Zaytoun, Visualising Human made Disaster through Interactive Illustration

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1. INTRODUCTION

Networked journalism, a recent trend through the development of Web 2.0 and 3.0 technologies such as micro-blogging and social media gave birth to a new form of interaction between the traditional notion of journalism and the public (Beckett 2010). The spread of smartphones and Internet to all corners of the world has given individuals a global voice for what they see, hear and observe.

Bradshaw (2012) discusses some of the hidden practices within Data Journalism such as methods that journalists use to filter the data, vast data collection techniques and data mining methods to generate new forms of information from digitised data. The complexity of the practice and issues with data overload in the modern age also brings in concerns about data privileges. For instance, how various kinds of information such as wars, diseases and corruption compete with one another.

The piece 'Zaytoun', was created in response to the 50 days war in the Gaza Strip of Occupied Palestine during the summer of 2014. Graphite-based conductive ink on top of an emotive illustration by artist Mina Braun affords the opportunity for direct interaction with the drawing. Touches across the textured surface trigger a change in the capacitance of the circuit, which is detected by the various analogue pins of an Arduino Mega micro controller. When a threshold of electrical current is broken, the program sends text to a pair of thermal receipt printers.

One of the thermal printers prints names of individuals who died during this war and the other prints collected local stories from Twitter. The stories included within this work are collected from individuals living inside Gaza strip, Jerusalem and the West Bank, reporting the current crisis. Names of people who lost their lives, during and since the invasion are downloaded periodically from Al-Khabar (Al-Khabar 2014) website which gets the list from Gaza Ministry of Health. In order to capture this data we developed a PHP program that converted and stored it using JSON standard for use within the visualisation.

The illustration consists of families and an olive tree (see: Mehrpouya 2014). Olive trees are internationally recognised as a symbol of peace. In Palestine they are also a symbol of unity and the relationship that people have with their lands. Not only have the Palestinians been oppressed and forced to give up their lands but also vast numbers of these trees have been bulldozed or moved to occupied lands and inside Israel (see: Khoury 2013, Booth 2014).

The invasion and bombardment of Gaza coincided with the run up to a symposium on the production of data, organised by the research centre for Design Informatics at the University of Edinburgh. Submission of the drawing was not only an opportunity to bring human suffering to the fore in an academic community which can, on occasion, be isolated from the 'real world'. There was also a desire to preserve the personal nature of the data that major events inevitably generate now.

2 DATA, WHY TWITTER?

Every day, over 95 million messages are shared between users and Twitter as a mediator of a real-time information network among all of its users (Huberman et al. 2008). This creates a contested space, with various biases and concerns: for instance institutions that are more code-savvy and have an ability to automate and mass produce tweets, as well as individuals with specific political agendas who can create various trends and biased information. The Twitter system itself also tends to filter the daily 95 million tweets and tailor them to the interests of the user or perhaps the interests of Twitter advertisers. This complexity, while providing an area of uncertainty and a blurred reliability (See:

Stephanie 2009, Acar & Muraki 2011), in disastrous situations also allows people to communicate in a more meaningful way with the people from outside and inside their countries (for examples see: Acar & Muraki 2011, Heverin & Zach 2010, Vieweg et al. 2010).

In this piece we needed to collect information about local stories reported by people directly involved in the disaster and solid numbers and figures which turned out to be a very challenging aspect of this work. For example, the #gazaunderattack hashtag over the course of recent Israel election in the past week on average had about 6 thousand tweets per day (Topsy 2015). As has been the case in the past with 24-hour rolling news, the actual persistence of this public content has been relatively flimsy. Stories and photos, unless recirculated in the 'traditional media' or archived by individuals, are difficult to track down after the event. One example is the above hashtag. Researchers were able to periodically scrape tweets from the API and saved over 267,000. However, on a recent search there were only some few hundred reported.

3. REFLECTION AND DISCUSSION:

Following our installation at the University of Edinburgh *Producing Data Conference*, we made some changes to the collected stories of this piece and also some improvements at interaction level.

We did not collect any qualitative or quantitative data about this piece during its installation at the conference nor its installation at the Edinburgh College of Art except for the thread of printed paper itself that represents the number of times the drawing has been touched.

Over the course of the two installations we found that use of illustration and art as a way to communicate with digital data and numbers will create a very personal and strong link with the observers. We informally interviewed some of the participants at the Producing Data conference and one individual stated that he "never realised the war was still going on" and the majority of observers found the lengthy prints on receipt paper and personal stories very strong and communicative.

We also found that the majority of people who looked at piece did not touch the illustration for reasons such as being scared of damaging the art work or not understanding the dynamics of the interaction. Over the course of two weeks only 65 individuals touched the illustration. The less formal location for display in the Evolution House building may also have contributed to this somewhat. The only direct feedback in the user experience is the sound of the printers triggering. If this is inaudible it is unclear that a touch was successful. For our exhibition in the V&A *Digital Futures* event as part of the pre EVA-London conference activities, we are planning to make the interaction part clearer and collect more qualitative feedback.

4. REFERENCES

Acar, A. & Muraki, Y. (2011) Twitter for crisis communication: lessons learned from Japan's tsunami disaster. *International Journal of Web Based Communities*, 7(3):392–402.

Al-khabar (2014) The victims of Gaza: A list of Palestinians killed in Israel's ongoing assault. http://english.al-akhbar.com/node/20528 (retrieved 6 June 2015).

Arendt, H. (1959) *The human condition:[a study of the central dilemmas facing modern man]*. Doubleday.

Beckett, C. (2010) The value of networked journalism. London School of Economics, UK. http://www.lse.ac.uk/media@lse/POLIS/documents/Polis%20papers/ValueofnetworkedJournalism.pdf (retrieved 6 June 2015).

Booth, W. (2014) In West Bank, Palestinians gird for settler attacks on olive trees. *The Washington Post*, 21 October. http://www.washingtonpost.com/world/middle_east/in-west-bank-palestinians-gird-for-settler-attacks-on-olive-trees/2014/10/21/eb4f5096-54a8-11e4-892e-602188e70e9c_story.html (retrieved 20 March 2015).

Heverin, T. & Zach, L. (2010) *Microblogging for Crisis Communication: Examination of Twitter Use in Response to a 2009 Violent Crisis in the Seattle-Tacoma, Washington, Area*. ISCRAM.

Huberman, B. A., Romero, D. M. & Wu, F. (2008) Social networks that matter: Twitter under the microscope. *Available at SSRN 1313405*.

Khoury, J. (2013) More than 100 olive trees uprooted in West Bank, Palestinians report – Middle East. http://www.haaretz.com/news/middle-east/.premium-1.553291 (retrieved 20 March 2015].

Mehrpouya, H. (2014) Zaytoun. Vimeo. https://vimeo.com/105133652 (retrieved 6 June 2015).

Stephanie, B. (2009). Tweeting the Terror: How Social Media Reacted to Mumbai. http://www.cnn.com/2008/WORLD/asiapcf/11/27/mumbai.Twitter/index.html?iref=newsearch (retrieved 20 March 2015)

Topsy. (2015) Tweets per day: #IsraelUnderFire and #gazaunderattack. http://topsy.com/analytics?q1=%23IsraelUnderFire&q2=%23gazaunderattack&via=Topsy (retrieved 6 June 2015).