

## **Beware, your imagination leaves digital traces**

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‘Who would know how to love without having read novels?’ This saying seems to take on a new meaning with the multiplication of virtual worlds, even though the adjective “virtual” may be greatly misleading. It would be very odd to say, when thinking of the young hero of Marcel Proust’s *A la recherche du temps perdu*, who spends whole days utterly absorbed in the fictional landscapes painted by his favourite novelists, that he resided in a “real” world, while a youngster of today who buys rather expensive equipment to play with buddies on the other side of the planet through wireless and satellite connections would be said to be living in a “virtual” landscape.

It would be much more reasonable to argue that it was Proust’s narrator who lived his adventures “virtually” while his 21st-century counterparts have to embed their imagination in so much hardware and software paraphernalia that they clearly end up in a more real, more connected, more technical world. Or rather we might agree to say that the capacity of young children to absorb remains the same but that the technology of the printed book has been partially replaced by a vastly more complicated and concentrated entertainment industry.

Imagination no longer comes as cheaply as it did in the past. The slightest move in the virtual landscape has to be paid for in lines of code. If you want your avatar to wear a new golden helmet or jump in the air, gangs of underpaid software engineers somewhere in Bangalore have to get out of bed to work on your demands. The fancies of our brains have shifted so little from the real to the virtual that tens of thousands of children in China are earning a living by causing avatars to graduate to higher levels in various digital games before reselling them for a good prize to boys in America who like to play those games but have not the time nor patience to earn enough “points” for their aliases. When Segolène Royal, the French presidential candidate, bought a piece of real estate on Second Life to start a campaign headquarters there she paid for it in hard cash.

If it is rather useless to try to decide whether we are ready to upload our former selves into these virtual worlds or not, it is more rewarding to notice

another much more interesting difference between the two industries and technologies of imagination. Apart from the number of copies sold and the number and length of reviews published, a book in the past left few traces. Once in the hands of their owners, what happened to the characters remained a private affair. If readers swapped impressions and stories about them, no one else knew about it.

The situation is entirely different with the digitalisation of the entertainment industry: characters leave behind a range of data. In other words, the scale to draw is not one going from the virtual to the real, but a scale of increasing *traceability*. The stunning innovation is that every click of every move of every avatar in every game may be gathered in a data bank and submitted to a second-degree data-mining operation.

I am sure that this accumulation of traces has enormous effects for the entertainment industry, for specialists in marketing, advertising, intelligence, police and so on, but another consequence is worth pointing out. The precise forces that mould our subjectivities and the precise characters that furnish our imaginations are all open to inquiries by the social sciences. It is as if the inner workings of private worlds have been pried open because their inputs and outputs have become thoroughly traceable.

Before digitalisation, social psychologists used very vague words such as “rumours”, “influences”, “fads”, “fashions” or even “contexts” to describe the complex ecology of our minds. But today it just happens that a character from a game can be followed through the IP numbers of the computers from which they are clicked or from the stream of news in which they are commented upon, all the way from the designers who draw them to the blogs where their adventures are exchanged.

The ancient divide between the social on the one hand and the psychological on the other was largely an artefact of an asymmetry between the traceability of various types of carriers: what Proust’s narrator was doing with his heroes, no one could say, thus it was said to be private and left to psychology; what Proust earned from his book was calculable, and thus was made part of the social or the economic sphere. But today the data bank of Amazon.com has simultaneous access to my most subtle preferences as well as to my Visa card. As soon as I purchase on the web, I erase the difference between the social, the economic and the psychological, just because of the range of traces I leave behind.

Dozens of tools and crawlers can now absorb this vast amount of data and represent it again through maps of various shapes and colours so that a “rumour” or a “fad” becomes almost as precisely described as a “piece of news”, “information”, or even a “scientific fact”. It’s not by accident that the founders of Google have one reference in their original patent, and it is to a chapter of Robert K. Merton, the American sociologist, about citation patterns in science.

Owen Gingerich, the great historian of astronomy, spent a life-time retrieving all the annotations of all the copies of Copernicus's first edition. He could thus give a precise meaning to the rather empty notion of "Copernican revolution" and could show which parts of the book everyone had read and misinterpreted. Nowadays, any scientist can do the same for each portion of each article he or she has published so long as the local library has bought a good package of digital data banks. But what is more extraordinary is that any journalist can do so as well for the latest Madonna video or the dirtiest rumour about Prince Harry's love affairs.

In other words, the former distinction between the circulation of facts and the dissemination of opinions has been erased in such a way that they are both graduating to the same type of visibility — not a small advantage if we wish to disentangle the mixture of facts and opinions that has become our usual diet of information. Subjectivities used to be the inner sanctum where social sciences had to stop and dismount in order to shift to other, less reliable vehicles. It is now possible to follow how the characters of a "reality show" or the finalists of Star Academy have so modified the ways and means with which their viewers speak and think about the world that the social has become, so to speak, continuous with the psychological.

French kids arrested by the police and brought before a judge raise their hands with an "Objection, your Honour!" that has no meaning in the French legal system but is ubiquitous on American TV series. The consequences for the social sciences will be enormous: they can finally have access to masses of data that are of the same order of magnitude as that of their older sisters, the natural sciences. But my view is that "social" has probably become as obsolete as "natural": what is common to both is a sort of new epidemiology that was anticipated, a century ago, by the sociologist Gabriel Tarde and that has now, at last, the empirical means of its scientific ambition.

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