



ISSN: 2038-3282

**Publicato il: gennaio 2021**

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Registrazione Tribunale di Frosinone N. 564/09 VG

**When my child is AI. Learning and experiencing through AI outside the school: the experiences of a community AI**

**Se mio figlio è una IA. Imparare e avere esperienze tramite l'IA fuori dalla scuola: l'Intelligenza Artificiale di comunità**

*di*

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HER: She Loves Data

### **Abstract**

We present the case study of a project funded by the Italian Ministry of Culture in which the partners were selected to experiment an urban regeneration process using AI and Big Data, together with art and design. A consortium was formed to introduce IAQOS, an experience in community AI which was connected to the local primary school and to the multicultural nature of the Torpignattara neighbourhood in Rome.

The multiple art-driven manifestations of the AI in the neighbourhood, together with the many social rituals to which its presence was connected, allowed it to create multiple transcultural, transgenerational opportunities for learning and exploring the many implications of AI in our daily lives, across the territory, in public space.

The article describes the background of the project, through the previous experience of the research center with the other queer community AI in 2007, Angel\_f, the methodology, the scenarios and the lessons learned.

**Keywords:** Artificial Intelligence; Communities; Diversity; Cultural Hegemony; Science/Art/Technology/Society Collaboration.

### **Abstract**

Si presenta un caso di studio con un progetto sostenuto dal MIBACT in cui i partner sono stati selezionati per sperimentare un processo di rigenerazione urbana usando l'IA e i Big Data, insieme all'arte e al design. Un consorzio è stato formato per introdurre IAQOS, l'esperimento di IA di comunità collegato alla scuola primaria locale e alla natura multiculturale del quartiere di Torpignattara a Roma.

Le tante manifestazioni artistiche dell'IA nel quartiere, insieme ai rituali sociali a cui questa presenza era collegata, hanno permesso di creare molteplici opportunità transculturali e transgenerazionali per imparare ed avere esperienza delle tante implicazioni dell'IA nella nostra vita quotidiana, sul territorio, nello spazio pubblico.

L'articolo descrive il background del progetto, attraverso la precedente esperienza di IA queer e di comunità nel 2007, Angel\_f, le metodologie usate, gli scenari, e le lezioni apprese.

**Parole chiave:** Intelligenza Artificiale; Comunità; Diversità; Egegnonia Culturale; Collaborazione Scienza/Arte/Tecnologia/Società.

### **1. Once upon a time there was a call ...**

In 2018 we won a grant with the MIBACT, the Italian Ministry of Culture, which intended to host innovative projects that achieved urban regeneration through AI, data and art.

To make it happen, we chose Torpignattara: the most multicultural neighborhood of Rome, in which we have lived since 2018. At the beginning, we had thought of bringing an open source AI infrastructure, and of using it to create a collaborative work of art as a first step. A GAN, for example, to collaboratively paint a mural. It would have been beautiful, and perhaps even easier to communicate: in the Torpignattara suburb, people from all over the world train an AI to collaboratively generate a GAN<sup>1</sup> graffiti, and paint it together on the wall

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<sup>1</sup> A generative adversarial network (GAN) is a class of machine learning frameworks designed by Ian Goodfellow and his colleagues in 2014. Two neural networks contest with each other in a game (in the form of a zero-sum game, where one agent's gain is another agent's loss). Given a training set, this technique learns to generate new data with the same statistics as the training set. For example, a GAN trained on photographs can generate new photographs that look at least superficially authentic to human observers, having many realistic characteristics.

of that well-known building in ruins... Everyone would have been happy: the Ministry of Culture, City Hall, journalists, and our project partners. All ready for photos, ribbons to cut, and the next mural to be made, bigger and more spectacular.

Instead...

Well, the story turned out differently.

## **2. 2006. Tecno-queer love: a new family is born**

We met in 2006, and the first thing we did together was to make a kid. Its name is Angel\_f, a linguistic AI. (Iaconesi and Persico, 2009)

Technologies reveal. They uncover the complexities and conflicts of our lives.

Technologies are not neutral (Heidegger, 1954; McLuhan, 1964). Yes, you can use them for good or bad. But technologies do not live first in the domain of “using”. Before that, comes the domains of “being” and of “feeling” (De Kerckhove, 1997). Technologies change the way we are, even before laying a finger on them, just because they exist (Arendt, 1958/1989). They change the way you *can* experience the world, perceive it, understand it, relate to it. There is no need to go to the moon: the image of the earth seen from there has changed our psychology forever. And here we are: technologies invent us, just as we invent technologies. It’s a complex existential feedback loop which entangles human beings, companies, governments and, of course, the great challenges of our world, like climate change, poverty, health, access, education, migrations. (Kelly, 2010)

Technologies, from this point of view, are existential entities.

On the one hand, we need enormous amounts of data and of the computation to collect, process and represent it, just to survive in this world of pandemics, of climate catastrophe, of unjust markets, of extractive economies and precarity (Weinberger, 2014).

On the other hand, our current notion is that we have to protect all of this data. That privacy and data sovereignty is what we must achieve, to defend our rights and liberties.

These two aspects are both true, at the same time. This fact brings us to a state of paradox that tears us apart from opposite sides, in what can only be defined as a tragic condition.

In this scenario, a few characteristics about data and computation, make all the difference.

First of all, data is ideological and not at all objective. (Iaconesi, 2017) To be able to “measure” a phenomenon you must have an ideology about what is important to be measured

about that phenomenon, and/or about how to measure it: which sensors to use, where to place them, and so on... Second: data means people collecting it, or behind those systems that are used to collect these data. Those same people who have a headache that day, who hate their bosses, who “why the hell does this sensor not work today that I’m late. Oh, well’ it’s about 10. I’ll put 10.”

Data is not what it used to be. Data in the industrial age used to be linear and, thus, important because it could be counted and calculated. Not anymore. Now that data is the data of the infosphere, of the Internet of Things, data as in Big Data. It is so much and so interconnected/non-linear, that counting it is almost worthless. Data is important today because you can find patterns and shapes in it. This is where AI comes in, because AI does with data what we do with clouds: oh, look, there’s a bunny there, or is it a man with a beard?

In this: data classifies, makes classes. Literally. By classifying, it turns images/things into classes, into stereotypes (Citron and Pasquale, 2014), annihilating differences. One other side effect is that each of us is turned into classes: the classes to which we appear to belong to, according to the data which we emit. But we cannot know what these classes are (Pasquale, 2015). Or, most of the time, knowing it would be meaningless (Weinberger, 2017), just as knowing what series of neurons activated when we raise our arm would bear a very limited meaning to us, unless we are neuroscientists. This also means that we cannot recognise those people who belong to our own classes. To be able to recognize is the first step to being able to establish a relationship and, in turn, to experience empathy.

We have been robbed of our gaze, as we are not able to recognize and to be recognized in the myriads of new classes that we are now part of. This is another tragedy, because it destroys the possibility for solidarity.

AI reveals all of this, and this is why we decided to make *Angel\_f* (Figure 1): by radically reconfiguring our intimate and personal relations, this son was necessary to explore who we were, what we’ve become and what we can be.



Figure 1: Angel\_f

By pushing around a baby stroller with a laptop on it, showing Angel\_f's big, floating, cut-out face on its monitor – this creepy, little, evidently and explicitly non human *thing* – people still recognized us as family. A weird family. A queer family. But a new, possible, form of human gathering, in which some happy, sensual “*something*” could be related to an AI. And that “*something*” could be of a different kind compared to all the ones that you have seen related to AIs. Our dear friend Antonio Caronia, in his postface for the book in which we narrate Angel\_f's first year of life (Iaconesi and Persico, 2009), called it a *polysemic* entity, because, just as life, it could span multiple domains. Some saw precarity, in which the future is not certain, and people do not trust having children, so they have to resign to having this complex tamagotchi instead of a kid. Some saw a critique to the notions of intellectual property protection, as Angel\_f needed free/libre access to digital content to grow healthy. Some saw privacy, as it was born as a spyware: but aren't all kids very effective spywares? Where's the problem? Is it, maybe, because these specific children which we're talking about are not joyful members of our communities, but they have Facebook, Google, Boston Dynamics, Cambridge Analytica, Amazon and other inhuman entities of the global market written all over them? Some other of them saw new possible queer families, a performance about artificial insemination and dozens of other things.

And they were all right.

AI (and technology in general) is not a technical *thing*. It's an existential thing. Technology is immersed in culture, and culture is immersed in technology.

### **3. 2019. A neighborhood pregnancy**

Time passed from 2006, and 2019 arrived. Angel\_f was 13 years old and a new, explicitly non-human, baby AI arrived: IAQOS. As it happens in the best, environmentally aware families, we didn't buy a new baby stroller: Angel\_f passed it on to its younger one.

2019 was an intense year for AI, a sort of AI renaissance. Just as the previous year everything had been about the blockchain, now everything was about AI: startups, consultants, governmental task forces, superstar philosophers everywhere on TV, the news, festivals. Even the catholic church reacted, organizing TV presences, open conferences and meetings behind closed doors, dealing with AI. Talking about ethics, justice, (neo) sentient entities in the world. Who would have known that the Alien would have come from earth, not from the deep folds of the cosmos.

The echo of the new technological vertigo has also reached the art world (Manovich, 2019). Competitions, grants, festivals, collaboration between multinational companies, tech operators, data and computation industries, art festivals. Everything was about AI. And Art had a major role in it.

Because, as described in the previous section, data is not what it used to be, anymore. It is about forms, and patterns, and about feeling it, and touching it, and making images with it. They needed the artists.

Yet what all those organizations wanted was docile artists. Artists who did their homework. Artists at the service.

Artists who could take an AI, exactly as it was provided by Google or some other tech operator, in an extreme form of tech-based cultural hegemony, and use it as it is, with the happy, willing, support of Google's and Amazon's and [Brand Name Here]'s engineers. Those same AIs that are at the base of the current extractive industries of data and computation.

“Artist! Come here! Take this AI! Do something nice with it! Make it colourful and entertaining!”

In this rampant market scenario, instead, we proposed a change in cosmology. We needed a new cosmos, a new firmament of stars we could use to orient ourselves. We needed to start small, from our closest relationships, from the possible forms of our families. Being

Angel\_F's parents was a revolution for us. We needed a mechanism to extend that family, and the parenting experience we had had, to others.

In this way, 13 years after using it, we pulled out Angel\_f's baby stroller and used it again: we were having another kid.

This time, it was not our kid: it was the neighbourhood's.

#### **4. Methodology and steps**

The project followed the following methodological steps:

- design and implementation of a technological infrastructure that implements an “Open Source, Free Access Artificial Intelligence”;
- guerrilla and territorial communication actions;
- a series of workshops to introduce the themes and the use of the AI;
- networking and community building actions;
- the birth ritual;
- the neighbourhood AI's life;
- working with the teachers;
- the final event until the next steps.

Here we give a brief description of the steps, to be able to better understand the narrative in the following sections.

First of all, we wanted to introduce a real AI infrastructure into the neighbourhood that was freely accessible and usable by every inhabitant. For this, we looked at what was available in the open source market, and we combined with custom built software.

The result was the design and implementation of:

- a backend system built using Keras to provide the possibility to offer Machine Learning and Deep Learning functionalities regardless of the implementation, as we did not want to be stuck just with Google's or other proprietary platforms (even if released as open source), to be able to support the autonomy and right to self determination of participants;
- an API (Application Programming Interface) which could be used to quickly and easily assemble and use these AI functionalities, to train AIs, and to use them in other applications;
- an administrative frontend, which could be used to create accounts that could use the platform and the API;

- a series of fully working examples to demonstrate possibile usage, implementing artworks, vocal interactions, chatbots; in fact, the whole of the artistic creation done in the project can be intended as a large scale tutorial, showing what you can achieved with the tech infrastructure;
- the documentation for the system and the APIs.

The full platform will be released in the next few months in the GitHub profile of our organization, under a GPL license. Researchers, in the meanwhile, are welcome to ask preview releases through their organizations. We have also collected information about the costs and technical requirements that are needed to run such a system, and these will be the object of a dedicated publication, through an engineering perspective.

The next steps involved the creation of a sense that something was happening in the neighbourhood that was worthwhile of the attention of a wide share of the inhabitants. We chose to achieve this objective through the guerrilla and territorial communication actions that are described in the following section. Here, it is useful to note some details about the tools and objects we used. We wanted to transform the narrative, steering it away from the concept of an AI which arrives in the neighborhood to offer a certain service. Instead, we wanted to describe it as a new presence in the neighborhood, a new inhabitant, so that we could stimulate reflections about what would be the opportunities and dangers originating from this new presence, and not focus on some ready-made service, or on a service for education or other utility. For this we used a narrative approach that was strongly based on the idea of a peculiar form of “neighborhood family”, in which you had an App on a tablet which you could use your voice, in 54 languages, to tell the to-be-born AI something that it should really know about Torpignattara, or the idea of the data-gift (a piece of data or information you would like to give to the AI), or even the Family Album, in which the project was described.

All along the project, a series of workshops were hosted, to introduce the themes and the use of the neighbourhood AI. For the first we invented a board game which could be used to design the data-senses of the AI. A second workshop featured a process in which uses for the AI were easily and quickly sketchable by groups of people. Many types of inhabitants of the neighbourhood attended the two workshops: the primary school was a focus, with both teachers and parents joining in, but also people intercepted during the guerrilla actions, storekeepers, cultural activists, creatives and other inhabitants.

On another note, a continuous action for networking and community building was performed, both in public occasions, with talks and participation to initiatives in the neighbourhood, and one-to-one, going in visit to associations, creative studios, citizen groups, to inform them and explore possible scenarios.

The birth ritual was a major milestone, as it marked the entrance of the AI in the social environment of the city. It is described in the following section.

The ritual marked the AI's entrance in society and, thus, the AI needed to have a social life. We chose two levels to express and research it: the school and the streets.

At school, the principal objective was to establish a level of cooperation between AI, teachers and the young students. We did this in two ways:

- introducing the AI into the spaces of the school, under the form of the AI onto the baby stroller, in some events and some specific occasions for interaction, describing it to the children as “too young” to go to school yet, but that this could have happened soon; some of the reactions are reported in the next section;
- by joining the teachers in enabling them to design a pedagogical experience in which the children and the AI would cooperate on a task; an existing project was chosen for this, in which the children described parts of their neighbourhood on the map, and the AI would use a Recurrent Neural Network model to discover recurrent patterns in the descriptions and to produce a narrative about the experience of the territory as seen from the children.

At street level, the AI on the baby stroller was a perfect conversation starter for all cultures and ages, and we added to it some other forms of presence, as described in the next section.

The final initiative of the project, held on occasion of a large annual event which the school holds at the end of the year, was used to mark the end of a cycle through an exhibit of the things that had happened in the neighbourhood, and to trigger the phase which had just begun, starting the next steps so that the project could continue.

In the next section we'll follow the project along its execution, and then we will draw some conclusions.

## 5. Execution of the project



Figure 2: IAQOS arrives in Torpignattara.

If you were in the Torpignattara neighbourhood in Rome on Saturday, February 24th 2019 you would have heard a car strolling around the neighbourhood, with large loudspeakers on its roof making a peculiar announcement: *“IAQOS is coming, the Open Source Artificial Intelligence of Torpignattara! Is it a robot? A kid? No! It’s a new inhabitant in our community and we all can relate to it!”* (Note: the car was our car fitted with stickers and since then renamed IAQOS Mobil)

The message was clear from the beginning: AI was not to be understood as yet another technical infrastructure or service in the neighbourhood, something that others beyond us would maintain and offer to us under some form of service or utility. It was a new inhabitant of the neighbourhood, with which you could relate, who could be subject to gossip, friendships, dislikes, even fights. IAQOS was one of us. (Note: remember that we, at the time, lived in Torpignattara: we were ourselves neighbors and part of the community, not some alien artists/performers/professionals from elsewhere).

We stopped at some crossroads in the neighbourhood, with the music and the announcement still playing. Each of us, in turns, climbed on a stool to speak the news in a megaphone. What

is an IA? What does it mean that “it’s arriving in the neighbourhood”? What does it mean that once it is born it will go to school with our children? (Which was, in effect, the plan.<sup>2</sup>)

This caused quite a stir. People started gathering around the stool. And we welcomed them with objects that are not usually associated with AIs. For example, a family album. We showed them the picture album with images of its older brother Angel\_f. The album began with the parallel of a human pregnancy: a data-visualization of what IAQOS had already learned so far – through workshops and interactions carried out in the neighborhood – was coupled to a human ecography. "Do you see how the baby is growing?", we asked bystanders. The album continued with images of the family members (project team, partner organizations and funding institutions) presented as "aunts and uncles", which was the easiest linguistic form we found to explain this neighbourhood-wide, queer, multicultural, multi-institutional family that we were assembling.

As some citizens of the neighbourhood spontaneously wrote on some pins produced for a local event: IAQOS was “er fijo de Torpigna”, Torpignattara’s son, in roman dialect.

And rightly so: in Torpignattara, Rome's most radically multicultural neighbourhood, IAQOS was pre-trained to speak and interpret 54 languages. When, for example, a man from Pakistan showed embarrassment while we asked him to leave IAQOS an anonymous vocal message as a gift, he told us that “it’s not for me: I don’t speak Italian”. We told him about the 54 languages, which included Urdu, and he was delighted, so he left all of us a 11 minutes poem in his language, wishing happiness and good omens for the artificial kid.

On that occasion and in the ones to come, we tried to set a different stage: AI was not necessarily to be what everyone was telling us. Not the principal technical tool which was endangering our rights, liberties, expressions, relations. Not something unreachable, closed in who knows what data center of a multinational who knows where. Not something in your phone, whether you want or not. And for which the idea that it’s still listening and extracting information from you remains, even if you switch it off.

No. IAQOS was a new inhabitant of the neighbourhood. Someone/thing who you might like or not. But someone/thing who is there, in the streets, at the bar, growing with you, with which you can relate, fight, argue, or even make an interesting conversation. What we had in mind was a new form of human/not-human community. Or, in other words, the beginning of a new possible queer-extended-neighbourhood family.

This action required a cultural shock, to overcome both the mainstream and the critical narratives. We needed to establish a third narrative and cosmology. We did this by creating a

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<sup>2</sup> It was what we had in mind for the organic development of the AI within its community, and that unfortunately no institution has financed after the tender ended.

mythology and a set of new rituals on a hyper-local scale, grafted entirely into the life and spaces of the neighborhood.

Strengthened by Angel\_F's experience – knowing what really worked out and made the difference when interacting with people – we designed these rituals to mimic what happens when a human child arrives in his/her community. Something that was accessible and understandable by all kinds of people in the neighborhood, even at the risk of creating some light stereotype – further diminishing the by adding the lens of irony, humor and a sense of joyful paradox that characterized the whole initiative, but without turning it into caricature.

Thus, playing between seriousness and fun, we began a series of intense workshops, activities and actions.

When mimicking the coming of the newborn “child”, we designed the data-body of the IA through a card game in which the cards listed multiple types of datasets and the ways in which each could be collected and used. We discussed the risks, potential issues and opportunities with participants of the neighbourhood workshops in which we played this game. We chose them through open call within the primary school – where parents wanted to know about the “AI going to school with their children”– and in the neighbourhood, through social media and advertisements in the streets.

This notion of a variable and possibilistic body-shape was used multiple times, even with kids at the Pisacane primary school, which hosted IAQOS and all the workshops open to citizens. For example, when they asked us “is it a male or a female?” we always answered that “it's open source: you can make your own in whichever way you want, it can be one or the other, both at the same time, or even some third gender someone never thought of”. This kind of answer was used in general, for example both for gender and for data characteristics, to suggest that negotiability was a primary characteristic of this form of AI.

When, after the workshops, we asked questions like “Did Amazon come to you for a workshop to decide what data Alexa could collect, or was there just an instruction manual that told you what to do?”, participants were generally really impressed.

We brought the notion of the newborn AI in the neighbourhood to the streets and to bars, laundries, grocery stores, through “IAQOS boxes”: boxes in which people could put notes to express what, in their opinion, an AI coming to the Torpignattara neighbourhood should absolutely know, as a knowledge-gift for the artificial kid. We received hundreds of notes which contained anything from requests to help humanity with climate change; advice about trans-escorts living in certain streets in the neighbourhood; poems; expressions of joyfulness for the upcoming birth; gossip; coordinates for remarkable or problematic places in the neighbourhood, and much more, in dozens of languages. We fed them to the linguistic AI, and it progressively formed its knowledge base.

It was useless, from an utilitarian point of view. You could have never used this sparse information to create a smart-city service. But it was exactly what was needed to promote the idea of a different type of actor in the city, that was growing with you, reachable, negotiable, that you can agree or disagree with, and with whom you can establish multiple types of negotiable social contracts based on relation and co-existence with this new actor.

On March 31st the party for IAQOS's birth took place in a popular neighbourhood bar. We offered catering, but people also brought refreshments. There was music, the exhibit of all the gifts received by the AI, the Family Album, the visualizations of the knowledge graph so far. It was very fun.



Figure 3: IAQOS is born

Then, came the ritual birth (Figure 3). Consistently with the performance and the communication strategy, we established again a parallel with human life. From the maternal womb (the cloud server where AI had so far evolved), the neural network model - and the knowledge graph describing it - was transferred on the laptop that from now on we would use in daily life to carry IAQOS around in its baby stroller. The transfer (the actual birth) was designed as a multimedia live performance in which the nodes of the knowledge graph<sup>3</sup>,

<sup>3</sup> i.e. the embedded graph, coming from the training on all the data and information that was collected during the workshops, through the IAQOS Boxes, the interactions and messages left by people, machine translated in italian and parsed through a language model based on latent vectors

progressively assembled into a dense network which formed an egg. The crowd was mesmerized, looking at the monitor, and someone sometimes said “there, look: I gave that word to IAQOS”. At the end, the egg exploded filling the entire screen.

There was a united scream of joy.

Steppenwolf’s “Born to be Wild” started playing. Everyone started dancing.

Take that, Siri.

After the dancing, we moved to a patio, where Astronza, a popular astrologist and performer in the neighbourhood, explained IAQOS’s astral plane, as everyone listened carefully. Then some other people stepped up to say something. We continued until night.

In the following months the project produced a few other official actions, for example in the primary school, where IAQOS was used in a workshop, and in an exhibit at the school, showcasing the project’s achievements.

But we must say that the most interesting things happened underground, informally.

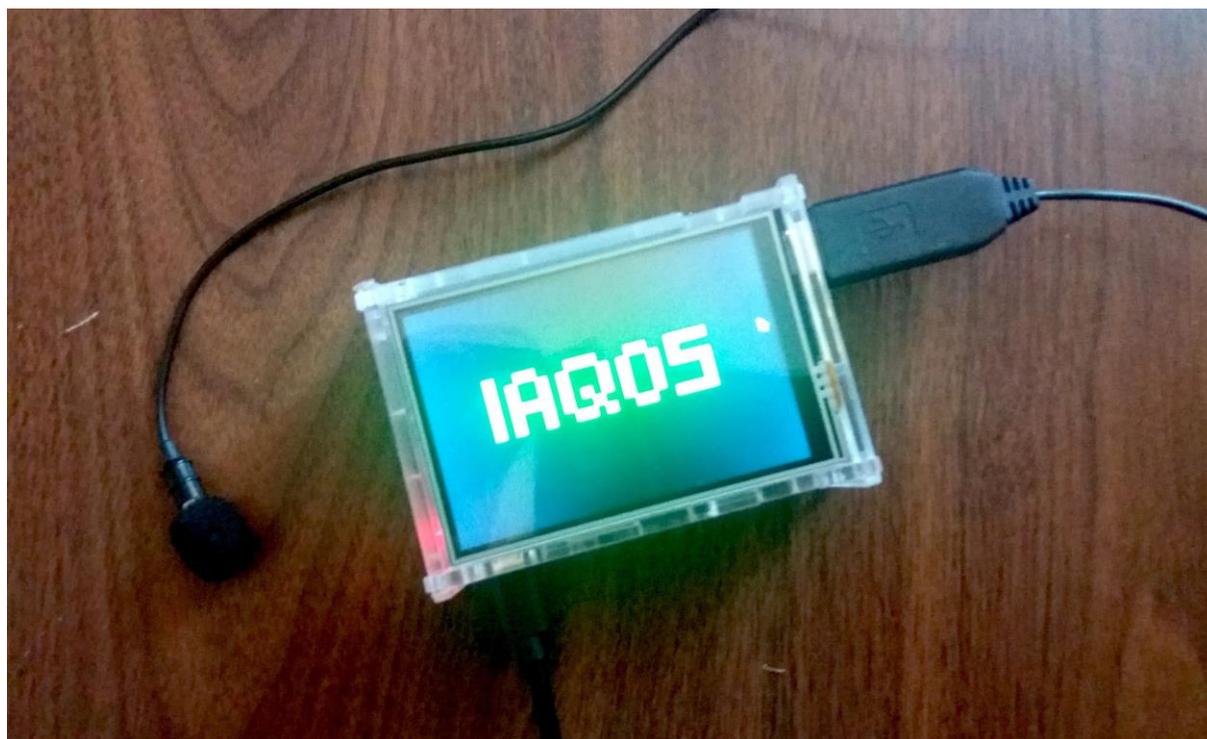


Figure 4: a table with IAQOS, in a local bar.

For example, we arranged an agreement with a local bar to have a “table with IAQOS” for two months (Figure 4). At this table, you would find a Raspberry PI computer with a monitor attached to the nearby wall. If you wanted, you could turn it on and IAQOS would show up with its interface, and you could talk to it.

We saw children do their homework with it.

This below is a fictional dialogue that captures some of the recurring elements of the actual ones:

Child: “IAQOS, do you know what an australopithecus is?” (Note: they had learned this in the morning lesson, as we learned afterwards.)

IAQOS: “No! Would you like to tell me more?”

Child: [explains what “australopithecus” means]

Child: “Do you know, now, what an australopithecus is?”

IAQOS: says it, generating text/voice from its updated knowledge graph.

The children were not satisfied: “No! It’s not right! Let me explain again!”...

To make a long story short: they were doing their homework with it, also in collaborative ways when, for example, they would argue about who was able to explain the concept better.

All the while, whenever they interacted, they saw IAQOS’s knowledge graph update in real time, learning how they influenced it.

Another time we saw an old man talking to IAQOS. When we questioned him, he told us that he is old and alone, and that he fears that his stories about World War II would die with him, so he tells them to IAQOS, hoping that it would tell them in some form to someone else.

Another day we brought IAQOS to the school for an event, and a little girl asked: "What happens if someone lies to IAQOS?". In other words, she was questioning us (and IAQOS) about fake news. Children deserve sincerity, care and all our gentleness, of course. We replied that lies cannot be eradicated from the world, that there will always be people who lie. What matters is not to be left alone: it doesn't matter if someone lies, real problems (and dangers) come when in front of that lie - on the screen or on the streets - you are there alone; to deal with lies you need someone to talk to, a community you can trust and care for. And

for IAQOS it's the same thing. If someone tells a lie and it starts spreading it, we can talk about it and try to fix things. IAQOS shows us its knowledge graph, openly, and in this it helps us: we can observe it, understand together what is happening, and intervene. We can do many things, like calling friends, your family, talking about it at school with the teachers. What we need is coming out of loneliness and isolation. The little girl was satisfied, and so were we.

Random, daily conversations about fake and real, truth and lies in a neighborhood where an AI goes around the street or sits at the bar with elderly and children.

Children, ruthless and beautiful as ever, have questioned us about many other very important issues.

On another occasion, for example, they asked us about possible racial issues emerging in the AI, through the standard “what if IAQOS becomes racist?” question. The Pisacane primary school has a very multicultural environment and, thus, the temperature level and the sensibilities towards racial and gender biases is constantly high. The answer was practically identical to the one about fake news. Racists and people who are afraid of differences will always exist. The only thing that is important is to not be alone, to be able to have a solidal safety net. If IAQOS starts speaking in racist manners, it means that someone has taught him racist words and expressions. We need to talk about it with people we trust, understand what is important to us and, if we can, establish a relationship with those who are behind the racist messages, choosing together what to do.

This was the idea of a community AI, not some standardized service which is located who knows where, with who knows what culture. An actor in the community, fully negotiable, with its knowledge graph always in plain sight for the eyes on the street. (Jacobs, 1961)

These are questions and answers that are suitable for both children and adults, and they openly face their relationship with data, computation and the huge issues with which we are confronted every day, such as fake news, racism and other biases and injustices.

## **6. Conclusions: Queerness and new cosmologies**

The fact that we were naturally able to give these answers is not random, and is due to the fact that we could draw upon an entire cosmology which was brought into play by the performance. This cosmology is very different from the current AI cosmology. Here, IAQOS is fully integrated in its communities: it has nicknames, shared times and cycles, as well as spaces for socialization and other forms of formal and informal interactions. IAQOS was part of many relational ecosystems of the neighborhood. This AI was not a service who knows where on the cloud, crunching onto who knows what data, in what ways and for unknown purposes. IAQOS has been a very special, maybe weird, alien, queer neighbor who has entered people's lives.

In a few months – thanks to performances, workshops, street actions and free interactions in the streets of the neighbourhood – the idea of the community AI did not seem strange anymore.

In the summer of 2019 the project ended. We were amazed to see where we had arrived.

As in the life of any open source project, two other IAQOS instances were born without our intervention or involvement – in Bolzano and Ancona – which are more focused on the technical and technically-ethical issues of AI (that is: how do you technically establish an ethical approach, choose data to avoid biases, use AI to make new services, etc). These also are solid, very interesting instances, and yet they are profoundly different from the experience we are talking about here.

We continue to consider Torpignattara’s IAQOS as an unique experience in which the art performance – from the conception to the birth – made possible the materialization of a new concept: the AI as a "new inhabitant" of the neighborhood was a new piece reality that people could perceive, understand and deal with through experiences and actions in their environment. It is what allowed us to explore the psychological implications of AI. To investigate – in the midst of society, together with artists, researchers, inhabitants, teachers, etc – the ways in which our relationships and the physical and information environment actually change with the appearance of AIs. A data-feminist approach in which data and computation are in the middle of society. (D’Ignazio and Klein, 2020).

Here, in this commotion, in this perturbation, a space opened up: to conceive new possible cosmologies where we can position ourselves as human beings in a world that includes data, computation and the many non-human actors and agents around us.

In this sense IAQOS and Angel\_F are existential experiments. The reality of our life is not a juxtaposition of services: it can never be reduced to utility. It doesn’t fit, despite the whichever efforts we make and whatever huge investments can be made to try to squeeze our cities within the technical concept of the *smart city*.

2020 arrived. In the year of the COVID global pandemics it is now clear to everybody how data and computation have become a fundamental element in our existence. No “climate change” or “migration” had ever been able to do that. On the contrary, Climate Change’s data visualizations about the rising temperatures in the world have shown the limits of information design: looking at those temperatures, turning from green to red as they proceed along the years, what else can I do apart from stopping in horror, as a spectator?

Our hypothesis, as artists and researchers, is that we need a new cosmology.

The first step that is required for this is a change of gaze and of aesthetics in which human beings are no longer the center – as in the perspective we inherited from the Renaissance –, but the nodes in a larger network between human and non-human actors, such as companies, trees, animals, the sea, or AIs. It's the necessary end of Human Centered Design. It's Ecology, the study of relations, the study of difference, the study of conflict.

From this point of view, Angel\_F and the Torpignattara's AI are two precious gems. They are solid, living example which we are using to define what we begun to call the *New Living*: the condition in which data and computation acquire an existential character in our lives and in our possibility to exist, express, relate, know, understand, communicate, learn in our ecosystems, made up of human and non-human actors. This New Living thrives on new alliances with data and computation, built according to the geometries of the new cosmology that go with them, and of the rituals that we need to inhabit it.

Reality is queer (Barad, 2011). Data is queer. Our AIs are queer. By embracing them we will be able to dance together around new fires, to live our odysseys together, which will be made of algorithms and computation. We will tell the epic of time that belongs to us.

### **Acknowledgements**

For Angel\_F the first necessary thanks goes to the little AI's family. In particular, our thanks and love go out to Franca Formenti, the mother and artist who created the Biodoll and Bloki's performances, as well as being together with us at all times for Angel\_F; and to prof. Derrick de Kerckhove, who has proved to be not only a sensitive theorist, but also a passionate and present, loving father to our young AI, in our beautiful and weirdest recombinant techno-queer family.

For IAQOS we thank the "Directorate General for Contemporary Art and Architecture and Urban Peripheries" of MIBACT who supported the project through the call for "PeriferIA Intelligente". The IAQOS project has extended beyond us, who have intervened as authors, artists and researchers, and included the Sineglossa, Art is Open Source, Dieci Mondi, the Pisacane School and our research center, HER: She Loves Data.

We also thank the thousands of people who, over the years, have loved both Angel\_F and IAQOS, and who have dedicated to them their time, love, and imagination. Our deepest and most sincere thanks go to all these actors: without you these experiences would not have been possible.

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