

## **Artistic responses to sentiment analysis: the ConnectiCity project.**

The radical changes in the urban environment of many cities in the world where traditional architectural infrastructure is being integrated and clashed with the new digital architecture leaves room for imagination and creation of new behaviours.

I want to concentrate on the artistic practice of an artist duo which confronts critically the dynamics that are created by the interconnection of social practices, local architecture and open and secure technologies.

Artisopensource, made of Salvatore Iaconesi and Oriana Persico works on the dialectic between opening and closing, between intellectual property and sharing, including expanded participation and dominance, with a plan to show how the growing importance of information technology located into the city should be focused on an enhancement not only of productive capital but also social and environmental.

To realize this objective Artisopensource has developed a digital way to the squatting tactic:, as they say: "technologies offer powerful tools for this kind of practice, that is similar, in more than one way, to what is called squatting: reclaiming spaces starting from the ones that have been forgot, excluded, left unformalized." Open data is their west.

In their artistic practice they try to create new spaces of interaction inside the interstices left inside the connection of material and immaterial spaces. Creating autonomous communication, information, relation and education spaces, hybrid economies that are sustainable and accessible, promote and sustain cultural development into the most common social network's platforms.

As, inside this social network our time and attention are becoming commodities that are the object of economic exchange, Artisopensource tries to see new meaningful data inside the emotional exchange constantly happening in our mediated cities.

*ConnectiCity* is a research project started in 2008 by ArtIsOpenSource, that through different steps show a series of incredibly rich insights on the ways people live in their cities.

It all started with VerSus Project, which was realized in two episodes. *VerSus - Rome, October 15th* is a video that displays the activity on social networks (Twitter, Facebook, Foursquare) during the riots of October 15th which took place in Rome during the local instance of the 15th October initiative created in the planetary process started by the Occupy Wall Street movement. The peaks and contours of the video represents the intensity of the communication and conversations that was taking place from the start of the protest (at 3pm local time) up until its approximate end (at 8pm local time). Messages have been captured using the publicly available APIs made available by the operators of these social networks.

A week later used the same technic applied to another contest and another city, the project was called *VerSus: Love vs Turin*. The artists showed the city of Turin as expressed through social media by people speaking different languages: patterns emerged where a zone of the city shows in the visualization of the different meaning it has for different cultures.

Both this two visualizations has been crystallized in a generative infosculpture in which the threads and emotional states expressed on social networks are crystallized into geo-referenced, three-dimensional solids (generative design). Thanks to location-based technologies, natural language analysis and 3D printing (or fabbing), the intensity, density and diffusion of emotions are transformed into the mountains, valleys and plains of a hybrid, neo-real landscape.

In *riot VS Rome*, the printed sculpture represents the means for reinventing life in the city and the way people express their dissent.

In *love VS Turin*, an emotional map is created from expressions of love, captured on Twitter in all their intensity. Love in Turin, as conveyed by its digital citizens.

Conceived by Fake Press Publishing, the publishing arm of Artisopensource, this sculptures were produced by Piemonte Share Festival in partnership with Fab Lab Italia (Stazione Futuro, Italia 150).

Following this path the artists realized *Maps of Babel*, a project that tries to understand and describe/visualize the mental models through which citizens of different cultures perceive and live their cities, harvesting their expressions on social networks to infer emotions, approaches, desires and visions.

As the artists ask themselves: "*can geo-referenced User Generated Content (UGC) shared over social online platforms be useful for the creation of meaningful, real time indicators of urban quality, as it is perceived and communicated by the citizens? Is it possible to use real-time text mining and conversational analysis methods on UGC in order to draw a series of maps depicting the very many and co-existing mental images of a city? How does an urban semantic layer – the meanings we attach to places – look like? How are well-being and happiness linked to places and how can we map them in real-time?*"

These project promote a vision by which citizens become an active inhabitant the city, where their production of information is critical to gain understanding and insights about the environments the live in, the societies and communities which they're part of.

*Enlarge Your Consciousness in 4 Days 4 Free* grabs emotions in real-time from social networks and uses them to gain better understanding of the way human beings have transformed by using digital technologies and networks. Expanding the spaces of the previous projects the artists extract real-time public information from multiple social networks, specifically Twitter, Facebook, Flickr and FourSquare . Artisopensource realized this project in collaboration with Mezzapelle-Deriu.

Each social network requires specific modalities to be able to read information from it, but they are all open. The texts, comments, tips, image/video captions published by online users were *anonymized* and processed using Natural Language Analysis, by applying techniques which have been inferred by existing highly effective techniques, such as the ones described in the researches of Gentile/Lanfranchi/others, Leidner/Lieberman, Quin/Xiao/others, Shi/Baker mentioned in the references at the bottom of this article.

The processing techniques were prepared using a set of linguistic templates (similar to regular expressions) created in 29 languages to identify syntactical/structural text patterns which would highlight the user expressing an emotional condition.

Using this vocabulary, made of around 25000 elements of words related to specific emotions, the artist has been in this way been able to classify 16 base emotions according to Robert Plutchik's classification. Each message could be associated to more than one emotion, depending on the context of expression.

Going beyond the simple visualization of the datas the artists realized an installation were 16 jellies were associated to two intensity levels of the 8 base emotions in Plutchik's classification.

As artists, Salvatore Iaconesi and Oriana Persico, shows the pleasure of this act of listening to planetary communities through social network information harvesting. They are not the only one, so a fundamental part of the project was to expose the techniques and the results of these processes from a rich variety of points of view.

Just to think also to a dystopian plan in an exhibit they did at BTF Art Gallery in Bologna, they let the people could purchase internet users for 9.99 euros. Inside a box each purchase can see the most recent emotions expressed by their “purchased” user on social networks. Anyone can become your personal emotional tamagotchi.

Reference

<http://www.artisopensource.net/2011/10/23/versus-love-vs-turin-visualizing-the-realtime-lives-of-cities/>

<http://www.artisopensource.net/2012/03/20/maps-of-babel-at-human-cities-symposium/>

<http://www.artisopensource.net/category/projects/enlarge-your-consciousness/>

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