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Greer Mitchell

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1. Abstract

This thesis explores the intersections of ubiquitous technologies, embedded democracies, and bright green futures and how that is resolved in a user interface design for a citizen centric mobile phone application.

My main question of enquiry is: How can I connect citizens to their local environment through human interface design on a mobile platform? *The Politics of Nature* by Bruno Latour proposes;

> *'An end to the old dichotomy between nature and society... of a collective, a community incorporating humans and non humans and building on the experiences of the sciences as they are actually practiced.' (Latour, 2004, p. 186-206).*

Design research throughout this thesis explores the intersections of urban health, human interface design, captology, mobile and sensor technology and citizen science while proposing an interactive mobile application for local and national governments to engage with an increasingly urban and technological savvy agora.

The aim of the accompanying mobile application prototype titled *Tune In, Share Out* (TISO), gives access to air and water quality information coupled with a mobile air quality sensor device which enables urban citizens to directly participate in the concept of the quantified self (Fawkes, 2010) by monitoring their pollution paths, while sharing this information through their respective social networks within a mobile mapping platform.

Concurrently this project contributes air quality information to aid citizens, scientists and city planners to make more informed and sustainable decisions within their local environment and agora.

Benefits of this application include citizen and environmental interaction and awareness, the ability for local government and citizens to enhance their tacit and embodied knowledge of respective groups and individual's, enabling greater understanding of each others perspective, while offering a channel of participation to an otherwise silent segment of society.