behaviours that we would like to see.

[00:32:37]

So then my question is. So you say, I put up a picture, normally people who wouldn't say that to me personally, come and like my picture. But what if that Like button, which we engineered, a FB engineer sat down and said I think we should have a Like button, and he engineered a Like button. In reality, it does nothing. There's a time cost, and energy cost, but it has no real meaning analogue (significance?), that's why people can press it and the world is not going to change.

[00:33:19]

But when you say no real meaning at all, what you're saying is we don't have it in the offline world?

[00:33:28]

Sure.

[00:33:28]

But we have. Oh I loved that.

[00:33:39]

But we say that right? Okay maybe answer this question. How is a FB Like, pressing that button, different from commenting I like this.

[00:33:46]

Oh it's much less costlier.

[00:33:47]

In terms of time and effort.

[00:33:50]

Psychological effort. First of all, it's a simpler action. "I love it" - it's a sequence of small actions of course, but even though they're costlier... when I speak here about cost, it's not energy cost, it's not the kilocalories that you expend by writing it. It's the psychological cost. That's why the button works so well. Because all we have to do is one click. And it's so cheap, so cheap, that we do how many Likes a day, on photos, status, other websites. That's one of the great ideas of FB, having Like buttons everywhere on the internet. It's so cheap that we do it in astronomical quantities nowadays.

And at the same time, it's cheap for me to do, but it brings a lot of value for other people. You see there's an NPR documentary about kids who have 100,000 followers on Instagram, and you see how those kids value each Like that they get on the pics and it's crazy. It's crazy. Every Like for them is really really important. Of course they get 1000 Likes and it's not each one, but all the aggregate feeling that comes from that, to the other persons it didn't cost anything. You're browsing through Instagram and all you have to do is double-click a photo and it's already a Like. And for the other ones, for those who get it, it's really empowering status.

The biggest driver of human behaviour is searching for status. It's not searching for sex, it's searching for status. because we don't search for sex directly, we search for things that we believe can give us sex.

[00:36:12]

Ok then so, answer me this. Do you think the way we use that Like button would be the same if the word were something else? "Recommend" or something else?

[00:36:22]

No. You were talking about the Like button as if it were a top-down decision. As if Mark Zuckerberg woke up one day and said we're going to have a Like button. I'm sure when they thought about having some kind of button on FB, they tested, they talked about which would be the word, they first brainstormed the hell out of it, "recommend" "like" "love" oh should we have a "hate" button also, and then they tested it. It was not just some guy who said we're going to have a Like button. love is too much, because if you do "love" button, most of the time, you don't really love that and so people wouldn't really use it that much.

Oh no, I don't "love" your shirt, Colin from work, but I like your shirt. It's lightweight enough to be cool to those who get it but it's not that hard for me, oh no I'm not going to say I love it.

[00:37:35]

Yeah it's non-committal.

[00:37:38]

And then you have pages, "I love the President" of Portugal. Hell no. I kind of like it. So it was not a top-down decision. I don't know if I ever read anything about it, but I'm completely sure they tested a lot of variations. It's what we like, we're the ones who made the decision. So we might not know we're making it, but we're making it.

[00:38:14]

This is very socio-constructivist. Like we decided ultimately what we ended up seeing.

[00:38:21]

And you know, all the changes they do on the platform, people always complain. The truth is they do, is because they already tested it and it worked better for them of course, but for them it's keeping us in, so they want .... At least for us, in the sense that we use it, we're driving the platform. I remember when the NewsFeed came out it was such a backlash, it was amazing. People were screaming. But FB, because they already tested it, they stuck to their guns and said no this is cool this is cool. There are some things that the backlash is justified and they changed it back. But the News Feed, they knew it was really good because of the tests, and they stuck to it, and nowadays everyone uses it. No one goes to see individual Pages, you stay on the News Feed. You keep scrolling and scrolling and scrolling. Successful technologies are those which piggyback on our motivations and not those that go against our motivations.

[00:39:33]

Okay. So what is the difference between pressing a Like button and typing "I like it". If you comment, "I like" and you press a button "Like", what's the difference?

[00:40:06]

First of all, with the button, you're constrained. You can't do anything else beyond liking. You can't "love" it. That's why you don't have four buttons, below each post, one saying "I like", one saying "I love", one saying "I so-and-so like" and one saying "I'm completely amazed". You only have one option.

[00:40:33]

Well two options. You can press or not press.

[00:40:36]

You can comment also but that's the alternative that you're talking about. You can press or not press. Yeah. So it's a binary decision. When you ask someone to write something, you have a full space of possibilities. You can say "I like." You can say "I LIKE" in caps lock. You can do so much things, and we don't like to make decisions. We want to make the simplest decision possible. Writing "I like it", first of all, it would be redundant, because it would another way to say it, and people would find it strange I think.

[00:41:24]

Don't you think it captures some of your essence? Your writing captures your voice? If you were to type in capitals or in a foreign language "me gusta"?

[00:41:27]

But that's different. That's different.

What I'm comparing is using the Like button and writing just I like it. This comparison, for me, if someone would write I like it, I would find it somewhat strange. If someone said "me gusta", that has extra meaning.

[00:42:00]

Why?

[00:42:02]

Because... because reasons.

[00:42:08]

Do you understand what I'm trying to get to? I'm trying to understand. One of the things that jumped out to me, when you were saying, when the button is

a constrained choice, versus the textbox where you have so many options, then it struck me as it's almost mass-produced. Pressing the Like button is you mass-producing a sentiment, versus you generating a handmade sentiment.

[00:42:44]

That's a good analogy. Yeah I look at it a bit like that. But that's why it's different to say "me gusta" from saying "I like it" because "I like it" is so close to pressing the button that it's weird that you do that and don't do the other one. "Me gusta" is a meme.

People sometimes do a like in some of my pics, and they comment with a heart. It's also pretty simple, but it's an extra layer of Like. Since you don't have a "I really like it" button, people say that. It's an add-on almost.

[00:43:40]

Would you also say, in a way, for example... I don't know if I'm overthinking this. In your example, when they press "Like" and they comment with a heart, that makes me jump again. Is it like the textbox is assumed, tacitly, to be a form of communication. You open a channel of communication. Versus the Like is a one-way street.

[00:44:21]

of course it is. Of course it is. I hate to respond to comments, and I have that feeling. That when people comment something, I'm expected to comment back. And I hate it, most of the times I don't want to be there, commenting something that's what the hell, yeah it was a picture that I took with double exposure... just Like it. Don't write anything else. it's not true, because I like that people commented, because I know that the algorithms on FB really value comments. But for me personally, no I don't want to engage and the Like doesn't force you to engage. The Like is just a Like.

Now FB also solved that problem, you can like comments now. That takes me out. I can go there, I like the comment that the person did, and I move on. I acknowledged your comment, are we cool?

Sorry if I'm speaking in such a cold way.

[00:45:26]

No no no, I appreciate your comments.



That makes me wonder. We've invented all these technologies, from the telegram to the phone to Skype, to FB which is like an interactive hypertext Yellow Pages. Now we are finding that, all these technologies, we invented them and we adopted them at a mass scale, because they allowed us to communicate more and more with each other. And now we are using them to communicate less, in that sense... do you see some reversal here?

[00:46:18]

Why do you say that we are communicating less?

[00:46:25]

Okay then, what is your opinion of these mass-produced Likes.

[00:46:37]

Those were Likes. Those were the kind of interactions I have with other people, were the kinds of interactions that if FB didn't exist, those interactions would never exist. Because people I don't see for a long time, probably if it weren't for FB, I wouldn't even remember some of them, high school friends that you never really talked to them at the time, and now they like my pictures. If it weren't for FB, I wouldn't have that. So that's another way. So "oh we're not having real conversation" isn't valid, they wouldn't even exist at all. I wouldn't have that anyway.

[00:47:21]

So even that Like is more than you would have had.

[00:47:22]

It's more than zero.

[00:47:28]

Yeah that's true. I like that.

[00:47:32]

A lot of the things I'm saying here, it's not my original thoughts, it's my mix of all the things I've been reading and what I've been thinking about.

[00:47:46]

I love it. Do what you're doing :)

[00:47:47]

Go read the other sociologist I talked to you about.

[00:47:57]

Okay let's ask it this way. In a very real sense, say 2 decades ago, 2 centuries ago, what it meant to be a friend would be different. 200 years ago it would be someone you grew up with, 2 decades it would be someone you know and call once in a while. But there was no Internet, and definitely not Twitter, mobiles and what not. And now, you can be friends with someone you've met for just 2 minutes.

[00:48:39]

You're conflating the sense of FB friends with the sense of "friend". Is that what comparison you're making?

[00:48:49]

No. I'm asking you personally, for your definition of "friend".

[00:49:15]

I think friendship, the core sense of someone who's there for you when you need it, I think that hasn't changed that much. You have different ways of communicating with those persons. Some of those friendships of mine only survive because now I have FB, because if it were a couple of decades ago, we went to different colleges, and we went to different cities and he got married and we lost touch. Nowadays I can keep knowing what he's doing, sometimes we talk, and we have a bond that wouldn't exist if it weren't for FB. We would just see each other on Christmas, because on Christmas everyone goes back to their homes. Oh what have you been doing - oh well it was a good year. It's not the same thing and FB allows me to keep in touch with those friends.

[00:50:11]

I have two questions. That's a very interesting analogy, or maybe in your case a real experience.

[00:50:15]

yeah it is. Just today I talked with a friend of mine that I haven't talked for a long time. He's coming next Thursday to see the Rolling Stones. And he was saying oh let's have dinner and I'm going to have dinner. He's going with his gf to my house, we're going to have dinner. If it weren't for FB, if it weren't for the small interactions that we have month to month or week to week, we wouldn't feel comfortable to call me and have dinner. And that's how it happens, you slowly drift away. And it's not a bad thing, friendships come and go. Some are more stable, there are some friends I don't even see on FB and still we can meet each other today and it's like we've been together for a long time, but other ones would slowly degrade and slowly drift apart. FB allows you to, if you want because if he likes your pics and you don't like him, it'll happen also and you'll slowly drift apart and we do it. In a conscious way we cultivate our friendship. But if it weren't for FB I would have lost touch with some of my friends.

[00:51:37]

So that example that you gave, you have a long-time friend. Let's consider the two cases. You said some friends, maybe they're not on FB and you haven't seen them for a long time but when I meet up with them again, things go on as per normal. But most of the time, FB is helping me to preserve some element of that connection, such that the next time we meet, we are still friendly and we haven't drifted too far apart. So what exactly is technology doing there?

[00:52:22]

I think the cost of interaction is so small in FB, it's so easy for you to go to profiles and like some pics or, I'm not even accounting for the FB algorithms that they use on News Feed. Let's forget those, because I think those don't work that well some of the time. It's so easy for FB, because two decades ago, if I wanted I could call, but it's a much more... I would have to remember him, I would have to go to the phone, go find his number, call him, you know that awkward moment then that we haven't talked for so long, what am I going to say, I just called to say... just just how are you?

It's much more, it's not costly in the sense of energy, it's a psychological cost, and FB takes that away. It's so easy to go there and like a pic, or comment something and this is what is the difference between FB and before. Because two decades ago, you could keep in touch with your old friends, but you would have to call them.

FB has this thing that's really good. This came with Messages, SMS and stuff like that, and old school snail mail already had that. It's asynchronous. You can send a letter, a FB comment or a message and the person doesn't have to be there at the time to receive it, and doesn't have to reply immediately. At least for me, it's easier for me to do it that way. When you call, no, the person has to be available at the time, it's different. It has a larger psychological cost to do that kind of actions. So one of the things that FB is enabling, is that kind of easy transactions. It's really easy, you go there and you just like some pics.

[00:55:09]

So in a way, are you suggesting that, a FB kind of interaction is sort of like cheating. It's an easy way to preserve a relationship. You wouldn't do that in real life. I wouldn't walk around beside you quietly, and once in a while, say ha that's nice. Is that what you're suggesting is happening on FB?

[00:55:38]

No, because FB allows you to do this. But you still have to cultivate the relationship other than FB. What FB allows me, what it does is, takes away the awkward moment: I haven't seen you for so long, so many things have gone by.

[00:56:02]

Because you don't have to fill them in.

[00:56:08]

Yeah, at the same time, I have this kind of Like interactions. And those interactions are a catalyst for me to meet them outside FB. Saying, I'm going home this weekend, are you there this weekend also? And since we've been kind of in touch through FB, it's easier for me. If it weren't for FB, I'm the kind of guy who never calls anyone. So I've already lost a lot of friendships. It's not lost, it's drifted away. Because I'm not the kind of guy who calls.

[00:56:55]

Like you said, you think calling is awkward because firstly it takes so much of your energy to remember and call.

[00:57:07]

Just to make something clear, it's not the energy. It's a psychological inertia that we have. It's more that than, it's not energy.

[00:57:25]

I get it, I wonder if this psychological inertia has to do with presence. Like you have, like if I'm talking to you, I would be talking to you, unconsciously and consciously, differently than I would talk to Kwame or Chris, or some minister. So we're synchronizing in a way, performing. Then are you saying your psychological inertia is because you've lost sync of that person, and you're not sure how to engage with that person anymore.

[00:58:06]

Yeah yeah that's a good way to point toward it.

Yeah it goes to that syncing. Because nowadays I talk a lot more with more neighbours in my neighbourhood. I don't talk a lot with them but we have some lightweight interactions in the coffee shop or stuff like that, that I don't have with my friends. Why? Because I keep seeing them, and that way it brings us back to sync almost, and so it's really easy to make a joke about soccer, say something about the weather, stereotypical time-waster. Because we keep seeing each other and we keep putting. It's like zig-zag syncing. The sync idea is really cool.

[00:59:19]

One last question, small question. So in this way, you're saying that kind of intermittent, or even constant connection, compared to before, is helping you keep friendships. How would you contrast this with the idiom where they say "absence makes the heart grow fonder".

[00:59:42]

Ah, because. You have a problem with sayings, one says X and another that says not-X.

[00:59:55]

But you get what I'm trying to get at? I think more and more that some silent space is also necessary.

[01:00:11]

But what this allows you, this doesn't force you to stay in constant contact. This allows you to manage it, and stay if you want to. Because with this friend I was talking about, we haven't talked for quite a long time, not even FB, we don't really interact. He's the kind of guy who goes hunting, and the pics that you would see, hunting and stuff like that, I don't really care and so I don't interact a lot with him. Sometimes I go there and say, oh my god, what have you become? But just this. We haven't talked a lot.

So I've cultivated that absence, also within the platform. But when I feel that absence has grown too much, and is passing a certain threshold that it's not an absence, it's a drift, I can go there and I can initiate very very easily some new interactions. So what it allows you is to manage that.

Like this. I don't answer a lot of phone calls. Even my gf says why the hell why don't you answer? It's your friend, your aunt. Because I have a cellphone, it's not the cellphone that has me. I still have the ability to decide that I don't want to answer the phone call. I reserve that right to myself. But she might be... if she were really worries, she might send a message to say please answer the phone, this happened. I can choose whoever I answer to or not. But this is not technology, this is social norms that start to grow out of technology. Nowadays you're expected to answer your phone. Every time someone calls you, it's like you can't say oh I was not at home, and we can't even say. Some years ago you could say oh i left my cellphone at home. Nowadays no one leaves their cellphone at home. You might forget your house keys but you don't forget the cellphone. And so you're expected to answer every call you have. No what the hell, no. I have the right to reserve space for myself. I'm the master.

[01:02:38]

Nice okay. Thanks. I can we can call it a day.

## Second Interview

[00:00:02]

Okay let's go. So the previous time I think we had a good conversation about the nature of witnessing. You reflected on your experience with the Internet, how you perceived people are communicating, connecting differently now. We had some interesting conversations about that.

Maybe before I start asking questions very specific to BOND, let's spend some time just thinking about wearables. You have a wearable technology, and in this case you want this wearable to be a communication medium as well. Do you think there is some fundamental difference, or unique pattern that a wearable can bring to the table?

[00:01:04]

Not specific to BOND? In general.

When we talk about communication, it's difficult for me... I think wearables are a specific category.

[00:01:26]

So what is unique to a wearable? Consider a watch or jewellery, how is it different?

[00:01:34]

I don't see that much difference. For me, it's even strange why isn't a cellphone a kind of a wearable. Because it's just a piece of technology that goes with you all day so why isn't it a wearable? Because you don't have it strapped on you, somehow? You have it in your pocket, so I don't see the clear cut some kinds of technology that we already use, like cellphones and other kinds of technologies like the iWatch or Galaxy gear or stuff like that. In that sense, I think they have a specific characteristic and what I think of wearables, for me Google Glass is one of the products that I think really makes a difference because you cannot avoid it. When you're using it, you have no way to avoid it. It's on your field of view, so that makes it really different from let's say a Galaxy Gear watch. It's really accessible, but it's not taking any of your senses in real-estate. And BOND in that sense would be also a bit different. But at the same time, when the cellphone vibrates in your

pocket, you cannot not notice it so. I think Google Glass has some really cool ideas around it because it blends into your field of view and it can enhance your experience in some ways.

But most of the time when I think of wearables, I think of them just a little bit of extension of technology, like cellphones or even tablets. Those who know me normally joke a bit with me, that I'm always with my iPad in my hand. So in a way, it's almost like a wearable to me because it passes more time in my hand than some wearables would pass on someone's wrist. It doesn't have to be strapped on my wrist to be something that's constant in my daily life. So I don't see wearables, most of the wearables that we hear about, like Fitbits and stuff like that, the iPhone 5 has the M7 processor and stuff like that, it does the same that the Fitbit does... but it's not on your wrist, it's not a wearable? I really don't get some of the reactions.

[00:04:43]

Okay maybe let's specialise these distinctions. Yes I agree with you that to the extent that the phone is always on you, it's as if you're wearing clothes. You're always wearing clothes and you're always wearing your phone. So in a sense, a phone shouldn't be, at least with the ubiquitous nature it has now, shouldn't be that distinguished from a wearable.

On that note, I would still draw some slight difference. At least, I'm optimistic about wearables for the reason that when you have a mobile phone, yes it can track and do most of the things that a wearable can do, but I'm not very sure about the contextual nature of it.

The kind of thinking that I go back to is, if I'm going to play soccer, I wear soccer shoes right? If I'm going bowling, I wear bowling gloves. In a way yes, apps can do that, but there's only a limited range of things an app can track and tell you. So if you're training a golf swing, maybe a wearable can do that better. Or if you're indeed tracking your health stuff, maybe a wearable which is on your eye, can track it better.

[00:06:33]

Of course. But at the same time, you know of a patent that Apple submitted this year of a health-tracking system embedded in your earpods. So you have a good point there. It's true. iWatch is said to be something like that. It has contact with your wrist and will be able to measure a lot of health indicators from that direct contact, and in that sense, a cellphone probably won't be able to do that, at least using the same sensors. Maybe someday, that they



can measure your aura or your sedation or something like that and they can track from that, but at the moment, it's not possible, so yeah wearables have a specific advantage.

But my thing is, with the wearables nowadays, when you talk about the Fitbit or the Nike one etc, they don't have that advantage. They don't make use of the specific advantage, of being really in touch with your skin or something like that, they're just a sensor that has been moved to a body area that's not your pocket. So most of them, I think they don't have that real advantage of being that you wear directly with you, but at the same time, I really understand that when I play soccer, I don't take my cellphone with me, so I really wouldn't be able to track movement measures.

[00:08:29]

I meant it more as a kind of specialisation. A mobile phone is a kind of convergence device, now it does a million things adequately well. Whereas you could play soccer with a normal shoe as well, but a soccer shoes is specialized for that function. Bowling gloves are specialized for that function.

[00:08:51]

Yeah you're saying a little bit what's been happening with apps. That you had a lot of features inside an app but now they're breaking the app apart, creating one app for each specific feature. Thinking of FB, it's the best example of this approach nowadays. In that sense, I think wearables are probably going to do that.

[00:09:12]

Let's try this. Maybe I can also posit it from a different approach, which is in user experience design. They have this idea called affordance. In that sense, I feel that a wearable, by being on the body, by being contextual and intelligent, on a phone I might still have to press a button or two to change some settings to get the context across, whereas wearables can instantly get it.

[00:09:55]

Yeah the affordance is more direct when you talk about wearables. It's true, it's true. It goes with the segmentation, when you start to segment the functions. Because when you talk about Fitbit and other health trackers like Jawbone, that is true. But when you go to Galaxy Gear and that new wave of

wearables, that's not true. They're trying again to put it all in the same place and do a lot of different functions in the same specific hardware.

I'm still figuring out where the trend is going.

[00:10:50]

In a way, in the design history of BOND, this is exactly why Kwamecorp diverged from that convergent device to the modular, don't-compete-with-the-mobile-phone approach, right? If it were a convergent device, if you have a mp3 player, get notifications and send SMSs from the watch itself, then you're literally competing with the mobile phone.

[00:11:22]

But the modular approach does that at the same time. It doesn't aim to replace every function, but by giving you a lot of choice, it starts to be again a convergence thing. Again, you can look at the time, you can have some specific functions that you don't have in a cellphone like the Touch module. But if you have probably a movement tracker, one module would probably be a movement tracker, and that besides a watch and besides the Touch, it's going to be again a convergence thing.

What I really loved about BOND and that's my personal opinion, is that we should have stuck with the Touch module and no modularity. In the future, we can see. But the Touch thing, was the unique value proposition that we had. And when you go into the modular approach, you start competing with a lot of verticals. You're competing with the Fitbit, we're competing with some kind of watches, we're competing with any other module. Imagine mobile payments, imagine you have some kind of module to do NFC mobile payments. You start to compete with a lot of different verticals and that's really really hard, because you can do a lot of things, but you can't do a lot of things well at the same time. At least in the beginning.

[00:13:10]

So that actually spawns 3 questions for me.

So the thinking behind BOND's modular approach, is first Lego for wearables, that's the tagline. Secondly, hardware as apps. Don't you think there are some, even considering the design history of BOND, what was the big idea of hardware as apps? What was the advantage they were trying to capture?

[00:13:58]

There's not much I can say from my personal experience here in the development that would add anything to that... What I feel, and this is my personal perspective, is that the modular approach comes because they felt that the Touch module was too little of a market to make BOND really grow and really take some market share in the wearables space.

[00:15:02]

So it's about monetisation.

[00:15:02]

I think so, I really think so. Which I may or may not agree, depending on whether my boss is listening to this.

So I think, because developing hardware is really really expensive. And the idea that I get from them is that by going only on Touch, the relationship kind of thing, it wouldn't make sense from a financial perspective. Which it's possible that it wouldn't make sense in the beginning. But after you capture that userbase, it would be so much easier to grow from there, than trying to make a lot of different things at the same time.

[00:15:56]

I have similar opinions as well, because when you promise that you can touch to stay in touch... because if it's a phone thing, and you promise that this is my feature, then you would respect the user interface and user experience, and that's the value proposition that you are adding, to make that experience of what you promised the best in its class.

So when you're saying in hardware, we allow you to touch to stay in touch, if the commitment to haptic sensitivity, that kind of hardware commitment is not there, then it feels like a gimmick, and it will be treated as a gimmick. Oh when I press it, there's a light.

[00:16:56]

How would you create a haptic experience that can simulate real touch? That would be something amazing, and that would be technology that you can then license to someone. Because they aren't a lot of things in that space. Some cool things, that can make you feel that something's moving from one side to the other, oh weird. So that would be something great, and what you're saying that when you lose that focus, and you don't do that part really really well, and I agree with that. I wouldn't make a modular approach for now. In the

future, we could think of it, because of course you have to think in financial terms, but I wouldn't have done that choice now.

And you can see it from the Tumblr thing, that we had the viral post. It was because, only because of the Touch module. It was not because of the oh they're modular and I can add X or Y modules afterwards. It was because of the Touch thing.

[00:18:19]

On that note, maybe from your analytics viewpoint. If there's such viral passion for the product, why is it that the Indiegogo campaign didn't work out?

[00:18:38]

I can't speak for that, because I wasn't involved in the campaign. I didn't even speak with those involved about why they think it failed. Sometimes it's a timing thing. Other times you didn't promote it on... because most of the people think oh you do a Kickstarter and they'll find out about you. Hell no. You always have to market, you can spend more or less money but you always have to market to the markets you're aiming at. And that might have not been that well developed? I don't know, I didn't have the experience. I would have loved to have that experience because I think crowdfunding is an amazing thing. It allows you first of all to test your ideas. And at the same time, I didn't even know that the long-distance relationship, that was why the posting about BOND in Tumblr went viral, because LDR the hashtag, it's a thing. I didn't know that. Now with hindsight, as with everything, it's obvious. But I didn't know how big it was and how people made that part of their identity. And that was what made BOND so big on Tumblr. Because people who are in a long-dist relationship, they really feel that something that's part of their identity, and they grow around it. That's why they shared it so much. At the same time, it went viral not only because of that. I went through some reblogs on Tumblr, and part of it was around some kind of jokes, around oh is it large enough to put on my ... So it had a fun funny factor also in there.

[00:21:06]

Oh I mean, it wouldn't be unprecedented. Many companies, the term tele-dildonics was invented in the 1970s. And even Durex is inventing vibrating underwear.

[00:21:22]

So it's like a ...

[00:21:23]

BOND meets Rule 34 yeah.

[00:21:27]

Rule 34 never fails, never fails. I'm still to search for something that oh they don't have it... oh they have it. I've seen some nasty things.

[00:21:45]

Ohkay I will briefly introduce you again to my Prof's framework. It's called the YUTPA framework. Being with You in Unity of Time, Place and Action.

Consider a 3 dimensional space with the axes, with a gradient going from black on one corner to white in the opposite corner.

The axes are You, Here, Now and the opposites are therefore Not-You, Not-Here, Not-Now.

So if you're not there, and it's not you or someone acting on your behalf, and you're not there at the right time, you can't act, there's nothing you can do in that situation. It's as if you don't exist in that situation.

And most of life happens here: where you are present, or someone who represents you is present, and you are present at the right time, and you're present at the right place. And this is where life and love happens.

But here are all the shades of grey, and with our technologies, we're interacting in these merging realities.

[00:23:44]

Yeah, we're taking darkness away.

[00:23:58]

Oh it's still dark and white in the diagram, we can increasingly play in the shades of grey.

[00:24:33]

I'm having a bit of trouble understanding the you-not-you axis.

[00:24:38]

I can explain that. The you-not-you goes down into a bit of sociology. Your sociological position. To give an extreme example, imagine you are the king and you're in a situation, you can act. But if you are the slave, in the same situation, you cannot act.

[00:25:01]

So it's in a way, social status, social power.

[00:25:05]

Yeah, you can be there, but if you don't have the capacity or the influence to act, then it's as if you weren't there at all. So that's what the you stands for.

[00:25:16]

Okay, I'm going to use power as my mental analogy for it.

[00:25:26]

And it's one of the dimensions. But it's a clear example.

Ok so, the questions I have. We'll go through each dimension. You, Action, Place and Time and each dimension has four sub-dimensions. And this is all relating to presence design. How do we sense and feel the presence of another person, thus building trust. That's how this framework has been derived.

So imagine you had BOND on your wrist. Right now, in this hypothetical situation, you don't know who's on the other side. And you get a vibration. Who would the other person have to be for you to be comfortable getting a vibration?

[00:26:29]

My circle of close friends, my girlfriend, my family, my close family.

[00:26:44]

And why?

[00:26:45]

I'm even considering the answer I gave. Because, no it only makes sense for my girlfriend, and possibly my aunt. Because my aunt is like my mother at the same time, and she's the person from my family whom I feel closest to.

[00:27:31]

So what is this? Why would you only want to get a touch vibration this closest person?

So consider this, don't sell yourself on the marketing of BOND.

[00:27:44]

No no no, it's not that. It's a little bit analogous to what I told you about answering the phone and replying to messages. It's more of... not that I didn't want my dad or some of my close friends sending me a touch, it's more of choosing, of allowing someone to do it. And since it's not even a choice, I can't choose not to accept a touch, because it happens. That's a great power I would give someone, so I would really restrict it to those two people, because they are the ones I feel are the most important in my life.

[00:28:53]

And when you say this, it implies to me that you feel very strongly, or you put a lot of importance on the sense of touch. Why?

[00:29:09]

I think because, in this sense, it isn't in the BOND. That's of course one of the cool things. Because touch implies closeness. I can hear a sound from far away, I can see something really far away, but you can't feel something from far away. Unless technology.

[00:29:47]

So it's a kind of embodiment.

[00:29:49]

Yeah, it's the one sense that implies that someone's near you. And this would allow them to be near me without being near me so it's that personal space thing at the same time. I'm kind of strict with whom I give that space to.

[00:30:14]

Would you care to comment on what you just said, which is, it's the first time maybe that we're sharing personal space digitally.

[00:30:31]

But I think this is not really true, because of course, cellphones already have vibration. So in a strict strict sense, it already happens, but it's different because the vibration on the cellphone, it's just, it doesn't signify anything by itself. It's just "I want to talk to you" or "I sent you a message that I want you to read", and in BOND, that content is taken away. So the vibration by itself is the meaning.

[00:31:19]

So wait, there is content right, in that sense?

[00:31:27]

It has some content, but it's a little more abstract. I don't know if this is something specific to Portugal. But I did this a lot when I was in high school. We called someone and we only let it ring. We called it a touch. Oh I'll give you a touch when I leave home. But sometimes I would do that with girls, just as a I thought of you thing. And it's funny I didn't even remember this. I did this a lot. A lot. It's that thing, oh let me just keep this thing going and give her a touch. It's funny because we used the expression.

[00:32:20]

Is it because the word in Portuguese is similar to touch?

[00:32:24]

Yeah yah because Portuguese for ringtone is toque telemovel, and toque is touch. So it's funny, this coincidence.

[00:32:39]

That's interesting, thank you!

[00:32:44]

It's really curious how these things converge accidentally here. And I did exactly this and a lot of people did it, it wasn't just me. We didn't really call because call... hell what am I going to say? I just want for her to be reminded of me, so the next time we meet on the street we have oh you gave me a touch a couple of weeks ago. That kind of thinking. But that touch, when I did that with the cellphone, as with BOND, it's a little bit ambiguous. A little bit what, ohkay you thought of me, but what, why did you think of me, what are the ideas that you're trying to communicate, so



you have to have some inferential work there. And with text messages and calls, you don't have that. Of course you always have some interpretative work to do in the communication but it's a lot more clear. You receive a text message saying I love you, it means I love you. You receive a text message saying I miss you, it means I miss you. And BOND doesn't have that. With the different kinds of vibrations and colours, you could make a show.

[00:34:14]

There is a definite sense of participation that you have when you get a touch. And you're saying I would prefer to reserve who I participate with.

[00:34:23]

Yeah because if a friend of mine, a guy, a really close friend of mine, gives me a touch, I'm like gayyyy. No if a friend, a girl friend of mine gives me a touch, what am I supposed to interpret from that? I don't know, are you thinking of me when you're at work? Weird?  
So that need for interpretation requires that I really feel extremely comfortable with the person I share the space with.

[00:35:11]

Again, you don't know who's on the other side. Does your impression of the other person matter?

Ohkay let's say you know is on the other side but maybe it's not someone you prefer. Not necessarily. So consider this, compare your girlfriend sends you a touch or a guy/girl you don't really like sends you a touch.

[00:35:46]

Nika, for example. Nah, I'm kidding.

[00:35:50]

So does that impression of her matter?

[00:35:56]

Of course. I think that's an easy one. Of course you don't want to be touched in that sense, in the BOND sense, by someone you don't like, or even someone you don't have strong feelings for, is not that close to you.

[00:36:14]

I'm trying to get at a kind of reputation. Let's say, if Tom Cruise or your favourite actress sends you a touch, would it make a difference?

[00:36:36]

Yeah yeah it would make a big difference. I would rather be touched by Monica Bellucci rather than some girl I've never met.

[00:37:01]

So what's happening here? In the previous question, you said I only want to share it with someone close. Monica Bellucci isn't someone close.

[00:37:16]

I wouldn't... Let me think of an actor I really like. Tim Roth, I love Tim Roth, I think he's an amazing actor. I wouldn't want Tim Roth to touch me. There's a sexualised thing here, why I would enjoy a Monica Bellucci touch but not a Tim Roth touch. It's not a status thing only.

At the same time... let me think of an ugly actress that I like. Meryl Streep... I wouldn't want a Meryl Streep touch. So it's a sexualised thing. I would interpret a Monica Bellucci touch as a flirt, and that's why I would allow it. But I'm saying this, but I wouldn't use BOND Touch. If that happened, I would stop using it probably. The first time it would happen I would stop and go oh Monica Bellucci just gave a touch.

[00:38:36]

Why is that? Why would you stop?

[00:38:36]

Because of that thing. It's a very personal space. The first time might be funny, and might be exciting, but from then on, if I wouldn't matter, it would be weird. It would lose the first impact.

[00:39:04]

I think there's something here, but I can't get to it.

Okay, now it is your girlfriend who's on the other side. You get a vibration. And it's from your girlfriend. How do you interpret it?

[00:39:56]

I thought of you.

[00:40:02]

Does it depend on... would you have a code, do you think?

[00:40:03]

I don't know. I think over time, you would develop a code, inevitably.

[00:40:10]

I think so. Between two close persons, you would of course. She would do 2 touches one day and I wouldn't understand them. She would get home and she would say oh I did two because I really really really missed you. And from then, you start to develop a language.

[00:40:34]

So it's almost like a pidgin, like how language develops.

[00:40:43]

So I think inevitably, it would happen. And three touches for don't forget to go to the supermarket.

[00:40:50]

Like a kind of reminder.

[00:40:50]

Yeah. Because it's really contextual. Because I'm sure if she would have said before leaving home, don't forget to go buy X before coming home. If I got a touch, in the middle of the day, I would probably interpret it as a reminder for the task that I have to do.

[00:41:19]

I had two questions based on this. Which is, you mentioned that over time definitely, some meanings some code will emerge. Other than that, do you think you would ever sit down and decide on a code? Would that even make sense?

[00:41:42]

No... no I think this kind of things is quite organic. Because there are so many situations. I wouldn't know where to start from. Oh what are the situations we

might use this for. Oh I thought of you, I miss you, bring the milk, I don't know. Only with the use would you come up with use cases in your daily life.

[00:42:24]

The second one is, we were talking just now about how sensitive the haptic sense has to be. So in a way I would like to see it from both angles: one is yes it can be as sensitive as you want to make it. And that of course there's a financial aspect there, hardware and R&D and everything.

Or it can be a kind of Twitter kind of limitation, which then inspires new behaviour.

[00:42:57]

Yeah constraints. I've shared a funny thing on our Twitter account yesterday. And it was constraints breed creativity. Of course. I don't know... I think in the beginning, you wouldn't have to invest that much in the haptic. I think the mere vibration would suffice. But I think for the product to become really good and for it to do its function really well. Because when I was thinking about having the vibration, it's not the oh when you move your finger from here to here and it vibrates in a different way. It was more of fine-tuning, how you feel the vibration. It's not to have different kinds of, only to have a vibration that's light enough to feel like a human touch, sort of. And at the same time, strong enough for you to feel it.

It was more of fine-tuning where is that balance.

[00:44:32]

The way I interpreted it was... right now the nuance comes from the length of pressing. And maybe even the pressure of pressing could be translated. So how lightly or how deeply you press it also translates.

[00:44:55]

Yeah. In the beginning I don't think that would be needed. I think people would use it in creative ways like they always do that we can't imagine. But at the same time, it makes a lot of sense that we have to have some kind of variability that we can control, either through pressure. Or if you touch one of the areas, it does like this and you touch in the other, it does like that. But I don't think that would be required for BOND to become a communication tool. Beyond the mere touch-touch sort of use case.

[00:45:40]

How involved do you want to be? How much do you want to be engaged on a day to day basis with BOND?

[00:45:50]

Probably more than once a day.

[00:45:58]

Like you probably SMS or Whatsapp multiple times a day. And it vibrates in your pocket multiple times a day?

[00:46:10]

I don't SMS and I don't Whatsapp.

[00:46:15]

Or FB or. Compare this to something social that you do multiple times a day.

[00:46:23]

I don't know. If you're talking about liking or commenting on FB feeds, I do it a couple of dozen times a day, with a lot of different persons, but mostly with brands and media outlets. I don't use FB messenger that much, I don't use Whatsapp that much, I don't use SMS that much. So the thing is this is something, if you analyze it, it becomes too much if your gf is constantly "touching" you, oh I thought of you I thought of you, maybe you'll start thinking, oh maybe you should think of me less.

For it to be special, it can't be used too much. This is in my personal experience, but as we were talking. One of the use cases that I'm always thinking about with BOND is for me to be at a dinner with friends, with my gf or in a social group, and that blink that you sometimes do when someone does something. You saw that? It would be through BOND.

Or sometimes, I'm with my gf and we're going down the street and I see someone with really weird clothes and you squeeze her hand just a bit so she notices that there's something she has to see. I would do the same in some social settings. A little bit of brain to brain communication that's not a, oh look at that guy that's doing X. it's more of, there's something going on, please take notice. So that would be my use cases, but I imagine teenagers being all the time buzzing away in Morse code.

This could be the revival of Morse code.

[00:48:50]

That's optimistic.

I'm guessing if you were to compare real-time versus recording/saving, the latter doesn't make sense at all right?

[00:49:08]

No it doesn't.

[00:49:11]

Even given any kind of... consider super-sensitive haptic response. No? It has to be real-time. Asynchronicity doesn't make sense.

[00:49:25]

No, here it doesn't.

[00:49:29]

why doesn't it make sense?

[00:49:29]

Because it already has so many limitations in what you can do with it, that if you take away the real-time the synchronicity, what's left?

[00:49:44]

So the majority of the meaning that's left is the synchronicity.

[00:49:46]

yeah it's the "I thought of you now." It's not the when you get home, you can see that I thought of you at 11o clock. It doesn't add anything to my day. No I really think the synchronicity here is essential. Because it's such a constrained medium that if you take away real-time, what's left?

[00:50:13]

Like one use case that I keep coming back to in my head. For example, imagine I have stage fright and I tell my partner the time I'm going to present. Right before, or even during, you get this gentle reassuring touch, it'll be fine, it'll be fine, that kind of thing - that would really help.

[00:50:46]

Yeah, I'm thinking more. At least for me it makes more sense, in the moment right before you enter the stage. During... the ambiguity of the interpretation would leave me a little bit like, what do I have my fly open, did I say something wrong? Because of that, what I was saying with my gf, it would be something like, just take notice of something. And that something, not knowing exactly why she did it, would probably leave me even more stressed out. But before the presentation, it's easy to interpret the meaning. Everything is going to go well. But during, you would be like.. I don't know, did I just spit on someone? It's the ambiguity, it's hard there.

[00:51:52]

So in that sense, I think in talking to you about the use cases of BOND, this keeps coming back. I think it's very prevalent, predominant here, which is this idea of, tapping for attention. That's how you see BOND Touch.

[00:52:12]

A bit. You always refer to it as a light stroke.

[00:52:22]

A sense of presence, you know? I'm here, I'm here. Whereas you see it as hey check this out, check this out. Which is also a kind of presence.

[00:52:30]

But it's different.

[00:52:34]

What would you say, maybe from a psychology perspective? Are we seeing this from two different standpoints?

[00:52:39]

I don't know. I'm trying to figure out why I do it, why I have that focus. I don't know. Because I keep relating this with my relationship with my gf and we're the kind of couple, that's always back and forth talking. You see a lot of couples that go to dinner. For me it's really sad, I don't know it might be great for them, but they have the whole meal without speaking to each other. And then in the end of the meal, they're both looking around the restaurant. We had some friends of ours that sat across us, saw us at the restaurant,

and in the end when they were about to leave, they came to us and they said, you're amazing. You keep talking to each other all dinner and you're always back and forth and back and forth and we're really really agitated in a sense. And maybe that's why my interpretation of BOND and of the touches is like the attention and look at that.

I don't know. I think this is really a personality thing, and a relationship dynamic that we have. But I was trying to think of other gfs if I had a different relationship with them...

[00:54:18]

How about, maybe now you do spend quite some time with her, and you're in the same city, so you mentioned I would want to get a touch once a day or something. Let's say you're in a long-distance relationship for a few months...

[00:54:38]

That's really hard for me to say, because I don't believe in long-distance relationships. I really don't.

[00:54:43]

Not even if it's a few months?

[00:54:45]

If it's a few months, and if it's a relationship, I would go like 6 months to some place and I wouldn't be worried, neither with me nor with her. I think we would be okay. But at the same time, 6 months is a lot of time and we always tend to underestimate how people can grow apart in different environments.

So if I went, let's imagine I went to the US with Kwamecorp because I had to go there to do something for 3 months, how would I use BOND? Even there, because there's something we don't talk about, but there's something here... that is we have other forms of communication. BOND is not to replace cellphones, or FB messenger or stuff like that. It's only another layer of communication.

Of course yeah, once a day, no more than once a day. Because it would start to feel that I would have to engage back and I think that's not the sense, the right way to approach BOND. BOND is something that you just receive and you don't have to go, oh no I have to give you a touch back because...



If she sends me a message I miss you, most of the time I text back saying I miss you too. In BOND I don't see it that way. I think it's more of "just thought of you" and it's more easy-going. If you want to talk and you want to have some other engagement, you have cellphones, you have text messages.

[00:57:00]

Another thing I'm getting from you is, in a way, the meaning that you associate with a BOND Touch, maybe with the use case it will change, but for now it is fixed.

[00:57:19]

I miss you, I love you, I remembered you, I thought of you. It's really that.

[00:57:26]

And that's something you don't think needs to be repeated twenty times a day.

[00:57:29]

Of course. if that's happening, it's weird. If you thought of me twenty times a day, or at least you thought of me twenty times a day and every time you thought of me you thought you should send me a touch, it's weird.

My gf is quite needy, is quite like that. She might think of me 2 or 3 times a day, but if she sent me a message every time she thinks of me, I'll be like, stop it please?

[00:58:15]

So that was all about You. How you and the other person have to be related and how would you interact with them. Now let's talk about Place. Which doesn't make sense at all right, if I'm in the same place with that other person, why would I use BOND?

[00:58:34]

No but I just gave you an example. In some sense, imagine my gf works in the same place as me and we're in a meeting and she's on the other side of the table, I see myself like someone saying some shitty arguments and I would touch like a shared ha ha moment with her. At the same time I see BOND being used, at least for me in proximity with the other person.

[00:59:13]

Okay. Let's say you get a vibration, do you get a sense of you being there or the other person being here. In that sense, even for that split second, when you think of them, is it as if they are there.

[00:59:36]

No.

[00:59:36]

Do you have that sensation with Skype? Do you get immersed in a Skype conversation?

[00:59:45]

No no not really. I don't even like Skypes and Google Hangouts with video. I don't know. As you probably already figured out I like to talk a lot but the layers that some tech creates... For me I like to engage people in proximity and real presence. So most of the times, I use of course, I use technology to communicate, of course I do. But it's not something I really enjoy. I'm not the guy who's two hours on the phone with someone.

[01:00:38]

So even if it's voice, even if it's video and voice, you don't get that sense?

[01:00:42]

No.

[01:00:42]

There is some related research. This Cambridge researcher called Satinder Gill, she's a psychologist and she did some work on body movements and tuning in that sense. And she reported that if you are in physical presence, you may not realize it just like you pheromones or whatever, you're tuning each other, your mood and everything syncs.

But if you even put a piece of glass, super-clean glass in between two people, that syncing stops. So you're in the same place, but there's a piece of glass in front of you and you can't sync anymore. It's very hard.

[01:01:32]

I wouldn't predict that, because I think that syncing comes from visual cues that you get from other person, from tone of voice, from pitch and I'm not imagining how that glass would stop it from happening. So my prediction wouldn't be that. It's interesting.

[01:02:03]

But do you feel disconnected? Even when you're talking to your gf on Skype vs you're talking to your gf face to face, what do you think is the difference? I mean of course there's the physical presence.

[01:02:18]

Even Skype with video.

[01:02:23]

You see the expressions and everything.

[01:02:26]

But even that is so much less than it is being in presence. Sometimes you notice people moving one finger over the other and that's something that I use as a cue for a cue for something.

[01:02:55]

So you are very sensitive to even subtle body language.

[01:03:00]

yeah. Of course Skype is better than having only audio. But even then, it's not approximately comparable to being in physical presence.

[01:03:17]

You get a vibration. Do you get some immediate rush of emotion or an indication of the other person's emotion maybe? Like do you imagine why the other person did it, or in that sense? Let's say in a hypothetical case, there is even pressure sensitivity right, so you get a haptic sense. Do you imagine the other person, do you share the emotional space?

[01:03:51]

It depends. What we were talking about developing the code between two persons. If it's at the beginning, if you're wearing it for one week, I might have some thoughts, oh what did she mean or what was she saying.

But if we're having it for a long time, because the human being, we're a lot of times sure of what the other person meant even though we are wrong. So I would easily say oh she did it because I have to go buy milk. I would interpret it but not really be doubtful about what the real meaning was. So I think in the beginning, I would get a little bit more rush oh oh what's going on. And afterwards I would just interpret it as oh I won't forget the milk, please stop vibrating.

[01:05:04]

This sort of reminds me of what Dominik also said, which is, something that you want to take note of, is that this vibration, this touch, no matter how sensitive, it is still never going to be as clear as saying it out loud or typing it out right? We developed speech and language for a reason. So do you think that this is a gimmick, or do you think there is a need for touch-based vibration, as a kind of communication? Is there a need for it? Or it's a nice-to-have, why not let's try it out?

[01:05:57]

It's a nice-to-have in my perspective. It's yeah, for me at least, and this is quite a personal perspective, because I imagine there are a lot of people who say otherwise. But for me it would be a nice-to-have, I may not even use it. For me it doesn't make sense, for me as a person with my own personality and my quirks, I wouldn't use it.

[01:06:39]

Something I got from that is, well if it's just a device that vibrates and we know this is the quality of vibration it's going to have, then I wouldn't use it because it's just not something I normally communicate with, I don't see a strong use case for it.

[01:07:16]

Yeah. But that's what I was saying about Whatsapp and SMS. Those mediums that allow for more complex communication, I don't even use those. I like to speak face to face with people, I like to interrupt them and be interrupted, and if I don't even use SMS and messengers and stuff like that...

[01:07:57]

Which is fine. In the sense of Kwame's saying, if I don't use Twitter, that also communicates something like I'm not interested in having a presence in that medium, and that's a kind of communication. Yes isolated-wise, if you're purely coming from a Twitter usage perspective, Kwame essentially doesn't exist on Twitter. But on the other hand, if you do know him, and you know the networks he is active on, then him not using Twitter also communicates something.

[01:08:39]

Of course, nowadays, when people say to you oh I don't have Facebook? That says a lot. That says a lot because it also depends on how many other people are using it. If someone comes to me and says I don't use Weibo, I'm not surprised. Nobody uses Weibo in Portugal, so it's not communicating anything through not using Weibo. It's always relating to the social norms that you might or not be communicating something. So if you tell me, oh I don't use Nokia 3310, those old Nokias, it doesn't say anything because nobody uses them anymore. But if you said to me, oh I don't use smartphones, that says something. It's always related to the norm.

That's why Twitter is not a great example. Because Twitter in Portugal or even outside Portugal, it doesn't have the same expression as FB does. If someone is not on Twitter, for me it doesn't say anything because Twitter is quite quirky and it has some very specific things so I get it, most people don't find it that engaging. But if someone says to me, I don't have FB, I'd say you have a problem my dear. You're a rebel aren't you?

[01:09:37]

True. Nice.

I like the next two questions. Does your location change how you feel about a vibration?

So if you are in the office, if you're at home, if you're on the beach, if you're at a friend's place, if you're in a bar, and you get a vibration, would it be perceived differently? Or alternatively, would it make you feel differently about something.

So the example that I gave. So normally you'd be stressed. For me I know, if normally I'm nervous and I get this vibration that I know is from someone, I would feel as if they're calming me down.

[01:11:14]

But what you're saying is not that it depends on the location, it's that it depends on your mood.

Of course, yeah, but it's not the location by itself.

[01:11:30]

Either does the location change how you feel about the vibration or does the vibration change how you feel about the location?

[01:11:39]

I think of course the vibration would depend on my location to the extent that my location conditions my mood and my state of mind. But it's not the location by itself. Because I can be here at the office and be stressed out or I can be extremely relaxed. So it's not the office that's going to condition how I interpret the vibration. It's my state of mind, within the office. Of course every time I'm in the office, I'm extremely stressed or anxious, of course the location would affect it. But it's a 2-step thing.

If the location affects your mood, the location affects the interpretation. But if you're the kind of guy who's always at ... I don't see the location a big difference.

[01:12:48]

Ok then let's go by your mood example, because that's exactly what I wanted to capture anyway. So does a vibration change your mood or does your mood affect how you perceive a vibration?

[01:12:58]

Both. It's a dialectical thing. Of course if I'm a bit sad and I receive a vibration, I'm going to interpret it probably as a small hug, and that's going to make me feel a little bit better. So there are both things here. If I'm in a happy mood and I receive a vibration, oh she thought of me cool, probably it's going to up my mood.

[01:13:31]

Let's say you're angry?

[01:13:33]

If I'm angry, depends on what I'm angry about. if I'm angry at work for example, if I'm angry at Guillermo because he's ignoring what I say, I don't know, I think I won't give much attention to the vibration.

[01:13:55]

And if you're angry with your gf?

[01:13:57]

If I'm angry with her, why the hell are you vibrating me for?

[01:14:08]

So I'm just trying to see whether there's some sense of a pattern. Is it always, you will always interpret the vibration as a positive thing. Like a FB Like you know?

[01:14:21]

Most times, you will. Because I'm not even seeing if I'm angry with her, I'm not seeing her doing a vibration. Because that would be that hate-like that you sometimes do, and I wouldn't see it that way. You can't do a sarcastic Like.

[01:14:54]

Ha yeah, she dumps you and pic on Twitter of her new bf and you do a Like.

[01:15:05]

You totally meant that. Passive-aggressive.

This question I like as well. So you're not physically with them and they're not physically with you. Maybe you're about to do something that the other person wouldn't like. And you get a vibration.

[01:15:25]

Oh I was thinking about when you were talking locations and moods that if I'm going out with my friends and trying to pick up girls, that wouldn't be. I wouldn't be very happy to feel a vibration. But it's like the ring, the wedding ring, you take it out and leave it at home.

[01:15:47]

But let's explore this. So it would change your mind, it would make you think or feel differently. At least for a second.

[01:15:58]

I don't know, if I was going to do it, that kinda thing, I would do it anyway.. I don't know. You might be on the fence and that might, oh she's so sweet she just thought of me. It would affect of course. If you're at dinner, she stayed at home because she was not feeling really well and you're at dinner with some friends and some girls come over, and start flirting with you, I think I would restrict myself a little bit harder if I got a vibration from her.

[01:16:48]

So in a way, I like this aspect, because consistently I get very similar answers. Which indicates that to me, in a way, you do, for that moment, feel her.

[01:17:04]

It might not be like she's here, but she's back in my mental space.

[01:17:10]

And she in that sense, influences your decision as if she were there.

[01:17:18]

No, because if she were there, things would be completely different. What I'm saying is, a vibration might restrain behaviours. Probably if she was there, I wouldn't be speaking to these other girls.

[01:17:38]

Ohkay let's consider from a maybe more positive angle. Like you're walking past, you're in the supermarket and you see chocolate which she likes. Would you buy it for her?

[01:17:56]

Oh yeah, yeah, probably. That would be, it makes sense.

[01:18:04]

So what do you think is happening here? Like you're being reminded of that person...

Would you say it's a kind of reflection, a moment of reflection?



[01:18:21]

In what sense, reflection?

[01:18:22]

Would you spontaneously do something you weren't even planning to do?

[01:18:26]

Also. Also. I sometimes go and sometimes she does the same.

[01:18:35]

But it's not a sense of duty right? it's not like remembering to buy the milk.

[01:18:38]

No no, sometimes we go have dinner at Amoreiras, a mall, and she, 90% of the times that I go there, I go to McDonald's and she goes to do other things because she doesn't eat McDonald's. And sometimes I buy those carrot sticks because i know she loves it and it's not that I have to buy her something.

[01:19:04]

But there's an intentionality there. It's spontaneous but there is no specific intention, it's just a desire to go to McD. But buying the carrot sticks, it's not a desire, you don't have a desire to buy a carrot. You intend to present it to her. So it's not a duty, it's not.

[01:19:38]

No, that's what I'm saying. It's not a duty. It's something that I just spontaneously, we do this a lot of things. I do this with the carrots. Sometimes when we go out, she takes a lot of time taking a bath and when we wake up in the weekends, and I'm the kind of guy who only takes bath after coming from coffee. Because I need to go out, have a coffee, smoke a cigarette and have 40 min of backlog from Instapaper. Sometimes when I go back home, she's probably still taking a bath. I buy a flower and I take it to her. So it's not the kind of thing where oh you went away to France and you didn't bring me anything. It's just... I went to Edinburgh last year, and I brought her like nine gifts. One of the gifts was a paper from McDonald's. It's not gifts necessarily. This reminded me of you, because of some talk we had a couple of months ago. So it's quite normal for us to do this kind of things.

[01:21:16]

Okay.

How important is tuning, if you get a vibration?

Firstly you seem to be of the opinion that it's a one-way thing. When you feel it, you send it, and you don't need to receive a confirmation. Let's clarify that. Maybe you don't need to get some confirmation of another touch, but would you need a Seen or something like that?

[01:21:49]

Ah! That was why I was talking about the balance between too strong or too soft a vibration. Because I would like to buy a product, it's quite hard to know for sure if the other person felt it because she might have taken it off. But I would like to infer she had felt it. For me, for us guys probably, it's almost impossible to not feel the cellphone, because if you have the vibration you have it in your pocket. You feel it a lot of times and it didn't vibrate sometimes. So we're really tuned to the vibration.

For women, it's not that clear because they have it in their purse or their bags. So a lot of times, they don't hear it and they don't see it. But in a wearable I think I wouldn't need a Seen button. Because I would infer that it happened.

[01:23:15]

Okay, is it important for you to know whether she felt it?

[01:23:21]

Of course. My only thing is I'm assuming is the system makes it really hard to miss a vibration unless you've taken it off. But you could implement a kind of dismissed that could give some feedback back.

[01:24:01]

Do you think, that when you get a vibration, would you feel compelled to acknowledge it? Like at least, tap it, or acknowledge it.

[01:24:19]

I would rather not. But if it was a feature, I would probably do it. I would probably do it. This is a code that you develop. If a product has the thing

that you have to dismiss the vibration, of course you're going to do it. Or else you know the other person is going to say...

[01:24:47]

yeah. So in a way it's like "because FB chat says Seen, you feel compelled to reply".

[01:24:53]

Exactly.

That's why I have an app that allows me to read the unread messages without making them seen and that's why sometimes I have read what they wrote but I was working on this and then it's there so I don't make the chat active so it doesn't register as Seen.

[01:25:20]

Okay. I would suggest we do the other half some other time.

Thanks Hugo :)

## Third Interview

[00:00:33]

Okay so if I remember right, the last time we finished 2 dimensions. So this time let's do Action and Time.

[00:00:54]

Okay.

[00:00:54]

Okay, so how important is tuning in a BOND communication? So if you have jetlag or there's a time zone difference, or it's a stressful work environment and you don't want to get BOND signals at the wrong time. So there's some kind of tuning to negotiate that this is my busy time don't disturb me and this is my free time. So how do you sync with another person?

[00:01:26]

How do I manage that, is that what you mean? How do I establish the do-not-disturb times?

[00:01:36]

Yes exactly.

[00:01:36]

I think BOND doesn't have that concept embedded in it. I think it would be good to have it. At the same time you always have the option of taking it off. So in that way, you can do it in a physical way, you can't do it in the features of BOND from what I understand in the product.

[00:02:13]

Okay. But do you think it should be there then?

[00:02:13]

I think it's important to be able to schedule some downtime and not be invaded, let's call it that. But at the same time if you think of the premise behind BOND, it's only for those you really care about. So I don't have any

downtime for my gf, there isn't a time that I say oh no, sorry, oh wait. I was wrong. Sometimes some football matches, there is some downtime don't bother me now please. But still she knows she can bother me if it's something important. So translating that to BOND, I think it would be have that downtime. But at the same time I think it would corrupt the core premise, which is allowing you to connect those who are really really important. Important enough that you give them skin space.

[00:03:22]

Okay. On this note, something that came up while transcribing the interviews, one question that came up is how different is BOND from a pager? Because we have so many means of communication, that I could easily see BOND being a one-to-one pager, but it just motivates you to communicate with them using a different means.

[00:03:52]

I think it's a good analogy. But at the same time, even the pager allows for more communication or at least to transmit more information than BOND. I'm not even thinking about the kind of pager that you can write some small SMS, I'm thinking about the original ones where you can only send phone numbers. And there's something implied in the pager. The pager works as a "I need to talk to you" and BOND doesn't have that. BOND is only a some kind of, I keep thinking of Yo! the app that came out a couple of weeks ago. Yo! The one that only sends Yo! I think that's in a way an app version of BOND.

[00:04:53]

Okay. Next let's see.

Does a BOND interaction make sense to be one-sided? You know if you're typing a chat on FB, sometimes it's enough to just tap the window so it registers as Seen. But you don't actually have to reply. Or do you have to respond, so when you get a vibration do you have to send a vibration back saying I got it?

[00:05:26]

I do it in a different way than you do it. You tap the window to send the Seen. When I want to end the conversation or when I don't want to continue the conversation, I do exactly the opposite. I switch tabs so it doesn't appear as a Seen. Because in a way, I think, as soon as the other person knows that

you've seen that message, there's an expectation of a reply. And from what I understand, that's what you're talking about in relation to BOND. And I think we've talked about this already, can BOND be a one-way means of communication, where you just send a I thought of you, and you don't need to send a I thought of you back. So I don't feel the use case around BOND implies the need for a back and forth between the users. I think it's good enough to send a touch without expecting the other person to say the same thing.

[00:06:39]

Oh yes, we did talk about it. You mentioned the Portuguese missed call "touches".

[00:06:45]

Yeah exactly. Exactly.

[00:06:46]

How would you negotiate how you use BOND with someone? Is it explicit, would you sit down and say and 2 taps is this, 3 taps means this and 5pm to 8pm don't disturb me? How do you negotiate it or do you need to negotiate it?

[00:07:07]

I think we covered this also. When you asked, I replied that some kind of code would emerge organically, or if I would create in a more cognitive way a code. I think it would probably grow out of usage rather than sitting together and defining some kind of rules.

Now that I'm thinking about it, maybe it would be cool that the first time, to set up some two or three rules like if I give you 3 touches in a row, that means that you need to call me. But only this kind of thing. I don't know if a long press would mean I'm really missing you but a short one is I'm missing you but not that much... but at least in practical use, if I touch you 2 times means you must call me straight away because I'm in a hurry for something. But only that kind.

I don't believe BOND would be used in some kind of high level conversation. For that we have other tools and other ways of communicating.

[00:09:00]

How significant is a BOND poke? Or how sensitive does the BOND module have to be for you to sense some kind of emotional significance from a vibration?

[00:09:14]

Can you rephrase it?

[00:09:17]

Okay if you're feeling sad, and you get a vibration, is it enough to get a generic signal, or would you need some more realistic touch sensation for you to feel some kind of comfort?

[00:09:36]

I think it's enough to be just a vibration. I think most of the things we do, the meaning comes from us. In this new medium of communication, I think it would be enough... it's like the missed call. The missed call is as empty as it gets, maybe it's not because you can let it ring one time or two times, but how we used it was just one, and as short as possible, to just have a missed call on your screen. So I don't think it would have to be realistic. Because I don't even know what realistic would mean here.

Do you mean realistic as to simulate a human touch?

[00:10:35]

Yeah like those haptic devices.

[00:10:40]

I don't know if it's needed. I think it would be a good feature if you could implement it, to simulate the finger passing by or a finger poking you. But I don't think it's needed, the meaning is constructed between you and the other person.

[00:11:04]

I think one thing that comes out at least in your idea of BOND, it's one of those everyday devices. I use it in the course of my day. It's not something that makes a special chapter of my day, but it extends my relationship right?

[00:11:28]

So in that sense, I'm guessing for you, a BOND Touch would be, in fact the more seamless it is in your life...

[00:11:50]

It's not intrusive.

[00:11:50]

Yeah. It's not only for some crazy news, it's just an extension. It's part of your daily relationship kind of thing.

[00:11:59]

Yeah, yeah.

[00:11:59]

Okay cool.

Now we come to Time.

Let's talk about duration of engagement. I've previously asked how would you want to be engaged, on a daily basis or on occasionally, but I'm trying to get at this sense of empty time. And what that means is, if you just get a lot of stimuli, it's all signal and no noise, firstly you lose track of what a signal means.

And when it comes to human relations, we need empty time to reflect on the relationships.

[00:12:51]

I wouldn't call it empty time, I would call it away-time. Emptiness, I don't know if it's the right feeling there. It's more of distance that helps you reframe the relationship and the way you manage it. When we talk about time, I said to you I didn't expect to have more than one BOND poke a day. And that allows for that empty time or away time that you were referring to. Because if every time I'm away from my gf, she doesn't allow that way time by allowing bringing herself back into my mind-space through BOND, that would corrupt the idea of away-time, that I think it's quite accurate.

[00:13:55]

Yeah.



How important is rhythm in this form of communication? Is it always one after the other, or both pressing together? I think we've already agreed that it has to be real-time.

[00:14:13]

Yeah.

[00:14:13]

So, it's real-time but if its one after the other, why how? Do you still need some kind of signal...

[00:14:34]

I don't know I've always thought of the pokes of BOND as a little short poke, so in that sense, I expect 4 cases that might happen in real life. One is I poke the other and I don't get a reply. It's only a I thought of you. Two, the other person pokes me and I don't give a reply. I imagine that although that's not what I would do the most, it would happen that the other person would poke me and I would poke back? If we're away for a week and she sends me a poke, since we're away for such a long time, I would still do the same to her. The fourth one that I think would happen, given the time, it would be really fun, it would be almost simultaneous pokes. Oh we just thought of each other right at the same time. I think that would create a kind of magic feeling.

[00:16:00]

On this note, maybe a slight digression, I was also thinking, when you start this poke interaction and it doesn't have to go further than that. Do you think it benefits from some kind of gamification, that incentivizes that behaviour?

[00:16:24]

I think this kind of close relationships are not really prone to gamification style kind of interventions. Because it's the external-internal reward thing. If you start giving external rewards for something that by nature is intrinsic, you're starting to dilute that intrinsic nature. So this gets more into a kind of social contract than goal-based kind of thing that gamification implies. So no, I wouldn't try to apply gamification principles here.

[00:17:16]

Okay.

So we will act differently depending on who's on the other side right? The way you talk to me is not the way you talk to your gf or your boss. So similarly, BOND I would imagine, you communicate with different people differently. But at the end of the day you're sending a very generic vibration through the BOND module. So how do you differentiate, or is it all in your head?

[00:17:43]

How do I differentiate the usage between me and several different people? Or the meaning of the message in that sense.

[00:18:03]

It goes back to that organic code that I believe it would take place after some iterations and some back and forth using the BOND bracelet. I think now I can digress a bit. To be honest, I really don't know, I think it's something that would come out of usage. But I do believe you would eventually develop different kinds of pokes, and different durations and different sequences. Almost like a very stripped-off Morse code.

[00:18:46]

So here maybe, in your role as a community manager, and probably if there's a focus group, they'll ask you to step in right? Let's say they create some prototypes, some actual-sized working prototypes, how would you design a focus group? What would you test for offhand?

[00:19:14]

I don't know. First of all I'm quite skeptical of focus groups. I think it's very easy to get a herd mentality out of a focus group. Someone will take the lead and other people will follow. It's really hard to do a good focus group because of that, because of the group dynamics that emerge within that specific group. So it wouldn't be my idea to do a focus group. But if my boss said you have to do a focus group...

[00:20:07]

Or what would you prefer and test and validate with?

[00:20:10]

Oh I would just give it to a group of people and tell them how it works. When you press this one the other one vibrates and vice versa. And just tell them you can have it for one week. Choose a person that you would like to share it with. That's it. In the end, I would look at usage data, I would see if people were really using it, how many times a day they were using it. At what time were they using it, are there any patterns, vibrate from here to there and there to here? And at the end of the week, I would gather all the persons again, who did they choose to use it with, why did you do it, how did you find the experience, do you think it made you closer to that person, do you think it invades your personal space?

I would probably try to in a crude way correlate those answers with the data I collected from the usage itself.

[00:21:28]

Okay cool.

I would like to go back, I think when we were talking about Heidegger and I brought up this idea of weak representation when you just observe something. Well this is Heidegger's jargon so I will just explain that. So he says when you observe something in your immediate reality, you get a weak representation of it. But when you transmit what you saw, you create a strong representation. As I recall, you had some skepticism towards that term. Where was that coming from?

[00:22:24]

That was coming from an area of psychology. The main researcher in that area is Elizabeth Loftus. She's quite well-known, because she was called to speak in a Congressional hearing and several courts because she's an expert in eyewitness testimony. And what her studies have shown, hers and a lot of other researchers, is that although we are quite convinced of our memory and our perception of events is straightforward, and that we're only telling it as it happened, the truth is depending on a lot, a lot of factors, how the questions that prompt you are phrased, on the colours of the clothes of those involved, there are a lot of factors that contaminate your memory. And there's another layer here that every time that you recall an experience, the next time you're going to recall it, you're not recalling the experience anymore, you're recalling the last recall.

So if you start drifting away for some reason from the original event that you saw, you start drifting. Imagine you see two cars crashing with each other.

And the first time you tell this to someone, oh because the car that came from the left was coming a bit fast. The second time you're going to tell the same thing to another person, you'll say the car was coming really fast. The third time you tend to amplify the first tendency that you spoke of. So each time we try to recall something and we try to tell it to someone, we're corrupting the original memory.

So that's why I don't agree on that, because human memory is amazing in certain things, but at the same time, it's extremely fallible.

[00:25:09]

Okay.

Well that was the second part of the interview. Thank you!

# Interview with Pedro

**Bio: Pedro Cardoso**, UX/UI designer and design team lead. More than 15 years of experience in digital media design, and was a senior designer at *YDreams*, working on a variety of new media applications from printed electronics to museum experiences. He came to *Kwamecorp* just after the inception of *BOND* but his ideas have profoundly influenced its development. He moonlights as a professional photographer.

[00:00:04]

So my thesis is basically trying to understand the social aspects of communication technology, and I want to use BOND as a case study. So what do I mean by the social aspects of technology. For example, we have a care, and a car as a technology allows us to move faster and go further, and it has fundamentally changed how we build cities. But irregardless of the technology of the car, it makes a difference in society if you have a Toyota or a Ferrari. People think differently, one is a status symbol and the other is not. All these things. So there's a social component of a technology, irregardless of the capability of the technology.

But if you want to be even more social in the sense of social media or social network, you can also bring in that aspect to certain technologies, especially the kind we use to communicate with each other on a daily basis. So it changes how we interact, it changes the affordances as a designer would put it, about what we think is acceptable. So this is the kind of things I want to investigate and I'm going to use BOND as an example.

So I'm going to ask you some questions which are more generic and slowly we'll converge on BOND, okay?

Central to my methodology is the concept of witnessing. You've probably come across the term witnesses, as in the context of a court of law. You get someone who's an eyewitness, who says I saw this, I did this etc, and no speculations are allowed. Under oath, you say this is what I experienced and this is what I saw. So that's witnessing. Why is witnessing so important? In fact in a court of law, an eyewitness is one the primary ways to get information. It is of social importance. A sociologist called Kelly Oliver, went through history, especially events of great trauma and hardships, Holocaust survivors included, and she found that when black people were fighting for civil rights or gay people fighting for LGBT rights or animal activists fighting for animal rights, they're not asking for recognition, but instead asking to be witnessed. Because recognition is still about having the same power dynamic. You still have the oppressor recognising the oppressed. But to be truly empathetic, to walk in their shoes, to truly be empathetic, you have to witness on equal standing, you have to look into their eyes and walk in their shoes. So witnessing takes on moral significance there.

She divides witnessing into two: one is being witness and bearing witness. Being witness meaning to observe something, and bearing witness meaning to transmit what you saw. I'll give you an example. Imagine you get on a tram. You don't see anyone you know, ten days later it is not something you will bring up in conversation. But if you get on a tram and say you see a Kwamecorp colleague, you might remember that as an incident that could come up in memory sometime later. So it became an event. So we were witness to Eduardo, and you recognized something in what you saw. So that's being witness.

Let's try bearing witness. You're walking through Rossio Square like any other day. But suddenly you see Eduardo, and not only is he there, he starts dancing. So now maybe some other time if you're recounting the incident to Joao, in transmitting you start adding your own flourishes and interpretations: he looked tired but then started dancing, he was dancing crazy, he seemed happy. You don't know what Eduardo was really thinking or feeling, but based on your experience, you're creating new meaning.

So those are simple examples of being witness and bearing witness. So what I'm trying to do in my methodology is to get testimony. Your experience and your meaning.

Can you reflect on your own life, your own experiences, especially in this job in this field, how have people through the years interacted with technology, or

using technology to interact with each other, have you noticed any trends, any changes? Any aha moments.

[00:05:31]

Yeah... are you asking about my experiences as a person on a daily basis in a normal setting?

[00:05:43]

Even from a professional perspective. Something you came across and realized?

[00:05:52]

Of course when we go back and we think about the way communications above all has evolved, which I believe is based on the communications that the most social connections are able to happen.

Suddenly you can hear a voice at a distance and that's radio, using radio waves to communicate or just to convey emotions and music and stories. Suddenly you have image, so the signal is stronger so you can image on the signal, and then you have TV and video.

We have the phone and suddenly everyone has a phone. And at first the phone is only attached to your wall. And then you have to be in a specific place at a specific hour to talk with someone. And then suddenly you detach the phone and you can carry the phone around with you and then all communications can happen whenever you want with whomever you want. And you don't even have to remember the code to talk with that person because we have to use codes to access, and now we use names. I'm talking about phone numbers, which is a code right? So we're using identify codes as people or things using technology.

Our car has a code, it has a name and an ID, and everything has an ID. So this is what I mean with a code.

And now we can communicate all over because of the phone and along the way, there was the Internet also, and that allows us to communicate through words and writing, now it's a completely open channel to all sorts of communication.

So what I mean is, it began as communication both ways, some of them only way like the TV and the radio and other communications possible both ways. And at certain points, it opens up to more than 2 people. So instead of just me talking with another person on the phone, basically on the phone now I

can talk to a lot of people. I can use skype to talk to a lot of people. I can use all social networking to talk with a lot of people at the same time. It's always bi-directional.

[00:08:20]

So you've noticed this rise of many-to-many communication channels.

[00:08:21]

Exactly.

Above all now the biggest change in communication, I'm focusing more on communication, I could focus on some many technologies but I have to grab one. Because all of them impacted the society. Of course I can talk about washing machines, but they didn't impact society so much although they evolved also. Fridges also evolved, but impact not that much on society... But communication, indeed they changed a lot our behaviour. We even brought more awareness about everything. Before it was only TV and radio, and there were filters created by journalists, filters created by the editors inside of radio/Tv stations. But now information comes from all over so people can be aware. They're only not aware if they don't want to be. The information is out there, awareness is out there. You just have to grab it. You just have to be interested in it.

[00:09:28]

So are you saying that, because of the ubiquitous information sources, the filters are much less prevalent.

[00:09:40]

You can choose, of course if you follow a blog, someone's opinions in someone's mind, then that person becomes the filter, that person's attitude. You're more free to choose the attitudes or filters you want to follow. But the main conclusion of all this conversation was one of the biggest changes in society was communication. All the channels we evolved to communicate, which now bring us real-time communication, real-time awareness of either friends and family, people you can now call at any time at any moment, or if we don't call, we just see a new post from them and we are aware of something happening with them. Or with the world, connection with the world, we don't have to wait for the news to understand what's happening in the world. We don't have to wait for anything, everything is already there. Again,



the relation, the mind-set of people to receive any sort of communication from family friends or the world, it doesn't have to happen in a specific place at a specific time. It can happen anywhere. Because again, we're always connected through all these channels.

[00:11:01]

Let me ask then, let's compare and contrast. You have kids Pedro. Do you notice that you use the Internet very differently in this social sense, in the connection sense, from how they use it?

[00:11:23]

Well they're following my behaviour of using the Internet. They're young, 7 and 10 so it's kinda hard to understand if they're using it differently. They text more than I do. But this is constraints, not mine but their constraint, because they have less money to spend on the phone. They only have the money that I give them to use on the phone. So of course they have to text more rather than talk. Because they have less money to spend.

or they use Skype and then I'm helping them use Skype, but this is me pushing them to use Skype because it's cheap. because you don't pay anything to talk on Skype. Or just send emails, so that way they can send images when they're on vacation with my parents or they can send messages or I can send them messages and images when I'm away from them. Of course comparing when I was to kid to their experience, there's a huge difference. But if there's a huge difference in their behaviour in using all these communication tools from mine, not such a big difference.

[00:12:29]

It's interesting you brought up the money constraint and they strategically text more than they talk. I think you know even that is a kind of negotiation that we constantly make with our technology. Yes on a financial basis, it is money, but then again everything's always ultimately about money. Hugo was saying, when he was younger, because in Portuguese a missed call is called a "touch" right, so he and his friends would give girls that they liked missed calls, to "touch" them.

[00:13:19]

For example, when you're talking innovation of communication in Africa, it's completely different from what we have here. Because in Europe, America, or

the Western world, we have smartphones. Of course they have smartphones in Africa as well, as they have less money and as these technologies are getting delayed there in Africa, their innovation is all around the older generation of phones. What they can innovate without spending as much money as we are spending on these phones. So they're innovating services using only touch, they're innovating services only using ringtones, they're innovating services around text messaging. You can do whatever you want. You can do money transfer with only sms. So you see it's a quite basic system that for us is really old school, and for them it's innovation.

So coming back to my kids. They only have 5 Euros a month to communicate and so of course they have to create their own run-arounds then, for them to be able to do ... and do whatever they need. So yeah innovation is something very abstract, it depends on the context, it depends on the society and culture where you are making the innovation.

Yeah what you were saying about changing people's behaviour in the social sense, again it has to do with the context. I'm talking about my experience in my world where I live and the people that I know. I don't know so much about what happens in Asia. I know these things because I read, but I don't experience them. And I'm astonished with these huge differences.

Last year Sony said we produced the last Walkman, and it was last year. And I was like... NOW? Only now you stopped producing Walkmans. And I'm talking about the tape Walkmans. And I was reading further the article and then I understood that the tape market in Africa is still very very strong. They still have tapes, they record, they have a market for tapes. Walkman made sense for that market. This is why Sony kept on producing the Walkman.

So you see, we're so proud of having 1000s of songs inside something as small as this or the iPod Shuffle. And still they have and use tapes and you have huge brands producing the readers as the Walkman. So where's the real innovation or the changes in society? Well they happen in their time in their own context.

I might be digressing...

[00:16:12]

Ah no, don't worry. it was very interesting indeed.

[00:16:16]

Yeah okay we can go much further talking about changes in society, but for me the changes in communication really stand out.

[00:16:33]

Definitely. On this digital connection theme, in your experience, what is intimacy, friendship, closeness? Do you think the affordances technology allows has eroded or negotiated?

[00:17:00]

I actually have a very special opinion about that. Because in the beginning I had a very strong resistance to social media. You've probably noticed that the first time that I used my name on social media was only a month ago. So up until now, I was on Fb with another name. Just to follow Kwamecorp, and before that I wasn't even on FB. Never. I don't have a Twitter account. I was one of the first ones to open an Instagram account, but that's because I'm a photographer, I love photography. I opened Instagram, shot a couple of pictures and then I dropped it.

Because, and this is really personal and not my opinion towards others, I don't feel more connected because I use FB. FB is just another window, another channel now to read information. Of course if people start to share their travel or their daily lives, of course I start to be more close, not really close to them but more aware of what they're doing. It doesn't really bring me close to them, because closeness to me is still to be face-to-face, is to be here talking with you, is to be in a café like yesterday afternoon, we were all there together and talking bullshit. This is connection for me, it's really being close to someone and talking and looking at their face.

Even if I didn't talk to them for 3 months, I don't know anything about their lives for the past 3 months and in 10 minutes they tell me about it, it's more relevant to me than over those 3 months, looking over their posts on FB and understand what they're doing. of course then I would be more aware of what they're doing and when we meet I might go oh I saw your pictures from your travel to this place, or I saw you picture of eating something. The topic then becomes related with what they post and not the spontaneous conversation that generates whenever you meet face-to-face.

Of course in the conversation you're going to miss a lot of things that happened in your life, but you will probably talk about the more relevant things, and the rest is just noise.

[00:19:19]

That's a very interesting point. Yes, when you summarize 3 months into 10 minutes, you're definitely going to talk about the highlights.

[00:19:34]

Sure, and this doesn't have to always be about long spans of time. For example when I arrive home and talk with my wife, and she will tell me what happened through the day. Either we are the whole day talking on Skype and now I know almost everything every minute what she's doing, or eight hours later, she tells me this and this. Done. She doesn't have to tell me she was eating an amazing salad. It was relevant for her because it was different from the rest of her routine, but usually she's having this and this but today she had an amazing salad. She'll tell me this. Great. Now I know the salad was amazing.

Probably she will bring some topics from her work and the projects she's working on, moving on, playing with the kids, cooking, back to sleep, seeing a movie whatever. But you see it doesn't have to be huge time spans. It can be a real small moment and we just share the things that make more sense.

Do I need to be aware of all the activities she was doing the whole day? No. She will tell me the most relevant things, and this when we'll connected. These are the things, in her opinion, the most relevant information to tell me and in my opinion, the most relevant information to tell her about my day. This is what's meaningful in our relation, because we don't need to tell each other everything. We just tell each other what's more important to keep on living.

[00:20:59]

A kind of signal in the noise.

[00:21:04]

Exactly. Suddenly if I go home and sometimes I sit a bit annoyed because I'm talking about problems or discussing meetings in the office, do I need to tell her about these things? Maybe I should skip to other discussions but then ...

Of course if you have someone who loves you they will cope with this.

Yeah coming back to this openness that social channels give you and the ability to be aware of everything always about everyone. It's too much for me. I really cherish to be close to people and even if it's just 5 minutes of talk, for me it's already much more relevant than looking at FB of that person for a long time.

[00:22:04]

Okay. Let's also come to this case: FB is only for your circle right, people that you've met in that sense.

[00:22:21]

Depends on how people use it. I would only add people that I really know.

[00:22:24]

Sure. But even on an architectural basis, it will question you if you just start randomly adding people. who don't even seem to have anything in common, no mutual friends, no nothing. When it suspects, wait you're in Sweden and you don't have any mutual friends, why are you adding this guy in India? It is a bubble of people that you've probably been in contact with.

[00:22:48]

Of course it's limited to people that I know of.

[00:22:50]

But the Internet allows communication with people you've never ever met, and never ever will meet. Like in forums or IRC or something like that. So have you used forums and other channels like that? I know I might never meet this person but I like talking to them.

[00:23:09]

Umm, not so much. it's not really my drive. Even when I have a problem, I try first to contact the people close to me that are aware, that may have knowledge of that specific problem. Yeah once in a while I'll go online and look for forums but I don't connect with someone there, and be there exchanging messages until I have my problem fixed. I'd rather go and talk to a photographer to help me with the camera because I have a problem.

[00:23:41]

But you can. So why wouldn't you?

[00:23:45]

Again, it has to do with my need of being face-to-face with someone. Probably with the trust that I have. I may find someone really knowledgeable about

some specific problem. I don't know, my first drive is always to find someone close and physical to help me with the problems.

[00:24:07]

Here you brought up this interesting term, which is trust. And part of the work that I'm doing revolves around trust. Presence design is about building trust. So that's cool that we converged on this topic.

I would say like an open statement that, yes we have these merging realities: the real world and the mediated technology/communication world(s). The way trust builds is sort of inverse in the two worlds. In the physical world, in natural presence, trust is 2 seconds, first impressions for the biggest kick-start and then builds on that over time. And based on that trust, you engage in transactions, which is conversation, favours whatever.

In the online world, it's the other way round. So you meet and you exchange a lot of transactions, and only over time, the reliability and the transactions of the other person increasingly builds your trust. So the trust online doesn't build the same way.

[00:25:23]

Either it's immediate or it never happens.

[00:25:28]

In natural presence, that's usually the way. But online, it's different. You have to go through the transaction phase, because there's no other way, you don't get these physical cues, facial movements, nothing. You have to go through the transactions; the words that you share become the actors, the actions that build your trust.

[00:25:58]

Oh just picking a bit on trust also. I was working with my previous company, I was working on changing the retail world and how people interact with stores and shops and big supermarkets and all that. And the big conclusion was, although we have so much technology now, we can enable people to move around in supermarkets and in stores with the help of technology, we can help them to buy and push them to buy. But still the biggest conclusion we arrived at, and we were testing also the technology in stores, is that customers need someone to talk with. In the end they may have amazing interfaces there pushing you to buy something, helping you to have an opinion

of something, but in the end before you touch the buy button, you need someone to come by and give you this assurance that you're making the right choice, because this is really appropriate for your use case. And you need that final quick ... of a physical person there. You can have an empty store with a lot of beautiful touchscreens, you might live it, but in the end, before you make the final decision, you need to have someone.

[00:27:07]

Why though?

[00:27:10]

People need it. Because all technology's so cold, and am I making the right choice, are the specifications of this machine the right one for me, you need someone to tell you: what kind of photography do you do? Oh you do this, so the best cameras, and I saw that you were looking at these two, you should go with the second one. Cool, because of the facts I already narrowed down my choice. And I have 2 or 3 cameras in front of me. But I really don't know which one is the best one.

I mean someone comes along, he's a person, he reads you, understands and makes the impression that technology is not making. But either you press buttons answers the questions on the screen, or that it's smiling to you, soothes you telling you oh you should buy that because this is the right one for you. That specific one suits you because you already have this and that, or you can evolve with this because you already have that thing that you love about photography. It can evolve so this is the best product for you. Ah thank you.

[00:28:26]

So it comes down to trust again? You trust the physical presence more than a fancy UI.

[00:28:29]

You can trust all the fancy UI, but in that last second, you need that. You don't have that immediate trust. This has to do with the behaviour side of trust. Say you're buying online on Amazon, you don't have a choice. If you have already this willingness to be there on a ecommerce platform, they're already converted.

[00:28:54]

But there you have customer reviews, and intelligent recommendations, comparisons, right?

[00:28:57]

Even if we push all this information, in the form of a statistic in an in-store context, people still need the bare minimum. You walk in the store, you have appliances, you have music, you have lights but you need that physical presence to be there to help you.

[00:29:16]

Maybe we're used to it. Especially now, when you can buy most things online, there's all the more a reason why you go to a store. And that's not to see another computer telling you what to buy.

[00:29:27]

You can have a computer, to give you all this information. The machine just being there is not enough information. You can have a very nice interface, giving you an interactive touchscreen, and pictures of the camera. Cool. Maybe I already know all this because I found information before online. But now I've touched the camera, I can feel in a space that conveys or drives me to buy something. But I need that person there next to me to say this is the best one. People need it.

This was the conclusion based on observation and tests we did in a previous project. So this is going a bit back about trust also.

[00:30:12]

Do you think an action done online is a deed. In the sense of, if I say I poked this person on FB, I emailed this person, is it something that would turn up or should turn up in a court of law? Is it something that would be processed as an event?

Like you get on a tram, you see Eduardo and you talk about it ten days later. So how do you negotiate what is an event and what is not, when it comes to online interactions?

[00:30:50]

That's not easy. Well what you're asking, do I record, do I store in my memory that happens online, on whatever channel, whether it's an email



received or a FB poke or whatever. Where do I consider that something relevant? That I will remember or use later?

I really don't know...

[00:31:28]

Have you done it before? Any strong memories?

[00:31:33]

Of course of course. but this is more in a... I don't know, depends on the context. Where if suddenly there's a harsh email complaining about something, yes that I will remember and use and I will save it because it was complaining something of a project. Either I agree or not, I have to use that information. Again FB I don't have any recollection of anything because I don't use it that much. What about email? Or recorded message on a phone call.

Then again, it has to do with negative complaints.

[00:32:13]

Mostly because that's what you get more often, right?

[00:32:17]

Well not that often; hopefully not!

The thing that I react more is to the negative things, so I'm more prone to flag that email, to put aside that email or something. Of course if I receive an email with every amazing news, great! That's really great. But positive things, oh I feel really great because I received this news, but something that I have to really strongly react, something that is negative or complaint, I have to react to and make it better. Because it's hard for me to live with something or someone that is not agreeing with something that I'm doing. So I have to react and change that. So again I'm more prone to save that information and react to it rather than anything else.

[00:33:10]

This brings me to my next point. You keep converging to some aspects of the theory behind my work. Which is that capacity to react, that capacity to act. So when you're a witness, why is it different from... so literally how is watching a crime on TV different from you being an eyewitness right there? And Dominik said, nowadays even people who are eyewitnesses are more likely to

record it than interfere, they don't actually act in that situation even if they could have.

So there's a special double responsibility of the witness, and in a way even that recording is an act of bravery, and I'll briefly justify both these claims. One is, what the witness is. I think Joao said it most strongly: we need people to look at us and know us, we are always looking for that and we try to get people in our circle who can do that for us and for whom we feel good to do the same for them.

In the research space my Prof has tried to incorporate this concept of witnessing to presence itself, digital presence. That's what her research is about.

What the witness is, is basically, when you recognize something and you're an eyewitness, you've signed an unspoken contract which compels you to act. Because if someone does ask you, you were there, why didn't you do anything? Did you not know that it was wrong? You feel this compulsion to act. it's like a conversation. If I talk and just keep talking, and you say something but I go on talking my original point as if nothing has changed, then it's a monologue. And it's as if you're not even here. So a conversation is, when you add something to my point, you implicitly expect to mould the direction of the conversation. So it's a kind of witnessing as well. You're shaping the conversation in the shared space.

In the same way, actions as well. If you're witness to an action, then your action, whatever that person was intending, when you are there, you have the capacity to act, and when you do that, the outcome is unexpected versus a determinate outcome. If one was a slave, he could be in the place witnessing an atrocity, but he can't change anything. So it's as if you were never there. You can say something but it would fall on deaf ears.

So the witness, of course the position matters, so the more equal the position the powerful you are as a witness. And being a witness you accept some ethical responsibility about the capacity to act, the capacity to react.

So when you say, I get a harsh email and I recognise that I have to react to it in a certain way, so that is actually a kind of protracted conversation that you're having. And that means you're witnessing each other, you've taken in the message and saying okay I'm going to give it the solemnity that it deserves and I'm going to react to it. And this is how presence bleeds over into digital media, even if it's not Skype or holograms.

So now I'll ask some design questions. As a designer, what are some guides, or assumptions about people that you make when you're designing social networks or social user interactions?

[00:37:53]

Assumptions? Well I've designed a lot of social services and social networking features. Although not being in them. Actually it was a good thing because I had a vision of someone that wasn't addicted, and my vision wasn't clouded by my own usage of such networks. So, it was a good thing.

My understanding, my strong understanding of what people need is maybe two things. One is to see, that voyeurism that we get using this communications. Really, even if it's really true interest that you have on what someone is sharing, because this person has a really good thinking or you're on very good terms with him, mainly and this is my strong belief, looking. Observing what other people are doing. They expose themselves, and I like to watch them. So people drive on this voyeurism, looking at what others are doing. And the other thing is to drive more connections. Who do you know that I can know also. Because this trend, their relations are transparent. You can see who I'm connected with, because then all the platforms I'm on keep on suggesting people to me that might be of my interest, people who're either friends with someone I know or working with someone. So they're suggesting new people.

People also look for new connections. It doesn't mean that they can't be relevant to them. If they see strong points to connect with, they probably will connect.

These are the main things, looking what others are doing and of course exposing myself if I like to do so, and looking for other connection, other people with all sorts of interests. it can be for dating, for working, for friends, it can be based on specific topics that I like. These are to me, 2 strong opinions on social networks.

[00:40:31]

I would like to ask here, yes there's a definite preference for this "voyeurism" as you say, and people like to share "exhibitionists"? But why? What is the motivation to share?

[00:40:42]

I can only give you my vision of things of course. People like to be relevant, like to be prominent, they like to gain more visibility over others. And probably this has to do with our more basic instincts of needing, of being the alpha or leader. And this is a really basic instinct we have in us.

And if we can have, every channel we have providing more exposure, either all these crappy shows you have on TV, or because the one who shared the most stupid thing on FB now you're kind of a celebrity because you're sharing really stupid content. it doesn't mean... you can share whatever right? Who am I to judge you if it's stupid or not? If you sharing those kinds of content gives you ... and you feel better with that, hey go on. Then this takes society in the path of immediate content, stupid content. Not relevant, not intelligent. But then again, who are we to push everyone to share always smart content, or intelligent content? I don't know.

I don't have a good opinion on this because I really see value in all these methods of course. To share really relevant content that really motivates me or takes me to another level of knowledge because of people who're more aware of things than I am, and they share their information. But I see the biggest drive is to show off, to be better, higher, more exposed.

[00:42:36]

Build social capital?

[00:42:36]

Get some reward, just because of likes, or people using my name or talking more about me or whatever. Always trying to come up with ranking in the society, social ranking or ... I don't know. That's one of the biggest motivations to expose yourself a certain way. So it really doesn't matter at what cost your ethics values you may be losing. Probably you lose trust because of stupid content but they still look at what you do. And they look for that, because they laugh. And they laugh for 5 seconds and then they forget. I don't know. but then again, it's just my strong opinion on the most common behaviour on that.

[00:43:30]

So let's get more towards BOND. What is BOND Touch primarily to you? Joao told me your vision for BOND was slightly more unique than anyone else's?

[00:43:55]

Actually my vision in the beginning when I came into BOND...BOND was my first brainstorming product in Kwamecorp. And BOND was presented to me, as most of the smart watches are today, a slim touchscreen that would push you information. My vision was, well let's try something simpler, more immediate, more invisible, which is something there on my wrist. I can communicate, but I don't need to look at it. We can generate, let's think about a code of vibrations or lights which... of course light has to drive my attention I have to look at it, but vibrations don't, I don't have to look at it. So I can add really seamless communication without paying any attention. it's just my skin, my nerve sense reacting or feeling the vibration and as time goes by, I will give some meaning to those codes. I will generate them with someone I'm communicating with on a daily basis. So this was kind of my vision in the beginning, let's try to push something much much simpler than a smart watch.

[00:45:18]

So you're saying even when the idea started last February, that was just the BOND Touch module right? Even before that, was there an idea to make a wearable watch?

[00:45:29]

When I came to the company in February, there were already ideas and wireframes, some explorations closer to a smart watch. It had a screen, it was a touchscreen, there were already some explorations of some content, pushing content to the watch or bracelet, the wearable, and then I was suggesting to start with something simpler, much easier to implement because it was just putting a vibrator into a small box on the wrist and let's try to test this in a simple way.

And even in the beginning, it wasn't even going to a box, it was to put a phone attached to your wrist, and just touching the screen just to validate vibrations if the touches were enough to communicate. So this was the first attempt to validate the concept of touch and vibrations.

So yes my vision regarding BOND was to simplify much more, because all that information you already have on the phone, you already have them on the phone so. That was also a bit my opinion about smart watches. I don't see much value as they are now to have them. It's not adding much more value than my phone at the moment. yes it's easier to look at really short information, some notifications and emails that have just arrived quickly, but is it easy to read, is it easy to scroll? I don't know.

We were thinking of BOND initially to trim down all information and just keep it to a really amazing simple communication channel. And I was thinking for example, just now when I was talking about my wife and I don't need to know everything she does along the day, but I'll ping her with some frequency on Skype. Are you okay, feeling good, simple. Because I like her, because I want to know how she's doing, if the work is being too pushy, have you eaten lunch? These are the kind of messages I do, not on a daily basis but once in a while I go there and ask her something.

So suddenly I have this thing even simpler than Skype, I don't have to think. I do two taps and she does two taps again and we're synchronized. And she's okay. I'm scrubbing it because I'm really bored or hey I'm really happy. I don't have to do anything, I just tap 3 times and she knows I'm happy. She doesn't really need to know why I'm happy, I'm just conveying the mood I'm feeling and suddenly she's happy with that or not.

Whatever. Many think of even more functional code, even you can establish because it's our own communication channel, you don't have to use the code that Skype uses whatever. I can say 3 long swipes means I'm going to get the kids. Or I'm leaving. It's more than enough. I don't have to say anything. See you in a moment, I'm leaving now. Sometimes we do.

[00:48:50]

As a designer, are there any special considerations that you would put in a wearable? I think you've already answered that it should be simple, it shouldn't compete with the smart phone. Are there other considerations as well?

[00:49:08]

One of the things I really love about the BOND concept is now that the modular concept is here, it literally can create specific modules to communicate with specific things around you. This I found really disruptive, because suddenly I have something really simple really close to me that I can customize to daily actions. I would love to not always pick up the car keys to go to the garage to pick up the car. I just go to the garage and it just opens, it just starts, because it's there on my watch. So I have a normal regular watch because I want to read the time, but I have this module there that is the car key. it's mine, it's always on my wrist, it's waterproof, I can do whatever I want with it, I don't have to remember about the car key. I just go there, unlock the car, drive the car, perfect.

This is just one simple example. Or the alarm in my house. I really like the example of the Oyster card (London public transportation card). We have the same here in Lisbon, so you have the same card where you put money and you can use all public transportation. For me as a daily user of the transport, it could be perfect. I don't have to think about whether I took my wallet or charged the card. No it just seamlessly happens.

So as a designer, the thing that I love the most about wearables is that it's there, I don't have to think about it, and lots of services around me, that I don't have to think about it. So as much as we can take out of my concerns, my worries about thinking, opening, connecting, tapping - as many as these actions can be automated in my day, I like this innovation and this connectivity and awareness of things but as much actions I can take out of that, this is the thing that drives me most in wearables.

I was working for a long time on for example gestures, computer vision. And this is happening with cameras in specific places, when you do things with your body, naturally. And it has to be natural. Put it here and wave your arms is not natural to do in a store. But if it's something that I'm doing that's quite natural and this camera sees me and immediately turns on this or that, perfect!

Or this kind of thing when you're at home, kind of the Nest concept, understanding the neighbours, the wind, curtains, the temperature and the light, and starts to adapt everything around you and learns with you, so it's more comfortable for you. Your environment is always customised to you, always related with your behaviour, perfect. So this is the kind of thing that I like.

[00:52:18]

So it customizes to you, using whatever means, like big data etc.

[00:52:26]

I nailed it down to two words, which in English sounds really perfect. Which are ubiquity and seamlessness. So the technology is all around us, it has to be, smart. We have all these sensors around us, they have to really cheap and communicate. And this is already out there. We have already an Internet of Things.

And seamless. I don't want to see them, that's so ugly, why is it not inside of the wall? It's still working perfectly, why isn't this already built-in in houses? So we can ditch all the cables, why don't they disappear? This is the kind of thing that drives me as a designer, thinking about my relation with things. This is why we strongly believe in wearables in the modular approach as well.

[00:53:40]

Maybe briefly reflect on your experience of what happened in the BOND design process.

[00:53:56]

I've been in and out of the project a few times.

[00:53:56]

I think everyone has.

[00:53:56]

True. It has been above all a learning process, because we never had someone really 100% focussed on the concept and really strong product designers thinking about the product, the outcome, the marketing and so on. So it's been kind of in and out of different knowledge and sensibilities. Probably maturing a bit more now because it's a bit more stable on the modular approach which it wasn't in the beginning. Since the last half-year, or a bit more, really more focused about the modular. So really matured with that idea. It was a bit schizophrenic at a certain point that it's hard to say it was good or bad.

When I believe in something that strongly, I would put some really team dedicated for the time it's needed to develop that idea. And BOND is a complex project, because it involves electrical engineering, and design and product design and marketing so it's not that simple as thinking of an app. Which is also not a simple thing but this involves more skills.

I could say so many things good or bad. There were really good designs in the beginning, which I believe it was kind of impossible to implement because they were too small. But really beautiful. From someone that we hired outsourcing. A designer.

And then we were pushing so much with this sustainable material that really compromises the high-end look of the product. And then it was too expensive to try all the electronics, so this took a lot of time and the project just



drifted because we weren't really validating or pushing anything. There was never really a strong investment even because it had to be a strong investment and we don't have the resources to do that right now. Half a million a project like this would deserve as investment to validate and prototype.

Yeah the strongest mistake that I believe we made was never having a dedicated team for the project that would think the project from top to bottom. It was always in and out, and some egos in the middle. And yeah that's my conclusion of the project so far.

[00:57:04]

Okay, thanks :)

## Follow-up e-Mail

Hi Pedro,

Hope you're doing well. Life's busy again now that I'm back in university life.

Once again, thanks for taking time for our interview. As I mentioned the other day, these are 4 other questions I would like you to consider from the perspective of a BOND designer/user. The goal is to open conversation spaces about the presence-design of the wearable product.

### Situated agency

You're not there and your partner is not here beside you. You get a BOND tickle; would the tickle change your mind, make you hesitate or otherwise behave differently in the action you were about to do?

(For convenience, let's assume it's an action that the partner wouldn't be supportive of.)

**Pedro:** I would always react to the tickle. But I don't see the connection between the tickle and something I was about to do, that most likely my partner wasn't even aware.

But if what you mean is a scenario where I was about to courtship other person, if I would step back upon receiving a tickle from my partner, probably yes. But I would step back without the tickle ;-)

## **Communion**

You get a tickle on your BOND. What does it mean - does it relate more to your mood and activity at the moment, or your partner's mood or activity OR independent of either (in which case, it's a separate mood of the relationship itself). Also how do you establish a code - by prescribing a language in the user manual, or pre-designing a code with your partner, or spontaneously creating shortcuts as and when the need arises.

**P:** We're prone to learn codes if we're willing to. Even more if it brings some sort of secrecy to our communication. Which is something I strongly believe to be a selling point for Bond. So I see it working both ways, with a pre-set code on the manual and a free mode, meaning users can create their own codes. I imagine some codes to come naturally others with repetition become natural. The pre-set is needed to help them unlock the interaction and break some frustration of "How do I communicate with this?"

## **Quality of Deed**

Is a BOND tickle significant, is it an action? (Like would you remember it the way you'd remember seeing Eduardo on the tram?)

Would the sensitivity/pressure and quality of haptic response change how you feel about a tickle?

**P:** I see it more as a momentary feeling, on a daily communication. But it's also dependent of the context. If I'm anxious to get a specific feedback, I imagine that feeling to last longer or even to leave an impression becoming a memory. Or if it's something more daily, like 3 tickles that meant I'll get the kids, so it will be interpreted as an action and therefore I have to remember it.

## **Making moments to signify**

How solemn is a BOND moment?

Is a BOND moment significant or would you use BOND for significant things?

(To clarify, Eduardo gave an interesting example. He said that a closed one informing family of an accident and hospitalisation over FB chat felt a bit out-

of-place because it was perceived as a more significant than what FB represents...)

**P:** As I see it, to make sense to have a gadget like Bond, has to be as seamless as possible. The less I think about it the better.