

Transkription Interview 23

- 1 I: Ahm, so yeah. Now it works ... perfect. So, first of all, thank you very much again (smiling). And the
2 first question is when did you participate in BCI-experiments? How many times and yeah, what is your
3 experience in general with BCIs? #00:00:27-1#
- 4 TN: Ahhh ... [unverständlich] I got [name] Email and I participated in there, it was a long time ago!
5 #00:00:40-8#
- 6 I: Long time ago, aha. #00:00:41-1#
- 7 TN: Yeah, [Name] did some of things with really [old] researchers in that field. //I: yes.// in 2009.
8 #00:00:54-1#
- 9 I: Wow, ok! So 8 years ago? #00:00:59-8#
- 10 TN: Yeah, 8 years ago I was in a experiment where I played 'World of Warcraft'. And ahm I was actually
11 in the testgroup, so I didn't so anything except for a last day, I actually got to work. In the working
12 version of the game, ahm ... and I think I took forever I think, it must have been like 7 or 10 sessions,
13 where I was sitting there with a braincap on. With all this nice sticky we liquid on my head. Ahm and
14 then I think for each time was like half an hour or an hour, I had to ... pretend to be ahm ... the idea
15 was that I would change from being an elf to a bear. //I: mhm.// with [different] methods, one method
16 was me ahm saying a [spell] in my head. A [spell] like hokuspokus, [unverständlich] //I: mhm.// That
17 would translate wonderful to german, I know. #00:02:10-8#
- 18 I: (smiling) So [name], is a river next to you because I hear water. #00:02:19-5#
- 19 TN: There is no water. #00:02:18-4#
- 20 I: No ok, oh strange. I don't know. I don't know if the connection is good now? ... Now it's better.
21 #00:02:27-8#
- 22 TN: I changed the location from my microphone. Maybe it helped? #00:02:34-4#
- 23 I: Ok, yeah. Good, thank you very much. #00:02:35-9#
- 24 TN: So, in the next session of the experiment I had to say the spell and see if that would change me
25 and there was really some ... some brainwave-activity of that I gues. //I: mhm.// And the other thing
26 was me pretending to be a bear and pretending to be an elf in my head. //I: mhm.// And then there
27 was a third thing we tried. Because she could really easily read off stress in people's minds [and look
28 upon this]; and then I had to be stressed or calm. But that was the most horrible thing I have ever done
29 in my life. Trying to be stressed for 15 minutes. #00:03:22-2#
- 30 I: (smiling) Really? #00:03:21-6#
- 31 TN: Yeah. #00:03:24-3#
- 32 I: And did it work? #00:03:23-9#
- 33 TN: No. #00:03:26-0#

34 I: No (smiling). #00:03:29-8#

35 TN: But I'm a really relaxed person, so it was really painful. What did work the best for me, in my
36 instance, but you have to read [name] research which I'm sure you have done. Ahm for me it worked
37 best to pretend that I was an elf or pretend that I was a bear. I think I could change from an elf to a
38 bear in 1,4 seconds. And ... the way back was 3 seconds or something. Which is pretty fast according to
39 [name] at that time. Those were really fun, because I was just sitting there. Haa! I'm this high, posh elf!
40 //I: (smiling).// I'm gonna shut some [unverständlich] people, shut, shut, shut; oh! I need to be a bear.
41 Roar! I'm a bear now. Small, smash, small, smash, I want some honey! Oh! I wanna be an elf again!
42 [unverständlich] //I: (smiling).// And this worked really well and it was so amazing how immersive it
43 was, because you had to act like your character, otherwise you wouldn't turn into your character.
44 #00:04:39-0#

45 I: Yeah, so it worked in your case, it worked best when you imagined to be a bear or an elf, right?
46 #00:04:46-2#

47 TN: Yes. #00:04:48-3#

48 I: And how was the feeling? You had to be relaxed or ... #00:04:58-2#

49 TN: No, I had to choose my own ah ... #00:04:59-3#

50 I: Strategy? #00:04:58-1#

51 TN: Yeah ... How I would interpret the bear feels like. So ... #00:05:04-8#

52 I: Ah! So, it was up to you? #00:05:07-5#

53 TN: Yes! #00:05:09-4#

54 I: Ok, and what did you imagine, like in your head? Like ...

55 TN: Well, I was thinking of ahm ... bears to be just very slow. //I: aha.// Very, very slow animals which
56 always kind of wanna sleep. They are [not] smart and they move their [boss] around, they just kill
57 everything. //I: mhm.// And I was thinking of elves, being really posh, annoying, [whimps]. So ... yeah,
58 like I acted about a minute ago. That was kind of, I think that described better ... the feeling I got from
59 them like I could report. #00:06:00-9#

60 I: Ok, and when you had to ... or to pretend that you were really stressed? What was this like? Which
61 kind of animal? #00:06:10-5#

62 TN: No, I had to change between the same animals, so I was pretending to be relaxed for the bear and
63 really stressed for the elf in my case. #00:06:18-5#

64 I: Ok, ok. Ah! Now, now, now, ok (smiling). Cool! And so you had to participate in this kind of
65 experiment like you said 7 or 8 times, right? #00:06:33-9#

66 TN: Yeah, could have also been 10. But there was very ... I was in a control group, nothing happened!
67 Just seeing what would happen if you are in the group where nothing would have changed. //I: mhm.//
68 So I was sadly in that group and it was very horrible! Especially the first time, because I was only sitting
69 like to make the experiment really good. She made it like really professional. And after the first time,

70 she she way easier for me as the test object. Because otherwise I would have to ... I have forgotten
71 what it was actually. But there there was some ... very high [unverständlich], they calibrate a lot or
72 they calibrate not that much. Or calibrate on the [goal]. I think later on the changed to calibraing on
73 the goal ... #00:07:29-1#

74 I: Mhm, ok. And now it's quite load again, this ... #00:07:33-2#

75 TN: Yeah, I hear your water also. #00:07:35-8#

76 I: Aha, ok (smiling). Do you think it's here in my laptop, no! Next to me is no water, just snow outside
77 (smiling). #00:07:44-2#

78 TN: Oh lovely, we have sun! #00:07:45-9#

79 I: No, we have a lot of snow today! #00:07:47-0#

80 TN: You gonna go skiing? #00:07:50-6#

81 I: No today, but in the next day I will go skiing, right. Yes, I'm lucky. #00:07:59-9#

82 TN: Awesome. #00:08:01-7#

83 I: Ok ... yeah, how did it feel? This experience? #00:08:06-4#

84 TN: It was horrible! #00:08:10-2#

85 I: Really all the time horrible? #00:08:09-8#

86 TN: All the time it was terrible, horrible ... But I did it because I liked [the researcher], but in the final
87 experiment, when there was actually a result. Because I didn't know that I was in the test group. So I
88 just thought the whole set-up didn't work. //I: ah!// And in the final session, it did work really well and
89 this was amazing! Ah I would recommend it to everyone and she said I could play games, like I would
90 pay lot's of money to play some games. #00:08:44-9#

91 I: Really? #00:08:48-3#

92 TN: Yes! It's kind of like the [unverständlich]; instead of visually and sensewise being there. You're
93 there in a mental state which I thought was, not sure how much different types of game players you
94 can make with that. But I think for ... I don't know let's say the purpose of acting out your character and
95 remaining in the character of your role playing games. That was [stunning]. I also think you could
96 probably use it for some serious learning stuff. So that people don't, I don't know, turn I don't know if
97 it would work with any serious learning, and they don't need to take it serious. Ahm in this case you
98 would have to take it serious, because you could read if someone is serious or not in their mental state.
99 #00:09:45-1#

100 I: So it was like a new experience, something different? #00:09:47-7#

101 TN: Yes totally! A unique, I don't think anyone will experience this outside of the university for years.
102 #00:10:00-3#

103 I: Yeah, and you are working in this field, right? You are a game designer?

104 TN: Yeah! In 2007 and 2008 I worked on an Nintendo-Game. Ahm ... which got published, won a price.
105 #00:10:18-5#

106 I: Oh, cool! #00:10:20-3#

107 TN: Those were pretty cool. And then ... I graduated in game design in 2011. And then, I think in 2013,
108 I started working for a game company, I worked there 2 years in part time. And I'm still developing that
109 game, because we were able to buy it off the company. Some things were drawn and they could
110 publish. And I did billboard games ... #00:10:56-2#

111 I: Aha. And do you use BCIs in this field as well, like for developing new games? #00:11:00-8#

112 TN: No. I would love to work, I had totally forgotten about to be honest. I don't talk to [the researcher]
113 anymore, I was thinking about haptic feedback controllers. That would be a cool thing which was no
114 longer being developed and ... but ahm yeah, I think the main thing with BCI stuff is ... I was just a test
115 object, so ... I wouldn't really know how any of that stuff works. It could probably be programmed but
116 I would need some really smart person to tell me ahm ... I know like the entire master studies. Ah in a
117 nutshell, to be able to work with it. But I and I heard that there are some cool news. Cabs out there
118 nowadays which just use something like 18 sensors and no wet ah ... stuff on your head. #00:12:01-1#

119 I: This gel, right? #00:12:03-0#

120 TN: Yes, the gel wasn't cool. It was not cool. #00:12:05-9#

121 I: And how did it feel like to wear this cap with the gel and this ... this amount of electrodes? Like
122 normally they use 64 electrodes ... #00:12:20-2#

123 TN: Yeah, it could have been 64, that would be slow, but when I used it, it must have been 50 electrodes
124 on it. #00:12:34-5#

125 I: Mhm, ok. And like- #00:12:32-8#

126 TN: Yeah, go on. #00:12:38-4#

127 I: Ok, so it was kind of annoying maybe? #00:12:40-7#

128 TN: It was mostly wet. #00:12:43-5#

129 I: Wet ok. So you needed to wash your hair afterwards? #00:12:48-5#

130 TN: Yeah, it wasn't something you would say like, hey! I need to go and pop this on and play a game. I
131 don't wanna wash my hair afterwards. #00:13:01-1#

132 I: Yeah, ok (smiling). Yeah, I understand. But maybe, if there would exist a BCI one day, with dry
133 electrodes or like a, you know, a headphone? #00:13:18-2#

134 TN: Yes. #00:13:19-7#

135 I: Then maybe it would be easier and you would be interested to play such kind of games? #00:13:24-
136 5#

137 TN: I would be really interesting buying that ones. I would be MORE interested. Now I would even buy
138 the ones where I would have to wash my hair. Because I don't have that long hair. And I just like play
139 for 8 hours and ago, 10 hours, on a weekend day. But I wouldn't pick it up to just play a short game.
140 That would to be, that need to be quite immersive role playing game where I need to ahm ... well, I
141 imagine I would change between most of the characters in the game. Like when you watch a movey,
142 you can change, you see [unverständlich] the characters emerging in the movey. Then I could choose
143 which character I wanna be, swop to them. And maybe I would be the shapeshifter, and I would be
144 able to change into any animal I can imagine, as long as the game first records my ... my mental state
145 for being a [squarell] or being a dog or a bear or an elf. #00:14:31-0#

146 I: Mhm, ok, ok, ok. So ahm did you hear before you participated in this experiments. Did you hear
147 about BCIs? Like what this kind of technology is? #00:14:47-1#

148 TN: I might have ... this is long time ago //I: yeah.// I assume I was fadly aware that it existent. Because
149 in 2006 I think or 2007, maybe 2008, there were this ahm ... you know [neco-ears]? Like chaping cap-
150 ears which you could put on your head and there was a sensor stuck to your forehead and then, based
151 on your mental status, I would move the cap ears, like cap up it was happy or cross [further]. And I
152 think there was even in 1.70 someone made a similar thing, so you could play pong on a [tarry]. And
153 those things use muscular attentions instead of any real brain activity. #00:15:41-1#

154 I: Ok, ok. Ok, good. So you didn't have kind of expectations before you started playing? Because you
155 didn't know what it is exactly? #00:15:56-7#

156 TN: Yeah ... no, I ... think [the researcher] said you get to play World of Warcraft and yes, you use
157 mental powers to change into a bear or an elf. #00:16:11-5#

158 I: Mhm, ok. #00:16:12-2#

159 TN: I think there was a pitch before that ahm ... I was told about playing games except for all the
160 [unverständlich] one which is just raising your eye brows. #00:16:24-8#

161 I: Ok, ok. And how did one session take? Like one hour or longer? #00:16:32-0#

162 TN: I really can't say. It was a bit long time ago. I think it was an hour. But it could have also been
163 three hours. #00:16:45-3#

164 I: Mhm, ok. And this calibration time before each session maybe? #00:16:48-8#

165 TN: Mhm, I think the first session ... it took longer at the start then later on ahm ... but ahm ... yeah, I
166 think it was at least 10 minutes or something. //I: mhm, ok.// And I think a better time would be ... it
167 also depends on where the electrodes are on your brain this time. //I: mhm.// Everytime you put it
168 one, but I think ... if there would be just a short minigame to play, when you have to one time play
169 something. When you a used to play short mini games, it takes a couple of minutes. Then that would
170 be really nice. Like your shape through the game change through all the forms you know. Ahm and
171 have a leader showing you, hello, you're matching the previous thing. I don't know. But what I
172 understood form [the researcher], also in her final presentation, for her graduation, the first time it
173 just takes longer to register and then later on it goes pretty fast. There is no, very light deviations.
174 #00:18:10-4#

175 I: Mhm, so it's kind of training? #00:18:13-7#

176 TN: Yeah. But also artificial intelligence training for the software to ... recognise patterns I guess.
177 #00:18:24-6#

178 I: Aha, ok, yeah. So and you said in the beginning you felt kind of bored, right? But in the end, in the
179 last session, you felt quite happy because you were successful and it worked quite well? #00:18:41-7#

180 TN: Ahm ... yes. At the start it was ah because I was in a control group. //I: yeah, yeah.// So basicly I
181 was using mental power and nothing happened. And in the final one, everything worked and it was
182 amazing. #00:18:57-2#

183 I: Ok. And did you feel responsible for this kind of actions? Like when it worked in the last session?
184 #00:19:04-9#

185 TN: Yes, yes. There was really good feedback from the game. Really direct. What I said I think it took
186 one and half seconds for me to change ah from being a ... what is it? ... an elf to a bear, and 3 seconds
187 to change form being a bear to an elf. Ah which ... the 1 and a half seconds was really fast I thought
188 the tings that are changing the animation in the game, just ah ... changing from a bear to an elf
189 [unverständlich], that also took something took something like one and a half seconds. And that was
190 ... adequate ... ahm ... yeah. #00:19:50-8#

191 I: I would say, that's amazing! Really, really good, yeah, wow. So you felt responsible, like you were
192 responsible for this mental actions? #00:20:03-7#

193 TN: Yes! #00:20:05-8#

194 I: Yes, ok, cool! ... Good. Cool, ok. Maybe because the first part of the interview is ahm ... yeah mostly
195 about BCI. And I think we have finished the first part. Or do you think we have forgotten something?
196 Like is important for you regarding regarding to BCIs? #00:20:37-7#

197 TN: Ahm ... well. To me nothing is very important, I think I don't know. #00:20:48-9#

198 I: Ok (smiling). Maybe ahm because you are, your profession is to be a game designer. What could you
199 imagine in the future for BCIs? Except gaming for example, but in other fields? #00:21:07-3#

200 TN: I think in the ... yeah, mostly probably in the field of ... what is it? ... serious gaming or learning
201 stuff teaching. When you wanna train people to handle stress well or to see how some situations ahm
202 say in the military, we are running around and you are going through all this nasty stuff which no one
203 wants to do, but hey, you a military guy so you are going through a shithole to do some busy work.
204 There it would be really nice to see what your brain activity would be and ahm and yeah, you could
205 prepare for that. Ahm ... to ... I can imagine something like that. But as for gaming, ahm ... I think it
206 would be really slow to just change into different forms. At least this game ahm with that ... but also
207 you have to feel empathy for other people. And to maybe, if you wanna treat kids with autismn, let's
208 say, hey! you have there empathy, maybe we can train you, imagine being a bit [empathic]. That's the
209 game kind of thing and it's technical. Maybe you like it more. And [gradually] they can see, like ... the
210 world from the position from their parents. And that they are giving them a really bad time. And they
211 can see, ah, maybe I can be a bit more a nice kid. I don't know. Or maybe if you have a whizzard, like
212 these really nasty people in the parliament, you or in businesslife or psychopaths, but they ... don't
213 have to be locked up, cause I don't know as a really stressful businessman, you could ahm test them
214 to being a psychopath. If there can show empathy or not. #00:23:26-5#

215 I: Ah! Yeah! Very good points and very good for me as well because we we need to think about future
216 applications as well. Yeah, well, ok, cool. And as you know like your brain activity can be seen, ahm,
217 from different ... yeah, or from ahm other people, you know, from researchers, ahm have you fears
218 concerning BCIs? Because maybe in the future, I just can tell you that Elon Musk, you know the founder
219 of Tesla, he is developing BCIs and he has established his own company which is called Neuralink. //TN:
220 mhm.// They are investing a lot of money in this kind of research. I'm not sure what will come and also
221 Mark Zuckerberg from Facebook, he has like his own lab now. #00:24:27-8#

222 TN: Yeah, I like Facebook, yes. We're to slow in typing messages //I: yeah.// Let's use brain-scanners
223 to type faster or [unverständlich] ... I thought this was amazing. Yeah ... well, there is two thing. The
224 first thing is 'have you seen the series doll house'? #00:24:50-7#

225 I: No, no. #00:24:55-5#

226 TN: If you have nothing to do, you watch the series doll house. #00:24:57-2#

227 I: Ok. Doll house, ok. #00:25:00-4#

228 TN: That's exactly what people should be worried. Ahm ... it's about people stealing ahm personalities
229 from other people and downloading them and manipulating them and putting them back into other
230 people and then you could hire I don't know someone like if you make a brainscan from a your
231 grandmother and she dies. And then you can upload that personality back into I don't know ... just any
232 person. And that this person is your grandmother. //I: aha, wow.// And they do some nasty stuff with
233 that as well. It is an AMAZING series, I think you will love it! Anyway ... ah, the other thing ... which ...
234 ahm what was your question again? #00:25:53-7#

235 I: Ahm, if you have any fears concerning the development of BCIs? Not just in BCI-Gaming you know as
236 we have talked about before, but in other fields like facebook or ahm ... automated driving for
237 example? When your brainwaves were shown to other people. Like is your privacy restricted then or
238 what feelings do you have? #00:26:24-6#

239 TN: Ahm ... yeah. This is kind of kind Google has access to everything. Even your WhatsApp pictures ...
240 You don't want them, but you can't stop it. Ahm so ... yeah, I guess apathy for me, I wouldn't be
241 [thinking about it]. Also the thing ist, can they really use it for something? Ahm they probably can, but
242 ... will I ever notice, probably not. #00:27:02-1#

243 I: Ok, ok, good. Ok ... so, this was the first part. And the last part is ah a really short one. It's about
244 technology in general. And I just want to ask you what does technology mean to you in general? And
245 what role does it play in your life? #00:27:35-9#

246 TN: Well ... I have ... since I was I think 6, I got a computer ... ah, I think technology is great. And I use
247 it a lot. Ahm ... however, last year I suffered a bit of a burn-out. And I was thinking of [more structure],
248 so I ... very rarely, maybe like one hour a day need to touch a computer, and then enjoy nature for the
249 rest of the time. #00:28:06-6#

250 I: So now you are using technology about one hour a day, right? #00:28:12-5#

251 TN: Currently for my ... for my work I use it 8 hours a day. //I: ah, ok.// And then afterwards I go play
252 video games for another six hours. #00:28:24-8#

253 I: Aha! (smiling) #00:28:26-3#

254 TN: 14 hours a day ... #00:28:30-5#

255 I: And in your spare time as well? Like during holidays? #00:28:36-9#

256 TN: Yeah, I need to download movies and watch them. //I: mhm.// Or play video games. Or ahm ... I
 257 don't know communicate with my friends where we gonna hang out through my phone. I use the
 258 technology from [unverständlich] to make sure that the house is warm. I use technology in a car to
 259 drive around ... #00:29:02-6#

260 I: Mhm, navigation? #00:29:07-2#

261 TN: Yeah ... or I cook food ... //I: mhm.// So, there is I don't know, I think even if you're ... yeah, I think
 262 short walking in nature for passing the cat or talking to other people. Probably everything you do uses
 263 technology, even if you turn on the [lab] from the showerhead, that's also using technology.
 264 #00:29:40-9#

265 I: Mhm. So ... I think it's everywhere (smiling). Do you agree? #00:29:46-3#

266 TN: Correct. #00:29:49-2#

267 I: Yeah, ok. And do you think that's a good development? Or would you prefer to restrict it in any way?
 268 #00:29:58-0#

269 TN: I think ah ... I think if you would, that is an annoying answer, but if you wanna restrict it, people
 270 wouldn't want that. People wanna be free. Freedom! So they would ah ... well, I would say it's maybe
 271 smart to ahm ... yeah, the right to sitting behind your cellphone and your [unverständlich] all the time.
 272 Because it infers with ahm ... I know being able to reflect on your life. //I: mhm.// You need some quiet
 273 time sometimes and nowadays no one does anymore. And I think that is really good that in France for
 274 instance, they ban cellphones on schools, there is no cellphones on schools anymore. #00:30:59-1#

275 I: So what, no cell-? #00:31:01-9#

276 TN: So you know cellphone, or a handy? #00:31:04-6#

277 I: Ah, cellphone. Yeah, yeah. Sorry, just the quality of skype. #00:31:08-0#

278 TN: In France if you're kid, you are at school, you are not allowed to have a cellphone. #00:31:13-2#

279 I: Ah ok, ok. Yeah, that's good. #00:31:15-7#

280 TN: I think that's amazing. I really look forward to seeing what the test results from that are. #00:31:24-
 281 9#

282 I: Yeah. And because, you have mentioned before that every person want's to be free and of course in
 283 the use of technology as well. To decide if you want to use ... your cellphone or not. Ahm what does
 284 freedom mean to you? Like in general and regarding technology as well? #00:31:51-7#

285 TN: Very good. Ahm ... I think freedom means that you're not bothered by other people or by ...
 286 computers to tell you that you are not allowed to do something. If you have the ILLUSION that you're
 287 absolutely free to do whatever you want. Ahm ... I think that's what freedom means to me. And in

288 regard to computers ... ahm ... that you can choose to use a computer to like say, you go diving, you
289 have a a depth meter, you can put all of that in a diving computer watch, which you can also do it by
290 side. Or just go free diving without the use of a scuba-mask or a oxygen-tank. That you can choose
291 whatever freedom you want. Because I can imagine also ... //I: yeah.// other people they don't like the
292 technology. But that's maybe because it's new. But even to me, as a generation grew up with, I mean
293 when I was younger there no internet and [the connection was] really slow but then as soon as there
294 was internet, we had a fast internet and computers. They use computers all the time, but even then, I
295 would not forget that ahm ... yeah, you can go too fast. And just ahm ... yeah, get a burn-out just from
296 not knowing ahm from the stress not being able to choose what you should doing. Should I be making
297 a video-game, should I be studying? Should I watch television? Should I play video-games? This can
298 give you enough stress that you can get a burn-out. //I: mhm.// And ... I don't know one way, to
299 strategy, to restrict people from also getting such a burn-out is to ... limit their use to technology.
300 Another strategy might be to ... have this people ahm give them records how to sensively use an
301 automated technology so that they don't trying to elect. //I: mhm.// Then, once step further when you
302 look at the human race ahm ... I think I read somewhere that if you are on your cellphone like every
303 moment that you bored which is quite awesome ... before where they could first, I now remember no
304 complete phone numbers or complete bank account numbers or maybe even [pie] through a hundred
305 decimales. Right now, they might be stuck at two numbers. //I: mhm.// When you look at those kind
306 of results; and that's just one, I think there was like twenty things when I read them oh my god! I'm
307 going to use my cellphone way less now. Do they really feel mentally [retarded] and handicapped? //I:
308 mhm.// Compared to how it used to be. Without using my cellphone ahm ... I think it would be smart
309 that people know in an early age at school like hey, this is the fact, the cellphone has on me. In some
310 regard, it is for your health like smoking. #00:35:30-9#

311 I: And you said before that we must have or it's important for you to have the illusion of freedom? Like
312 do you think it's an illusion? #00:35:41-7#

313 TN: Yeah, I really think it's an illusion. //I: Yeah.// Like, if I if you if I tell myself I'm free because of what
314 reasons? Ahm I'm probably not free for stuff people, for stuff I didn't think about. Because I can't think
315 of everything. Maybe something people can, but I think I can't and most people can't. Like I wanna be
316 free, that's people used to have to right now. I wanna be free like a bird, ok. Used to have to stand on
317 the grass, paddle your feets, so rainworms come up and they can eat them, you know, like still need
318 to eat, still need to breath oxygen. Still need some, otherwise you die. [unverständlich] whatever ... So
319 you're never really, really free. And that sense for people wanna believe that they are. #00:36:37-4#

320 I: Mhm. And do you think artificial intelligence is like a good development and you wanna use it? Or
321 do you have some kind of fears? #00:36:48-5#

322 TN: Well ... I think we are the brightest minds in the world, like you said, like Musk, and also the guy in
323 the wheelchair. #00:36:59-1#

324 I: Stephen Hawking? #00:37:02-8#

325 TN: Yeah, Mister Hawking. They say ah ... like we're not gonna die because of catastrophic fealure of
326 the planet because we're polluting it. Ahm ... but we're gonna die because of artificial intelligence way
327 before that. So they say that and I'm blind to believe them ah ...but at the same time like before it's
328 gonna turn to terminator ah skynet, I think yeah, you know, if we gonna die, we gonna all die at the
329 same time kind of thing. I like postapokalyptic movies, ahm ... there was cold war once and we could

330 have all died at one point in that point in time, in the 80ies. Yeah, you just never know. I could also just
331 die from someone not being able to drive a care correctly. //I: mhm.// And in that sense my world is
332 just everything I can see and live around which is pretty much my friends and a couple of cities and
333 [unverständlich] ... But beyond that I really my world is not, I can not perceive the world. //I: mhm.//
334 So the destruction of the world is also relative. #00:38:34-7#

335 I: Mhm. Yeah, ok! So ahm yeah, we're almost finished I think. All my questions here are answered. Do
336 you know think that we have forgotten something? Because sometimes when I ask people if I have
337 forgotten something ahm really cool ideas are coming. Therefore I'm asking maybe something else is
338 in your brain about this stuff, about BCIs, about technology ... Maybe you know more than I do ...
339 #00:39:10-3#

340 TN: ... yeah ... Ahm ... I now wish there was a futurology canal. On youtube or someting, probably there
341 is somewhere. You can just read up what all the ... what the world would be in 10 years ah or in 20
342 years. But I guess you can also go to Science Fiction-[Labs] for those king of things. There was there
343 was one thing though, yeah! I remember again, I'm reading this book now. It's called the dreaming
344 void ... Ahm and this is something I forgot to mention earlier. Ahm but I I think the most amazing, in
345 this book they tell it way better than I ever do it. But I won't bore you, with hey, you have to read it on
346 a pagebook (smiling). //I: (smiling).// Ah i's a science fiction book and they made some technology in
347 there which I think ah a braincap would totally work for ... ah the idea is that instead of sharing like if
348 you watch a movie, the movie does I don't know, lights, sound, actors acting, lot's of stuff to try to get
349 you into an emotion. If they succed or not, that's the question, but they really try really well. And in
350 this book they ahm ... what they have created is they ahm ... it's a way to sense ah how people feel
351 emotions and I guess that the device they are working is a sensor and a actuator. They can't make
352 people feel emotions, [but if fluid there will be an except] which is make people feel the entire ahm
353 emotional rollercoaster or whatever or a say a sensory drama. Or movies ... And another intention they
354 made using such an actuator of making people feel that emotion that they are wanting to feel. It is
355 called a they call it a [guyer-field], an emotional field, where ahm ... people can have an emotion and
356 they can show other people this emotions they want to. Say, you have a kid with autism mhm and they
357 have a braincab, they are feeling this emotions but they can't express them. The braincab could, I don't
358 know, ahm light up there wearable t-shirts and the color associated with other feelings. Or maybe
359 there are some icons on their shirts. And the person looking at them can say ah! I get how you're
360 feeling! ... //I: yeah.// Ah, so these autism kids could be trained with each other ahm ... showing their
361 emotions. I know even when they try to act out emotions ah ... this could be cool. Or if you going to
362 overdrive on this concept ahm ... people could all at the same time experience other peoples'
363 emotions. Which would be pretty cool if you would be in if you would want such a thing. But I can
364 imagine if you say, I don't know, the Kim Kardashian is ah ... is having a top emotional time because I
365 don't know she is going through a divorce and having a baby or whatever hollywood-drama. And you
366 put a sensor on her head and other people quickly experience the kind of drama she is experiencing. I
367 think lot's of people would totally wanna pay for that. #00:43:02-1#

368 I: Mhm, yeah. I agree! So the name of the book 'the dreaming boy', right? #00:43:09-2#

369 TN: Void. V - O - I - D. #00:43:11-4#

370 I: Ah voice! #00:43:12-7#

371 TN: Void! #00:43:16-8#

372 I: Void, ok! #00:43:16-8#

373 TN: I will type it to you ... I think that works better. #00:43:20-2#

374 I: And the series you mentioned was 'doll house'? #00:43:28-0#

375 TN: Yes! #00:43:28-0#

376 I: Ok, cool ... I've written it down on my table now (smiling) ... Ok, perfect. Thank you! #00:43:42-3#

377 TN: Yeah, science fiction is awesome, if you if you looking for more ahm ideas on these kind of things,
378 what I would recommend you is to go to a ... yeah ... in [city] we have a Science-Fiction-Library, what
379 you have to do besides your studies, for your Masters and their PhDs, is read Science-Fiction-Books.
380 //I: mhm.// I think they might give you very ah ... yeah, very cool ideas for the future ahm stuff which
381 can't be done yet. But which should be possible in the near future. #00:44:21-4#

382 I: Ok! Ok, yeah! Thank you! I'm going to google it! Ok, in [city], right? #00:44:29-5#

383 TN: [city]! #00:44:32-0#

384 I: Ah? ... Ah! [city], ah ok we pronounce it totally different (smiling). There was an accident one day I
385 can remember in this city? #00:44:43-7#

386 TN: Yeah, there was a fireworks factory explosion. #00:44:48-1#

387 I: Ah yeah, right, right. Ok, so thank you so much [name]! I think we are almost done ... ahm it was
388 really really cool and I thank you for your time! (smiling) #00:45:05-2#

389 TN: Yeah! I hope this really helped you? #00:45:03-7#

390 I: Yeah! You helped me a lot, really! And maybe do you know other guys who participated in this BCI-
391 gaming stuff? #00:45:15-8#

392 TN: Mhm ... the only thing I can think of where you might wanna look ... which would be ... I don't know
393 if this has to do with the scope of your research. But I think ... around Easter there is the ... you know
394 what a demo party is? #00:45:34-2#

395 I: No. #00:45:32-5#

396 TN: A demo party is people who hack technology. //I: aha.// So just imagine people like the oldest PC
397 ever possible and they try to run a new video game on it. //I: aha.// But it doesn't work and then they
398 start hacking the machine so it does work. Or they make nice graphics using really limited technology.
399 Like I don't know, remote control, the chip in there they use to I don't know, create 3D visuals of ...
400 kind of elephants. //I: mhm.// Ahm some people try doing that. And those people in general they are
401 really smart and they are really creative and really good at making anything out of anything. And in
402 Germany, I think around Easter, there is the biggest demo party ahm on the planet. At least in Europe
403 ... Another one would be dreamhack which is in Scandinavia, but I think in ... yeah, if you go to those
404 places, then you will be overwhelmed sensorywise, you will find only people who are just really good
405 at coming up with hey! If you give me this piece of technology, I can hack it, so I can create this for
406 you! #00:46:51-4#

407 I: Wow, wow! #00:46:52-0#

408 TN: And you would give, if you borrow them a couple of your ahm cheaper stuff, they would create
409 wicked video games for you with new experiences and ideas, concepts, in the course of just a weekend.
410 #00:47:09-7#

411 I: Wow, ok, wow! I'm going to look it up, ahm, demo-party, right in Germany? Ok, ok ... Yeah cool!
412 Thank you [name], just one last question how old are you? Because I need it for statistical purposes.
413 You know, I have like man, woman, age, like ... #00:47:31-6#

414 TN: Yeah, I'm 31. #00:47:35-8#

415 I: (explaining details about ethics-commission). #00:49:12-6#

416 TN: Ok! #00:49:50-1#

417 I: Ok, so thank you very much [name] and have a nice day! #00:49:52-8#

418 TN: Yeah, you too! #00:49:58-1#

419 I: Thank you, all the best! Bye, bye! (switching of the recorder)