"The world becomes our interface"[1]

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The experience of everyday and the objects we rely upon for our survival, work and fun are going to be changed by the appearance of Internet of Things (IoT). The IoT is not a specific technology but a set of networked technologies that in some cases already populate the material world around us.

This article looks at how everyday experience is transformed in the novel technological framework offered by the appearance of the IoT, taking into account the perspectives of three quite different authors. Here we attempt to integrate their vision situated in social sciences, anthropology and media culture/interaction design.

The reading of three books provides the background for this analysis although at the beginning those books seem to have less in common than what I hope will appear at the end. The authors and books are: Bruno Latour *Reassembling the social*. *An Introduction to Actor-Network –Theory,* Tim Ingold *Being Alive: Essays on Movement, Knowledge and Description*, Adam Greenfield *Everyware: The Dawning Age of Ubiquitous Computing*.

Latour is a French sociologist well known in design, urban, technological and artistic environment; Ingold is a Professor in Anthropology in Aberdeen, Scotland, him too quite popular in urban and design filed and finally Greenfield is an American expert in User Interaction and a journalist.

In *Reassembling the social,* Latour aims to "redefine the notion of the social" (Latour, 2005, p. 1), not as a static reality made of stabilized matter but made of relations; the resulting is then "a very peculiar movement of association and reassembling" (Latour, 2005, p. 7). Latour's attempt is somehow ontological and foundational in the sense that he goes at the very heart of the meaning of social by reconsidering the classical and modern dualism between individuals and between subjects and the reality outside, the object, in so doing he places social sciences in a new perspective that can be then extend to other areas.

The social he describes is not a contraposition of entities but a relational state that brings to the composition of society redefined by means of this associative and connective power. The connective approach represents the basis for the *Actor Network Theory* (ANT), the theory for which Latour is mainly known. The two key elements of the theory are, as obvious, actor and network. ANT considers those two elements as the essence of our social dimension, a new social model, not anything different.

"ANT is not, I repeat is not, the establishment of some absurd symmetry between humans and non-humans" (Latour, 2005, p. 76).

Latour is actually looking at the dissolution of both as actors or agents in fact in a more general term the theory is an "enquiry about the agency of all sort of objects" (Latour, 2005, p. 76).

Latour' foundational take redefines therefore the concept of social starting by granting agency to all sort of objects such as document, technologies, machines, artefacts and humans. The

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[1] N. Gershenfeld, 1999, p. 4

resulting everyday experience is the platform for all sort new social dimensions and configuration.

Tim Ingold, with his *Being Alive. Essays on movement, knowledge and description*, is the first that challenges Latour's ANT through what he calls *Spider*. *Spider* exemplifies the theory itself through a narrative escamotage the dialogue between the two insects. The issue addressed here is the same: the explanation of society as something not only pertinent to our species but rather a universal one. This brings to the coexistence of many kinds of societies and at the same time at the assimilation of all of them to a wider concept, the web, which represents the very nature of all of them.

"The web is not an entity. That is to say, it is not a closed-in, self-contained object that is set over against other objects with which it may then be juxtaposed or conjoined. It is rather a bundle or tissue of strand" (Ingold, 2011, p. 91).

Ingold's turn move away from the concepts of entities and lays in the vision of web in his word meshwork. The meshwork is not a network of lines but is a web with its own 'materiality, i.e. web of the spider or Skilled Practice Involves Developmentally Embodied Responsiveness.

Spider model recognises the essence of agency in a conscious and embodied process deeply interwoven with the environment and the material world as "the close coupling of bodily movement and perception" (Ingold, 2011, p. 94).

Agency becomes a dynamic skill embodied and tangled with the material world, something that ties together all the entities involved and rises from the inside. The book, a collection of previously published articles, finds its unity in this redefinition of the social not only as getting over the classical dualism of subject/object but as agency embedded and embodied in the meshwork, the resulting structure. Both books and theories, with different shadows give insight and help to frame the conditions of everyday experience that the latest development in ICT and media seems to enable.

They are also giving foundation for new understandings that will eventually inform analysis and design of new systems part of our daily life. Here the latest publication, *Everyware: The Dawning Age of Ubiquitous Computing* by Greenfield, comes into the equation. Greenfiled a journalist and practitioner coined the word *everyware* as a way to catch the temporal and material condition of the mediated everyday experience of the ubiquitous computing era. *Everyware*, a neologism, is the contraction of *every* as in everything, everywhere and *hardware*, everyware is the ubiquitous condition of information and computation but more; "ubiquitous is not only 'in every place' but also 'in every thing'" (Greenfield, 2006, p. 11).

When computation spread across the environment into our daily objects, the relationship between humans and the material world change and interaction design as well socio anthropological sciences start to play with the same common ground.

Everyware is not exactly the synonymous of Ubicomp, it stands for all previous interactive paradigms that since then has been developed, such as tangible, mobile, pervasive, mobile computing. As a new unified paradigm, Everyware should allow us to understand the relevance and the implications of emerging smart buildings, objects, clothes better that every single technology or free from any previous technological paradigms.

In fact UbiComp or other definitions had their limitations in their intrinsic causality that from a design perspective constrained all of them in controlled environment and situation i.e. office/workspace environment. The big concern of Everyware becomes the daily experience in any sort and shape.

Interacting with ordinary objects means, for the author, that we "redefine our relationship with such thing. We'll find our daily experience of the world altered in innumerable ways, some obvious some harder to discern" (Greenfield, 2006, p. 23).

"Artefacts such as clothing, furniture, wall and doorways become platform for computation" (Greenfield, 2006, p. 19).

Everyware is introduced as a process of digital mediation of our everyday life, of the way we experience the real world, of our daily existence as part of the Ubiquitous Computing era. The Internet of Things is the latest enactment of the ubiquitous revolution and although the term is biased by its industrial original meaning and by the fact it marks a distinction between the network of things and the network of humans; it has the potential to be understood and use as something very similar to the Greenfield' everyware concept but with the network element.

In August 2012 Facebook announced the adoption of a new communication protocol for their mobile application. This protocol (MQTT) was already in use in the Internet of Things and from August 2012 also the Internet of People shares the same communication substrate. This event marks the convergence of what I call the *Thingbook* with the Facebook. Both realms get much closer and it can mark the genesis of an entanglement of humans and non-humans on a global scale and on a daily base.

"Bringing things to life, then, is a matter not of adding to them a sprinkling of agency but of restoring them to the generative fluxes of the world of materials in which they came into being and continue to subsist" (Ingold, *Being Alive*).

Things had lived for long time in a social and environmental ghetto, *everyware* and the Internet of Things as a condition of "information processing dissolving in behaviour" (Greenfield, 2006, p. 32) will provide new scenarios for the social in our everyday experience and existence.

Bibliografia

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