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SOCIAL RELATIONS AS DATA AND METADATA

This is the text of the lecture “Social relations as data and metadata,” originally presented at the School of Arts and Humanities, University of Coimbra, during the 2nd International Graduate Conference in English and American Studies, titled “Interventions: Private Voices and Public Spaces”, held on May 2-3, 2014. In this print version, all video and audio files used in the presentation were replaced by evocative images of those audiovisual elements. In order to preserve the memory of the original form of the lecture, links to files which are still available on the internet are indicated, where relevant, within the body of the text. Stage directions describing the speaker's actions while those files were being executed and shown have also been introduced. This way, readers will better understand the relations between speaker's text, video projections and speaker's actions as components of the poetic and reflexive logic of the seven meta-dialogues that constituted this lecture.

[The audience is seated. The room is dark, except for a spot of light on the speaker's reading shelf. The speaker stands, ready to perform the dialogues. The projection screen reads, in black letters on a white background: “Sequence 1.”]

Sequence 1

- How do I start? Where do I start? What if I start here?
- Where?
- Here. Where we are now.

- And where are we now? Do you know where we are?
- I don't know where we are. But since we need a place to start, we could start here. Here. Near this swarm.
- What swarm?

[At this moment, the speaker projects a video that shows the positions of artificial satellites orbiting the earth. The speaker remains silent for some time (10-15 seconds) after the video starts playing. The following speeches occur while the projection of the orbiting satellites takes place.]

FIGURE 1 - Screenshot of an application developed by Analytic Graphics Inc. that allows real-time visualization, through Google Earth, of the positions of all satellites in the Earth's orbit. This image was taken from a video that records one of these visualizations. The application is no longer available in 2017.
[cf. "Positions of Satellites around Earth" (2014)]

- This swarm of satellites orbiting the Earth like bees. Circling the Earth every 93 minutes, every 94.6 minutes, every 100.8 minutes, every 103.2 minutes, every 116.5 minutes, every 119.1 minutes. Can you see them?
- Yes. Now I see them.
- There goes PEGASUS DEB. There go DELTA 1 DEB, and FENGYUN 1 C DEB. There goes COSMOS 397 DEB. There go ARIANE 1 DEB, and BREEZE-M DEB.

There goes GLOBALSTAR M046. Can you see GRACE 1 and GRACE 2? Do you see how fast they fly?

- How many of them? Do you know how many of them?
- 13 000, I'm told. 13,000 bees swarming the earth. Each one with its own perigee and apogee, its own weight, its own inclination, its own mission. Many already inactive. Space debris. Others doing science and communications. Others doing surveillance and war. Increasing the national gross product.
- Is this a starting place?
- Yes, this could be a place to start.
- Why start here?
- Because it's so difficult to grasp.
- What do you mean?
- So many trajectories. So many bees. Creatures from outer space.

[The speaker remains silent for some time (10-15 seconds). The projection screen reads, in black letters on a white background: "Sequence 2."]

Sequence 2

- How do I start? Where do I start? What if I start here?
- Where?
- Here. Where we are now.
- And where are we now? Do you know where we are?
- I don't know where we are. But since we need a place to start, we could start here. Here. Near this swarm.
- What swarm?

[At this moment, the speaker projects a website that visualizes internet traffic in real-time by counting the number of clicks and page views at any given instant. The speaker is silent for some time (10-15 seconds) after launching the program. He then manipulates the map in order to focus on one of the traffic circles in North America or Western Europe. The following speeches occur while real-time processing of global internet traffic is taking place.]

FIGURE 2 - Screenshot of an application that provides real-time visualization of the aggregate map of internet traffic. This image was taken from one of these views.
[cf. <http://wwwnui.akamai.com/gnet/globe/index.html>]

- This swarm of servers exchanging packets of data. Packets of data making millions of round-trips per second from server to server. Can you see them?
- No, I don't see them. Where are they?
- You have to look at the circles.
- What's in a circle?
- The aggregated global web traffic. 31 526 565 clicks per second. 81 153 817 page views per minute. A map of the world's online behavior at each instant.
- Is this a starting place?
- Yes, this could also be a place to start.
- Why start here?
- Because it's so difficult to comprehend.
- What do you mean?
- So many hits per second. So many packets. The buzzing of speeding electrons and flickering photons.

[The speaker remains silent for some time (10-15 seconds). The projection screen reads, in black letters on a white background: "Sequence 3."]

Sequence 3

- How do I start? Where do I start? What if I start here?
- Where?
- Here. Where we are now.
- And where are we now? Do you know where we are?
- I don't know where we are. But since we need a place to start, we could start here. Here. Near this swarm.
- What swarm?

[At this moment, the speaker projects a video produced by NATS (National Air Traffic Services) which visualizes all incoming and outgoing flights in the European air space during the day. The speaker remains silent for some time (10-15 seconds) after the video starts playing. The following speeches occur while the projection of the daily air traffic view is taking place.]

FIGURE 3 - Screenshot of an application for visualizing air traffic with departure and destination in Europe. This image was taken from a NATS (national air traffic services) video that records a day's air traffic visualization from actual data. Visualization published in 2014. [cf. <https://vimeo.com/88093956>]

- This swarm of planes. Flying people and commodities and weapons around. Thousands of planes. Millions of people and commodities and weapons moving from airport to airport. 90,000 flights a day. Can you imagine?
- It's difficult to imagine.
- Yes, it's difficult to imagine. We can see them and yet we can't imagine them.

- How can that be?
- Yes: how can that be? That's the question I keep asking myself.
- Is this why you want to start here?
- Yes, I want to start beyond imagination.
- What do you mean?
- So many flights. A dance of fireflies. A choreography of angels of aluminum alloys.

[The speaker remains silent for some time (10-15 seconds). The projection screen reads, in black letters on a white background: "Sequence 4."]

Sequence 4

- How do I start? Where do I start? What if I start here?
- Where?
- Here. Where we are now.
- And where are we now? Do you know where we are?
- I don't know where we are. But since we need a place to start, we could start here. Here. Near this swarm.
- What swarm?

[At this moment, the speaker launches an audio file with an excerpt from an interview with Edward Snowden broadcast by the German channel NDR on January 26, 2014. He simultaneously projects the transcript of the interview. The speaker remains silent for the duration of the audio recording.]

[...] Every time you pick up the phone, dial a number, write an email, make a purchase, travel on the bus carrying a cell phone, swipe a card somewhere, you leave a trace and the government has decided that it's a good idea to collect it all, everything, even if you've never been suspected of any crime. Traditionally the government would identify a suspect, they would go to a judge, they would say we suspect he's committed this crime, they would get a warrant and then they would be able to use the totality of their powers in pursuit of the investigation. Nowadays what we see is they want to apply the totality of their powers in advance – prior to an investigation.

You could read anyone's email in the world. Anybody you've got email address for, any website you can watch traffic to and from it, any computer that an individual sits at you can watch it, any laptop that you're tracking you can follow it as it moves from place to place throughout the world. It's a one stop shop for access to the NSA's information. And what's more you can tag individuals using "XKeyscore". Let's say I saw you once and I thought what you were doing was interesting or you just have access that's interesting to me, let's say you work at a major German corporation and I want access to that network, I can track your username on a website on a form somewhere, I can track your real name, I can track associations with your friends and I can build what's called a fingerprint which is network activity unique to you which means anywhere you go in the world anywhere you try to sort of hide your online presence hide your identity, the NSA can find you [...].

FIGURE 4 - Transcript of an excerpt from an interview with Edward Snowden made by Hubert Seipel, originally broadcast on the German channel NDR on January 26, 2014
[cf. video: https://www.liveleak.com/view?i=f1d_1390839693; cf. transcript: <http://www.ndr.de/nachrichten/netzwelt/Snowden-Interview-Transcript.snowden277.html>]

– This swarm of fingerprints. Tracking individuals through exabytes of data and metadata. Trillions of records in just one stream. They call it 'XKeyscore': a front end search engine that allows analysts to look through all of the records collected worldwide every day.

- It's difficult to conceive.
- Yes, it's unconceivable. We can read it, and yet we can't conceive it.
- How can that be?
- Yes: how can that be? That's the question I keep asking myself.
- Is this why you want to start here?
- Yes, I want to start with the unconceivable.
- What do you mean?
- So many online fingerprints. So many desires. So many thoughts.

[The speaker remains silent for some time (10-15 seconds). The projection screen reads, in black letters on a white background: "Sequence 5."]

Sequence 5

- How do I start? Where do I start? What if I start here?

- Where?
- Here. Where we are now.
- And where are we now? Do you know where we are?
- I don't know where we are. But since we need a place to start, we could start here. Here. Near this entanglement.
- What entanglement?

[At this moment, the speaker projects a website which visualizes relations of interdependence between managers and companies providing services and equipment to the US National Security Agency, on the one hand, and lobbying in Washington, on the other. The speaker remains silent for some time (10-15 seconds) after launching the program. He manipulates the visualization in order to focus on one node of the interdependence network. The following speeches occur while the visualization of the networks is taking place.]

FIGURE 5 - Map of relations between managers and subcontractors of companies hired by the NSA and lobbying in Washington. [cf. <http://news.muckety.com/2013/06/23/the-multi-million-dollar-national-security-lobby/43121>]

– This entanglement of interests. Hundreds of contractors and subcontractors, investors, directors, lobby firms. X works for, has worked for, was former CEO of, is chairman of, is senior adviser of, consultant, early investor, current investor.

- It's difficult to disentangle.
- Yes, it's impenetrable. We can visualize it, and yet we can't penetrate it.
- How can that be?
- Yes: how can that be? That's the question I keep asking myself.
- Is this why you want to start here?
- Yes, I want to start with the impenetrable.
- What do you mean?
- So many tangles. So many interests. So many profits.

[The speaker remains silent for some time (10-15 seconds). The projection screen reads, in black letters on a white background: "Sequence 6."]

Sequence 6

- Is this where we are?
- I don't know if this is where we are. I don't know, really. This is where we might see ourselves as being at now. This is now. This is us. This is where we might see ourselves as being at if we could see where we are.
- And how do you start? How do you start from those five ungraspable, incomprehensible, unimaginable, unconceivable, impenetrable nows?
- Now you begin to realize.
- What do I begin to realize?
- How impossible it is to start. How I cannot begin to see what I needed to see to be able to start.
- I don't know if I follow you.
- Let me read you what I wrote. This is the first sentence:

[At this moment, the speaker projects and reads the first sentence from his lecture abstract.]

"Technological and political surveillance has perfected its granularity and automatic impersonality by means of software programs that enable individual location tracking by GPS coordinates and massive data mining of communication networks."

FIGURE 6 - First sentence from the lecture abstract

– It seems to make sense. But why do you equate “technological and political surveillance”? Technological surveillance doesn’t have to be political. It is necessary simply for the communication systems to work. You have to monitor signals all the time.

– Yes, I guess you could argue that. That surveillance is embedded in the technology. The more complex it is, the more control it requires. And at a certain point the political becomes embedded in the technology. Perhaps that’s what I should have written.

– And what do you mean by “perfected its granularity and automatic impersonality”? This looks like just another lazy abstraction of yours.

– Not really. If you think of it, our numerical models for representing the world and ourselves are more and more detailed. Those models have become increasingly granular in mapping space and time, down to nanoseconds and nanometers. Many functions of production and communication have been programmed in the models. This means that they are carried out by automated systems often without any visible or clearly defined agency. Sensors detect different kinds of physical signals and turn them into data, and these in turn are processed by thousands and thousands of different algorithms in all sorts of human-computer interactions. Maybe if I read out my next sentence you will begin to see.

– See what?

– See what I am trying to articulate, but don’t know exactly how. Here is what I wrote next:

[At this moment, the speaker projects and reads the second sentence from his lecture abstract.]

“The XKeyscore application of the U.S. National Security Agency is but one example of the extent to which our rights to privacy can be and have been breached in the current media environment.”

FIGURE 7 - Second sentence from the lecture abstract

– So then you seem to put it all as just a question of rights to privacy.

– No. I think you misunderstand me. What is implied is that that breach of privacy is just a symptom of a much larger problem I was already hinting at in the opening sentence: we are becoming a surveillance society. It’s not just that our media

environment and our digital devices are tools for disciplining our minds and bodies. It's also the 24/24 tracking of what Snowden describes as our network fingerprints. That's something that is beyond even the wildest imaginations of our science fiction writers.

[The speaker remains silent for some time (10-15 seconds). The projection wall reads, in black letters on a white background: "Sequence 7."]

Sequence 7

– So you are able to imagine the network after all.

– Yes, but it is a defective imagination. My ears can listen to huge data centers processing voltage differentials, and humming their noisy songs day and night, in chilled data halls, but I cannot picture the actual mining of data and metadata. It is as if there was an incommensurable gap between listening to the machines crunching the data and our actual condition as flesh and blood human beings.

– What is that sound?

[At this moment, the speaker launches an audio file with the recorded sound of a data center. He simultaneously projects the image of one of those large data centers. The speaker remains silent for the duration of the recording (30 seconds).]

FIGURE 8 - A Google Data Center located in the State of Iowa, USA.
[cf. <https://mynoise.net/NoiseMachines/dataCenterNoiseGenerator.php>]

– I call it the sound of data. Can you listen?

[At this moment, the speaker launches the audio file with the recorded sound of a data center for a second time. The speaker remains silent for the duration of the recording (30 seconds).]

– Yes, I can listen. It's not difficult to describe. A fan-like metallic vibration combined with non-stop muffled blowing ringing in my ears.

– A never-ending dance of algorithms. The noisy sound of data.

– What do you see in the sound of data?

– I see the incommensurable gap that my imagination cannot comprehend. How have we moved from thoughts and desires to this technology? I feel overwhelmed by the deafening music of data and gigantic cooling systems which respond to the rise in temperature of electronic flows, whose heat must be constantly dissipated.

– What else have you written?

– Let me read you two more sentences. The third one:

[At this moment, the speaker projects and reads the third and fourth sentences from his lecture abstract.]

“An increasing number of our public and private daily actions leave traces in data systems, and those traces are used to monitor current behavior and condition future behavior, ensuring compliance with the digital administration of our existences, desires and imaginations.”

FIGURE 9 - Third sentence from the lecture abstract

Now the fourth one:

“Big data systems promise goodness and fairness in their massive collection of data, offering terms of service that place us in markedly asymmetric positions, constantly feeding them information that will be sold back to us, just moments later, in the form of products and services, as we incrementally teach the data system how to better program our profiles as consumer-citizens.”

FIGURE 10 – Fourth sentence from the lecture abstract

– Those are long inflated sentences! Now you are talking about the digital administration of society, and about buying and selling over the internet. Citizens must be accountable. Identities must be known. Transactions must be safe. How could it be otherwise?

– Why should our actions be turned into surveillance data? Why should our behaviors be modeled through algorithms? And why should we be monitored all the time? Let me show you Bumblehive, codename for the new NSA Utah Data Center, which houses the world's current largest supercomputer. It's a 1 million square meters facility, which cost 2 billion dollars, home to Titan, a supercomputer capable of trillions of calculations per second, 1 quadrillion gigabyte storage capacity, enough for creating a data file of all internet activity of every single US citizen.

FIGURE 11 - Utah Data Center of the National Security Agency, completed in August 2014. [cf. <https://nsa.gov1.info/utah-data-center/>]

– A megamachine of total information awareness. A totalitarian dream come true.

– I guess you could say that. It's beyond science fiction. Its unstated motto seems plagiarized from a draft rejected by Zamiatine or Huxley or Orwell or Dick or Gibson or Stephenson, as suggested by a photographic montage with a parody welcome plate at the entrance of the administrative building: "if you have nothing to hide you have nothing to fear".

FIGURE 12 - Parody welcome plate at the entrance to the administration building of the new Utah Data Center of the National Security Agency. Photomontage 2013.
[cf. <https://nsa.gov1.info/utah-data-center/>]

- It’s a frightening sentence.
- That’s what I thought when I first read this parodic message. Is this just another bureaucratic government mega-machine, completely incapable of irony, bent on submitting the world to its self-referential mission? Or is it something else? How have we arrived here?
- Where?
- Where we find ourselves now. Unable to imagine our own technologies. Unable to think through our existence as data files.
- This might be just a block of your own. You shouldn’t use the plural. Did you write anything else?
- I only have three more sentences. The first one goes like this:

[At this moment, the speaker projects and reads the fifth sentence from his lecture abstract.]

“Virtualization of both the economy and individual identity has given the electronic network the ability to reconstruct a large quantity of social interactions and situations as pure streams of data, digital correlatives of the abstraction of financial markets and the fiction of value.”

FIGURE 13 - Fifth sentence from the lecture abstract

- More lazy abstractions and prosopopoeias, I am sorry to say.
- I concede that my argument was faltering right at the very beginning. The next sentence isn't much better. I quote:

[At this moment, the speaker projects and reads the sixth sentence from his lecture abstract.]

“Software systems can be described as forms of discipline and control that transcode our social relations in terms of their data models and algorithms.”

FIGURE 14 - Sixth sentence from the lecture abstract

- This was a far-fetched jump indeed. How would you expect to show that our social relations are changed by software? And what do you mean by “social relations”? Your sentences have been focused on network technology and surveillance politics until now. Why this sudden leap? Probably no one would be following you anymore by then. You would have lost your audience in the very first paragraph. A feat that very few writers could have achieved.

- Let me just read my last sentence:

[At this moment, the speaker projects and reads the seventh sentence from his lecture abstract.]

“I will use a software studies perspective to draw attention to the role of global network systems in the reconfiguration of private voices and public spaces suggested by the conference theme.”

FIGURE 15 - Seventh sentence from the lecture abstract

- I have to say it was a wise decision.
- Which decision?
- Not to write your paper.
- That's what I realized. It's too difficult. I cannot say what I would like to say. I was unable to find words or thoughts to write about this world, this networked world of data and metadata.
- And is this how you stop?

– So I figured. Since I had not started, I could just stop anywhere. It didn't make any difference. I could just stop, and play a song.

[At this moment, the speaker projects a video with the song “Space Oddity,” recorded onboard the International Space Station by commander Chris Hadfield. After launching the video, the speaker leaves the proscenium and sits in the middle of the audience. The end of the lecture coincides with the end of the song, which lasts for 5:30 minutes.]

FIGURE 16 - Screenshot of the video filmed aboard the International Space Station by astronaut Chris Hadfield, later mixed with his recording of David Bowie's song “Space Oddity.” Video published on May 12, 2013
[cf. <https://www.youtube.com/watch?v=KaOC9danxNo>].

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* All hyperlinks last checked on September 30, 2017.