

Femke Snelting and Katia Truijen

LISTENERS IN THE ROOM

Katia Truijen: During the retreat, Matthew (Plummer-Fernandez) created the @InstituteOf bot that generates random titles for institutions. You were interested in making a 'critical fork' of it to do a close reading of the code that Matthew wrote. Reading and commenting on code is a recurring practice in your work.

Femke Snelting: In the projects of Constant, the organization I work with, we often try to make what we call 'meta-comments'. We speak about gender in a bug report; we discuss ethnicity in a proposal for a software standard; we try to read language habits in large data sets. We do this by making use of the writerly structures that already exist around collaborative code practice. Through its open source licensing, free software allows you to intervene and to be part of a collective and continuous process. People engage in discussions around code through mailing lists, or do bug reports to comment on technical issues. In that way it is a very discursive culture.

At Constant, we aim to involve different types of expertise in discussions around technology. We think it's necessary to include other voices than those from engineering or computer science, as it is too limited to confront technology only with technology. Through collectively reading and commenting on different layers of code, we want to learn and test how our relations with technology are never one-way.

When Matthew told us about the @InstituteOf bot, the idea came up that this could be an interesting occasion to do what we call a critical fork: a complete copy of his code but with comments, references and discussions added. I was curious to see if it would be possible to recognize elements of the discussions we had about computational intelligence and research, within the technological objects that script the program or 'collage code' that Matthew wrote. Also, the idea of a bot as a generator of institutions is interesting in itself because of the institutional forces embedded in code practice, such as the way certain habits and power relations establish themselves over time. So it would be interesting to see @InstituteOf as both an example of and subject to institutional critique; that 'institutions' created through code might already have their own institutional habits.

KT: Currently, there is an ongoing stream of news about algorithmic flaws, like the machine learning algorithms behind Amazon's same-day delivery service excluding certain predominantly black ZIP codes. Reports about these incidents often call for a more critical engagement with algorithmic culture, emphasizing the importance and sensitivity of algorithmic design.

FS: The 'algorithmic hype' and the craze of using the 'a-word' for anything related to contemporary computation leads to the complexity of the technology being confirmed over and over again. It's a way of distancing ourselves from what is actually going on. Of course there are many technologies that are beyond the understanding of many of us, but there are also surprisingly mundane, repetitive and even silly aspects to them. The complications you refer to often come from the layering of simple assumptions. I think it's important to decide to not be scared away.

KT: So the challenge is to find ways or tactics that can help to align ourselves with technologies? I read about a recent workshop initiated by Constant where you were categorizing different phrases as being paternalistic or not. This approach seems to offer an interesting entry point to learn more about algorithmic thinking and machine learning.

FS: About a year ago, we organized this session with activists, artists and researchers to learn about and work with text data mining. A computational linguistics professor from Antwerp introduced us to Pattern, a text mining module for the Python programming language. We learned that text data mining technologies are based on optimizing a small seed of knowledge that is then scaled up to analyze large sets of data. Small test samples, or so-called 'golden standards', function as benchmarks if they work well and allow other data to be analyzed by algorithms. However, the initial human decision-making process is still central to how these algorithms extrapolate knowledge.

We tried to find out as much as we could about these golden standards, and under which conditions they are being developed. Not surprisingly, they are often created by underpaid students or mechanical turk workers who are basically bombarded with data and paid for the speed of their classification. It's all based on sentiment analysis, like rating sentences on the level of anger that is being expressed. In this process, clichés emerge and are reaffirmed, because people don't have time to consider their decision. Anything that is ambiguous or unclear is discarded; first on the level of classification, either positive or negative, and second, if there is disagreement between people who rate the same sentence. Only material without ambiguity will pass through.

We were asking ourselves what these type of processes mean in terms of knowledge production. We decided to classify 'paternalism' in a data set, something as ambiguous as can be. So we simulated a scientific process by developing our own golden standard to counter the efficiency drive of text mining technologies, allowed for debate and offered time to make decisions.

KT: Often when new technologies or applications are developed they get analyzed or criticized, but once we are immersed, they blend into the background and critical analysis or intervention seems to stop. You are persistent in not using certain software applications like Gmail, or devices like a smartphone.

FS: This is part of our tactical approach. Testing out other ways of using technologies is an important element in our research practice at Constant. It may seem like a minor difference, but a lot happens when technological habits get questioned. You stop using technologies because they are convenient, but rather start because they raise interesting questions.

KT: You also actively intervene when new technologies or standards are developed.

FS: Currently, I am following the process of encoding emoji in Unicode.¹ My colleagues and I were really surprised by the way the Unicode Consortium implemented 'skin tone modifiers' as a response to a call for more diversity in the

set of emoji. While calling it universal, they have actually introduced a racist system. As a group, we tried to intervene by responding to the public call for comments. We investigated the decision-making process at Unicode by a close reading of meeting reports and press releases while writing and presenting about our findings. Through these meta-comments, we try to enter into dialogue with something that presents itself as a mutable process open to everyone.

KT: During our retreat, in conversations about the agency and behavior of computational entities, it was difficult to move away from a human-centered perspective. At some point, you introduced the idea of the 'algorithmic gaze', which allowed for us to assume a more 'bot-centric' perspective.

FS: I borrowed this notion from a colleague at Constant who is working on a long term project on computer vision and how image recognition could be understood as an algorithmic gaze; not only looking at the effects and the politics of algorithms, but to read them as radically other forms of seeing.² Of course humans are not uninvolved, but it's too easy to think that they completely define this gaze. This is a difficult exercise though, because it means to try to imagine a world in a post-humanist sense, in which the human is not always at the center, and then to think what kind of relations we could have with this other gaze.



During the retreat, we found that some of the discussions we know from dealing with difference and otherness suddenly became very useful. We talked about the different levels of awkwardness that sometimes emerge during group conversations, like the assumption that we are all the same makes the fact that you are not very difficult to handle. Questioning the assumed sameness through difference can be awkward or painful, both for those who assume to be the same and those who don't.

From the idea of the algorithmic gaze, as something different and beyond our understanding, we imagined how an algorithmic research entity could exist as an agency without feelings; a computational agent that could be different without feeling its pain or awkwardness. We were interested in exploring what this would mean in a social situation, how such an agent could help to break through the assumed togetherness, and what types of research and knowledge would be produced from it. What kind of relations would then emerge? How would this computational agent reflect or deflect work between humans? In a way, we were trying to see the algorithmic processes that were already present in the room and in our conversations.

KT: I find it interesting that, throughout the retreat, we continuously adapted our environment to the kind of conversations we were having, like different types of chat rooms. The kitchen and the forest allowed for one-to-one conversations, the living room and the courtyard were used for plenary discussions, and the park and the café allowed us to talk in smaller groups. We often used spatial metaphors, such as the garden or the dance floor to describe different types of relations between agents, both human and non-human. You approached the idea of the algorithmic research entity as an actual 'listener in the room'.

FS: In fact, we had already invited strangers in our midst by using different tools and software for recording and processing the discussions. We tried to understand what it could mean to invite an algorithmic listener to a conversation, and started to imagine those presences in different ways. To test some of our intuitions, we generated two automatic transcriptions of the same conversation in which an awkward social moment took place. Interestingly, this moment was completely missed and erased by both of the transcriptions, but not in the same way. Because we were there and we know how the technology works, we can reverse-engineer what must have happened, algorithmically speaking. We can start to see the 'golden standards'. But if you would not have attended the meeting and only read the transcript, you would never be able to recognize the fact that there was an awkward moment.

KT: And what did these non-human listeners contribute to the others in the room?

FS: That is where it becomes interesting: to not take these automatic transcriptions as misrepresentations of what happened, but to approach the computational agents as actual listeners. What is beautiful about the two transcriptions, is that they show two different readings of a situation, which not only de-essentializes the technology, but also serves as a nice reminder that every one of us hears and reads the same things differently. So, they operated simply as different characters, each with their own kind of presence. ✓

1 Femke Snelting et. al, 'Opt Subject: Issues with modifier mechanism, UTS #52', 2 May 2016. At: <http://possiblebodies.constantvzw.org/feedback.html> (accessed 10 August 2016).

2 Nicolas Malavé, 'Scandinavian Institute for Computational Vandalism'. At: <http://sicv.activearchives.org/logbook/> (accessed 10 August 2016)

DISCO-

Tamar Shafir, Femke Snelting, Füsün Türetken, Simone C. Niquille, Dorien Zandbergen and Nick Axel

Why did Eris, goddess of discord, throw the golden apple? Her disagreeable nature led to her being the only goddess not invited to Peleus and Thetis's wedding. When she turned up anyway, she was refused admittance and, in a rage, threw a golden apple amongst the goddesses inscribed with the words "To the fairest".

The collective form of research

Research often is a predetermined process that involves multiple agents located in different spaces, organizations, formats, media, places and times. Those agents are organized according to various patterns, rhythms, hierarchies, and protocols. For example, the academic framework defines multiple tiers that are granted different forms and quantities of agency: canonical figure, Professor, assistant Professor, Principal Investigator, lecturer, graduate student, undergraduate student, research subject, etc. The different tiers imply a flow of theory and critique (downwards) and primary or "raw" content (upwards). The institutional context prioritizes written documents in order to archive and expand the knowledge it contains. These structures offer an illusory architecture of knowledge and condition/limit the ways in which 'conversation' is part of the process of doing research.

When conditioned by institutional research institutes, conversational practices take place in highly formalized settings, like the conference and the lecture. Only when organized in these formations the outcomes of conversations are acknowledged as 'knowledge'. In more collective forms of research, the question how conversations ought to be conducted and what gets recognized as knowledge and insight is itself part of the research process. We'd like to imagine this collective process in terms of a dance: on the hand, a conversational framework that relies more on a social code (which can be respected or not) and on the other, a channeling of data and knowledge into individual and sequential vocal expressions. We want to think of conversation as a dance. Could research also operate as a dancefloor? We talk a lot, but don't dance nearly enough.

What issues could disco- address?

disco- should be able to create a better balance between conversational content and

context. Moments of disruption, frustration and blockage often come from an unacknowledged or unequally acknowledged disconnect between these two. For example, diversity does not guarantee that everyone gets their voices heard. Common issue with group conversations is not merely that there is a lack of common ground, but often the absence of awareness that there is no common ground, or that the ground on which people stand has shifted. disco- should be able to sense disconnect and respond to it. It should also have a sense of autonomy in this respect, so, not only 'responding' to participants' frustrations but also indicate on its own accord when to do so.

The dancefloor as paradigm

Dancefloors are complex spaces that operate based on some implicit understandings:

0. Pre-disco rituals, i.e. shaping your disco body: the disco nap, hygiene, getting in the mood, choosing the right clothes, contacting your disco buddies...

1. All bodies on the dancefloor share the same spatial framework at the same scale.

2. Each body has an independence of motion that is relative (mutually inclusive or exclusive, depending on the free will of each body) to the independence of motion of all other bodies.

3. Each body has a simultaneity of motion that is coextensive with the motion of all other bodies.

4. The expressive capacity of each body may be unequal and subject to several determinative factors that include, but are not limited to: expertise; bravery; will; imagination; familiarity; acceptance; freedom; normativity; ability; free time; implicit or explicit codes of conduct.

5. The dancefloor may encourage or discourage inequalities through different factors that include, but are not limited to: price of entry; public versus domestic setting; legal status; dress code; darkness; loudness; accessibility of audience to DJ; level of intoxication; legal status and enforcement for various intoxicants; sexual orientation; gender; race; class.

6. Participation in the dancefloor can assume different registers. These include but are not limited to: improvised expressive dancing; choreographed expressive dancing; choreographer; chaperone; wallflower; barfly; bartender; disc-jockey; lighting controller; technician; cleaner; bouncer/ID-checker; policeman; drugdealer; poledancers; bathroom attendant; ...

7. Spaces in a disco include: a bar, VIP Room, backstage, restrooms, DJ desk.

DANCE DANCE REVOLUTION

As an exercise we transcribed a piece of conversation from a public discussion on automation and responsibility with Merel Noorman via speech-to-text software. The two software constellations used are Gentle ("A robust yet lenient forced aligner") and Trint *Beta ("Magically transform media content through text"). Comparing the transcriptions of these two very different computational listeners produced, we recognized how different sets of algorithms make different guesses at what was said. Not unlike human participants, they at times heard the same things, but often they heard very different things. Unlike humans, these strangers offered direct access to their particular forms of understanding and misunderstanding, without reservation or embarrassment. By taking their interpretations into account, we started to see patterns beyond our usual scope of hearing. Listening through their otherness allowed us to imagine conversations that could include radically different listeners.

Gentle

it you know there has to do with you know she was just stupid you know so many more hands better and you'll be the system you know yeah yeah memphis from you know i have yeah uh and uh <unk> and because it's if you if you go through this long then everything rings and then into that they should comes and uh i mean one day she where i mean you've completed problems it should do is exactly what it's supposed to and it goes wrong so it goes all right if you're more human is is all right if you're more human it's just three dollars a airplane its course right i think they're just been once but she's doing and you know five and answer and you had the patience or the interaction designed another er so clear that you could then stepping itself yeah you know so both ends have problem yeah and and you will love and that's all frisbee golf and she'll never be to pick up and she'll never be ass human it's instant that just completely feels that way if you go to get out so that's always say should pool but it just it was in the end of all it's like you know it's just you know that's the that's the way it was that it just makes you say well you have to have to type a kind of the citizens of the human years it just kind of the citizens of the human usage spaces than most valuable trees technology that goes there yeah and so uh we that's consideration mind you know everything else they're kind of can be discarded and so that you know because fox of it was gonna happen done correctly disadvantages which is actually the the way to go is moment i mean you know way to go is moment i mean something that i mean uh that's a uh you wanna completely ultimate hopelessly let a computer oversee and a partner or a different to to to see if they're across the whole the biggest problems there is that they don't see the difference between car sellers of these beating is fine with me for it we think is funny right you know and have you have [laughter] i'm the oldest for the most of the problem is love salt you could never do this because that's we're supposed to be yeah see that that's right and that's that's you know it's it's you know what about us the problem

Trint

Yeah but if the less I do with the notion that you said the difference between a tongue in one hand and human system on the other hand. Yeah and because if you if you go through that line everything works and then interpretation comes on an important issue I mean it's completely obvious you to do exactly what it's supposed to do and it goes wrong it goes all right if you're more human is a bit dodgy with crime is of course you have to interrupt the bottom of what the machine is doing and you have to find an answer and these interpretations or the interaction design are not always so clear that you can understand the thing itself. — Yeah you know so both ends have a problem. Yeah and you will often never software because the machine will never be as human assistant that it completely feels the way we work together now so there's obviously a basic problem. But if you do it in the polling that's why you know it's just you know. There's no way to understand it it just makes mistakes. Well that's how cities have lost really comes to systems of the human perception space is the most valuable piece of technology that goes there. — And so with that consideration in mind you know everything else you know. Come be discarded so the hero becomes part of the look past the young which of English which is actually the way to go it is moment to mean something I mean let's say if you want to completely of totally autonomous leave let a computer over see the parking lot here for two weeks to see if the cars are stolen. The biggest from Osteria step they don't see the difference between a car scholars of these museums going look for it you know and you know until this fundamental problem is not solved.— You can never get rid of that responsibility. You see the difference and that's saying all the same meaning always opposed to the problem.