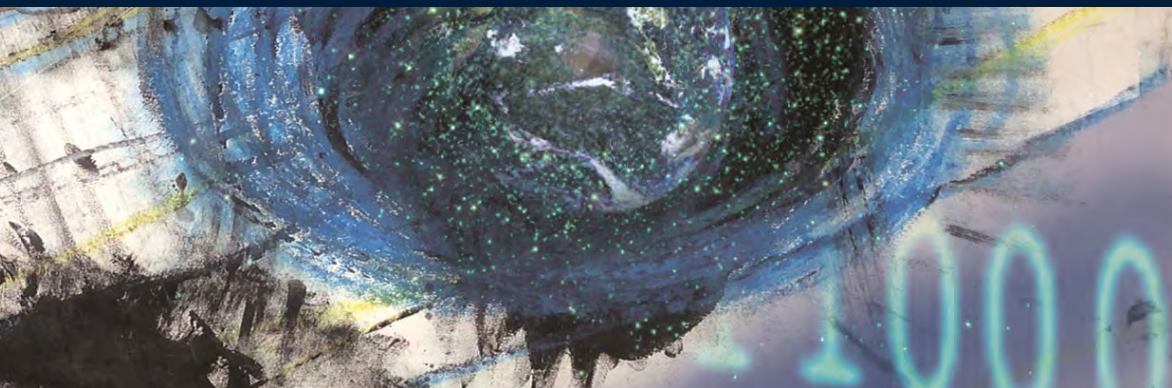


Laboratorio di Sociologia e Antropologia della Comunicazione | Sperimentazioni

Bruce W. Powe

Opening Time on the Energy Threshold

with the contributes of
Cristina Miranda de Almeida
Matteo Ciastellardi



Laboratorio di Sociologia e Antropologia della Comunicazione



Collana diretta da Matteo Ciastellardi e Derrick de Kerckhove

Bruce W. Powe

Opening Time

on the Energy Threshold

with the contributes of
Cristina Miranda de Almeida
Matteo Ciastellardi

LED Edizioni Universitarie di Lettere Economia Diritto

ISBN 978-88-7916-807-6

Copyright 2016

LED Edizioni Universitarie di Lettere Economia Diritto

Via Cervignano 4 – 20137 Milano

www.lededizioni.com – www.ledonline.it

E-mail: led@lededizioni.com

I diritti di traduzione, di memorizzazione elettronica e pubblicazione con qualsiasi mezzo analogico o digitale (comprese le copie fotostatiche e l'inserimento in banche dati) sono riservati per tutti i paesi.

Le fotocopie per uso personale del lettore possono essere effettuate nei limiti del 15% di ciascun volume o fascicolo di periodico dietro pagamento alla SIAE del compenso previsto dall'art. 68, commi 4 e 5, della legge 22 aprile 1941 n. 633.

Le riproduzioni effettuate per finalità di carattere professionale, economico o commerciale o comunque per uso diverso da quello personale possono essere effettuate a seguito di specifica autorizzazione rilasciata da:

AIDRO, Corso di Porta Romana n. 108 – 20122 Milano

E-mail segreteria@aidro.org – sito web www.aidro.org

Stampa: Digital Print Service

CONTENTS

Note 7

SECTION 1: IDEAS

1.
Opening Time: On the Energy Threshold. Introduction. 14
Bruce W. Powe

2.
Opening the time for images: sensorial re-unification 23
Cristina Miranda de Almeida

3.
Augmented Reality for Collaborative Media 33
Matteo Ciastellardi

SECTION 2: AUGMENTED TEXT

Opening Time: On the Energy Threshold 45

3.

AUGMENTED REALITY FOR COLLABORATIVE MEDIA

Matteo Ciastellardi

1. BLENDED REALITY

Web content belongs to different and multiple spheres of production, use, and distribution. There is content that operates one-way, thus with no possibility of feedback to the original producer (except through tools that allow for subsequent feedback, such as web forms or response channels). There is content that is pre-designed to encourage active participation. (That is, it develops thanks to the bottom-up enrichment by the users themselves.) Finally, there is content that moves the reading action of medial text to a dimension of blended reality. In the latter case, as for blended reality, this does not mean one of the many patents developed by digital communication brands, but the phenomenon, that, since the 1990s (on a mass consumer level) has started to propose that media experience systems go beyond the digital synthesis of reality on the screen.

The blended reality model, has evolved on the basis of at least three different remedies to the problem of lack of relationship between the perceived reality of users and the interface of digital contents.

A first step has been taken through solutions that are closer to virtual reality, allowing the user a feeling of freedom and movement within the exploration of extended worlds and environments that recall that of the real world (open exploration, interaction with objects, virtual dual representation in a simulated environment, and so on) and, subsequently, the ability to interact with other users in virtual scenarios. Examples include the first video games with exploration

interfaces, virtual communities like Second Life, up to online gaming platforms.

A second strategy, less successful, was to bring a very realistic representation of the world to users' screens, offering forms of minimum and sequential interaction, or a guided script of visual storytelling, such as multimedia products in graphic exploration or transposition of cinematographic films whose storystream could only be guaranteed by the correct sequence of user actions (for instance, arcade games like *Mad Dog McCree*, 1990).

A third mode, a current one and nowadays regarded as the basis for the concept of blended reality, was born when the narrative focus moved from computer screens to smartphone screens, allowing users to exploit the camera as a filter able to find media texts scattered in the surrounding environment. The first step to 'augment' reality was the introduction of environmental coordinates to geolocate, via the phone camera, information related to what the smartphone was framing. Some other uses were related to tools such as QR codes (bi-dimensional dot-matrix codes): with specific apps they can be recognised in terms of digital content (a QR code represents just a text string) so they can "augment" the item where they are located, opening a weblink, or showing a text, an address, a number, or other related details. Apps and social network sites fully transformed handheld and wearable devices into interfaces to query and explore the real world through the lens of the camera and the screen of the smartphone. Information about travel, tips about accommodation, songs embedded into a paper page, or a 360-degree view explored via a Facebook picture are only a few examples of a new blended form used to recognise and relate to reality. The use and adoption of evermore-sophisticated technologies inside a smartphone (such as compass, gyroscope, GPS) supported by a web connection and with the possibility of easily creating content to enrich the experience of environment, objects, texts, and so on, enable an improved mediated reality experience. The use of a digital layer to explore, expand or interact with the elements behind the phone camera, 'augmented' by specific apps, also meets the active roles that the public is demanding.

In this sense, we have to consider at least two different types of users. We can define the first type as 'audience' (Livingstone, 2005; Jenkins, 2013), in search for engagement in terms of exploration, interaction with content and keen for the new possibilities of real-

AUGMENTED REALITY FOR COLLABORATIVE MEDIA

world recognition. We can call the second type 'public', made of prosumer (consumer and producer at the same time, Toffler, 1980: 265), eager to collectively participate in the experience of a blended reality, responding to the possibilities offered in terms of mutual creation of content.

The phenomenon of blended reality is the direct consequence of an endless process of technology enhancement and the rise of a participatory culture. It is easy to find products of blended reality for private consumption, in which every user is limited to exploring and interacting with the digital layer only in a way that is defined by a stakeholder for commercial purposes (very common in marketing strategies). However, the idea of participation is more engaging when participation is not limited to the use and consumption of an experience, but when it is expanded into the constant definition of the experience itself. There is a wide range of definitions of participation, determined not only according to categories of users, habits of consumption and interaction, but also by the possibilities offered by different technologies and supports: open source models, moderation, restriction policies, geographical area of participation, amongst others (Jenkins, 2006 and 2013). It is possible to move from total engagement and content production to lurking and peripheral participation (Jenkins, 2013: 156-163). Every user can be absolutely silent and unrecognisable in the lifestream of a media experience, just as the same user can serve as a content producer, moderator, troll, gatekeeper, and countless other roles and this influences the consumption of other users.

2. THE (UN)COMFORTABLE PROSTHESIS OF INFORMATION

The role of users as individual actors is every day more relevant in terms of personal engagement and participation: most of the experiences, tools, platforms and products for augmented reality are designed for a solipsistic use. The user in this process of interaction represents him/herself through exploring a new layer of information while maintaining control of his/her own environment. The experience is similar to the user of a pair of glasses: it is only from an entirely individual point of view that someone can benefit (in terms of information and consumption). And the metaphor of glasses is really pertinent due to the fact that one of the most important experiments

MATTEO CIASTELLARDI

for augmented reality, promoted and supported by Google, was based on a pair of glasses able to enrich different experiences of everyday life (Google Glass). Google's project, and its suspension for various reasons (Di Zubin and Blythe, 2016: 115) underlines how subjective exploration through a digital layer is, and how difficult it can be to accept an external prosthesis of information.

The use of an external device to embed, internalise and 'browse' reality represents a cultural development that distances us from traditional ways of internalising knowledge. Memory and brain structure were originally devoted to the preservation of information, from tiny details to big stories, memes to visual memories.

In *Understanding Media: The Extensions of Man*, Marshall McLuhan introduced the concept of prosthesis in media theory, to explain media's function as "any extension of ourselves" (McLuhan, 1964: 7). As physical extensions of a person, the different supports extend the capacities of the biological self: hands, feet, skin, nervous system, sight, and other faculties can find their extension outside the body by adopting different media.

This concept of augmented body converges with the idea of augmented reality. On one hand, a tool like a smartphone (augmented body) is driving senses and the nervous system to go beyond the perception of the real environment, connecting the proprioception of the self towards new patterns of reality: from here-and-now to a constant connection with distant information, people and environments (more freedom, less experience of novelty). On the other hand, a digital layer of information (augmented reality) is defining the edge of intersubjective and situated dimension of the self with a common ground of experiences, information, and knowledge framed in a mobile screen: a second skin of the world defined by other people to enrich the experience of reality itself (less freedom, more experience of novelty).

The convergence of these two aspects, and the necessarily multi-tasking activities related to the fruition and use of specific media, defines a different range of consciousness and ever-new possibilities in terms of knowledge, interconnection and exchange.

Prosthetic extension through media also creates changed processes for some functions of the body. For example the externalisation of memory (adopting wearable devices and the Internet to store and retrieve any kind of information) and the different ways of 'reading' (different interfaces and media texts) are, at the same time, useful op-

tions and biological changes for some brain functions (Wolf, 2007); the multitasking attitude can lead to lower grey-matter density (Loh and Kanai, 2014).

If media extend, they also amputate. Although electronic technology expand the central nervous system, there is also a possible drift into amputation or auto-amputation. From a biological perspective, the human organism seeks to maintain a state of equilibrium. Any disturbance, turbulence, contamination or external stress pushes the human system to react and rebalance its original state, sometimes with the auto-amputation of the disturbing element.

With the arrival of electronic technology, man has extended, or set outside himself, a live model of the central nervous system. In this sense, it is a development that suggests a desperate suicidal auto-amputation, as if the central nervous system can no longer depend on the physical organs to be protective buffers against the slings and arrows of outrageous mechanism.

(McLuhan, 1964: 43)

Media as prosthesis can become uncomfortable when the information overload unbalances the self. In this sense, augmented reality takes advantage of the proliferation of grassroots content, but it also suffers from the non-linear and fuzzy problem of content surplus, which destabilises the biological assets of the self.

New generations, especially millennials onwards, suffer this process in terms of the reading brain (Wolf, 2007), but rebalance learning strategies to face new and fluid models of content consumption, naturally strengthening emerging competencies and skills. Moreover, the trans-media approach of recent generations, moving through different supports and channels, browsing information in several ways, and the multi-screen attitude, using several devices simultaneously, enhance people polarisation around the tools and the mixed processes of reading and decoding information.

According to these socio-cultural and biological premises, the definition of specific content and products for blended/augmented reality must take into account different variables of use, moving from possible ways of consumption and end-user participation, to the skill abilities of the potential users and their cognitive gaps in trans-media competencies.

MATTEO CIASTELLARDI

3. THE RISE OF COLLABORATIVE MEDIA FOR AUGMENTED REALITY

When we speak about blended reality, we move into a specific field of interaction and exploration. Human factors, socio-cultural context and the different supports for interaction are the three key elements that define the framework of blended reality. But we must also consider the definition of the content of blended reality itself: the layer of distributed and interconnected information that enriches what smartphones frame.

Today, when we consider media content, we are facing the rise of many collaborative media: “a form of mediated communication whereby people collaborate on messages, content, meaning” (Löwgren and Reimer, 2013: 4). Collaborative media means to face a culture of participation and mutual interchange between audiences, content and the supports on which content is distributed and remediated. According to Löwgren and Reimer, we can speak about collaborative media instead of digital or analogue media because there is no longer a clear distinction between the two. “Today all major media run on digital infrastructures and, consequently, the concept has lost its meaning as a marker of contemporary media and contemporary media practice”. (Löwgren and Reimer, 2013: 14).

In the specific case of augmented reality, as already noted, it is very simple to find content defined top-down from big stakeholders, but it is not so common to have a complete frame of grassroots production by the means of collaborative media. The software and the culture of collaboration and sharing are broadly diffused, but it is important to classify the production of content into three flexible categories:

1. microproductions (participatory media texts related to microblogging and social network sites);
2. extended contents (participatory media texts related to websites, full thematic platforms and co-operative networks);
3. full publishing (participatory media texts related to autonomous independent systems like apps and ipermedia productions).

Augmented reality commonly needs specific tools and platforms such as in the full publishing category to offer participatory media texts to explore. If companies and professionals can invest in these kinds of products, usually it is not possible to offer a broadly distributed, accessible and simple framework for content creation (Mano-

vich, 2013). Some accessible platforms to create AR content exist as well as some open source systems, but they require money or advanced coding ability in order to obtain initial results.

Only a few models of augmented reality platforms offer, for specific purposes, or with limited resources/time, a free framework to develop content to digitally enrich the real environment. These apps most often function through pattern recognition of visual objects (text, images) in order to overlap the original item with a digital layer created by the user.

Collaborative media are slowly moving in this direction in order to offer complete solutions to customise the real world with augmented content.

In the present volume, the example of augmented reality expanded towards a perspective of collaborative media starts from an original masterpiece created by B. W. Powe: *Opening Time*.

The original artwork is a text (Powe's creation) mixed with images (by Cristina Miranda de Almeida) produced for an editorial outcome (printing press). Adopting a system of augmented reality (in this case Zappar - <https://www.zappar.com/>) the product comes to life if framed by the Zappar app in a smartphone, and it offers specific interactions with a digital variant of the text/images. The digital version of the original introduces music (composed by Michael Century), web connections, videos, a wiki version of the text (completely re-writable by users) and many other elements that can be explored, modified and expanded.

The purpose, as shown in Figure 1, is to move from an original idea, preserving the authorship of the product, and then to cross-fertilise in order to create a web version of the original. The web version is a connective product that can be completely reorganised, played, and restyled, giving the opportunity to maintain a record of all the design steps taken. The digital variant, examined and re-edited over time, can be explored at different stages to view an interesting map of the contributions, the tendencies and the ideas emerging from the original artefact and recombined in the electronic version. The possibility to trace all the data and all the actions led by users in the digital layer offers the opportunity to study the creative processes of interaction and consumption, in order to have new material (apart from contents) that can be very useful in identifying emergent topics, as well as the constraints of the digital variant.

MATTEO CIASTELLARDI



Figure 1. The four passages from the original artefact to the data analysis of contents and processes.

REFERENCES

- Di Zubin Sethna, Blythe, Jim, *Consumer Behaviour*, London: Sage Publications Ltd, 2016
- Jenkins, Henry, *Confronting the challenges of participatory culture: media education for the 21st century*. The John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning. Cambridge, MA: The MIT Press, 2009.
- Jenkins, Henry, Ford, Sam and Joshua Green. *Spreadable media: creating value and meaning in a networked culture*. Postmillennial pop. New York; London: New York University Press, 2013.
- Livingstone, Sonia. 2005. "On the Relation between Audiences and Publics". In Sonia Livingstone (ed.), *Audiences and Publics: When Cultural Engagement Matters for the Public Sphere*, 17 – 42. Bristol, UK: Intellect.
- Loh Kep-Kee, Kanai Ryota, 'Higher Media Multi-Tasking Activity Is Associated with Smaller Gray-Matter Density in the Anterior Cingulate Cortex', *PLOS ONE* 9(9): e106698. doi: 10. 1371/journal. pone. 0106698, 2014.

AUGMENTED REALITY FOR COLLABORATIVE MEDIA

Manovich, Lev, *Software takes command: extending the language of new media*. International texts in critical media aesthetics. New York ; London: Bloomsbury, 2013.

McLuhan, Marshall, *Understanding Media*, New York: McGraw-Hill, 1964.

Toffler, Alvin, *The third wave*. New York: William Morrow, 1980.

Wolf, Maryanne, J. Stoodley, Catherine, *Proust and the squid: the story and science of the reading brain*. 1st ed. New York, NY: HarperCollins, 2007.