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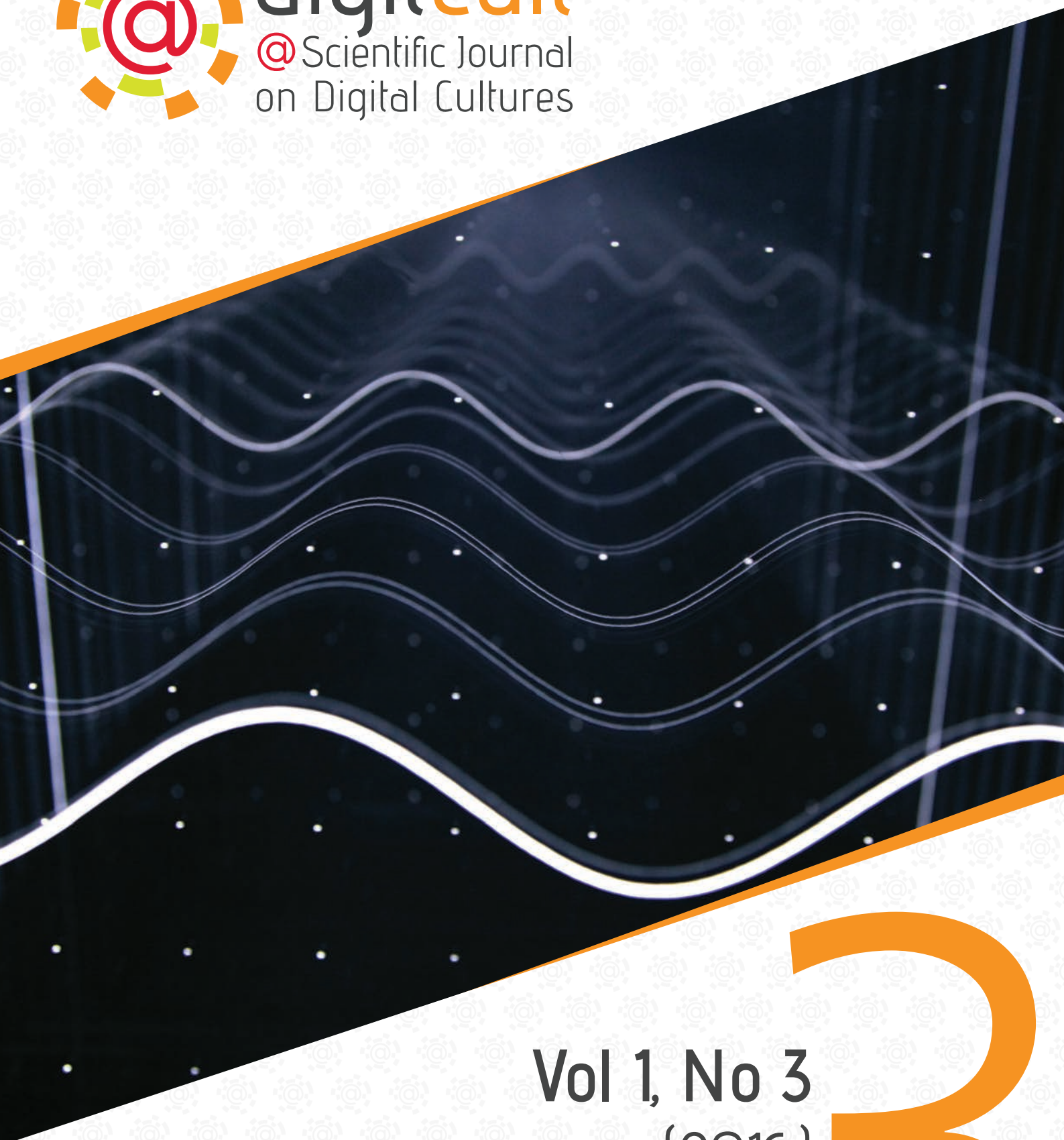

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DigitCult | Scientific Journal on Digital Cultures

Towards Multimodal Content Fruition in On-line Scientific Journals: The Case of DigitCult

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Abstract

On-line journals are becoming increasingly important and credited as scientific communication tools. The advantages of Web publishing, and in particular open-access peer-reviewed repositories, are remarkable in terms of availability, information retrieval, and potentially addressed audience. Quite surprisingly, some aspects typical of on-line publishing have never been fully explored and exploited: for example, the possibility of providing readers with multi-modal content (e.g., different file formats for text encoding, attached multimedia objects, etc.) non-traditional paths to navigate information and further investigate research themes (links to external content, video interviews with authors, multimedia insights, etc.), and the use of social networks and forums as spaces for debate among peers and with experts. DigitCult is an academic journal dealing with digital cultures, and – due to its multi-disciplinary and trans-disciplinary vocation – it has been conceived to achieve the mentioned goals. Consequently, a paradigm shift is required in the design of contents by authors, the rethinking of the editorial process, and the study of technical solutions aiming to adapt existing on-line publishing platforms to the new requirements. This paper will document the analysis, design and implementation efforts that led to the release of DigitCult, presenting – after the first year of publication – an insight about the technological and cultural innovations that DigitCult aimed to bring to the debate among scientific journals. Specifically, Section 1 will address the problem of technological affordances and editorial cultures, with particular reference to on-line scientific journals; Section 2 will propose a multi-layered reading environment aiming to enhance transmedia communication; finally, Section 3 will focus on the technical issues encountered to achieve this goal, discussing the limits of the OJS platform and proposing some workaround solutions.

Note: Section 1 – “Socio-technical Affordances and Editorial Cultures” was written by Tatiana Mazali; Section 2 – “A Multi-Layered Reading Environment to Enhance DigitCult’s Transmedia Communication” was authored by Domenico Morreale; finally, Section 3 – “Augmented OJS: Technical Issues” was written by Luca A. Ludovico.

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Note to Readers

This work – published in Vol. 1 No 3, namely after the first year of activity of our journal – is an early contribution to the debate among traditional and on-line scientific journals focusing on technological and cultural innovations. We decided to publish an opening work which reflects the efforts of the first year of publication to face the crucial problems which DigitCult intends to deal with in the next issues.

Mario Ricciardi, Editor

1. Socio-technical Affordances and Editorial Cultures

In scientific scholarly communication, as in any other form of communication, the content and the container (the form) are co-dependent. From Marshal McLuhan's concept "the medium is the message" (McLuhan 1964) to the *domestication* paradigm applied in media studies (Hirsch, Morley, and Silverstone 1992; Silverstone 2006), we agree to see the socio-technical system that produces the different supports of knowledge dissemination (be it encyclopedias, books, printed journals or digital ones) as the result of the interaction between the technological affordances (paper, digital) and the public's tasks (*audiences*, users, community); an interaction that happens through methods of use and appropriation mechanisms in which the technologies, the content models/languages and the social and cultural contexts co-build each other.

In order to discuss about scientific publishing and dissemination in the world of university we need to analyze three closely related aspects: the publishing models consolidated in academic practice (formats that range from monographs to specialized journals), the evaluation models (that determine the publishing formats accepted by the academic community), and the technologies that allow to give form to these formats and languages.

The printed word technology (Ong 1982) certainly represents the "solid matter" that has most influenced the establishment of a series of publishing models in the world of scientific communication. If we take journals into consideration, innovation happens in relation to their contents, while their interfaces (that allow reading) and languages are still anchored to practices and cultures of the publishers and readers (mainly the academic communities) that have remained relatively stable until the early two thousands.

When paper came up against the digital world and the Net, the international big academic publishers began by offering digital equivalents of their analog catalogs. It is the so-called "copy-paste" model, from paper to digital support without any changes; the product remains the same, both in terms of content and of interface, if we consider that the display of a PDF is not so different from that of a printed page.

But, from the beginning of the new millennium up to the present day, several convergent phenomena have triggered important changes. The crisis of the scientific-academic publishing industry (Cope and Phillips 2014), included in the book publishing crisis tout court, has met and collided with a new cultural sensitivity, the *open access*, that runs parallel to the *open source* ethics in computer science. In addition, the renewal of the evaluation rules applied to academic careers has had a transforming impact on the traditional publishing practices of the scientific community.

The convergence of these three factors explains the proliferation of journals published in Open Access (OA) mode. To ensure an open access to the scientific results of publicly-funded research, Italy has adopted its own specific law (Law 112/2013 of October 7th, 2013) in compliance with the corresponding European Directives, although some minor changes have been hotly debated. Critical voices have been raised against the "protectionist approach" in favor of the publishing houses, an example of which is the longer embargo period for articles and research works originally published in pay magazines (the open files can only appear 18-24 months afterwards, whereas EU directives speak of 6-12 months).

The so-called *green route* to OA (EU recommendation n. 4890 17/07/2012) has increased the number and types of readers that can be directly reached by scholars, and thus promotes a culture of transparency and sharing; at least potentially, this facilitates fruitful exchanges for the collective construction of knowledge.

The on-line inventory DOAJ (Directory of Open Access Journals), which lists high-quality open-access journals subjected to peer review – as is now required by the assessment standards also in our country – is a good indicator for understanding the extent of the phenomenon: in December 2016 there are 9,391 Journals spread over 128 countries (https://doaj.org).

Nevertheless, the format of digital publications tends to follow the model of paper magazines. On one hand, the Net makes scientific articles much more accessible but, on the other, the prevalence of the PDF format is still obvious, which is a clear sign of the printed model dominance and fixity.

If we look for the reasons behind what could be called a real resistance to change, we can identify several factors that determine this consolidation of cultural practices: on the production side, we have the publishing houses with their own business, organizational and professional models, plus the scholars and their recognition rules among peers and, finally, the research evaluation models; on the side of consumption, there are the reading models and the expectations of the public interested in academic publications.

The revision in our country of the mechanisms of research evaluation has been crucial in triggering a quantitative increase of publications, but also a further standardization of formats: today the international open access and peer review digital journal model, far from having fostered innovation in the production models and languages or in the scientific knowledge consumption styles, has created a "new" grammar, to which all (publishers and scholars) have to adapt. Innovation (the OA model, the possibility to fully exploit the potential of digitalization) is being "tamed" into something that may well become a new and static standard, a real *lock-in* process to quote Jaron Lanier's words (Lanier 2010): when a model or a tool become predominant in doing something (in this case, publishing in a way that is efficient and successful for one's academic career), it becomes more and more difficult to do that thing in a different way. A popular and prevalent model discourages innovation.

In view of this danger, we should consider the potential advantages of the Net and its digital world – mainly the multimedia and multi-modal nature of its language and devices – to improve the scientific publications that are affected by the problems signaled by Davies (2014): the slow pace of the workflow (reception, refereeing tasks, final editing) that can easily exceed a year from the moment of submission; the high access costs that explain the elitism of many journals regarded as most authoritative; and the absence of inclusive space open to young scholars.

The newly changed socio-technical environment, however, does not lack exceptions. There are journals that take advantage of the digital world and its specific expressive skills to transform the traditional publishing models in new ways, advocating for a multimedia setting in the composition of texts, or to manage the well-established formats in a different way (e.g. by allowing displaced communities to work collaboratively on remote publishing workflows). Only a large-scale deployment of new models will be able to propel really new practices and strategies, and therefore to create the conditions to overcome any *lock-in process* in the evaluation and publication of scientific research studies.

Innovation in academic publishing can be fostered on four levels: the instrumental level, by taking advantage of the different technological supports and their interconnections; the linguistic level, by overcoming the dominance of the words and the printing model; the cultural level, by accepting collaborative and interdisciplinary models in the academic assessment practices; and the economic level, by developing new models of sustainability.

As Limone puts it (2014), the ongoing changes in academic production revolve around three key concepts: design, collaboration and access.

Design has to do with the writing models and the creative approach to the scientific publishing languages. Innovation in the product design requires "the production of interactive and three-dimensional texts, animated presentations, video-documentaries. This type of product exploits the Web's potential certainly better than a magazine, but has not yet been considered a scientifically ratable item" (Limone 2014).[1]

Collaboration is the result of processes supported by the technologies that allow access and sharing. The assessment academic standards should reward collaboration instead of focusing, as they do nowadays, on the competitive individuality that struggles on the very thin limits between scientific disciplines.

Access, lastly, can trigger new models, such as the so-called "Megajournals, a fairly recent

[1] Translated by the author.

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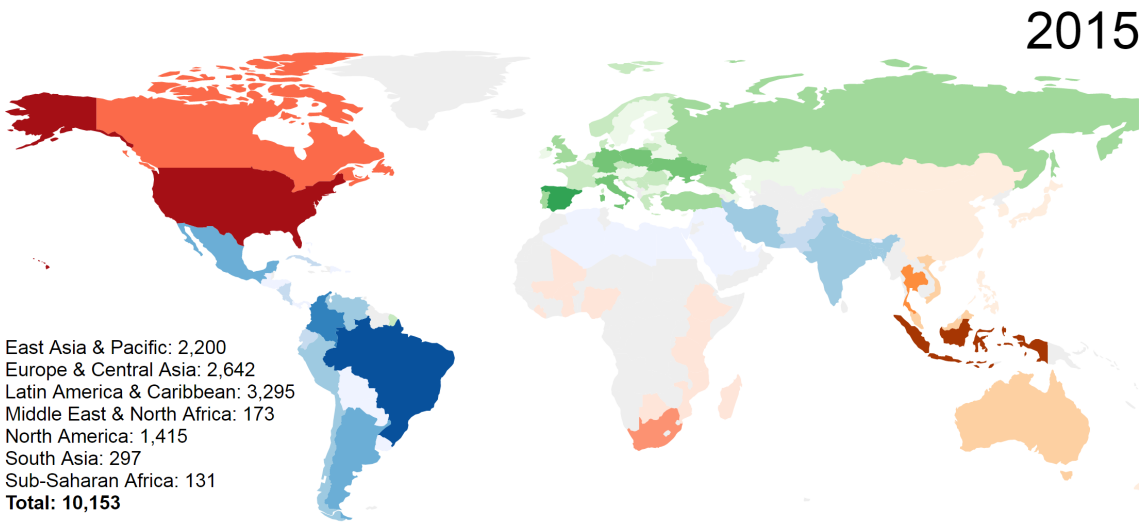

Figure 1. Location of journals using Open Journal Systems in 2015 – Source: https://pkp.sfu.ca/ojs/ojs-usage/ojs-map/

phenomenon that corresponds to open access, multidisciplinary journals; their editorial criteria to select scientific papers are different from those of paid-subscription journals".[2] More open access models can support the enlargement of publics, pulling the ability of researchers to make cultural transfers beyond the circle of peers (Attanasio 2011).

DigitCult journal was created with the aim to give an answer to some of the challenges presented here. It was decided to use the OJS platform for digital publishing because it allows, potentially, to work on all three levels mentioned above.

OJS was founded in 2001 and is developed by PKP (Public Knowledge Project). It is now the tool of a growing number of university and research institutions. It allows to edit and publish open access and peer review journals, and offers an open source platform that can thus be used independently of publishing companies. The platform's choice to be inclusive can even be seen in the fact that it has been translated into 30 different languages, although the most used one is English. In 2015, according to the latest figures provided by PKP, 10,123 journals were using OJS, all over the world, North and South, and with a rather good presence in developing countries (see Figure 1).

2. A Multi-Layered Reading Environment to Enhance DigitCult's Transmedia Communication

DigitCult adopts a transmedia (Jenkins 2006; Scolari 2009; Davidson 2010) communication strategy in order to promote an additive comprehension process of the scientific content that is present in the papers. This comprehension process involves two complementary paths: the integration of videos, images and text in the dissemination process and the extension of the discussion process and the creation of conversations through media (Manovich 2013) about the topics of the essays on social networks.

The goal is to use an editorial plan that foresees the orchestration of multiple language styles, media (text, videos, images, animations), communication strategies and platforms (content management systems, media-centered social networks such as YouTube, people-centered social networks such as Facebook and Twitter) so as to encourage the understanding of the scientific content in the journal even by a non-specialized audience, in order to have a dissemination service characterized by *public understanding of science and technology*. The report "The public understanding of science" was published in 1985 by the Royal Society and is a document of fundamental importance for the European development of this movement. As the report underlines

[2] Translated by the author.

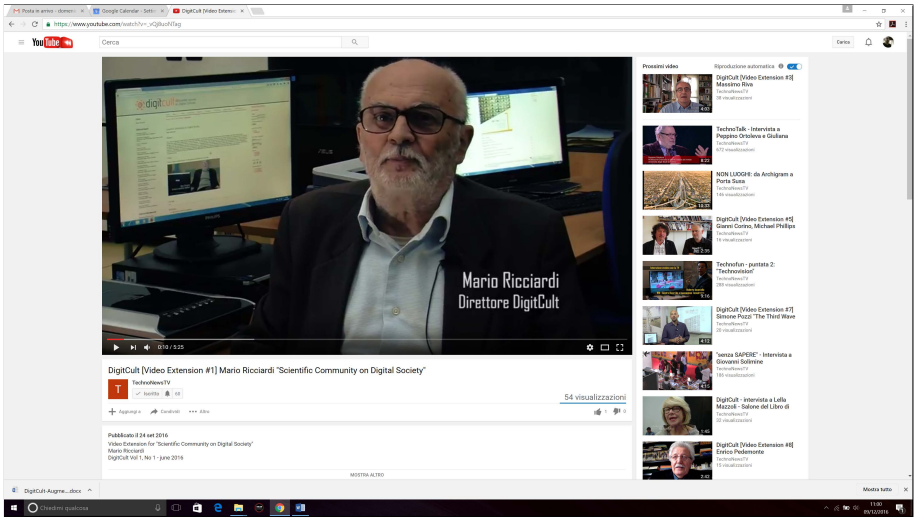

Figure 2. The first video extension developed for the essay "Scientific Community on Digital Society" by Mario Ricciardi published on DigitCult Vol. 1 Iss. 1 (2016) – URL: https://youtu.be/_vQj8uoNTag

a better understanding of science can be a significant promotion factor for the well-being of a nation, raising the quality of both public and private decisions and enriching a person's life (Irwin 1995).

The editorial plan is aimed at creating a multi-layered reading environment where each different text-node (the article, the video extension, the posts on social networks) adds an original perspective on the topics and on the issues.

The orchestration and coordination of the various texts created around each essay published follow a transmedia approach. This means that they make sure that each media content involved in the project is complementary to the others, with a low level of redundancy and a language that is suitable for its own platform. This favors a process of additive comprehension of the themes.

> "A transmedia story unfolds across multiple media platforms, with each new text making a distinctive and valuable contribution to the whole. In the ideal form of transmedia storytelling, each medium does what it does best [. . .]" (Jenkins 2006)

When applied to the DigitCult multi-layered model, the approach is divided into three main levels: the essay, which represents the main content, uses a scientific language and academic publishing rules. It is presented in its linear form on the corresponding page of the Open Journal System platform; the video extension on YouTube, which represents the video extension of the essay, and uses a more popular language. On the one hand it is aimed at encouraging the reading of the essay and on the other hand at extending its contents by proposing discussion topics and further studies designed to encourage the creation of on-line conversations; the posts on social networks, particularly the Facebook page and Twitter profile of DigitCult, represent the favorite space of interaction for the community of authors and readers.

According to the popular classification of cross-media projects proposed by Gary Hayes in 2006, which is based on a scale from high to low redundancy between the contents of the various assets which are part of the project (Hayes 2006), the DigitCult multi-layered model ranks among the transmedia *bridge*, in which each medium is linked to the others through references (the bridge), and each asset has a different perspective on the content of the communication, although there is a main media content, the tent-pole (in this case the essay), around which the transmedia architecture is structured. In DigitCult, the page of the Open Journal Systems platform which hosts the essay, also includes links to audiovisual content, called Video extensions, uploaded on YouTube.

The video extensions represent the second layer of the DigitCult's transmedia strategy. They are short videos lasting 4/5 minutes maximum uploaded on YouTube and published on the DigitCult page from which you can download the pdf of the essay they refer to. The video extensions represent a multimedia content which is complementary to the essay. In the video extension the authors of the essay ask the audience to deal with their contribution and highlight

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the main themes, inspiring and encouraging the discussion which will be later developed on DigitCult's social channels. The goals of the video extension are to match the technique with the scientific discourse in terms of support and as a language style, and to encourage a dialouge about specific issues. The video extension is an integral part of the essay and is connected to it, therefore the extension is intended as media *expansion and dialogue* (thanks to the possibility to use channels which make you experience the themes of the essays in on-line discussions). The Video extensions are structured in three parts:

- Overview: the introduction which provides a summary of the theme and the purpose of the essay;
- Relevant Topics: the central part which explores the key themes of the essay;
- Open Issues: the third part meant to encourage dialogue and discussion, suggesting some open issues, on which analysis and research can be focused.

The video extensions, created by the editors of DigitCult in collaboration with the author of the essay, have a basic style which ensures an efficient production process. The video includes some animations showing phrases extracted from the essay that accompany and emphasize some moments of the video speech. For each video extension the author is asked to select and indicate by email some phrases and key words from his essay that will be turned into animations and included in the video as cultural activators (Jenkins 2006) for each one of the three parts of the video (Overview, Relevant Topics and Open Issues). These phrases and keywords will encourage the user to do a decoding and interpretation process, also through dialogues and exchange of information with other on-line users, therefore favouring the social use of content.

Social networks represent therefore the third layer of the transmedia DigitCult model. A common feature of the different types of social networks can be identified in the possibility for the users to influence the shape of the social network and on the ways in which the content is distributed. Users can help define their newsfeed on Facebook and Twitter, affecting the algorithm that determines the visibility and circulation of content through their choices and their actions. User actions consist of upload of original content, cataloguing of existing content via hashtags or tags, addition of comments and answers, reworking and redistribution of existing content. These actions leave traces on the content to which they are associated, increasing the amount of data and metadata of the content itself, and generating what Manovich defined as *conversations through media*, of which the video extensions want to represent an enabling factor.

> "We see new kinds of communication where content, opinion, and conversation often can't be clearly separated. Blogs is a good example of this: lots of blog entries are comments by a blog writer about an item that s/he copied from another source. Or, think about forums or comments below a web site entry where an original post may generate a long discussion which after goes into new and original directions, with the original item long forgotten. Often 'content', 'news' or 'media' become tokens used to initiate or maintain a conversation" (Manovich 2013).

Therefore the goal of including video extensions of DigitCult on social channels is to trigger a conversational process that contains tokens in the videos that are able to gather a network of grouped content through the sharing of pages, boards and tweets, that represent interpretations and stimuli for derived content.

Through the multi-layered structure of DigitCult's reading environment, a double dynamic is therefore activated. This dynamic is favored by the *bridges* between the three environments (editorial content management system, media-centered social networks and people-centered social networks) and between the three types of content (digital essay, video extension and conversations through media on social networks). The first part of this double dynamic is centripetal, that starts from the promotion of the individual essay on social networks, through the video extensions, and finishes with the essay on the Open Journal System's publishing platform, intercepting a non-specialised audience and providing opportunities to acquire the skills needed to understand the content of the scientific essay (with the goal of combining efficiency in the divulgation and scientific rigor). The second part, a centrifugal component, starts from the digital essay on the Open Journal System and finishes with *conversations through media* on social networks, which extend the dialogue between authors and readers and between the authors

themselves, in a form that ensures a persistent link between media content, the essay, and the totality of comments, data, and metadata created by users.

3. Augmented OJS: Technical Issues

The choice of OJS as the journal management and publishing system for DigitCult was driven by a number of aspects, including its free and open source features, its adoption by a huge number of other open-access initiatives, the customization options offered by its back-office interface, and the huge community of users and developers who are regularly exchanging opinions and technical advices on OJS discussion forum.

As it regards the graphical interface of the journal, by entering the administration area it is possible to load user-defined texts and images, in order to customize e.g. the header through the journal's logo or to assign a cover to the current issue. It is possible to further exploit the possibilities for interface customization by uploading a user-defined CSS[3] file, thus giving the desired look to pages in terms of font family, size and weight, background and foreground colors, link styling, and much more.

A more challenging aspect concerns the customization of the original structure of journal pages. From this point of view, the availability of built-in as well as user-defined plugins can help. For instance, the information about DigitCult's editor, scientific committee, editorial board and publisher presented in the left column of the homepage was realized through a block plug-in defined by the webmaster and implemented in HTML language. After adding this user-defined component to the list of available plug-ins, it was possible to load it both in the homepage and in the *Board* area of the *About* section.

Another section that required special care due to the transdisciplinary characteristics of the journal was the release of multiple templates, covering not only word-processor's common formats such as Microsoft Word (DOC) and its open counterpart OpenDocument (ODF), widely used in the digital editing of texts, but also LaTeX, which is – more properly – a document preparation system. When authoring a LaTeXdocument, the writer uses plain text as opposed to formatted text, as in WYSIWYG word processors like Microsoft Word; such a plain-text document contains markup information to define the general structure of a document, to stylize text throughout a document, to manage image and table layout, and to add citations and cross-references. The production of a formatted output document, typically in PDF or DVI format, requires to compile the source file. A LaTeXtemplate was included since this approach is widely used in academia for the communication and publication of scientific documents in many fields, including mathematics, physics, computer science, statistics, and engineering.

In conclusion, OJS proved to be a framework flexible and customizable enough to natively manage the most common requirements of personalization concerning text and graphic content, as well as to slightly alter the original structure of Web pages. Nevertheless, some additional needs were required by the scientific committee and editorial board members of DigitCult. In the following we will describe some emerging issues and the workarounds implemented to solve them.

3.1. Extending Articles' Summary

A first point considered unsatisfactory regards the paper landing page, namely the content that a reader views by clicking a link to a specific article from the issue summary. The default information offered to the reader is rather poor: it would be reasonable to expect on the one hand the opening of the PDF version of the paper, or on the other hand a page rich in catalog information, additional content, links to related materials, etc. Conversely, the default settings restrict the page layout to abstract, keywords, and a link to the PDF file. An interesting area is reserved to the external back-references automatically retrieved by the platform; unfortunately these links, after their detection, should be evaluated and enabled case by case by the author of the work, which often results in a blank section.

Such a default setup, according to DigitCult scientific and editorial board members, makes

[3] CSS stands for Cascading Style Sheets, which is a simple mechanism for adding style (e.g., fonts, colors, spacing) to Web documents.

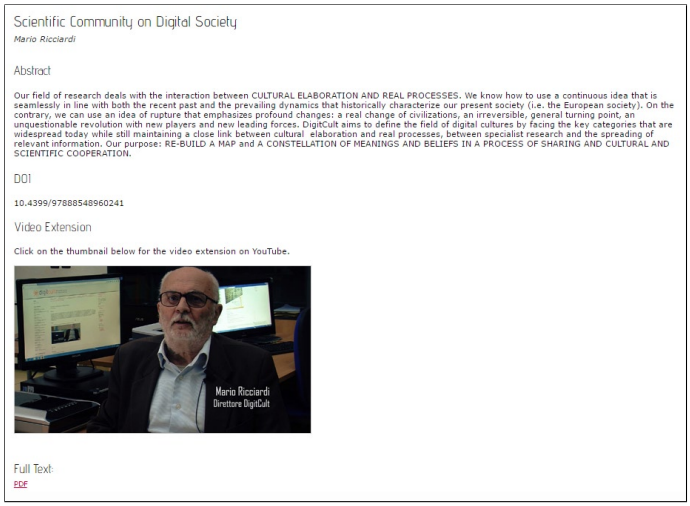

Figure 3. Customized summary including a video extension.

this page an annoying waste of time before getting to the actual paper content. Please note that the front page of the PDF document contains most of the information presented here. Instead of merely jumping this intermediate page to proceed directly to the PDF, we looked for ways to make its content more interesting. A trivial idea was to embed additional catalog information, not present in the original layout, such as the DOI[4] assigned to each paper. But the true advancement is to provide the reader with brand new sections, such as suggested Web sites, video extensions, and links to discussions on the social networks.

Two examples can be extracted from DigitCult Vol. 1 No 1. The Web interface of the customized summaries of papers (Ricciardi 2016) and (Haus 2016) is shown in Figure 3 and 4 respectively. It is worth noting that, with respect to the default structure, the former summary presents a section for the video extension, whereas the latter includes a list of essential Web references and additional video content.

From a technical point of view, these additional parts – whose meaning and importance have been discussed above – are hard-coded in the abstract of each paper and formatted through ad hoc HTML tags. OJS limits the range of HTML elements that can be displayed in the journal's pages. Such a list can be read by accessing the Site Administration area of the platform, and modified acting on the configuration file named `config.inc.php`. The allowed elements include basic tags for structure and layout, such as `<p>`, `<ul>`, `<ol>`, `<img>`, `<em>`, `<i>`, `<strong>`, `<b>`, etc.; but this list intentionally leaves heading tags `<h1>` to `<h6>` out, probably not to allow page customizations that would profoundly change its structure. Rather than forcing this setting, an easy workaround to enter headings in user-defined sections (e.g. the extended summary) is to confer a heading-like style to one of the allowed tags through the CSS. Needless to say, this will affect the look of such a tag throughout the interface, but some tags are unlikely to use – e.g. `<cite>` – and therefore they can be "recycled" to simulate headings.

3.2. Back Issues on the Homepage

The publishing policies of DigitCult include always-open submissions and publishing on a rolling base. Consequently, papers are expected to be available on line as soon as the copy-editing process ends. Due to an editorial choice, DigitCult presents the current issue's cover and summary in the homepage, which makes two conflicting goals emerge: on the one hand giving visibility to the last published issue, on the other hand offering the reader new contributions as soon as they are accepted for publication in the next issue.

Such a problem is partially solved by the time constraints of the publishing process. In fact, the end of the review phase and the consequent copy editing phase is often close to the release date of the new issue, even for those papers sent well ahead of the deadline. Therefore, the overlap between the old and the new works is quite limited.

[4] DOI stands for Digital Object Identifier, a persistent interoperable identifier in use on digital networks.

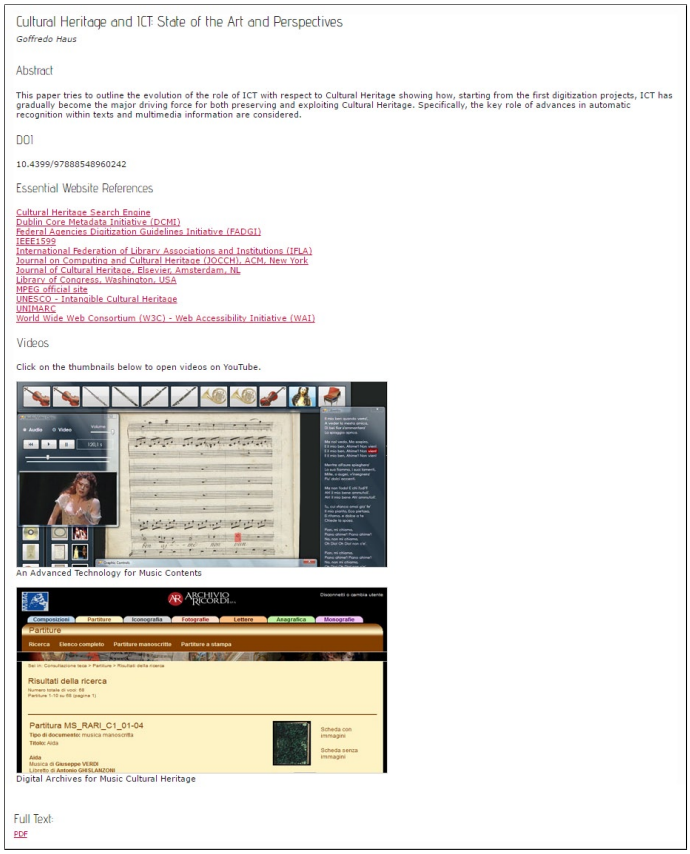

Figure 4. Customized summary including additional Web references and video content.

Figure 5. Cover thumbnails for quick and easy access to back issues from the homepage.

In order to minimize overlaps and maximize visibility, we come up with the following solution. About 15 days before the official publishing date, the new issue's articles begin appearing on the homepage, thus sending the earlier works to the archive. The visibility of the previous issue, which officially is still the current one, is guaranteed by a mechanism based on cover thumbnails shown on top of the homepage. These clickable images keep trace of the latest issues, pointing to the corresponding archive entries and giving them high visibility and prompt accessibility. An example is provided in Figure 5.

From a technical point of view, also this addition is based on the workaround explained above: the description of the journal – originally customizable in content but not in structure – is enriched and suitably formatted through ad hoc HTML tags, and currently includes also latest issues' thumbnails.

3.3. Two-way Integrations with External Resources

Since hyperlinks can be easily embedded in any user-defined text area of the interface, outlinks from OJS are trivial to implement. If the targeted material in turn can provide backlinks to OJS pages, then a two-way mechanism can be implemented, and this feature can greatly extend the capabilities of the platform.

An example is provided by the integration between OJS on one side, and media-sharing environments – such as YouTube and Vimeo – as well as social networks – such as Facebook and Twitter – on the other. The former approach lets readers enjoy alternative versions of the paper, insights and additional material, usually prepared by the authors themselves. Content can be commented by viewers, but in general terms this kind of tools is not intended for debate. The latter option allows the creation of open discussions on each specific paper, thus enabling a closer interaction among authors and readers.

In both cases, the information flow can proceed in two opposite directions, and this feature makes DigitCult an original example of transmedia experiment, not only in its content but also in its form.

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EU Digital Regulation Versus Copyright: A Way to Reconcile Digital Economy and Copyright?

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Abstract

In September 2016, the European Commission presented a proposal for a Directive on copyright in the Digital Single Market, part of a package that also includes the transposition into European law of the Marrakesh Treaty and its effects on the European Union's relations with third countries, as well as the regulation on online transmissions of broadcasting organisations. The copyright directive is of major importance in the context of digital regulation as it proposes a new related right for press publishers and a new mechanism aiming to give rightholders better control over the use and remuneration of their works on Internet. The proposal also narrows the liability exemption under the e-commerce directive, which has given platforms that provide access to protected works a way out of concluding licensing agreements with rightholders. The draft directive proposes three exceptions to copyright to reinforce digital use in education, protection of the cultural heritage and text-and-data mining. The aim of this paper is to present and to comment on the copyright directive and offer an overview of the opinions that are starting to emerge among different stakeholders.

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Introduction: The European Copyright Framework

The European Commission presented its proposals for European copyright legislation on 14 September 2016.[1] We will focus on the directive on copyright in the digital single market in view of the fact that it introduces innovative measures for the protection of copyright and related rights in the context of digital distribution.[2] Before addressing the directive's content, however, it is important to note that the European Commission launched a "Digital Single Market" strategy in May 2015. According to the European Commission, the strategy aims to improve access for consumers and businesses across Europe to digital goods and services, to create the right conditions and a level playing field so that digital networks and innovative services can develop and flourish, and to maximize the growth potential of the digital economy.[3] The Commission estimates that the digital single market could generate €415 billion by tearing down "digital barriers" across the European Union. The digital single market would be a way to retrigger growth, which remains weak in Europe.

The inclusion of copyright in the digital single market strategy was initially justified as aiming to remove obstacles to the creation of the European digital single market. Under the Barroso Commission (2004-2014), copyright was seen as a brake on digital growth, acting as a "barrier" to the creation of a digital single market:

> "Copyright should not be seen as a convenient scapegoat, but it should no longer remain part of these obstacles either. Rather than being a hurdle, it must be a modern and effective tool to support creation and innovation, provide access to quality content across borders and encourage investment, freedom of information and cultural diversity." (Barnier, EU 2012)[4]

Previously, the European Commission had sought to harmonise copyright. Since the 1980s the European Community (now the European Union) has carried out an ambitious program of harmonisation of the law on copyright and related rights, with the primary aim of fostering the Internal Market by removing disparities between the laws of the Member States. This program has resulted in no fewer than seven directives on copyright and related rights that were adopted

[1] See: Communication "Promoting a fair, efficient and competitive European copyright-based economy in the Digital Single Market" (https://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-592-EN-F1-1.PDF); Proposal for a Regulation laying down rules on the exercise of copyright and related rights applicable to certain online transmissions of broadcasting organisations and retransmissions of television and radio programmes (http://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-594-EN-F1-1.PDF); Proposal for a Directive on copyright in the Digital Single Market (http://ec.europa.eu/transparency/regdoc/rep/1/2016/EN/1-2016-593-EN-F1-1.PDF); Proposal for a Regulation of the European Parliament and of the Council on the cross-border exchange between the Union and third countries of accessible format copies of certain works and other subject-matter protected by copyright and related rights for the benefit of persons who are blind, visually impaired or otherwise print disabled (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016PC0595&from=EN); Proposal for a Directive of the European Parliament and of the Council on certain permitted uses of works and other subject-matter protected by copyright and related rights for the benefit of persons who are blind, visually impaired or otherwise print disabled and amending Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society (https://ec.europa.eu/digital-single-market/en/news/proposal-directive-permitted-uses-works-and-other-subject-matter-protected-copyright-and).

[2] We will disregard the other texts presented as part of the copyright package, namely the directive and the regulation on the transposition into European law of the Marrakesh Treaty and its effects on the European Union's relations with third countries and the regulation on online transmissions of broadcasting organisations, as these are beyond the focus of this article.

[3] European Commission, 6 May 2015 "European Commission - Press release - A Digital Single Market for Europe: Commission sets out 16 initiatives to make it happen" (http://europa.eu/rapid/press-release_IP-15-4919_en.htm).

[4] Extract from the speech by Michel Barnier (Commissioner for Internal Market, in charge of Intellectual Property Rights), European Commission - Press release - Adapting copyright to the digital age: the next steps – "Licensing Europe", 6.12.2012 (http://europa.eu/rapid/press-release_SPEECH-12-923_fr.pdf).

in a 10-year interval between 1991 and 2001. The seven directives have created a measure of uniformity between the laws of the Member States.[5]

This harmonisation effort has resulted in improved coordination of copyright rules in the single market. However, it is important to point out that the European Union is not working from scratch in this field. Indeed, efforts to codify copyright began as early as the 19th century.[6] But while there are common European rules leading to the implementation of copyright, the exercise of copyright continues to be based on a territorial dimension. Logically, when the debate opened on the creation of the digital single market, the question of the exercise of copyright was perceived as a key issue in a context where the "digital market" implies the creation of a cross-border market theoretically free of national and/or territorial barriers.

The territoriality of copyright therefore came under fire: "The Member States have largely ignored the single-most important obstacle to the creation of an Internal Market in content-based services: the territorial nature of copyright. Despite extensive harmonisation, copyright law in the Member States is still largely linked to the geographic boundaries of sovereign states. Consequently, copyright markets in the EU remain vulnerable to compartmentalisation along national borders. (…). If the Community is serious about creating an Internal Market for copyright-based goods and services, is must inevitably confront the problem of territoriality in a fundamental way. This would imply the adoption of a Community Copyright Regulation (or European Copyright Law) to replace the existing directives and partially pre-empt the national laws on copyright of the Member States".[7]

The Juncker Commission initially took up the slogan inherited from the Barroso Commission - "to break down national silos in copyright", in other words to eliminate the territorial aspect of the exercise of copyright:

> "1. We must create a digital single market for consumers and business, making use of the great opportunities of digital technologies which know no borders.
> 2. To break down national silos in telecoms regulation, in copyright and data protection legislation, in the management of radio waves and in the application of competition law.
> 3. If we do this, we can ensure that consumers can access music, movies and sports events on their electronic devices wherever they are in Europe and regardless of borders." (Juncker, EU 2014)[8]

[5] 1. Protection of topographies of semiconductor products (Council Directive 87/54/EEC of 16 December 1986 on the legal protection of topographies of semiconductor products, OJL 24/87,24.01.1987);
2. Computer Programs Directive (Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, OJ L 122/42, 17.05.1991);
3. Rental Right Directive (Council Directive 92/100/EEC of 19 November 1992 on rental right and lending right and on certain rights related to copyright in the field of intellectual property, OJ L 346/61, 27.11.1992);
4. Term Directive (Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights, OJ L 290/9, 24.11.1993);
5. Satellite and Cable Directive (Council Directive 93/83/EEC of 27 September 1993 on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission, OJ L 248/15, 6.10.1993);
6. Database Directive (Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, OJ L 77/20, 27.03.1996);
7. Resale Right Directive (Directive 2001/84/EC of the European Parliament and of the Council of 27 September 2001 on the resale right for the benefit of the author of an original work of art, OJ L 272/32, 13.10.2001).
The Information Society directive (2001/29/EC) defines the right of communication and the right of making available to the public and introduces the WPPT and WCT into European law. It defines a set of exceptions for optional application by Member States.

[6] The Berne Convention for the Protection of Literary and Artistic Works was signed on 9 September 1886. The text has been revised or added to seven times since then. Added to this is a corpus of sector-based agreements, the most noteworthy being the WIPO Performances and Phonograms Treaty (WPPT) and the WIPO Copyright Treaty (WCT) (1996).

[7] Bernd Hugenholtz – "Towards an Intellectual Property Rights Strategy for Innovation in Europe" – EP, STOA (2009), p. 28 (http://www.eurosfaire.prd.fr/7pc/doc/1280392513_stoa2009_02_en.pdf).

[8] Jean-Claude Juncker – "A new Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic

Towards the Contemporary Copyright Model

The digital single market strategy presented in 2015[9] nevertheless states the need to "reduce" differences between national copyright regimes, not to abolish them. The strategy highlights the importance of improving cross-border access to copyright-protected content services, facilitating new uses in the fields of research and education and clarifying the role of online services in the distribution of protected works and other subject-matter.[10] In December 2015, the European Commission published in this context a communication entitled "Towards a modern, more European copyright framework".[11]

Gradually, with the presentation of the digital single market strategy, followed by the communication on copyright, the Commission sought to strike a new balance in the objectives of copyright reform. The initial approach of tearing down the copyright "barrier" was replaced by one more respectful of the exercise of intellectual property rights. The draft directive on copyright has three objectives in this regard: (a) to allow for wider online access to protected content across the EU, focusing on TV and radio programmes, European audiovisual works and cultural heritage; (b) to facilitate digital uses of protected content for education, research and preservation in the single market; and (c) to ensure that the online copyright marketplace works efficiently for all players and gives the right incentives for investment in and dissemination of creative content.[12] Easier access to protected online content and the digital use of protected content are in keeping with the approach of creating a digital single market. The idea is to ban the "barriers" of territory-based exploitation of works for certain uses, hence the difficult exercise of trying to reconcile the exploitation of rights on a territorial basis with easier cross-border access. These objectives also seek to enhance the functioning of the online copyright market for "all actors" (these are not defined but include online platforms and traditional distributors such as broadcasters, as well as content producers and music collecting societies, for example) with the ultimate aim of contributing to investment in creative content and innovation in dissemination modes.

The provisions through which these different objectives are meant to be achieved are set out in Title II and Title IV of the draft directive. Title II establishes an exception for reproductions and extractions made by research organisations to carry out data mining for the purposes of scientific research (article 3);[13] it also creates an exception for the digital use of works for the sole purpose of illustration for teaching (article 4)[14] and an exception allowing cultural heritage

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Change", European Commission, Press release, 15.7.2014 (http://europa.eu/rapid/press-release_SPEECH-14-567_en.pdf).

[9] "A Digital Single Market Strategy for Europe" (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0192&from=EN).

[10] "A Digital Single Market Strategy for Europe", p. 8 (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0192&from=EN).

[11] "Towards a modern, more European copyright framework", 9.12.2015 (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015DC0626&from=EN).

[12] Commission Staff Working Document – "Executive summary of the Impact Assessment on the modernisation of EU copyright rules", 14.9.2016 (http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016SC0302&from=EN).

[13] Article 3 - *Text and data mining*

"1. Member States shall provide for an exception to the rights provided for in Article 2 of Directive 2001/29/EC, Articles 5(a) and 7(1) of Directive 96/9/EC and Article 11(1) of this Directive for reproductions and extractions made by research organisations in order to carry out text and data mining of works or other subject-matter to which they have lawful access for the purposes of scientific research.

2. Any contractual provision contrary to the exception provided for in paragraph 1 shall be unenforceable.

3. Rightholders shall be allowed to apply measures to ensure the security and integrity of the networks and databases where the works or other subject-matter are hosted. Such measures shall not go beyond what is necessary to achieve that objective.

4. Member States shall encourage rightholders and research organisations to define commonly-agreed best practices concerning the application of the measures referred to in paragraph 3."

[14] Article 4 - *Use of works and other subject-matter in digital and cross-border teaching activities*

"1. Member States shall provide for an exception or limitation to the rights provided for in Articles 2 and 3 of Directive 2001/29/EC, Articles 5(a) and 7(1) of Directive 96/9/EC, Article 4(1) of Directive 2009/24/EC and Article 11(1) of this Directive in order to allow for the digital use of works and other subject-matter for the sole purpose of illustration for teaching, to the extent justified by the non-

institutions to make copies of works for the purpose of the preservation of such works (article 5).[15]

These provisions have the greatest impact on copyright as they introduce mandatory exceptions. The exceptions defined previously in Directive 2001/29 (Information Society Directive) were optional. Further, the aim of these exceptions is to secure a cross-border effect that undermines the territoriality (see, e.g. the exception for teaching (article 4.3): "The use of works and other subject-matter for the sole purpose of illustration for teaching (…) shall be deemed to occur solely in the Member State where the educational establishment is established"). On the other hand, the application of the Three-Step Test (article 6) is required. Some experts observe that the exceptions as defined are too narrow, especially for text-and-data mining limited to science and research.[16]

Title IV provides for the creation of a related right for press publishers for the digital use of their publications (articles 11 and 12);[17] it also provides that platforms that store or give access to works uploaded by users must, in cooperation with the rightholders, take measures to enter into agreements with the rightholders for the use of their works or to prevent the availability of their works. Platforms must provide rightholders with adequate information on the functioning

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commercial purpose to be achieved, provided that the use:
(a) takes place on the premises of an educational establishment or through a secure electronic network accessible only by the educational establishment's pupils or students and teaching staff;
(b) is accompanied by the indication of the source, including the author's name, unless this turns out to be impossible.
2. Member States may provide that the exception adopted pursuant to paragraph 1 does not apply generally or as regards specific types of works or other subject-matter, to the extent that adequate licenses authorising the acts described in paragraph 1 are easily available in the market.
Member States availing themselves of the provision of the first subparagraph shall take the necessary measures to ensure appropriate availability and visibility of the licenses authorising the acts described in paragraph 1 for educational establishments.
3. The use of works and other subject-matter for the sole purpose of illustration for teaching through secure electronic networks undertaken in compliance with the provisions of national law adopted pursuant to this Article shall be deemed to occur solely in the Member State where the educational establishment is established.
4. Member States may provide for fair compensation for the harm incurred by the rightholders due to the use of their works or other subject-matter pursuant to paragraph 1.

[15] Article 5 - *Preservation of cultural heritage*
"Member States shall provide for an exception to the rights provided for in Article 2 of Directive 2001/29/EC, Articles 5(a) and 7(1) of Directive 96/9/EC, Article 4(1)(a) of Directive 2009/24/EC and Article 11(1) of this Directive, permitting cultural heritage institutions, to make copies of any works or other subject-matter that are permanently in their collections, in any format or medium, for the sole purpose of the preservation of such works or other subject-matter and to the extent necessary for such preservation".

[16] See Alain Strowel, ERA Annual Conference on Copyright Law (17-18 November 2016), written submission. See also, Commission's comment on TDM: "The need to better reflect technological advances and avoid uneven situations in the single market is also clear with text-and-data mining (TDM), through which vast amounts of digital content are read and analysed by machines in the context of science and research" (Towards a modern, more European copyright framework – COM(2015) 626 final, p. 7).

[17] Article 11 - *Protection of press publications concerning digital uses*
"1. Member States shall provide publishers of press publications with the rights provided for in Article 2 and Article 3(2) of Directive 2001/29/EC for the digital use of their press publications.
2. The rights referred to in paragraph 1 shall leave intact and shall in no way affect any rights provided for in Union law to authors and other rightholders, in respect of the works and other subject-matter incorporated in a press publication. Such rights may not be invoked against those authors and other rightholders and, in particular, may not deprive them of their right to exploit their works and other subject-matter independently from the press publication in which they are incorporated.
3. Articles 5 to 8 of Directive 2001/29/EC and Directive 2012/28/EU shall apply mutatis mutandis in respect of the rights referred to in paragraph 1.
4. The rights referred to in paragraph 1 shall expire 20 years after the publication of the press publication. This term shall be calculated from the first day of January of the year following the date of publication."
Article 12 - *Claims to fair compensation*
"Member States may provide that where an author has transferred or licensed a right to a publisher, such a transfer or a license constitutes a sufficient legal basis for the publisher to claim a share of the compensation for the uses of the work made under an exception or limitation to the transferred or licensed right."

and deployment of the measures and provide adequate reporting on the recognition and use of the works (article 13).[18] These provisions seek to address the so-called loss of value of music collecting societies.

Title IV also establishes transparency obligations in contractual relations between authors and performers on the one hand and producers and publishers on the other, with the aim of ensuring better remuneration of authors and performers (articles 14, 15, 16).[19]

Title IV contains three separate measures. We will comment on the two provisions impacting digital use and digital regulation. The third, establishing transparency obligations in relations between authors and their contractual counterparts, has no consequences on digital regulation and will not be considered here.

Article 11 grants a specific related right to press publishers for the digital use of their protected content. The related right for press publishers for their online content is intended to boost press publishers' bargaining power in dealing with aggregators of press content or press sites. Since 2002, Google News (used either directly in the search engine or through its application) has offered news produced by press sites. Web users can therefore access the content of articles published in major daily papers without any remuneration being paid to the press publisher and with consequences on the sales of dailies (both on paper and online). Following in the footsteps of Google News, Facebook developed an Instant Articles service and Apple launched Apple News in 2015, offering a selection of five to ten articles available on iPhone. New practices like Web crawlers are emerging and undermining the press sector.[20]

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[18] Article 13 - *Use of protected content by information society service providers storing and giving access to large amounts of works and other subject-matter uploaded by their users*

"1. Information society service providers that store and provide to the public access to large amounts of works or other subject-matter uploaded by their users shall, in cooperation with rightholders, take measures to ensure the functioning of agreements concluded with rightholders for the use of their works or other subject-matter or to prevent the availability on their services of works or other subject-matter identified by rightholders through the cooperation with the service providers. Those measures, such as the use of effective content recognition technologies, shall be appropriate and proportionate. The service providers shall provide rightholders with adequate information on the functioning and the deployment of the measures, as well as, when relevant, adequate reporting on the recognition and use of the works and other subject-matter.

2. Member States shall ensure that the service providers referred to in paragraph 1 put in place complaints and redress mechanisms that are available to users in case of disputes over the application of the measures referred to in paragraph 1.

3. Member States shall facilitate, where appropriate, the cooperation between the information society service providers and rightholders through stakeholder dialogues to define best practices, such as appropriate and proportionate content recognition technologies, taking into account, among others, the nature of the services, the availability of the technologies and their effectiveness in light of technological developments."

[19] Article 14 – *Transparency obligation*

"1. Member States shall ensure that authors and performers receive on a regular basis and taking into account the specificities of each sector, timely, adequate and sufficient information on the exploitation of their works and performances from those to whom they have licensed or transferred their rights, notably as regards modes of exploitation, revenues generated and remuneration due.

2. The obligation in paragraph 1 shall be proportionate and effective and shall ensure an appropriate level of transparency in every sector. However, in those cases where the administrative burden resulting from the obligation would be disproportionate in view of the revenues generated by the exploitation of the work or performance, Member States may adjust the obligation in paragraph 1, provided that the obligation remains effective and ensures an appropriate level of transparency.

3. Member States may decide that the obligation in paragraph 1 does not apply when the contribution of the author or performer is not significant having regard to the overall work or performance.

4. Paragraph 1 shall not be applicable to entities subject to the transparency obligations established by Directive 2014/26/EU."

Article 15 – *Contract adjustment mechanism*

"Member States shall ensure that authors and performers are entitled to request additional, appropriate remuneration from the party with whom they entered into a contract for the exploitation of the rights when the remuneration originally agreed is disproportionately low compared to the subsequent relevant revenues and benefits derived from the exploitation of the works or performances."

Article 16 – *Dispute resolution mechanism*

"Member States shall provide that disputes concerning the transparency obligation under Article 14 and the contract adjustment mechanism under Article 15 may be submitted to a voluntary, alternative dispute resolution procedure."

[20] Web crawlers are software that browse the web to collect resources (web pages, images, videos, data).

Press publishers have sought to obtain financial compensation, with different approaches being taken from one country to the next. In France, the press sector signed an agreement in 2013 under which Google must make a financial contribution of €60 million to the sector. In Spain, a law adopted in 2014 requires content aggregators to remunerate press publishers for the right of redissemination. Shortly thereafter, in December 2014, the Google Noticias portal was shut down. In Germany, the March 2013 revision of the copyright law granted a related right to press publishers to obtain remuneration from search engines or aggregators. But the devolution of this right under national law in Spain and in Germany has failed to consolidate the ownership right of press publishers.

Following the more or less blatant failures of these national regulation attempts, the Commission decided, notably under pressure from German press publishers, to introduce the related right in European law. This related right gives press publishers the right of reproduction and the right of making available to the public as defined in the 2001 copyright directive.[21] The grant of a related right contributes to recognition of the press publisher's role in the digital value chain and helps guarantee the rights to the content being exploited. By granting a related right to press publishers at EU level, the Commission intends to change relations with aggregators, which would no longer be able to react as they have been able to do to date at the level of a single Member State. Mutatis mutandis, the related right has demonstrated its legal effectiveness, notably in court cases, with respect to audiovisual communication companies (broadcasters), protected by the related right granted to them under the unitary right. It will be interesting to see whether this right provides sufficient leverage to strengthen the bargaining power of press publishers. As a result, publishers' groups welcome the attribution of a related right as "a necessary and historically important step in guaranteeing media pluralism as an essential basis for freedom of opinion and democracy in the digital world".[22] The European Consumer Organisation (BEUC) questions this right and its impact on the availability of news aggregators, access to content and media pluralism.[23]

The draft directive clarifies that the protection of the new right does not extend to acts of posting hyperlinks, which do not constitute communication to the public under current EU law (see Recital 33). This is in line with the recent CJEU ruling in GS Media in which the Court held that posting a hyperlink to copyrighted content published online without consent of the copyright holder does not in principal constitute a "communication to the public". However, the exact scope of the new publishers' right still raises some questions. Several clarifications are needed, including whether or not the new right applies to publication on blogs, whether end-users will still be free to use snippets (i.e. small fragment of a text) and what type of use is going to be considered "digital use" of a press publication.

Article 13 sets up a framework striking a fair balance between platforms and rightholders and more specifically the music sector, which suffers from the online exploitation of works considering that platforms provide little or no compensation to creator. The measures proposed are complex but can be described as creating two obligations: the first requires platforms to negotiate fair agreements with rightholders for adequate payment of their works disseminated online. The second obligation aims to ensure greater transparency on the protected content stored by platforms by encouraging the use of content recognition technologies (such as the content ID technology developed by YouTube) and by responding to rightholders' requests on works stored and thus held by platforms, possibly against the will of the rightholders.

These measures responds to the pressing demands of the culture sector (authors, producers, publishers and notably the collecting societies in the music sector),[24] which has seen widespread pillaging of copyright-protected content with the emergence of platforms. The strong growth in the online market over the last decade has multiplied the importance of cultural content and of the services providing access to it. Due to their influence and dominance, online platforms have become the main portal to access online content and they carry significant economic weight. The total market value of online platform services in Europe is estimated at

Crawlers index press content, archive it and disseminate it to their customers in the form of a structured press panorama. The press panorama market is worth €163 million, of which only 13% benefits press publishers.

[21] Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

[22] See EUObserver, 15 September 2016 – "EU targets Google in copyright reform" (https://euobserver.com/digital/135089).

[23] See BEUC's oral statement – ERA Annual Copyright Conference, 18 November 2016.

[24] See GESAC's contribution to the debate on "Value Gap" (http://www.authorsocieties.eu)

€22 billion.[25] An average of 23% of this value is generated directly from the exploitation of cultural content.

Two types of services are offered by platforms: on the one hand are cultural content providers like Spotify, Deezer, Netflix or iTunes, which are licensed to use works and consequently have the authorisation of rightholders; on the other are online platforms like YouTube, DailyMotion and Facebook, which provide access to aggregated or user-uploaded content, in this case without the authorisation of rightholders.

Online platforms attract users by offering access to cultural content that they have organised, aggregated and recommended. They draw direct economic benefit from such content. Unlike access providers, online platforms provide little or no compensation to creators for the use of their works. This inequality of treatment stems from use of the liability exemption for hosting services in the electronic commerce directive.[26] This clause is stretched beyond what the legislator intended by being applied to copyright-related acts by online platforms. Platforms claim the status of mere technology intermediaries having no economic activity as the result of placing users in contact with the works to which they have access and they consequently refuse to negotiate compensation agreements with the rightholders concerned.

The result is that only a small share of the income generated by online exploitation is returned to creators, particularly for the exploitation of musical works. This also leads to a competitive disadvantage for access providers that negotiate licenses, which pay the license rights agreed with rightholders. Under article 13 of the draft directive, platforms that store and provide access to works must enter into agreements with rightholders for the use of these works. This provision imposes a best endeavours obligation on platforms: they must negotiate agreements with rightholders for the use of their works (as is already the case, notably for music with traditional distributors such as radio). Recital 38 states in this regard that platforms "are obliged to conclude licensing agreements with rightholders".[27] To prevent platforms from

[25] The total market value of platform services in Europe is estimated at nearly €22 billion [Search Engines: €16.140m | Social Media: €3.160m | Personal Lockers: €1.740m | Video Platforms: €845m | Content Aggregators: €100m | Total = €21 985m]. See: Cultural Content in the Online Environment: Analyzing the Value Transfer in Europe, Roland Berger 2015 (https://www.rolandberger.com/gallery/pdf/Report_for_GESAC_Online_Intermediaries_2015_Nov_EUR.pdf)

[26] Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market ("Directive on electronic commerce", http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32000L0031&from=EN).
Article 14 – *Hosting*
"1. Where an information society service is provided that consists of the storage of information provided by a recipient of the service, Member States shall ensure that the service provider is not liable for the information stored at the request of a recipient of the service, on condition that:
(a) the provider does not have actual knowledge of illegal activity or information and, as regards claims for damages, is not aware of facts or circumstances from which the illegal activity or information is apparent; or
(b) the provider, upon obtaining such knowledge or awareness, acts expeditiously to remove or to disable access to the information.
2. Paragraph 1 shall not apply when the recipient of the service is acting under the authority or the control of the provider.
3. This Article shall not affect the possibility for a court or administrative authority, in accordance with Member States' legal systems, of requiring the service provider to terminate or prevent an infringement, nor does it affect the possibility for Member States of establishing procedures governing the removal or disabling of access to information."

[27] Recital 38 - *Directive on Copyright (COM(2016) 593 final)*
"Where information society service providers store and provide access to the public to copyright protected works or other subject-matter uploaded by their users, thereby going beyond the mere provision of physical facilities and performing an act of communication to the public, they are obliged to conclude licensing agreements with rightholders, unless they are eligible for the liability exemption provided in Article 14 of Directive 2000/31/EC of the European Parliament and of the Council.
In respect of Article 14, it is necessary to verify whether the service provider plays an active role, including by optimising the presentation of the uploaded works or subject-matter or promoting them, irrespective of the nature of the means used therefor.
In order to ensure the functioning of any licensing agreement, information society service providers storing and providing access to the public to large amounts of copyright protected works or other subject-matter uploaded by their users should take appropriate and proportionate measures to ensure protection of works or other subject-matter, such as implementing effective technologies. This obligation

shirking their responsibilities by claiming the liability exemption under article 14 of the electronic commerce directive, recital 38 details what an "active" role means in the case of a platform. This active role exists if the platform "optimises" the presentation of the uploaded works or subject-matter or promotes them online. The crucial question is whether these criteria of optimisation of presentation or promotion of works are sufficient to demonstrate the active role of platforms, thereby prohibiting the use of article 14 of the electronic commerce directive.

Article 13 imposes additional measures. Paragraph 1 provides that platforms that store works must take measures in cooperation with rightholders to prevent the availability on their services of protected works identified by rightholders. Content recognition technologies, such as the content ID technology developed by YouTube, must be implemented. Platforms must provide sufficient information on the functioning and deployment of such measures and, where relevant, adequate reporting on the recognition and use of the protected works. Recital 39 seeks to make clear the conditions for implementing these recognition technologies. Platforms would be responsible for providing information on the technologies used, the way they are operated and their success rate for the recognition of rightholders' content. Rightholders, on the other hand, would have to provide the necessary data to allow recognition of their content.[28] These provisions are expected to strengthen transparency on how platforms use the works they store. The liability exemption defined by the e-commerce directive is not called into question, but it is clear that platforms will no longer be able to use it at their discretion, notably before courts, to shirk their responsibilities with regard to rightholders' claims.

It can be argued that the burden of proof is reversed. Platforms find themselves in a situation of having to justify their use of protected works and rightholders are consequently in a stronger position. These arrangements must also contribute to improving the fight against piracy, which continues to represent a major drain on intellectual property rights due to the massive illegal downloading of protected works (both musical and audiovisual).

There have been few reactions to date to the provisions of article 13 of the new directive. We can quote the European Group of Societies of Authors and Composers (GESAC) who called the proposal the "Europe's first step to end tech giant free riding".[29] Google's Vice-president, Caroline Atkinson wrote: "This would effectively turn the exempti into a place where everything uploaded to the web must be cleared by lawyers before it can find an audience".[30] BEUC (The European Consumer Organisation) voices doubts about the protection granted to consumers under the complaint and redress mechanism foreseen under article 13.2, noting that it applies only on an ex-post basis and will be difficult to implement since users have no specific rights. In a letter sent to the Commission a group of academics state that article 13 "imposes a general monitoring obligation upon a great number of providers of intermediary services. Such an obligation is not a special monitoring obligation but a general monitoring obligation as it does require the monitoring of the activities of all users." Article 13 would therefore be in contradiction with article 15 of the electronic commerce directive[31] which may contribute to the violation of all

should also apply when the information society service providers are eligible for the liability exemption provided in Article 14 of Directive 2000/31/EC."

[28] Recital 39
"Collaboration between information society service providers storing and providing access to the public to large amounts of copyright protected works or other subject-matter uploaded by their users and rightholders is essential for the functioning of technologies, such as content recognition technologies. In such cases, rightholders should provide the necessary data to allow the services to identify their content and the services should be transparent towards rightholders with regard to the deployed technologies, to allow the assessment of their appropriateness. The services should in particular provide rightholders with information on the type of technologies used, the way they are operated and their success rate for the recognition of rightholders' content. Those technologies should also allow rightholders to get information from the information society service providers on the use of their content covered by an agreement."

[29] The European Authors' Societies – "Copyright package: Europe's first step to end tech giant free riding", 14.09.2016 (http://www.authorsocieties.eu/mediaroom/262/33/Copyright-package-Europe-39-s-first-step-to-end-tech-giant-free-riding)

[30] EUObserver – "EU targets Google in copyright reform", 15.09.2016 (https://euobserver.com/digital/135089)

[31] Article 15 - *No general obligation to monitor* (Directive 2000/31/EC)
"1. Member States shall not impose a general obligation on providers, when providing the services covered by Articles 12, 13 and 14, to monitor the information which they transmit or store, nor a general obligation actively to seek facts or circumstances indicating illegal activity.
2. Member States may establish obligations for information society service providers promptly to inform

internet users' human rights.[32] The criticism is significant as it invokes respect for human rights, notably the right of freedom of opinion and expression, by referring directly to the European Charter of Human Rights: the provisions of article 13 would apply not only to organising more balanced relations between rightholders and platforms, but would also call into question users' access rights to a free internet.

Article 15 of the E-commerce Directive prohibits service providers from implementing general monitoring obligations. The CJEU ruled in two separate cases (Scarlet v. SABAM, 2011 and in SABAM v. Netlog, 2012) that the prohibition on general monitoring derives from Articles 8 and 11 of the European Charter of Fundamental Rights, which safeguard personal data and freedom of expression and information, and that a balance must be struck between the preventive measures imposed on technical intermediaries and fundamental rights. However, platforms routinely perform monitoring action through content-recognition technologies at the request of rightholders or on court injunctions in order to prevent particular infringements. For instance, videosharing platforms like Google and Dailymotion implement sophisticated copyright-management systems (e.g. Content ID, Audible Magic, etc.) that provide rights-holders an automatic means of monetising their content or for removing it in case of infringement.

Conclusion

The measures proposed by the Commission on rightholders' loss of value (article 13) and on compensation for press publishers (article 12) open up new horizons in the digital economy: this attempt to halt the pillaging by Google, Amazon, Facebook and Apple (GAFA) of the European cultural and information resources is commendable. The question is whether the instruments proposed are strong enough and of adequate scope to achieve this objective. This initiative is nevertheless courageous in a political and social environment in which consumer organisations are committed to the principle of free use on internet, policy-makers largely condone the economic reality of piracy and GAFA exerts strong pressure on policy-makers, leaving the Commission little room to manoeuvre. The EU executive should be supported and encouraged in its efforts. The exceptions to copyright aimed at improving protection of the cultural heritage in the digital environment, facilitating data mining and facilitating educational practices are nonetheless debatable. An exception to copyright should be the ultimate solution, used only when others - notably licenses negotiated between users and rightholders - are not possible. The European Commission fails to demonstrate the merit of these exceptions. It would seem that the idea is to compensate for the provisions granted to rightholders with measures benefiting the public, as though the Commission did not want to be accused of acting in the sole interest of rightholders. These proposals will have to be debated in the Council of Ministers of the European Union (which acts in this framework as legislator) and in the European Parliament. It will be interesting to see the outcome of these proposals.

the competent public authorities of alleged illegal activities undertaken or information provided by recipients of their service or obligations to communicate to the competent authorities, at their request, information enabling the identification of recipients of their service with whom they have storage agreements."

[32] "Open Letter to the European Commission - On the Importance of Preserving the Consistency and Integrity of the EU Acquis Relating to Content Monitoring within the Information Society", 30.9.2016 (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2850483).

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Social Networks and Participation: A Critical Literature Review

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Abstract

This paper explores the controversial concept of participation in contemporary commercial social networking media. It begins by investigating a number of contemporary theories related to social networking media in order to bring forth the assumptions that underline the usage of the concept of participation. Regardless of the epistemological and the ontological assumptions of the research surveyed, participation is generally accepted as the necessary pre-condition for the sustainability of social networking media. Specifically, studies from economic, social, cultural, and political perspectives make use of the concept of participation to make sense of the current usage of social networks. However, there is no agreed upon understanding of participation across such studies, and in some among the most notable cases, the definitions are either unsubstantiated, reductionist, and/or deterministic. This presents an impediment in furthering the understanding of the role of social networking media in contemporary societies and further fragments the analysis of the phenomenon. By critically analysing a multitude of perspectives on participation in social media studies, this critical survey attempts to develop a comprehensive overview of the understanding of participation that can be used as a basis for further research across different disciplines. The paper further argues that participation is a concept that cannot be studied without a multi-disciplinary approach that takes into consideration both micro and macro level of communication.

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Introduction

In light of the commercialisation of online collaborative platforms in the 1990s, the concept of participation gained a renewed interest within academic literature particularly in the field of communication and media studies. Terms such as “network nation” (Hiltz and Turoff 1978) and “collective intelligence” (Levy 1997) emerged amid a first wave of cyber-optimism. As Barry Wellman noted, these views “extolled the internet as egalitarian and globe-spanning, and ignored the way in which differences in power and status might affect interactions both online and offline” (2004, 124). With the rise of commercial social networking media such as Facebook and Twitter, a new optimistic trend exploded, following the dominant idea set forth by Jenkins (2006) and represented by the concept of convergence culture. Once again, the concept and imaginary of participation became central. In spite of Wellman’s addressing critique, a leading group of cultural theorists and media scholars hailed the connective power and liberating potential of social networking media (Henceforth SNM). Business analysts celebrated the new opportunities for marketers. As Kaplan and Haenlein stated, “(i)t’s all about participation, sharing, and collaboration, rather than straightforward advertising and selling” (Kaplan and Haenlein 2010, 65). Internet analysts welcomed user-generated content as a “shared global resource” (Shirky 2011, 27). “Everywhere you look, people are coming together to share with one another, work together, or take some kind of public action. For the first time in history, we have tools that truly allow for this” (Shirky 2008, cover page).

This article reviews the three main perspectives of participatory culture, summarizing the contributions of the positivist, interpretive, and critical approaches in order to weight contribution to the academic debate, and also pointing out shortcomings. Highlighting how these approaches consider the role of technology in society, the article aims to shed light on the controversial nature of the concept of participation and how literature needs to integrate the role of democratic theory, power, and political economy in the development of a solid theory of participation on social media.

Positivist Perspectives on Social Media and Participation

In general terms, positivist perspectives on social media tend to see technology as an instrument, stressing the quantitative effects of technology on organizations, and focusing on the quantifiable economic benefits resulting from usage (adapted from Orlikowski and Iacono 2001). Positivist approaches can be mainly found in economics, management, marketing, organizational communications, and information systems research. Within the positivist perspectives, the most common ones are the “computational” and the “tool” view. Social media companies are concerned primarily with constructing algorithms and models to represent, manipulate, store, retrieve and transmit information, thereby supporting, processing, modelling, or simulating aspects of the world (ibid 2001). On the other hand, single businesses and organizations think of social media in terms of a means to an end, as a labour substitution tool, a productivity tool, an information-processing tool, or a social relation tool. Here levels of access, interaction, and participation are assessed using a wide range of terms such as brand awareness (Kim and Ko 2012), brand engagement (Brown et al. 2007; Trusov et al. 2009), customer relationship performance (Nielsen 2002), organizational connectivity (Chivee et al. 2008), and word of mouth (Hoffman and Fodor 2010).

The ontology of the positivist approach sees objective reality and the social world as existing independent of humans. Human action is defined as user- or, in the case of more business-related research, customer-behaviour. This is considered as rational and purposive. According to Garretson (2008, 12), “consumers increasingly use digital media not just to research products and services, but to engage the companies they buy from, as well as other consumers who may have valuable insights”. Moreover, the approach acknowledges an alleged shift of power from companies to customers, inasmuch as “consumers are dictating the nature, extent, and context of marketing exchanges” (Hanna, Rohm, and Crittenden 2011, 265). With these preconditions analysts seem to have precise predictions for a future when businesses embrace openness, peering, sharing, and global thinking. Participation and collaboration become the key factors of a future of increased wealth creation. “A power shift is underway, and a tough new business rule is emerging: harness the new collaboration or perish. Those who fail

to grasp this will find themselves ever more isolated—cut off from the networks that are sharing, adapting, and updating knowledge to create value" (Tapscott and Williams 2006, 12).

Access is a fundamental aspect of positivist approaches to participation in social media. From single businesses' perspectives, promoting access entails increasing brand awareness. From the perspective of social media companies, this means opening new markets which were previously not easily accessible. The problematic aspect of access for business-related purposes is that, when driven by particular private companies, it could be limited to those information resources that the same companies can monetize at the expense of fair and open competition.

Interaction is another essential dimension of SNM under this perspective. According to Bertot et al. (2010, 266), social media "is defined by social interaction". Interaction generate both connectedness and connectivity (Van Dijck 2013). "Directing users to share information with other users through purposefully designed interfaces" (Van Dijck 2013, 46), social media promote connectedness, or, in other words, the creation and maintenance of new and pre-existing relationships, group formation, and circulation of information (Boyd and Ellison 2007; Shirky 2008; Boyd 2010). These characteristics are particularly heightened on Facebook. On the other hand, connectivity is the leading principle behind the Facebook business model. In Van Dijck's formulation, connectivity regards the sharing of users' data between Facebook and third parties (Van Dijck 2013). Connectivity takes place through three coding features that have been designed by Facebook developers, namely Beacon (now disabled after a fierce struggle focusing on privacy issues), Open Graph, and the Like Button (ibid 2013). The common purpose of the three features consists in the aggregation and processing of user data and their sharing with third parties, such as businesses and advertisers. These features operate on top of the more traditional display advertising that allows businesses to target market segments on Facebook with extreme precision. In fact, whereas with television advertising it is not possible to know exactly who is going to be exposed to the commercial message, with Facebook advertising, companies know in advance the peculiar characteristics of the receiver, such as their gender, provenance, and even purchasing habits.

Hoffman and Fodor (2010, 46) define participation as user-generated content likely to increase "commitment on the part of the consumer", "loyalty to the brand," and make "the customer more likely to commit additional effort to support the brand in the future". Customer participation in social media became a crucial node in the "pull" marketing mix. As Garretson (2008, 12) points out, "Consumers increasingly use digital media not just to research products and services, but to engage the companies they buy from, as well as other consumers who may have valuable insights". From this perspective, participation in social media needs to be precisely gauged, measured, and turned into ROI-oriented metrics. The authors also enumerate a series of strict categories of key performance indicators (KPIs) for brand engagement (as distinct from brand awareness and word of mouth) such as number of followers and number of @replies, for what concerns Twitter; number of comments, active users, "likes" on friends' feeds, user-generated items (photos, threads, replies), usage metrics of applications/widgets, impressions-to-interactions ratio, and rate of activity (how often members personalize profiles, bios, links, etc.) for what concerns Facebook (Hoffman and Fodor 2010, 45). A second instrumental role of social media participation is manipulation and control, in order to, internally, optimize the business' social media presence, and externally, improve customer-relationship management (CRM) at large. It follows that, internally, the objective is to quantitatively increase KPIs and enhance quality of customer engagement, such as tone of comments (de Vries, Gensler, and Leeflang 2012). Externally, the aim is "to engage in timely and direct end-consumer contact at relatively low cost and higher levels of efficiency than can be achieved with more traditional communication tools" (Kaplan and Haenlein 2010, 67). More specifically, the issue of control is central in the interface design of Facebook Pages, where communication flows are centralized and vertical, in order to offer Page administrators the power to monitor and govern flows of user-generated content[1].

A first problem with the positivist school is that it disregards qualitative approaches to social media participation. Doing so, this perspective overlooks contextual factors, such as conflict and

[1] An example of this is the introduction, in 2011, of Timeline, a new graphical layout in which the algorithm EdgeRank decides what content is to appear on top of a page's newsfeed according to relevance rather than chronologically. The new Page design marginalizes posts updated by users in a little window with narrow prominence. This decision by Facebook decreases visibility for personal expression on its pages in order to maximize the efficiency of branding (Coretti 2014).

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political economy, oversimplifying the complexities of power relationships among actors. Moreover, this approach focuses merely on the utilitarian objectives of presence and interaction: from a business perspective, profit; from a management perspective, efficiency; from a political marketing perspective, consensus. Furthermore, an emphasis on control ensures that any conceptualization of participation is limited to its more minimalistic expressions, whereby user's expression is allowed and encouraged only insomuch as it will be functional to these three goals.

Interpretive Perspectives on Social Media and Participation

The ontology of interpretive approaches rejects the positivist value of objectivity typical of positivist analysts, deeming reality as subjective and constructed by actors. Reality is thus a social construction that can be interpreted rather than merely discovered. Epistemologically, the interpretive researcher abandons the neutrality of positivism becoming part of the process of analysis, in which the participants' experience is emphasized. This perspective is dominated by the fields of sociology, socio-economics, media studies, political science and cultural theory, which, instead of focusing on the strictly quantitative predictions of positivism, prioritize qualitative approximations of micro-contexts of interaction and participation. The interpretive researcher sees technology as a human activity, stressing on socio-political issues resulting from usage. They tone down the tool view in order to incorporate considerations of organizational arrangements in which IT is developed and used. This implies that in order to understand technology one has to understand the context of use, and the interplay between the social and the technical. In this view IT is seen as a development project (e.g. a social process of design in a specific organization in which power moves and and symbolic acts become a paramount concern for the researcher), as a production network, as in Latour's Actor-Network Theory (2005), as an embedded system (with a stress on socio-historical, cultural and political accounts), and as a structure, drawing on Giddens' Structuration Theory (1984). In some cases, technology is seen as a "proxy", where the crucial aspects of IT can be understood through some set of substitutes (e.g. individuals' perception, and diffusion rates and costs), or, even, as nominal. This view does not conceptualize IT, or at least any specific technology, in favour of issues surrounding technology. Doing so, the interpretive approach attempts to overcome deterministic accounts seeing technology and society as inseparable and constantly feeding on each other. Consequently, technology starts losing its idealistic potentials and starts showing drifts (Ciborra et al. 2000). Participation in social media has been dubbed in various terms as convergence culture (Jenkins 2006), remix culture (Lessig 2008), and produsage/prosumption (Toffler 1980; Bruns 2008; Ritzer and Jurgenson 2010).

In his account over convergence culture, Jenkins equates social media to participatory culture and argues that spreadable media is the direct outcome of it (Jenkins, Li, Krauskopf and Green 2009, 7) as consumers "are grassroots advocates for materials which are personally and socially meaningful to them." In fact, Jenkins et al. (2009) considers platforms such as Youtube and Facebook as a clear manifestation of a gift economy. Spreadable media is then a tool for empowerment and thus a participatory artefact (Jenkins et al. 2013). Participation, within his understanding, democratizes products and services by increasing the input customers can have and in turn the emotional attachment. Jenkins (2009, 331) defines participatory culture mostly from the point of view of fans and customers focusing on their active contributions in terms of the creation and circulation of content, and in terms of their reciprocal interactions. He states that participatory culture is characterized by "relatively low barriers to artistic expression and civic engagement, strong support for creating and sharing one's creations, and some type of information mentorship whereby what is known by the most experienced is passed along to novices" (2009, 7). A participatory culture "is also one in which members believe that their contributions matter, and feel some degree of social connectedness with one another (at least they care what other people think about what they have created" (Jenkins, Purushotma, Weigel, Clinton and Robison 2009, 5f). The interactions amongst users create the collective intelligence, as advocated by Levy (1997), which can be considered a new source of media power (Jenkins 2009).

The mechanisms described by Jenkins (2009), especially drawing on his studies on fandom, make way to a meaningful public culture, where fans can speak back to TV networks and even lobby in favours of endangered shows (Jenkins 1992). By virtue of this argument, Jenkins assumes a natural link between fandom and political activities and assumes they have

the same characteristic in terms of involvement and nature of the struggle. Thus, the focus is on the involvement of a community with particular institutional contents. Successful changes to institutional content is seen as consumer empowerment as it involves the inputs from a variety of consumers. In turn, prosumption is seen as participatory regardless of the nature of content. Within this argument, Jenkins (2008, 137; 268) concludes that the web "has become a site of consumer participation (...) which further advances cultural diversity." Bruns (2008) draws a similar optimistic account picturing a produsage-based participatory culture which brings along new models for democracy. Likewise, according to Tapscott and Williams, social media result in the emergence of "a new economic democracy (…) in which we all have a lead role" (2007, 15).

However, not all interpretive accounts on social media participation share such positive outlook. Evgeny Morozov (2009), a media analyst that in other accounts relies on more critical approaches, describes slacktivism as the tendency to limit individual engagement to "political activities that have no impact on real–life political outcomes, but only serve to increase the feel–good factor of the participants" (Christensen 2011, introduction). Liking Pages on Facebook, signing online petitions, re-tweeting posts: these are just some of the examples of slacktivist practices. "When the marginal cost of joining yet another Facebook group are low, we click "yes" without even blinking, but the truth is that it may distract us from participating in more productive ways. Paradoxically, it often means that the very act of joining a Facebook group is often the end – rather than the beginning – of our engagement with a cause, which undermines much of online participation" (Morozov 2009, par. 6).

To conclude, the definition of participation within this approach stresses the interpretation of the role of the actor involved with the manipulation of cultural symbols. There are two main limitations within the interpretive outlook. First of all, as positivist approaches, interpretive accounts tend to oversimplify the role of power as a central defining issue of participation. This is due to the fact that interpretive approaches strongly focus on the micro levels of interaction without relating them to structural issues. Consequently, these accounts do not consider (or minimize) issues such as concentration of ownership, control, surveillance, and power law distributions. Secondly, cyber-utopian approaches such as Jenkins' convergence culture imply an automatic translation of interaction into participation that has yet to be demonstrated.

Critical Perspectives on Social Media and Participation

The ontology of critical approaches rejects both the idea that an objective reality exists and the view that reality is purely socially constructed. According to critical theory, reality is the product of history as a continuous struggle amongst classes wherein power is the central feature of analysis. The elements of analysis are always connected to a totality (e.g. society), whereby an emphasis is provided to institutional and historical situations. Epistemologically, critical approaches criticize interpretive frameworks for they do not stress structures as fundamental objects of study. Promoting emancipation and criticizing the status quo become imperative aims for the critical researcher.

Critical theorists consider technology at two different levels, firstly identifying its specific affordances, and then contextualizing them within the surrounding social environment (Feenberg 1991). Affordances (Gibson 1979; Hutchby 2001; Wellman 2003) constitute an interchange between the essential properties of technologies and the use that is made of them in terms of the interpretation of "the possibilities that they offer for action" (Hutchby 2001, 447). As Fuchs (2008, 2-3) states, such analysis is a two-stepped procedure, "consisting of (1) a process in which human actors design ICTs and in which it is analyzed how society shapes ICTs, and (2) a process in which it is assessed how the usage of ICTs transforms society". The position of technology and society on different levels does not imply a clear separation of the two. As within the interpretive approach, technology is considered as an immanent part of society (Williams 1961; Feenberg 1991, 2005; Winston 1998; Fuchs 2008, 2011). Furthermore, technologies are built in a social milieu with a design that is favorable to the power holders in society (Feenberg 1991, 2005). Hence, critical perspectives on social media participation focus on the political economy of digital technologies (Fenton and Barassi 2011; Fuchs 2009, 2014), and, drawing upon Foucault (1978), on power as an ever-present factor in communications (Carpentier 2011, 2016).

From a critical perspective, any account on social media participation must highlight the values that drive technological design, in the case of social media platforms such as Facebook, namely commercial interests and capitalist ideology (Feenberg 2005). Communication protocols

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of commercial social media, decreasing possibilities of action for users to a narrow range of choices, reinforce different power positions among those who create and control information and those who simply react to and interact with information (Coretti and Pica, 2015). As a corollary, interaction becomes an instrument of marketing in the social media attention economy. Whereas in the traditional media economy information was a scarce resource, in the context of social media, user attention becomes the scarce resource. In the attention economy users accept to receive generally free services in exchange for their attention to both content and advertising. Content acts as a vehicle towards advertising and the maximization of profits deriving from advertising. The issue of surveillance is directly linked to user attention. Hence the agreement between users and media producers does not involve attention only, but also the provision of personal information by the user. Through cookies, media producers access a wide array of user information, from their browsing history to their individual tastes and attitudes in exchange of highly targeted advertisements. This way interaction might be facilitated, but participation is curbed by surveillance and commodification of personal information (Fuchs 2014).

As Fuchs states, "The entire planet is today a capitalist factory. Internet user commodification is part of the tendency of the commodification of everything that has resulted in the generalization of the factory and of exploitation. Neoliberal capitalism has largely widened the boundaries of what is treated as a commodity" (Fuchs 2014, 118). The higher attention time is given to advertisements, the higher the profit will be. It follows that the more popular a certain content is, the more profitable it is, hence the prominence of mainstream entertainment at expense of more complex and informative content. The supremacy of entertainment curbs participation through a process that Putnam (1995) calls "time displacement hypothesis". Putnam attributed to television viewing the decline of participation in the American political system and social activities. The same argument can be applied to online media, with various empirical studies which prove that users spending more time with online entertainment spend less time participating (Nie 2001; Bugeja 2004). It follows that in spite of interaction being a precondition to participation, there is an inverse correlation between interaction and participation when interaction regards entertainment rather than political content.

According to this perspective, a typical practical expression of participation takes place in alternative and community-driven media, such as Wikipedia and Diaspora, free from alienation, exploitation, and corporate control. Sandoval defines community media as "media that serve a specific geographic community or a community of interest, and allow non-professionals to actively engage in media production, organization and management" (Sandoval 2014). Alternative media "emphasize the organization of media to enable wider social participation in their creation, production, and dissemination than is possible in the mass media" (Atton 2002, 25). However, the idea of alternative media as fully participatory is not free from controversy. To start with, whereas it is true that participation is considered to be central in order to promote social capital and communal spirit, it can also be exclusionary, in terms of who has the right to participate, and divisive, in terms of the values that drive collective involvement. Countless examples could be cited here, from the explicit self-destructive behaviour of pro-anorexia online communities such as "pro-ana" (Norris et al. 2006), to neo-Nazi groups (Linden and Klandermans 2007). Second, alternative media are subject to power laws of distribution as much as commercial media. It is known that information distribution on a commercial platform such as Twitter is dominated by a small elite of 20 thousand users, amounting for less than 0.05 per cent of the whole Twitter population, which attracts half of all attention within the popular SNM (Wu et al. 2011). In 2008, 90% of the content shared on Twitter came from 10 per cent of the users only (Oreskovic 2009). Similar patterns are present on Wikipedia, where only 2 per cent of users ever contribute material (Shirky 2010). Although the Internet is an open network, most of the traffic is concentrated in few sites, replicating the mass-media model. Moreover, offline power relations are seldom challenged online. "While the Internet may increase the circle of participants in the public sphere, access to its tools is skewed in favour of those who already are well-off in society-in terms of wealth, race and skills" (Benkler 2006, 236). Fenton and Barassi stress attention on the importance of "being in the media" in order to transmit a message efficiently. "The more powerful and influential individuals are, the better placed they are to get their message across" (Fenton and Barassi 2011, 193). This phenomenon, on a long-term basis could have a disruptive impact on the participatory potential of the Internet.

In a nutshell, the view of participation by critical scholars is holistic and it involves the equal sharing of symbolic, political, organizational, and economic decision-making between grassroots and corporate power. Limitations of the critical approach include varying degrees of determinism

of the struggle upon classes and economic considerations, too much stress on contradiction as endemic to human condition, and an overstatement of maximalist forms of participation. Critical theorists seldom acknowledge the expansion of the political sphere minimizing the role of the cultural sphere highlighted by new social movement theorists. Moreover, in their extreme versions, they tend to drift towards the populist aim of total equality. As Carpentier (2011, 26) states, "(m)odels that support stronger forms of participation (even the most maximalist versions) do not aim for the (symbolic) annihilation of elite roles, but try to transform these roles in order to allow for power-sharing between privileged and non-privileged (or elite and non-elite) actors." 'Old' questions that have been at the core of the direct democracy debate, such as whether voters are competent or not, and whether direct democracy benefits the few or the many, apply even to a hypothetical situation of a truly participatory media landscape (Lupia and Matsusaka 2004).

The Matrix of Social Media Participation

By reviewing the main analytical perspectives of social media participation, and highlighting contributions and shortcomings, this article stresses the need for a vision of the term that overcomes the tiresome binary outlook of technology proposed by cyber-utopians and cyber-pessimists that see technology as either inherently enabling or oppressing potentials for a more participatory culture. As Dencik and Leistert (2015, 2) comment, abstracting "social media technologies from the social, political, economic and cultural processes that embed their development and uses leads, otherwise, too frequently to a strategically driven interpretation of events." Acknowledging the fact that overlaps among analytical perspectives are present (see, for instance, Jenkins 2013, and Jenkins and Carpentier 2013), the article proposes a more holistic understanding of participation by developing a matrix comprehensive of all views.

A first dimension of analysis in social media participation draws upon classical social theory and media studies. It concerns the degrees of sociality held by the media as techno-social systems, "in which information and communication technologies enable and constrain human activities that create knowledge that is produced, distributed and consumed with the help of technologies in a dynamic and reflexive process that connects technological structures and human agency" (Fuchs 2014, 37). According to Hofkirchner (2002, 2013) and Fuchs (2014), media hold three levels of sociality, namely, information and cognition at the first level; communication at the second one; community, collaboration, and co-operation at the third level. Access is the key to the first level of sociality, which is typical of mass media and the World Wide Web of the 1990's, the so-called web 1.0. This level involves limited agency at an individual level, whereby knowledge produced in society is objectified, "applied and used in social systems" (Fuchs 2014, 38). Information enters the realm of knowledge as a social fact (Durkheim 1982), constraining because independent of individual behaviour, enabling because it acts as a precondition of higher levels of sociality. Communication acts as a second stage in Hofkirchner's model of social activity (2002, 2013). This level is based upon the Weberian concepts of social action and social relations (Fuchs, 2014). According to Weber (1978, 4), "(a)ction is 'social' insofar as its subjective meaning takes account of the behaviour of others and is thereby oriented in its course". Here the separation between the individual nature of access and the symbolic and communicative nature of interaction becomes manifest. This level is typical of the telephone, the telegraph, and Internet applications such as Instant Messaging software. The interpretation of participation put forward in this paper is directly related to the concepts of community, cooperation and collaboration as highest levels in the model of human sociality. Through mutual relationships, individuals build a sense of belonging and mutual dependence, establishing the collective identity of a given community. At a higher level, individuals can cooperate with "hands, organs of speech, and brain, not only in each individual, but also in society, human beings became capable of executing more and more complicated operations, and of setting themselves, and achieving, higher and higher aims" (Engels 1886, 288). The highest degrees of sociality are expressed by SNM.

It is possible to draw a parallel between the three stages of Hofkirchner's model of sociality and the three levels of Carpentier's Access-Interaction-Participation (AIP) model (2011, 2016a). Each stage of sociality is equivalent to each of the technological affordances as theorised by Carpentier in his negative-relational model; at the first level, information and cognition match access; at the second level, communication corresponds to interaction; at the highest level, community and co-operation correspond to participation. The notion of access is strictly

intertwined with the concept of presence, "whether this is the presence of objects and people, the presence of information (and ideas and knowledge), presence in specific spaces or presence in specific institutions (or organizations)" (Carpentier 2016a, 10). When looking at digital media, access can be assessed along two dimensions, the social and the cognitive (Newhagen and Bucy 2004). The social dimension of access concerns issues of digital inclusion. According to the World Bank's report "World Development Report 2016: Digital Dividends", the number of people connected to the internet has more than tripled between 2005 and 2015, from 1 billion to an estimated 3.5 billion. However, this means that still more than 50% of the world population is excluded from online information, with a significant disadvantage in educational and economic terms. Mobile technology may help bridge this gap. Over the next ten years, up to 3 billion additional people will connect to the Internet through mobile technology (Manyika et al. 2013). The cognitive dimension of access relates to the issue of knowledge divide. Having physical access to Internet-ready devices does not necessarily imply that the user knows how to use them proficiently. Whereas digital divide is the domain of technology, knowledge divide is the domain of culture and education. According to Deepak Mishra (2015, 1-2), "(e)vidence suggests that digital technologies are in fact helping to expand knowledge, but are not succeeding in democratizing it. That is, digital technologies are helping to bridge the digital divide (narrowly defined), but are insufficient to close the knowledge divide. Democratizing knowledge is more than a matter of connectivity and access to digital devices. It requires strengthening the analog foundations of the digital revolution – competition, education (skills), and institutions – that directly affect the ability of businesses, people, and governments to take full advantage of their digital investments". The concepts of information, cognition, access, and presence are central within the utilitarian focus typical of the positivist approach, where participation is intended as consumption towards the aims of either profit, efficiency, or consensus. On the other hand, they act as pre-conditions of participation within the interpretive and critical approaches.

The second stage in Carpentier's AIP model is interaction. This term, which finds its equivalent in the second stage of Hofkirchner's sociality model, has been defined in various ways in social science. Giddens's definition encapsulates the main common characteristics of interaction, whereby interaction includes "any form of social encounter between individuals" (Giddens 2006, 1034). First of all, as Merrill and Eldredge (1957) point out, such encounter has to be meaningful. This caveat if far from being unproblematic. This issue concerns both nature, scope and effects of communication. Drawing upon Malinowski (1923) and Schneider (1988), we rely on the dichotomy between phatic and instrumental communication. Phatic communication is "purposeless" (Malinowski, 1923), as it aims at establishing a social presence rather than at transmitting meaningful information (ibid, 1923). On the other hand, instrumental communication is "purpose oriented" (Schneider, 1988). As various studies prove, online media culture is becoming increasingly dominated by phatic forms of communication (Miller 2008; Coretti and Pica 2015). Secondly, interaction implies various degrees of "reciprocity and bidirectionality" (Carpentier 2016, 14). However, considering that online conversations in SNM often involve considerable numbers of participants, the idea of *trialogic* interaction makes more sense than simple *dialogic* interaction. A trialogue is in place when interaction in a network is multi-directed and reciprocal among a significant number of nodes. However, due to the structure of SNM's communication protocols, the nature of online group conversations often resembles unbalanced flows of information in favour of stronger nodes (i.e. Facebook page administrators over users in page posts) (Coretti and Pica 2015). In all definitions of interaction, communication is central. Conflating the two together could bring to an impasse such as the one in place regarding slacktivism. In fact, Morozov's hypothesis on slacktivism creates a false dialectical relationship between slacktivist participation and 'real' participation. Actually, what Morozov calls slacktivism, rather than being a downturn of participation, represents a set of interactions, either user-to-user or user-to-document, that, in certain contexts, might even act as preconditions towards participation (Christensen 2011). Whereas there is no empirical evidence that acts of slacktivism displace attention from offline participation, it has been proved that using social technologies for private entertainment might have a negative effect on participation levels (McLeod, Scheufele, and Moy 1999; Norris 2000; Prior 2007; Shah 1998; Wellman, Haase, Witte, and Hampton 2001; Zhang and Chia 2006). As Gil de Zuniga et al. (2012, 321) remark, "it is not the media per se that can affect individuals' social capital and engagement, but the specific ways in which individuals use media."

Carpentier (2011, 2016a) criticizes a wide range of definitions of participation because they conflate characteristics of different terms in one vague concept. For example, Melucci defines participation as "both taking part, that is, acting so as to promote the interests and the needs of an actor as well as belonging to a system, identifying with the 'general interests' of the community" (Melucci 1989, 174). Gottlieb defines participation as community engagement, as a "process of building relationships with community members who will work side-by-side with you as an ongoing partner, in any and every way imaginable, building an army of support for your mission, with the end goal of making the community a better place to live" (Gottlieb 2006, 130). Del Bono et al. define social participation as the "advantages that come with developing and maintaining a variety of social relationships and involvement in the community. Aspects of social participation include contact with a partner, adult children or other family members, interactions with neighbours and friends, as well as engagement in voluntary work and local leisure and social activities" (Del Bono et al. 2007, 55). In all these definitions, as in Jenkins' definition (provided in the previous section), the undifferentiated application of access, interaction, and participation as if they were a single concept is apparent. Melucci includes characteristics typical of access such as belonging. Gottlieb focuses instead on the communicative aspects of interaction. The same can be said about Del Bono et al.'s account, which also emphasizes aspects of social capital.

Understanding and applying democratic theory is key to illuminate the conceptual vagueness around participation Democratic theory (Carpentier 2011, 2016b). Democratic theory helps categorizing participation according to two closely intertwined dimensions, namely decision-making processes and intensity of participatory practices. The key concept in this perspective is power, as an ever-present feature in social relations. In any context, an assessment of participation must consider the localities, power positions of the actors involved, and the intensity of their participatory practices. Participation is itself part of the power struggles in society for how political process should be defined and arranged. In terms of decision-making processes, Pateman (1970) distinguishes two categories of participation, partial and full. Partial participation sees a decision-making process among parties where decisional power is distributed unequally. On the other hand, full participation is characterized by equal deciding power among parties (ibid 1970, 70-71).

The second dimension follows as a corollary, whereby decision-making processes shape the intensity of participatory practices. Carpentier (2011) points out a primary distinction between minimalist and maximalist forms of participation. Minimalist participation is typical of classical liberalism, whereby it encompasses the right of the citizenry to elect the rulers and to stand for the election (Schumpeter 1976; Marshall 1992). The minimalist model is characterized by centralized decision-making processes, delegation, and limited citizen participation. On the other hand, the maximalist model is typical of Marxism and anarchism. Characterized by de-centralized decision-making processes, this model is expressed in a variety of different articulations, all of which highlight a close connection between mass participation, individual autonomy, and direct democracy (Jennings 1999). Somewhere in the middle lies the New Left framework, which combines elements of direct democracy at a local level and representative democracy at a national level (Pateman 1970). Along the two dimensions of decision-making processes and intensity of participatory practices, Arnstein (1969) develops a "ladder" of participation that spans from non-participation, tokenism, to citizen power. Within this model, consumption of information might be a precondition to participation but also a tool for manipulation. Likewise, interaction might inform and stimulate participation without necessarily questioning power imbalances that hinder full participation (see Carpentier 2016b for further information).

Participation does not take place in a vacuum; only appreciating the contextual surrounding facilitates a better understanding of the concept. Following the three main analytical perspectives, a practical definition of participation needs to take into account the following dimensions: in the first place, the central nature of an expanding political sphere from the perspective of democratic theory (Carpentier 2011); secondly, the different nature of participation in respect to access and interaction (Carpentier 2011, 2016a); finally, from a critical political economy approach, the affordances emerging from the widespread use of commercial social technologies (Fuchs 2008, 2011; Coretti and Pica 2015).

The above discussion brought to fore the following differentiating characteristics in the view of social media participation. Firstly, the focus of research. From the dominant perspectives, participation can be seen as either consumption, manipulation and sharing, or co-deciding and co-owning. These three conceptualizations entail different ontological and

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methodological apparatuses, as previously discussed in this article. Secondly, Arnstein's (1969) 'ladder of participation' frames the discussion within the realm of democratic theory, excluding the more culturalistic interpretations of participation typical of the interpretive approach. Thirdly, differentiating between access, interaction, and participation is a crucial dimension in order to move beyond traditional appreciations of participation that, due to extremely diverse usages, tend to remain vague and often essentialist (Carpentier 2011). Drawing on Carpentier's (2011, 2016a) AIP model, the social media participation matrix considers these three dimensions as technological affordances of media according to their potential in terms of sociality (Hofkirchner 2002, 2013; Fuchs 2014). These six dimensions represent the main point of difference and contention amongst the literature surveyed. Following, the proposed Social Media Participation Matrix is introduced (Fig. 1).

Degrees of Sociality	Technological Affordances	Degrees and Types of Participation		Ontological Approach	Epistemological Approach	Elements of Focus
Social Media as Social Facts (Durkheim, 1982)	Information / Access	Nonparticipation	Manipulation / Therapy / Informing*	Positivist	Quantitative (e.g. Big-Data Statistics, Surveys, etc.)	Utilitarian; User Access / Presence as instrumental towards profit, efficiency, or consensus. Participation as consumption.
Social Media as Social Relations (Weber, 1978)	Communication /Interaction	Partial Participation	Consultation / Placation	Interpretive	Qualitative (Interviews, Observation, etc.)	Focuses on Micro-context; Emphasis on the interpretation of the role of the actor involved. Participation as manipulation and sharing of cultural symbols.
Social Media as Community (Tonnies, 1988)	Community/ Co-Operation /Participation	Full Participation	Partnership / Delegated Power / Citizen Control	Critical	Qualitative + Quantitative	Focuses on power struggles. Focuses on macro and structural characteristics. Participation as equal sharing of decisions and ownership.
Social Media as Co-Operation (Marx, 1867)						
Adapted from Hofkirchner (2002, 2013), and Fuchs (2014)	Adapted from Carpentier (2011, 2016a)	Adapted from Arnstein (1969, in Carpentier, 2016b)				

Figure 1. Social Media Participation Matrix.

To conclude, a holistic view of social media participation is one that considers and analyses both the enabling structures of communication platforms (e.g. Coretti and Piga 2015) and the individual behaviours (e.g. Miller et al. 2016). Hence, the understanding of participation put forth by this paper suggests a multi-methodological epistemological stance, that advocates the use of both quantitative and qualitative methods and a focus on both micro- and macro-levels of interaction. It also strongly suggests an emphasis on the architecture of SNM, on the affordances of technology, and the individual role and power relations amongst actors.

Conclusions

An increased awareness of the controversial utilization of user data by commercial SNM such as Facebook and Google, and the intrusive levels of surveillance by government agencies such as the NSA in the United States and GCHQ in the United Kingdom, gave rise to more critical approaches towards online participation. As Carpentier (2011, 2016a) points out, cyber-utopian accounts on participation lack of insight into democratic theory and a conceptual apparatus regarding participation. Sandoval (2014) further adds that there is a systematic neglect of the political economy of the platforms where participation takes place.

This paper tries to make sense of the various views of participation. Participation has to present an active component and a shared outcome. It is clear that positivist approaches neglect the constitution of participation following a hyper rationalistic and economically deterministic view of social connections. On the contrary, interpretivist views concentrate on micro systems of connections and explode the concept of participation to all sorts of social realm, relying on hyper relativist, and cyber utopian accounts of fan groups to justify claims of increased democratization. Finally, the critical school tries to bridge the gaps of the former views by uncovering intentionality, systemic power relations and comparing ideal political economies of participation. In these terms the critical school addresses the gaps and shortcomings of previous literature. However, it still presents a problem of over focus on social struggle and capital accumulation.

The paper proposes taking into consideration all three views of participation, in order to put forth a holistic understanding of participation. Further research is needed to develop the proposed matrix into a sensitizing device for future research on participation in social networks. Further research is also needed in order to evaluate the shortcoming of all three schools so that a full framework can be devised to guide future empirical endeavours that understands participation as a controversial and multi-facet phenomenon that needs both macro and micro understanding to be appropriately framed into every context.

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Grand Tour: immaginario, territorio e culture digitali

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Abstract

Il Grand Tour può essere recuperato come asset narrativo utile per un intervento strategico di re-branding del viaggio in Italia? Il contributo analizza il contesto e le condizioni per una progettazione di questo livello nell'ambiente culturale dell'epoca digitale. Considerando gli archetipi moderni della mediazione dei luoghi come una grande riserva di senso, da riattivare sia nelle pratiche basate sui format seriali e transmediali che valorizzano i territori nella produzione creativa, sia nella costruzione di infrastrutture digitali e transluoghi per la valorizzazione degli attrattori culturali.

Grand Tour: Imaginary, Territory and Digital Cultures

Could the Grand Tour be recovered as a narrative asset oriented to a strategic re-branding of the travel in Italy? The present contribute analyzes the context and the conditions for a design of that level in the digital age cultural environment. According to the modern archetypes of the places mediation as a great reservoir of meaning, it points out strategies to reactivate them both through practices based on serial and transmedial formats promoting the territories by creative production, and through the construction of digital infrastructures and trans-places aimed at enhancing cultural attractors.

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Perché ritornare al Grand Tour?[1]

Comunicazione turistica top down e bottom up, marketing esperienziale del territorio, (digital) storytelling, immersività, profilazione del visitatore; docufiction, mockumentary e reality show per il turismo, cineturismo, teatralizzazione degli spazi storico-artistici, realtà aumentata, 3D, gamification, social network. Sono tanti gli strumenti oggi disponibili per la valorizzazione del patrimonio culturale. C'è molta confusione, a iniziare dalla messa a fuoco dei punti di forza di un *italian cultural heritage* e quindi dalle scelte sui settori del nostro patrimonio sui quali concentrare (le poche) risorse: tangible o intangible? l'archeologia? il paesaggio? l'enogastronomia? le città d'arte? i borghi? Tutti insieme? Mancano linee e macroobiettivi di comunicazione e si procede come al solito a braccio. Ogni regione, ogni comune va avanti per conto suo, con strumenti di promozione diversi e spesso non integrabili. Senza voler sminuire qui le responsabilità delle istituzioni per il disastro in cui versa la comunicazione turistica e del territorio in Italia, va ammesso che valorizzare e promuovere il Belpaese è oggettivamente difficile, anche perché non ci sono modelli da imitare. La Spagna per esempio ha puntato in gran parte su alcuni luoghi dello svago e dello "sballo" (Costa del Sol, la costa valenciana, Barcellona e la Costa Brava, le Baleari) che attraggono soprattutto i giovani, mentre nei mesi invernali si popolano di pensionati stranieri. Il turismo francese è "parigicentrico" e basato essenzialmente sulla cultura artistica ed enogastronomica. Quello inglese, "londracentrico", su un mix di cultura (soprattutto pop) e divertimento, oltre ovviamente sull'insegnamento della lingua. Quello olandese, "amsterdamcentrico", funziona sul modello spagnolo, con più musei e architettura. Tutti, in effetti, si caratterizzano per la presenza di una struttura semplice e compatta di luoghi e archetipi, di asset narrativi transmediali (Giovagnoli 2013) su cui costruire una diversificata strategia promozionale che utilizzi tutti gli strumenti comunicativi per poi valorizzare il resto del patrimonio e dei territori. È più o meno la strategia della "coda lunga" (Anderson 2006).

Una strategia difficilmente applicabile in Italia, dove i grandi attrattori sono moltissimi, di molti tipi diversi, e sparsi sul territorio: Roma, Venezia, Firenze, Napoli, la Sicilia, l'Umbria, i cinquantuno siti Unesco, le Alpi, i Vulcani, il mare della Sardegna e quello della riviera romagnola, il trekking, lo sci, l'enogastronomia (diversa in ogni regione), le terme, la musica, etc. Lo stesso per gli archetipi: il sacro, il profano, il benessere, il divertimento, il cibo, il clima, la cultura (in tutte le sue possibili declinazioni), il paesaggio, lo sport, l'avventura, etc., senza considerare la debole identità nazionale degli italiani e la loro scarsa fiducia nelle istituzioni statali sovraregionali. Il rischio è che siano altri soggetti a costruire stereotipi (il paese del Papa, dell'arte, del mare) e narrazioni su di noi, a determinare la nostra immagine, e dunque la quantità e qualità dei flussi turistici (impermeabili l'uno all'altro e non organizzati sul territorio in percorsi e itinerari coerenti). A fronte della straordinaria ricchezza dei punti di interesse, se il soggiorno medio dei turisti stranieri in Italia resta inferiore alla settimana (a Roma solo tre notti)[2] la causa principale è l'incapacità di immaginare strategie di gestione e promozione del patrimonio sistemiche e coerenti, sulle quali costruire comunicazione e servizi.

Esiste una possibilità di creare per il patrimonio e territorio italiani un asset turistico-narrativo che attraversi verticalmente il paese e che possa assicurare coerenza ed efficienza dal punto di vista gestionale, economico e comunicativo? E quali relazioni si configurano tra l'ambiente digitale e queste scelte strategiche?

Nel nostro contributo proponiamo di tornare indietro nel tempo, a quando l'Italia era per l'Europa la meta di viaggio per eccellenza, il luogo in cui fare esperienza di tutto: arte, religione, natura, scienza, politica, catastrofe, erotismo, clima, benessere, avventura, festa, divertimento, cibo, commercio. Tutto in un solo viaggio che infatti durava mesi, se non anni.

Rilanciato da una sterminata produzione letteraria, il Grand Tour era un sistema abbastanza complesso che legava a sé tra la fine del XVI e il XIX secolo miti e territori del Belpaese in un viaggio di formazione che metteva alla prova il visitatore e lo preparava alla sua vita futura. Prima delle metropoli, il principale spazio di simulazione per l'Europa, e il primo grande

[1] L'articolo è stato condiviso e discusso dagli autori. Nello specifico Emiliano Ilardi ha scritto i primi 3 paragrafi e Donatella Capaldi gli ultimi 2.

[2] Statistiche ENIT 2015: http://www.enit.it/it/studi.html e Comune di Roma: https://www.comune.roma.it/PCR/resources/cms/documents/Il_turismo_a_Roma_24_11_2015_01_X.pdf

immaginario transnazionale moderno. È possibile recuperarlo nell'ambiente culturale della società delle reti? Adattarlo all'Italia di oggi, e al viaggiatore contemporaneo, che si sposta velocemente con aerei e treni ad alta velocità armato di smartphone e tablet? Renderlo credibile per il turismo esperienziale, immersivo, consumista e disincantato?

Gli archetipi del Grand Tour

La nascita del Grand Tour a fine Cinquecento segna un passaggio chiave verso la modernità: dai pellegrinaggi medievali - il cammino di Santiago, la via Francigena dal Nord dell'Europa verso Roma e Ancona o Brindisi per l'imbarco per la Terra Santa, e altri itinerari devozionali diretti a santuari e abbazie - a una concezione laica del viaggio come esperienza di formazione, che da allora fino a metà Ottocento ha assolto una precisa funzione nella vita dei rampolli delle classi dirigenti nobili e alto borghesi delle principali nazioni straniere, rispondendo a una doppia pulsione, verso la conoscenza e verso il piacere. Convenzionalmente se ne attribuisce l'invenzione a Elisabetta d'Inghilterra, poi imitata dal Re Sole e dall'Elettore del Brandenburgo (Brilli 1995). Borse di studio venivano destinate a giovani gentiluomini che, accompagnati da un tutor e spesati dalla corona, avrebbero dovuto raffinarsi sul piano politico ed estetico, viaggiando in Francia, Svizzera, Germania, per approdare in Italia, terra di corti e di repubbliche dogali, ossia dei modelli politici esemplari a livello europeo. Un "vademecum" del perfetto viaggiatore, redatto da Francis Bacon (*Of the travel*, 1615), insegnava ad affinare l'osservazione dei fenomeni politici ed economici (nello stile della nascente metodologia scientifica), registrarne le peculiarità organizzative e culturali, imparare la lingua, le maniere e le relazioni sociali, avviare e mantenere i contatti necessari per scoprire cose inedite, rinsaldare rapporti futuri, e soprattutto comprendere il funzionamento delle istituzioni: politiche, giudiziarie, religiose, artistiche, educative e militari. Nelle città-capitali (per l'Italia soprattutto Roma e Venezia) i giovani dovevano visitare le corti dei principi e quelle di giustizia, le chiese e i monasteri, i monumenti, le mura e le fortificazioni, le biblioteche, le università, l'alta manifattura e le rarità; se si arrivava in una città di mare (Genova era per gli inglesi il punto di approdo in Italia) anche il porto e le camere di commercio. La Serenissima, oggetto di culto soprattutto per i britannici nel secolo della rivoluzione di Cromwell, coniugava istituzioni politiche "aperte", intense attività economiche e commerciali, una fertile produzione artistica e una nuova e agguerrita industria dell'intrattenimento. Mentre Roma, rimessa a nuovo da Papa Sisto, era la Corte ma anche l'Urbs per antonomasia, il luogo della Res Publica, della fondazione del diritto, dell'Impero, dello Stato Pontificio, dell'antichità a cielo aperto e di una concentrazione unica e irripetibile di opere d'arte e di architettura. Una terza capitale, Napoli, si aggiungeva al Grand Tour alla fine del Seicento, con le incombenti e "minacciose" bellezze del Vesuvio e dei Campi Flegrei e le vestigia greco-romane (Fino 1993; De Seta 2011). Da Genova, da Torino, dal Brennero, partiva una rete di stazioni di posta che, ogni 30 km, garantivano riposo e cavalli freschi; e lungo il viaggio altre esperienze si innestavano sul tragitto canonico, fino a creare un archetipo più complesso: via Lucca (con i bagni termali, l'antenato della pratica salutistica moderna); via Bologna, passando da Firenze e Siena; via Verona verso Venezia; o percorrendo la dorsale adriatica, Ancona e Loreto (con il santuario religioso).

Ma se migliaia di giovani patrizi, e in seguito semplicemente benestanti, si muovevano nel nostro paese era anche per intercettare le grandi ricorrenze spettacolari, come la "Sensa" a Venezia con lo sposalizio del mare, e il celebrato Carnevale; e lo stesso a Roma: il Carnevale, le cerimonie religiose e le intronizzazioni papali. Il ludus costituiva il versante solo apparentemente minore di questo nuovo archetipo dell'immaginario collettivo. La festa ne era il motore meno ufficiale ma più efficace: allestimenti fastosi, macchine spettacolari, teatri d'opera e concorsi di popolo. E facilità di relazioni, incontro, stordimento, mirabilia e fantasmagoria, travestimento e cambio di identità, trasgressione sessuale, superamento provvisorio delle barriere sociali. Perciò Venezia diventò l'indiscussa prima meta di viaggio, la città-spettacolo con i ridotti, le bische, il barcheggio sulla laguna, l'arte della cavallerizza, e la grande invenzione - dal 1637 - dell'opera lirica, in una fusione già seriale di musica, canto, recitazione, danza, ed effetti speciali, che ripetevano in spazi chiusi le grandi macchine delle cerimonie spettacolari in piazza. Venezia, il luogo principe del divertimento - nutrito da sapienti operazioni di marketing editoriale e onnipresente nella letteratura e nella pittura sei-settecentesca – era imperdibile per i giovani europei, che annotavano tutte le loro esperienze nei diari di viaggio (De Seta 2014). Ancora dopo quasi due secoli, calato in parte il fascino di quello veneziano, il Grand Tour si

polarizzava sull'altro grande Carnevale, quello romano, raccontato da Goethe, Gogol, Stendhal, Dickens e soprattutto Dumas, nel *Conte di Montecristo* (1845): un evento in cui saltavano le norme sociali e si allentavano le rigide divisioni di classe per cui si incontrava l'aristocratico giocare a carte in una lurida osteria con il calzolaio, il maniscalco o addirittura un brigante (la scena restituita da Mario Monicelli e Alberto Sordi nel *Marchese del Grillo*).

Nasceva così l'immaginario turistico occidentale, dove l'archetipo del viaggio di formazione "politica" si arricchiva teatralizzando i luoghi, liberando la pulsione erotica e ludica e immergendo i primi turisti in un mix di arte e di cultura popolare. L'iniziazione, l'avventura a sfondo sessuale, il gioco, l'industria del piacere sollevavano il giovane viaggiatore, spesso proveniente da paesi calvinisti o riformati, dalle norme e dalle mortificazioni del corpo (Littlewood 2004), come testimoniano le più esplicite note di viaggio del Settecento spesso romanzate (come l'*Ardinghello* di Wilhelm Heinse), dove il tratto libertino si combinava con l'avventura romanzesca on the road: l'imprevisto legato al mezzo di trasporto, il pericolo incombente dei briganti che rendevano le vie malsicure, le fughe da situazioni scabrose e malavitose, duelli e sfide all'arma bianca in cui incappavano regolarmente i viaggiatori (Brilli 2003, 2004). Già ibridandosi con la fiction, il romanzo, il Grand Tour diveniva così un gigantesco problem solving dal vivo, una sfida con l'insicurezza e l'ignoto, la scoperta, la sorpresa, l'incontro fortunato. In aggiunta, scemando via via la valenza politica delle corti italiane, cresceva l'immaginario sull'Italia come luogo del classico, evocato dalla grande pittura rinascimentale e ridefinito dal Poussin "romano" nel Seicento. Il paesaggio archeologico, le rovine come fastigi di uno splendore e di una armonia perduti, la Natura come Mater Tellus, depositaria e custode della bellezza, e come sprigionamento del desiderio e dell'amore, alla base della civiltà e del sentimento. Una inclinazione prima arcadica e poi romantica che aveva radici nel già consolidato contrasto barocco tra Roma e Napoli, immaginata come luogo della catastrofe e degli inferi: l'eruzione del Vesuvio del 1674 richiamò migliaia di turisti, e fu riprodotta in centinaia di quadri diffusi in tutta Europa; nel 1738 il Vesuvio tornò a parlare attraverso la scoperta delle rovine di Ercolano, a cui seguì quella di Pompei (un continuum non casuale collega l'ambasciatore inglese Hamilton che sovvenzionava alla fine del XVII sec. la prima campagna di scavo e gli interventi recenti su Pompei e Ercolano del British Museum e della fondazione HP). Il Grand Tour assorbì dunque da Napoli il senso della catastrofe, insieme a un "format della rovina", che serializzava Roma, e in generale l'Italia in senso neoclassico (con il ruolo sempre più importante di Firenze), come paesaggio della storia e dell'arte, che Winckelmann diffuse in tutta Europa: i luoghi come immenso deposito di reperti e opere, concentrati all'inverosimile e fruibili ovunque, anche nelle cantine dei palazzi, in un addensamento tale da far quasi svenire Stendhal a Santa Maria Novella (e ancora oggi, gli spettatori della *Grande Bellezza* di Sorrentino davanti al panorama di Roma visto dal Gianicolo). Fragonard, Goethe, David, Chateaubriand e molti altri intellettuali e artisti in viaggio ne rimanevano folgorati, e restituivano uno spazio sentito come enorme quinta variata e variabile in cui mettersi in scena, e in cui scavare fino alle radici più antiche. Così il viaggio a Sud si prolungava da Napoli alla Sicilia, trainato dalla riesumazione dei templi dorici delle colonie greche e delle architetture normanno-sveve (Cometa 1999; Bonaventura 2009).

L'arco storico connesso alla formazione del gentiluomo iniziava ad esaurirsi nella prima metà dell'Ottocento: cambiavano il soggetto del viaggio in Italia (ora il turista borghese), e nel suo complesso l'ambiente culturale (ora i nuovi media metropolitani: oltre al romanzo, il giornale, la rivista illustrata, la fotografia, la pubblicità). Ciò nonostante, tutte le strutture archetipiche che abbiamo disegnato fin qui hanno continuato a rielaborarne i tratti e, ri/mediate dalla narrativa e dalla pittura, sono diventate la prima riserva di un iniziale branding turistico italiano: il mito di Venezia, rilanciato da Hoffmann nei suoi aspetti decadenti, e più tardi da Ruskin nella celebrazione dell'artista-artigiano. Quello di Firenze, corroborato dai Preraffaeliti. Quello di Roma dal celebre *Fauno di marmo* di Hawthorne (1860), dove la scenografia monumentale della città eterna diventava anche luogo dei misteri. L'Italia come una miniera ad alta concentrazione di classicità, un palcoscenico di millenni, civiltà e popoli, in una sorta di sospensione temporale, era da un lato il terreno preferito per il gothic con inclinazioni fantastico-horror, decisamente avventuroso e sinistro, per i cunicoli e sotterranei di castelli (Horace Walpole e Ann Radcliffe); dall'altro era il contesto del best seller europeo indiscusso di tutto il primo Ottocento: *Corinna o l'Italia* di Madame de Stäel (1807), dove il paesaggio, tra Roma, Napoli, Firenze e Venezia, era esperienza spirituale, rapporto con l'infinito, educazione sentimentale, e occasione per rigenerare il format del Grand Tour basato sul viaggio di formazione culturale (sulle orme di Corinna si sarebbe incamminato il drappello di inglesi

"romani": Byron, Percy e Mary Shelley, Keats). Seguono il giornalismo politico (che introduceva un nesso di lì in poi quasi obbligato tra Italia e il conflitto/instabilità) con il periodo delle guerre di Indipendenza, della nascita di uno Stato unitario, e delle gesta di Garibaldi, e poi altri generi e media editoriali: il libro di viaggio, rivolto a un ampio pubblico borghese; e la rivista illustrata, destinata a un'audience ancora più popolare e trasversale. Tecnologie sempre più raffinate per l'immagine, prima ad opera di illustratori, xilografi e bozzettisti e in seguito incorporando la fotografia, erano finalmente disponibili per la carta stampata, riproducibili a fine Ottocento anche in milioni di copie. Dei monumenti e delle opere d'arte principali si poteva ormai avere un'idea indipendentemente dal viaggiare; e la mobilità si allargò a strati più ampi, lungo le strade ferrate, e poi in automobile: commercianti, professionisti, artigiani, impiegati, studiosi, giovani studenti. Con la possibilità di scoprire palmo a palmo il territorio, frammentando spazio-temporalmente il canone direzionale nord-sud, il percorso iniziò ramificarsi in molti modi, per esempio verso la costa orientale. E dal 1897 arrivava anche in Italia il viaggio organizzato dalle agenzie stile Thomas Cook.

Con il passaggio definitivo al sistema dei media della metropoli l'asset narrativo del Grand Tour durante il Novecento si è definitivamente frammentato, e le sue riserve di senso (motivazioni, immaginari dei luoghi, strutture archetipiche in grado di generare storie) sono state riutilizzate nei nuovi format dei linguaggi e delle pratiche di consumo, e negli stereotipi del turismo massificato. Le singole mete di viaggio canoniche sono tuttavia rimaste invariate: Venezia – la città/oleografia degli amanti, pallido riflesso del passato; Roma – la città della classicità e del papa; Firenze – la città dell'arte; e Napoli - la città degli inferi sotto il Vesuvio e degli scavi di Pompei. Le aggiunte più evidenti sono state nutrite fin dagli anni Cinquanta dal cinema (che ha sfruttato, ancora una volta, il romanzo): le isole di Capri, Procida e Ischia, e le Eolie; la riviera romagnola; il paesaggio toscano degli inglesi (da *Camera con vista* a *Io ballo da sola*, fino alla saga vampiresca di *Twilight* che scopre Volterra e Montepulciano); più recentemente il Sud profondo, con anticipi sulla costa amalfitana, Taormina, il Salento, il Cilento, la costa meridionale della Sicilia. E come gli immaginari relativi alle quattro città principali, anche altre strutture topiche sembrano sopravvivere nella lunga durata, in particolare l'idea dell'Italia come ambiente saturo d'arte; mentre altre sono state riutilizzate dal cinema e dalla televisione, come la festa e l'avventura erotica (nella versione abbassata dei latin lover/vitelloni); la catastrofe naturale e antropica (dai vulcani al relitto della Costa Concordia); l'avventura (sistemazioni di fortuna, detective story); le terme (il fitness); l'esotico (e il cibo); il gothic; il conflitto e l'instabilità, ma anche la facilità di relazioni e l'accoglienza (distrutte e ripristinate, da *Benvenuti al Sud* fino a *Hotel da incubo*).

I flussi e i social network

Su questo complesso archetipico ormai ridotto a stereotipi diffusi a livello globale agisce di solito lo storytelling pubblicitario dell'industria turistica. Ma come viene messo a fuoco da studi recenti (Giordana 2010; Calabrese e Ragone 2016), il turista è da tempo e prima di tutto uno spettatore e un attore dei media, e questo è un aspetto fondamentale se si vuole passare dallo sfruttamento dell'immagine banalizzata del luogo a una narrazione che ricostruisca (o ricrei) in modo fertile e stabile un immaginario sul luogo. È anzi possibile espandere questa tesi: solo a partire dal lavoro sugli immaginari collettivi, dal territorio immaginato, dagli archetipi culturali, si possono generare nuove mete turistiche, allargando il potenziale disponibile, creando nuovi asset stabili per lo storytelling, e allungando come effetto finale i periodi di permanenza. Purché si produca una interazione tra quattro flussi narrativi, che qui proviamo a scorporare e definire:

a) il senso autoctono dei luoghi: dato dall'insieme di patrimoni materiali, immateriali e paesaggistici, storici antropologici e socio-economici che rendono un territorio caratteristico e immediatamente identificabile (le Cinque Terre o la Laguna Veneta);
b) i racconti sui luoghi costruiti dall'industria turistica; nei casi migliori, quando un patrimonio storico-antropologico prima semisconosciuto e disaggregato riesce a divenire un nuovo brand grazie ad investimenti in cultura, valorizzazione e marketing (la val d'Orcia, la val Marecchia, il Salento, la via Francigena);
c) i racconti sui luoghi costruiti dai media spettacolari, che trasformano in attrattori alcuni territori e centri urbani (il cinema - che ora genera direttamente cineturismo, i best seller letterari, la serialità televisiva, i videogame);

d) le storie personali che si proiettano sulla meta di viaggio e/o si identificano con essa, partecipando alla costruzione di (auto)biografia e senso identitario.

L'interazione fra i quattro flussi è stata resa possibile dalla rivoluzione culturale delle reti che, con le tecnologie digitali, ha permesso di ibridarli stabilmente (Ragone 2011). I social media, nella fase attuale della trasformazione sociale (Boccia Artieri 2012), accelerano e riplasmano la portata dell'interazione, funzionando come vettore di frammentazione, rielaborazione personale, creazione di link transmediali e condivisione delle esperienze che si vivono in ognuno di essi. I luoghi diventano iperlink, reali e virtuali, transluoghi (Bertone, Morreale e Taddeo 2013; Capaldi e Ilardi 2016). E fungono inoltre da sorgente della comunicazione sulle piattaforme digitali per la gestione e la riconversione dei territori, che oggi sono infrastrutture imprescindibili e vitali per ogni operazione di branding che si basi sulla mobilitazione di reti, soggetti e imprese per una co-produzione di immaginari e servizi.

Ma torniamo al soggetto, al turista che è attore dei media: le azioni di sistema per la valorizzazione turistica, affinché si inneschi un circolo virtuoso efficace, nutrito dal social networking, non possono prescindere da un ampio riuso degli immaginari dell'industria creativa, tendenzialmente ad audience più larga. Partendo dal fattore (c) si può attivare più facilmente il circolo virtuoso che coinvolga i racconti sulle storie personali (d) e sui patrimoni locali (a), fino a riaggregarli nel re-branding (b).

Riusare i media creativi

Per formalizzare l'ipotesi strategica di un "ritorno" all'asset narrativo del Grand Tour occorre quindi esaminare brevemente i format attuali dei media (oggi in vorticosa convivenza e ibridazione nell'ambiente digitale) che, come hanno rilevato ormai da un quarto di secolo gli studi sull'immaginario turistico (a partire da Urry 1990), determinano ampiamente l'economia, l'organizzazione e l'evoluzione del settore. Si tratta di almeno quattro zone principali: i format televisivi di viaggio, la rimediazione dei luoghi nelle produzioni creative di fiction o documentari, la nuova produzione di format e fiction seriali sul web, e la teatralizzazione e virtualizzazione di luoghi attraverso il riuso delle produzioni creative.

La prima zona comprende in Italia programmi ormai ben collaudati (*Sereno Variabile*, *Linea Verde*, *Linea Blu*, *Linea Bianca*, *Geo and Geo*, *Kilimangiaro*, in parte *Quark* e derivati), basati sull'assemblaggio di format altrettanto classici: servizio giornalistico, documentario, docufilm di avventura, clip di film, talk show; l'appeal è generato dalla qualità spettacolare degli spezzoni in audiovideo, ma il palinsesto è altrettanto standard: presentazione basic di un luogo, bellezze artistiche/archeologiche, paesaggio, memorie locali, enogastronomia, patrimonio immateriale (feste, usanze, leggende, lingue, musica, sistemi agricoli e di pesca), itinerari consigliati, sport associabili; schemi da guida turistica piuttosto che da wiki-enciclopedia, e comunque privi di asset narrativi forti. Ultimamente è comparso un reality show come *Pechino Express*, format fiammingo riadattato da RAI2, che offre storytelling e valenza immersiva. Il viaggio come avventura, improvvisazione, incontro inaspettato; un precedente è stato *Turisti per caso*, dal 1991, dove il modello letterario del libro di viaggio si mescolava con leggerezza a suspense, problem solving e un pre-reality sui rapporti interpersonali della coppia; ne è nato un sito collaborativo - emulo del celebre WAYN: Where are you now, attivo dal 2002 e che oggi conta 20 milioni di utenti - dove il pubblico condivide diari, itinerari consigli, notizie e pacchetti personalizzati, integrato con Facebook e con forum specializzati; come vedremo, un anticipo non banale della tendenza verso la sitcom in rete. *Pechino Express* viene animato da coppie di viaggiatori chiamate a superare delle mission, come è tipico di un genere mutuato in parte sul videogame. Il territorio funziona come una mappa, e come una quinta, la scenografia della prestazione: un misto di sport, ostacoli vari, performance, e ricerca di soluzioni, gestito dal conduttore, tra commenti salaci e incitamenti. Più che reality show, l'esito è quello di una fiction, complice un sapiente montaggio del girato (mentre le scene più divertenti vengono subito lanciate sui social network). Di nuovo, sebbene a un livello molto superficiale, c'è la scoperta di tradizioni e usi autoctoni, e l'accento sulla capacità di relazione, che riguarda le dinamiche interne alla coppia, ma anche la maniera di rapportarsi ai nativi con l'ausilio di un linguaggio extraverbale che genera esilaranti malintesi o inaspettate forme di aiuto.

Se la banalità classica e standard dei format televisivi non offre vere storie utili nella mediazione dei luoghi, al massimo frammenti, gag e testimonial che possono riprodursi nelle pratiche delle reti, sono invece i best seller – romanzi sempre più spesso di tipo seriale – a

trainare il più delle volte location note o anche inedite, oppure tradizioni del patrimonio immateriale: gli esempi sono tanti, dalla Stoccolma dei gialli di Stieg Larsson, alla Sicilia del Commissario Montalbano. Seguendo la lunga tradizione del film di avventura e spy story, un effetto di ri/mediazione potente è imperniato attualmente soprattutto su plot avventurosi basati su un segreto, un enigma da risolvere, come nel *Codice da Vinci* e in *Angeli e Demoni*; mentre i videogame hanno abituato i giocatori alle ricostruzioni in 3D con salti temporali anche lunghissimi (*Assassins' Creed* a Venezia o nella Roma dei Borgia). I luoghi divengono a volte metafore colme di senso e associabili a uno stile di vita: la fontana di Trevi nella *Dolce Vita* felliniana; o all'eterno conflitto dell'amore impossibile: la Bocca della Verità in *Vacanze Romane*, il castello di Aglié in *Elisa di Rivombrosa*. Il Colosseo nel *Gladiatore*, invece, o la Fontana dell'Acqua Paola nella *Grande bellezza* sono lo specchio della resistenza e della decadenza. Ci sono infine strategie pubblicitarie originali e avanzate, che insegnano come trainare contemporaneamente un territorio e i suoi prodotti. Il pastificio Garofalo di Caserta, per esempio, da oltre un decennio coltiva il brand trasformandosi in produttore di video sui luoghi più affascinanti della Campania; la potenza dell'immaginario evocato dal territorio diventa garante implicito del prodotto, nemmeno citato, ma veicolato in maniera affatto obliqua e sotterranea. Del tutto al di fuori dei format della pubblicità televisiva, la Garofalo affida dei "corti" (max 20') a grandi registi italiani e americani, reclutando come protagonisti star internazionali[3] (Richard Dreyfuss tra gli altri). I corti vengono trainati, a parte i passaggi nelle sale cinematografiche, da eventi web e campagne di fidelizzazione attraverso Facebook (del resto la tendenza dominante nella pubblicità degli ultimi anni è di depotenziare le grandi agenzie e riportare la strategia all'interno delle aziende). Il brand Garofalo, e l'alta qualità della pasta, vengono associati allo splendore di un cinema di qualità e al fascino delle storie che vengono evocate dai luoghi (il Museo Madre di Napoli per Valeria Golino regista, o San Gregorio Armeno, la via napoletana, dei presepi che si trasforma con Terry Gilliam, in un plot inquietante negli inferi di Napoli).

Dall'immaginario filmico deriva, come indotto, il fenomeno in ingente crescita del cineturismo" (Todaro 2011) che tradizionalmente porta a una mappatura dei luoghi e dei set dei film (a volte dei romanzi) per creare un percorso di visita, promosso da una articolata operazione di marketing, curato in Italia dalle diciannove agenzie regionali per le location. Casi emblematici i Sassi di Matera, con la *Passione di Cristo* di Mel Gibson; e all'estero i luoghi cult della serie *Sex and the City* a New York; le ambientazioni della saga di Harry Potter; gli scorci della Nuova Zelanda nel *Signore degli anelli*. Un'altra tendenza diffusa, resa possibile dalle tecnologie digitali, è la rifunzionalizzazione dei luoghi come aggregatori eterogenei di frammenti di fiction e altre produzioni creative: passeggiate cineturistiche metropolitane in cui è possibile richiamare con una app le scene dei film girate in questa o quella strada, da Parigi a Tokyo, da Londra a New York. Per l'Italia ricordiamo Napoli con il Movie Tour dei film di De Sica, Rosi, Martone, e Roma, con le location dei maggiori film, e tre percorsi dedicati alla *Grande Bellezza* di Paolo Sorrentino. Anche Google Play, piattaforma mirata al noleggio e all'acquisto dal catalogo Play Film, ha lanciato una app simile sui set di varie città del mondo.

Del resto, al di là del cineturismo e delle app, il virtuale tende ad innestarsi nei luoghi reali, in forme sempre diverse di teatralizzazione. Fin dal tardo Ottocento (copiosi esempi si trovano nei romanzi satirici di Jerome K. Jerome) i media hanno stimolato la creazione di luoghi fittizi, "realizzando" storie e immaginari collettivi: la famosa "casa di Giulietta" in via Cappello a Verona viene visitata ogni anno da milioni di persone, ma è in realtà un'invenzione che risale agli anni Trenta del XX sec. sulla scia del successo mondiale della tragedia shakespeariana in salsa hollywoodiana di George Cukor (1936)[4]. Il verosimile diventa vero, e il luogo della storia coinvolge, genera proiezione e identificazione, complice anche la statua di Giulietta sistemata ad hoc e i messaggi d'amore che gli innamorati possono lasciare sulle pareti predisposte. Funziona anche con la pubblicità: il duecentesco mulino delle Pile a Chiusdino nel senese si tramuta nel brand Mulino Bianco della Barilla, e come tale è divenuto meta di viaggio. Altro esempio di trasferimento dalla fiction alla riutilizzazione di luoghi reali: Ponte Milvio a Roma come meta dove appendere un lucchetto sul modello del best seller *Tre metri sopra il cielo* di Federico Moccia (1992), una pratica dilagata a livello globale grazie anche ai social network. O

[3] http://raffaeleconte.com/strategie-web-marketing-facebook-garofalo/; https://www.youtube.com/watch?v=R6c1STmvNJc

[4] http://www.verona-in.it/2007/12/24/antonio-avena-lurbanista-del-900-che-creo-i-luoghi-di-giulietta-e-romeo/

ancora: il Museo d'arte Ghibli, una sorta di parco interattivo, concepito dal celebre regista di animazione Hayao Miyazaki in un quartiere periferico di Tokyo, dove tutto rimanda alle creazioni più famose dell'omonimo studio di disegni animati (*Heidi*, *Porco Rosso*, *La città incantata*). Anche dal *Museo dell'Innocenza*, scritto nel 2008 dal premio Nobel Ohran Pamuk, è nato a Istanbul un vero e proprio museo. La teatralizzazione e virtualizzazione dei luoghi con installazioni digitali eredita in realtà pratiche tradizionali, che hanno sempre puntato sulla rimediazione della letteratura, e delle sue riduzioni filmiche e seriali: dalla Märchen Straβe, la Strada delle favole dei Fratelli Grimm, che in Germania si stende per quasi 600 km da Hanau a Brema, toccando tutti i paesi resi celebri dalle loro fiabe, al percorso della Bella Addormentata a Sommariva del Bosco in Piemonte, o alle miniere di sale di Wielickza vicino a Cracovia, dove grandi statue di nani o orchi rimandano al *Signore degli Anelli* di Tolkien, che visitò forse il luogo nel 1908, traendone ispirazione per le Miniere di Moria.

Dalla televisione e dal cinema ci stiamo così via via spostando verso l'esperienza dei transluoghi (Calabrese e Ragone 2016). Inseriti in un ambiente-fiction, in una storia che ci porta a rivivere aspettative, reazioni emozionali, e a caricarle di significati individuali, i beni e i territori vengono valorizzati - e visitati fisicamente - in modo "laterale" rispetto al loro valore storico-artistico (Kotler e Andreasen 2004). Il belief finzionale, come Morin (1956) spiegava già nel suo saggio-capolavoro sul cinema, cattura, suscita e rafforza di per sé il ricordo e l'affettività, ed espande l'interesse per l'esplorazione anche antropologica dei luoghi. L'immersione non più solo virtuale ma fisica nell'ambiente e nell'azione della fiction - magari coadiuvata dalla realtà aumentata - permette di condividere e provare modelli di vita e codici di comportamento, invita a saldare l'archetipo narrativo all'esperienza individuale, dilata la partecipazione e lo status di soggetto sociale del visitatore; e non da ultimo, stimola la riappropriazione del corpo all'interno del format. Ed è una estensione soggettiva che per la sua valenza sempre più importante (in tempi di an-estesia ed euforia della virtualizzazione digitale) tende a essere riproiettata spontaneamente - miliardi di volte - nei social network. Il riuso intelligente degli immaginari di massa e la teatralizzazione degli spazi con tecnologie digitali sono oggi - insieme al social networking - una via obbligata per qualsiasi strategia di valorizzazione turistica.

Resta un'ultima zona che vale la pena di esaminare, quella della produzione "nativa" sul web. La moderna serialità ha essenzialmente due temi portanti: il viaggio avventuroso in terre lontane e inaccessibili (che dall'esotico ottocentesco arriva alla fantascienza e al fantasy) e la drammatizzazione della vita quotidiana (che dal romanzo rosa arriva alla soap opera e alla sitcom senza dimenticare ovviamente il giallo, il thriller, l'horror, il medical drama). Apparentemente, il primo genere sembrerebbe quello più riusabile per le strategie turistiche. Si sta però creando un effetto di saturazione da eccesso di pressione causato dai format che governano la sorpresa e l'avventura, secondo schemi – sempre gli stessi - progettati e standardizzati. Occorre guardare al riuso nell'immaginario turistico anche per l'altra dimensione della serialità, quella della drammatizzazione del quotidiano. A partire dal secondo dopoguerra, con l'allargamento dell'accesso delle masse ai mezzi di trasporto, il viaggio ha smesso di essere avvertito come una rottura radicale con la quotidianità, ed è divenuto anzi uno dei suoi elementi costitutivi. Non solo la vacanza o il lungo viaggio di lavoro ma anche l'eterno e noioso movimento del pendolare, in treno, in macchina, sull'autobus e, ultimamente, anche in aereo. La diffusione delle compagnie low cost ha trasformato perfino il weekend fuori porta in un viaggio all'estero. Le aspettative del nuovo viaggiatore non prevedono più l'incontro con il diverso "assoluto" o l'avventura radicale ma, più modestamente, la scoperta di nuovi scorci o luoghi (spesso di un panorama già conosciuto attraverso i media); tornare a casa sapendone un po' più di prima, gestire un'avventura "sotto controllo", da raccontare sui social, al limite con qualche imprevisto ma di facile soluzione, e se va bene l'incontro con persone interessanti. La moderata drammatizzazione da sitcom (che è poi il clima *comunicativo tipico di Facebook), ripresa in televisione da Turisti per Caso, Milano-Roma, Frontalieri o* Piloti, lontana eredità delle storyline secondarie del Grand Tour, fatte di feste, incontri casuali con persone di tutti i tipi, piccole avventure e imprevisti, tende a diventare terreno fertile per un format nato da pochi anni, ma che sta riscuotendo sempre più successo: la webserie. Sono essenzialmente autoproduzioni a basso costo, girate quasi sempre nei luoghi di origine dei produttori. Ve ne sono anche di genere fantascientifico, come *While*, viaggi nel tempo ambientati nei luoghi simbolici della Basilicata; o fantasy, come *L'uomo di Montevecchio*, creata da un gruppo di studenti nelle miniere di Montevecchio in Sardegna. Ma di solito sono girate in luoghi e situazioni che gli autori conoscono bene in ogni dettaglio: anche quelli che il comune turista non può immaginare; e che possono offrire uno sguardo alternativo su ciò che per molti è già familiare, e dove è sempre

possibile fare nuove scoperte o incontri stimolanti. *Travel Companions* è per esempio ambientato interamente sulla tangenziale di Napoli con le avventure di due personaggi che cercano quotidianamente di recarsi al lavoro. *BlaBlaCar Road Movie*, creata dalla famosa piattaforma online di ride sharing, è un tour di quaranta tappe: piccole e grandi città da nord a sud, per raccontare, telecamera alla mano, l'Italia che si sposta insieme ad estranei, offrendo e accettando passaggi in auto. Gli attori sono persone sconosciute, compagni di viaggio di ogni paese, lingua e cultura; il copione è imprevedibile, affidato al caso dell'incontro. Interessante è anche *'A Famigghia* che racconta in cinque episodi la sgangherata impresa turistica di tre ventenni che a bordo di un furgoncino offrono a due turiste in crociera, appena sbarcate al porto di Messina, «un viaggio "on the road" alla scoperta della vera Sicilia». Un fenomeno prevalentemente giovanile da tenere in conto per le strategie di re-branding come quella che proponiamo.

Re-branding e ambiente/culture digitali

Al panorama della produzione creativa più popolare, attiva nel veicolare immaginari sul nostro territorio, e in lenta ibridazione con l'ambiente digitale, con i social media e con le installazioni nei luoghi, dobbiamo naturalmente aggiungere il lavoro documentaristico. Dove ai prodotti audiovideo spesso di altissimo livello, ma raramente accessibili in rete, si affianca da tempo una sterminata factory costituita da community e videomakers locali, spesso artigianale, e mirata alla valorizzazione diretta attraverso YouTube o siti web dedicati ai patrimoni locali.

Le risorse di base (l'immaginario dei media, le energie utilizzabili localmente per la valorizzazione in rete dell'immaginario dei luoghi) sono ampiamente disponibili. Il punto è che ai giganteschi vantaggi delle culture digitali, che hanno rivoluzionato i sistemi di valorizzazione dell'heritage (accelerazione della comunicazione, globalizzazione, trasformazione dei consumer in prosumer, ibridazione tra conoscenze formalizzate e creatività), si accompagna l'implosione, non solo del tempo (l'istantaneità della comunicazione e la simultaneità dei collegamenti tra frammenti di conoscenza e di esperienza) ma anche dello spazio; cosa assai evidente per il turismo in termini di micronizzazione spontanea delle proposte, quando non esista una strategia efficace di storytelling basata su archetipi di lunga durata: il Palazzo Te e non la Mantova dei Gonzaga, il Colosseo e i Fori e non la Città Eterna, per non parlare delle cento città e dei borghi che pure sono la storia e lo spazio che ci rende unici al mondo.

Torniamo allora all'ipotesi di partenza: il re-branding del Grand Tour. Segnali di evoluzione di almeno alcune aree del fenomeno turistico sembrano motivare ulteriormente l'idea di un salto di qualità del brand Italia, sia come operazione di storytelling coerente con una nuova antropologia del viaggiatore, che come organizzazione e servizi in rete. Il viaggio, infatti, è sempre più inteso come "cultura", e quindi come attività creativa e non solo ricreativa (Miliani 2015)[5]; un'esperienza che rimette in gioco il corpo, la fisicità dei luoghi, e la relazione sociale, in cui trovare senso rispetto alla pressione troppo forte della virtualità, della connettività e del solipsismo imperante sui social media. Ritorna il viaggio come "tecnologia del sé", cura del corpo e dell'identità, mediante immersione e dialogo con narrazioni altre. Il senso del Grand Tour riemerge e crea una nuova domanda. L'archetipo della formazione europea che abbiamo descritto - esplorazione ed educazione, esperienza estetica, avventure e divertimento, accoglienza e enogastronomia, in territori sempre diversi, con differenti modi di vivere, di fare cultura e di essere nel paesaggio - si collega alla filosofia post-industriale di Slow Travel, una delle espressioni del Movimento Slow, teorizzato da Carlo Petrini e da Carl Honoré. Non solo relax, sostenibilità, agriturismi, trasporti a bassa emissione di CO2 come il treno, la bicicletta, ma anche un'esperienza di vita nella quotidianità dei luoghi, la ricerca di esperienze fuori degli itinerari di massa, il territorio come spazio del rapporto con l'altro (Nocifora, De Salvo e Calzati 2011). L'ospite diventa attore, in un ambiente dove si sovrappongono esperienze spazio-temporalmente diverse rispetto al suo trascorso di vita, e nella condivisione ciò che accade di inatteso e inaspettato funziona come una chiave di entrata possibile per conoscere una comunità (Gardner 2009). Il fenomeno va estendendosi, per esempio con la riattivazione come asset narrativo di percorsi antichi (la Francigena, in embrione l'Appia), sia con il ritorno alla grande festa, che rappresentava nel Grand Tour l'attrattore implicito del viaggio (la Taranta); ed

[5] Una riflessione sui risultati emersi dall'indagine dell'Osservatorio "Vivo la cultura" 2015, nato dalla collaborazione tra SWG e DigiLab-Sapienza.

è oggetto in questo periodo di riflessioni e ipotesi di lavoro interessanti come l'idea delle "geografie private" (Brilli 2014), quelle del viaggiatore di un tempo, del viaggio "lento" come vettore essenziale dei percorsi da riprogettare in Italia. Il momento è probabilmente maturo per passare da una dimensione di nicchia a un'operazione di strategia nazionale, come è accaduto negli ultimi anni per Slow Food.

L'ipotesi di un re-branding basato sulla reinvenzione dell'itinerario nazionale Nord-Sud, deve includere naturalmente i due aspetti: il viaggio lento (con stazioni che sostituiscano le antiche stazioni di posta), e le feste (un investimento strategico, che al di là di quanto già accade a Venezia, deve trovare sostegno pubblico e capacità di progetto almeno a Roma, Napoli, Palermo). Terzo aspetto, gli immaginari collaudati e ancora molto fertili nella cultura di massa che possono essere richiamati nei luoghi (il gothic, l'avventura, il mistero, la catastrofe, la detective story, le terme e il gusto, etc.), a nutrire, come un tempo, i percorsi. E quarto aspetto, quello relazionale, dove è possibile prevedere, secondo modelli di sharing economy momenti di scambio e di esperienza in comune (turisti di altri paesi, comunità locali): senza ripristinare salotti e diligenze, il viaggio può tornare a essere scoperta di culture diverse, anche trovandosi a cena, dopo aver programmato insieme l'invito su una piattaforma digitale. Oltre ai servizi standard del tipo di Trip Advisor, infatti, una piattaforma social network del Grand Tour potrebbe offrire molto di più di quanto oggi è disponibile fra guide turistiche, siti di promozione territoriale, di musei, alberghi o ristoranti. Elencando in breve: i libri e i diari di viaggio, le repliche delle tappe "classiche" negli itinerari principali e nelle ramificazioni - un buon esempio su questo versante è stato realizzato da tempo in Toscana[6]; le stazioni di posta e di ristoro anche sulle vie secondarie, le attività tipiche del community-based tourism come gli alberghi diffusi (Valayer 1993; Dall'Ara 2011); e ancora: i materiali disponibili sui luoghi nominati nei resoconti di viaggio; visite virtuali e in loco, servizi per la mobilità, prenotazioni, escursioni, attività, occasioni di incontro; interazione, apertura alle proposte di community locali e blogger, un'espansione reticolare della piattaforma sono le altre componenti essenziali per trasformare un luogo in net-locality (Gordon e De Souza e Silva 2011). La creazione di installazioni digitali locali e la "smartizzazione" dei luoghi avverrebbero così in connessione con una infrastruttura di comunicazione e servizio di livello internazionale. In tempi di (necessaria) ricentralizzazione delle politiche per il turismo, il re-branding del Grand Tour è un'ipotesi concretamente realizzabile: con una campagna di comunicazione e di marketing virale; con il concorso delle Regioni e degli enti locali, che per frammenti stanno in parte ricostruendo il circuito e la sua memoria, come a Latina o a Reggio Calabria (Scamardi 1998); e soprattutto con la partecipazione attiva al (social) network di imprenditori del settore turistico, di gestori del patrimonio culturale, di community di fan dei luoghi e di singoli cittadini e turisti.

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[6] http://www.turismo.intoscana.it/site/it/itinerario/Ripercorri-gli-itinerari-del-Grand-Tour-00001/ e il materiale approntato dalla Biblioteca Nazionale di Firenze: http://grandtour.bncf.firenze.sbn.it/. Nell'ambito del progetto "Percorsi d'Innovazione 2008" del CESVOT.

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DigitCult | Scientific Journal on Digital Cultures

La trasformazione digitale: sviluppare competenze e culture

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Abstract

Il digitale trasforma completamente il modo di lavorare e l'organizzazione delle aziende. Il punto vero per innovare non è solo sviluppare competenze digitali, ma aiutare le organizzazioni a cambiare le loro culture interne. Stiamo attraversando una vera e propria metamorfosi dei mestieri, delle competenze e delle organizzazioni, che ci fa vivere in un periodo di incertezza e complessità alla ricerca di nuovi modelli di lavoro e di conoscenza. Il digitale modifica profondamente il modo di lavorare nelle imprese: trasforma i processi produttivi, ridisegna le strutture, innova i modi e gli spazi della comunicazione, rende più competenti le persone, cambia le culture organizzative. Nel presente lavoro, sarà presentata una ricerca volta a comprendere le diverse competenze e culture digitali presenti in un'azienda italiana di 4.000 dipendenti.

Digital Transformation: Developing Skills and Cultures

Digitalization is completely transforming the way companies work and their organization. The focus point for any innovation is not only the development of digital competence but rather to help the organization change its culture. We are now going through a profound metamorphosis in the professions, in qualifications and also in the organizations themselves which means we are now experiencing a period of greater uncertainty and complexity as we search for new working patterns and increased knowhow. The digitalization profoundly modifies the way enterprises work: it modifies their methods of production, reshapes their structure, introduces new ways and platforms of communication and increases skills and changes organizational culture. In this paper, a research aiming to understand the different digital skills and cultures of an Italian company of 4.000 employees will be presented.

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Introduzione

Il presente lavoro si colloca entro una cornice teorica che integra gli assunti del paradigma socio-costruttivista (Ugazio 1988; Moscovici 1989) con quelli del modello psicodinamico bi-logico (Matte Blanco 1981; Carli 1990). Tale prospettiva consente di interpretare il processo di rappresentazione della realtà come il prodotto del funzionamento della mente in rapporto a specifici contesti sociali.

Il modo di ordinare la realtà è ancorato alla cultura e alle ideologie dei gruppi e sottogruppi ai quali l'individuo appartiene (Palmonari 1987). Il processo di categorizzazione sociale, infatti, è profondamente influenzato dalle dinamiche inter-gruppo, dall'identità sociale, dai valori e svolge un ruolo fondamentale nell'azione sociale quotidiana (Tajfel e Forgas 1981). Gli individui nel tentativo di dar senso alla realtà sociale in cui vivono la costruiscono (Moscovici 1976; 1984). E in questo processo di costruzione entrano in gioco le emozioni, ossia il modo di funzionare della mente. Un funzionamento fondato, come teorizzato da Matte Blanco, su una doppia logica: il pensiero asimmetrico, cosciente, che ci fa entrare in rapporto con un contesto o un evento; e il pensiero simmetrico, emozionale, che quel contesto o evento immediatamente suscita in noi. Sono emozioni immediate e primitive che rimandano a schemi come: "amico-nemico", "dentro-fuori", "alto-basso", etc. Le persone percepiscono e danno significato agli eventi e alla realtà in cui operano, in primo luogo sulla base di un processo di simbolizzazione emozionale e, solo in secondo luogo (e non necessariamente), attraverso categorie di pensiero che articolano differenze ed elaborano dati di realtà.

Il modello psicologico adottato ipotizza innanzitutto che le organizzazioni sociali vengono, in gran parte, *costruite* dai processi mentali. Nei processi mentali che costruiscono un'organizzazione non c'è solo il pensiero fondato su categorie convenute, ma hanno una parte assai rilevante anche le emozioni collusivamente condivise dalle persone che a quella organizzazione appartengono (Carli 1990). Categorie ed emozioni condivise che danno senso agli eventi, orientando i comportamenti. Si tratta di modelli culturali che permettono di riconoscere rapidamente, quasi in modo scontato, senza pensarci su, il senso di quanto sta accadendo, e quindi di operare. Gli attori organizzativi costruiscono il contesto in cui operano, quindi la loro strategia di azione, sulla base di un processo condiviso di simbolizzazione emozionale delle dimensioni del contesto stesso e attraverso categorie di pensiero, convenute tra gli attori organizzativi. Il processo di simbolizzazione emozionale, quando "appartiene" a un gruppo che fa parte di un determinato contesto, assume uno spessore storico, tradizionale e insieme diventa specifico di quel contesto, lo caratterizza; diventa una "cultura locale", propria di quel gruppo/contesto (Carli et al. 1997).

Il pensiero digitale

Siamo in un momento straordinario di profonde trasformazioni sociali. È cambiato il modo in cui ci teniamo informati, il modo in cui curiamo le nostre relazioni e le modalità con cui svolgiamo il nostro lavoro. Tutto ciò che era abituale e "vero" non lo è più. Siamo diretti verso "una realtà nella quale ogni oggetto e ogni persona sono connessi" (De Biase 2015, 19).

Eppure le persone e le organizzazioni spesso fanno fatica a cambiare, continuano a funzionare come se nulla fosse accaduto, come se si potesse fermare il tempo. L'annuale indagine Istat "Cittadini, Imprese e ICT" evidenzia come solo il 12% delle imprese italiane si collochi a un livello "alto" o "molto alto" di digitalizzazione. Quelle più evolute nell'adozione delle tecnologie digitali sono le imprese editoriali e le TLC. (Istat 2015)

La densità tecnologica di un determinato ambiente organizzativo non dipende tanto dalla presenza di diverse tecnologie, quanto dalla qualità delle relazioni che tra esse s'instaurano e dal tipo di interconnessioni che vengono a crearsi tra il loro uso e le pratiche organizzative e di lavoro quotidiano (Bruni et al. 2013).

Nelle organizzazioni il digitale apre a eventi nuovi, sconosciuti, su cui non c'è un processo di simbolizzazione emozionale consolidato, testato, coerente con una prassi operativa. Non c'è una tradizione, ma nuove pratiche da immaginare e sviluppare. Adottare le tecnologie digitali implica sperimentare nuovi processi lavorativi e relazionali, accettando l'iniziale disorientamento

e confusione emozionale, per poi trovare nuove categorie di lettura e nuovi modelli di comportamento.

Il digitale, ad esempio, con il concetto di "rete" porta con sé una dimensione nuova nei rapporti con l'altro: porta con sé i concetti di "vicinanza" e di "simmetria".

Pensiamo alla rivoluzione che il digitale porta in alcune relazioni come: la relazione medico-paziente; la relazione insegnante-allievo; la relazione dirigente-collaboratore; la relazione PA-cittadino. Sono tutti rapporti fondati su una asimmetria, di conoscenza e di "potere". E con il digitale questa asimmetria "salta", viene messa in discussione. Probabilmente è proprio per questo che le resistenze maggiori alla trasformazione digitale le troviamo proprio in quelle categorie che devono rivedere e riconsiderare la loro dimensione di "potere" rispetto all'altro.

Promuovere trasformazione digitale implica, dunque, l'agire sul cambiamento delle culture presenti nei contesti sociali: imprese, PA, sanità, scuola. Le organizzazioni basano il loro funzionamento sulle culture d'appartenenza. Una cosa "vera" in un'organizzazione sembra non esserlo più semplicemente entrando in un altro tipo di impresa, dove i modi di sentire e di pensare le cose, cambiano, sono completamente diversi. Sviluppare il pensiero digitale significa partire dalle culture presenti per "innovarle". Non è facile, non è automatico, non si tratta semplicemente di imparare a utilizzare una nuova tecnologia, ma di costruire, con gli altri, nuove rappresentazioni del lavoro.

In tal senso l'espressione comunemente utilizzata: "*alfabetizzazione digitale*" andrebbe rivista. Sarebbe meglio parlare di "sviluppo", "*sviluppo di competenze*". Sviluppo nel significato di togliere i *viluppi*, gli intrecci, i nodi, gli ostacoli (che sono per lo più ostacoli culturali). E sarebbe meglio parlare di "integrazione" e non di "inclusione". "*Integrazione*" nel senso di integrare il tuo modello culturale con nuove competenze, ma partendo da te, dal tuo modello.

Mappare le competenze e le culture digitali

La ricerca descritta nel presente lavoro analizza e mappa le culture organizzative in rapporto all'innovazione e alle competenze d'uso degli strumenti digitali, al fine di accompagnarle nel processo di trasformazione digitale. Quindi non una mappatura centrata solo sul "saper fare" (ossia mappare il livello delle competenze digitali), ma mirata a individuare i diversi modi di "pensare" l'innovazione entro l'azienda. L'indagine è stata condotta all'interno della Direzione Risorse Umane di un'azienda italiana di circa 4.000 dipendenti. Si è partiti dall'esplorazione del funzionamento dell'azienda e della Direzione Risorse Umane, attraverso la realizzazione di due interviste in profondità ai manager HR (il direttore delle Risorse Umane e il responsabile della funzione Sviluppo e Formazione) e due focus groups con un campione di quadri e impiegati della direzione (raggruppati per età anagrafica). Le interviste in profondità e i focus groups hanno rappresentato un momento iniziale molto importante di conoscenza del contesto e di approfondimento dei vissuti e delle attese circa il processo di innovazione digitale in corso. Nelle interviste in profondità, della durata di circa un'ora ciascuna, si è partiti da un'iniziale domanda-stimolo: "*obiettivi e valori dell'Azienda e della Direzione Risorse Umane e linee di sviluppo futuro*". Aperto il tema, si è dato ampio spazio all'intervistato, seguendo il percorso associativo da lui proposto e ponendo attenzione al codice linguistico utilizzato (quei modi di dire e di raccontare l'azienda che caratterizzano la cultura organizzativa).

Con i focus groups, della durata di due ore ciascuno, sono stati approfonditi i seguenti temi: gli utilizzi delle tecnologie digitali in azienda e nella vita privata; le modalità di lavoro e di relazione; i cambiamenti in corso in azienda e nella funzione di appartenenza; gli ambiti di miglioramento e le attese sul futuro.

Le evidenze emerse nelle interviste in profondità e nei focus groups hanno contribuito alla costruzione di un questionario *ad hoc* di mappatura culturale (Carli et al. 1997). Il questionario ha indagato, attraverso domande strutturate, le seguenti aree tematiche: abitudini e comportamenti d'uso delle tecnologie digitali, in ambito lavorativo e personale; percezione dell'innovazione digitale e delle sue conseguenze (es.: "L'utilizzo delle tecnologie digitali come sta cambiando: - l'azienda in cui lavora?… - il modo in cui si informa e si tiene aggiornato?… - le sue relazioni sociali?…); abitudini di fruizione della intranet aziendale; interessi e consumi culturali nel tempo libero; percezione dell'immagine dell'azienda in cui si lavora e del grado di sviluppo futuro (es.: "Quanto l'azienda in cui lavora: - è competitiva?... - è innovativa?... - il posto di lavoro è sicuro?..."); livello di soddisfazione lavorativa (es.: "Quanto è soddisfatto:

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- delle opportunità di carriera?... - del tipo di lavoro svolto?... - della qualità delle iniziative di formazione?…").

Nel mese di novembre 2015, il questionario è stato proposto a tutte le 134 persone appartenenti alla Direzione Risorse Umane dell'Azienda. Sono stati compilati 104 questionari (il 78% di quelli inviati). I 104 questionari compilati sono risultati rappresentativi della popolazione di riferimento rispetto alle principali caratteristiche sociodemografiche e di ruolo (genere, età, titolo di studio e qualifica).

Le risposte al questionario sono state elaborate con tecniche statistiche di Analisi Multivariata (ACM e Cluster Analysis) (Bolasco 1999). L'Analisi delle Corrispondenze Multiple (ACM) ha evidenziato tre fattori principali.

Il primo fattore risultato utile nel differenziare le diverse culture e competenze presenti in azienda è la dimensione della vitalità/stallo. Da una parte apertura, curiosità, soddisfazione e una visione positiva dell'innovazione e del futuro; dall'altra chiusura, insoddisfazione e una visione negativa dell'innovazione e del futuro. Dunque, non una variabile legata a uso-non uso (come potevamo aspettarci), ma una dimensione culturale e di approccio verso il mondo, l'innovazione e il futuro.

Il secondo fattore, invece, contrappone l'essere in rapporto positivo con l'azienda rispetto a una posizione di "scollamento" da questa.

Il terzo fattore, infine, concerne la partecipazione alle piattaforme di social network (da una parte l'essere sui social network, dall'altra non averli mai utilizzati).

Su queste dimensioni culturali l'Analisi dei Cluster ha evidenziato 8 cluster, ossia otto diversi modelli culturali presenti in azienda in rapporto all'innovazione. In Figura 1 li vediamo proiettati su un piano fattoriale rappresentato dal primo e dal secondo fattore.

Iniziamo la descrizione del piano fattoriale dal quadrante della "Vitalità", quello in basso a sinistra. In questo quadrante si situa il cluster che abbiamo definito dei "positivi": caratterizzati dall'essere molto soddisfatti del loro sviluppo professionale e del lavoro svolto in azienda; coltivano molti interessi nel tempo libero (amici, cinema, libri, viaggi); utilizzano molto la intranet (per sviluppare la propria formazione, per acquisire informazioni, per scambiare info e opinioni, per lavorare con gli altri); hanno un atteggiamento di apertura e curiosità verso l'innovazione digitale (incoraggia la creatività, accresce la vita sociale, migliora la qualità della vita); utilizzano WhatsApp anche per lavoro; frequentano Twitter, Facebook e Blog. Sempre nello stesso quadrante, troviamo il cluster dell'"appartenenza": caratterizzati da un forte senso di appartenenza e una relazione molto positiva con l'azienda (percepita come innovativa, socialmente responsabile, orientata ai risultati, competitiva); nel tempo libero ascoltano la radio, leggono i quotidiani e utilizzano molto la rete internet (anche attraverso smartphone e tablet).

In questo quadrante emerge una prevalenza della fascia d'età tra i 35 e i 44 anni (soprattutto nel cluster "positivi") e quella tra i 45 e i 54 anni (soprattutto nel cluster "appartenenza"); prevale la qualifica aziendale "quadro" e la "laurea" come titolo di studio (soprattutto nel cluster "appartenenza").

All'opposto, in basso a destra, si delinea il quadrante "Chiusura". In questo quadrante troviamo il cluster dei "no internet", ossia di quelli che nel tempo libero non utilizzano tecnologie digitali (no internet, no email, no smartphone, no pc, no tablet, no Whatsapp, no lettore e-book); hanno una percezione negativa dell'innovazione (le tecnologie stanno creando una società pigra e logorano la comunicazione tra le persone); hanno pochi interessi; non utilizzano la intranet aziendale; non frequentano i social network. E il cluster degli "isolati" caratterizzati da una forte insoddisfazione per il loro sviluppo professionale e delle opportunità di carriera all'interno dell'azienda; un atteggiamento di forte chiusura nei confronti dell'innovazione digitale; assenza di interessi e attività culturali. In questo quadrante c'è una prevalenza di donne, della qualifica "impiegato" e del titolo di studio "diploma".

In alto a destra, invece, si delinea il quadrante "Scollamento" dove troviamo il cluster "in fuga": caratterizzato dall'avere un'immagine negativa dell'azienda (percepita come poco competitiva e poco innovativa), del management (percepito come poco interessato a innovare, a decidere e a comunicare) e del grado di sviluppo dell'azienda nel medio periodo. Basso il senso di appartenenza e bassa la soddisfazione per la qualità delle iniziative di formazione aziendale. Le persone appartenenti a questo cluster utilizzano molto i social network (Facebook, Instagram, Twitter) e l'utilizzo delle tecnologie digitali viene percepito come fuga dalle occupazioni quotidiane. Nel tempo libero navigano molto in Internet, leggono libri e frequentano i social network. In questo quadrante c'è una prevalenza della qualifica di "impiegato", del titolo di studio "laurea", di uomini e della fascia d'età tra i 25 e i 34 anni.

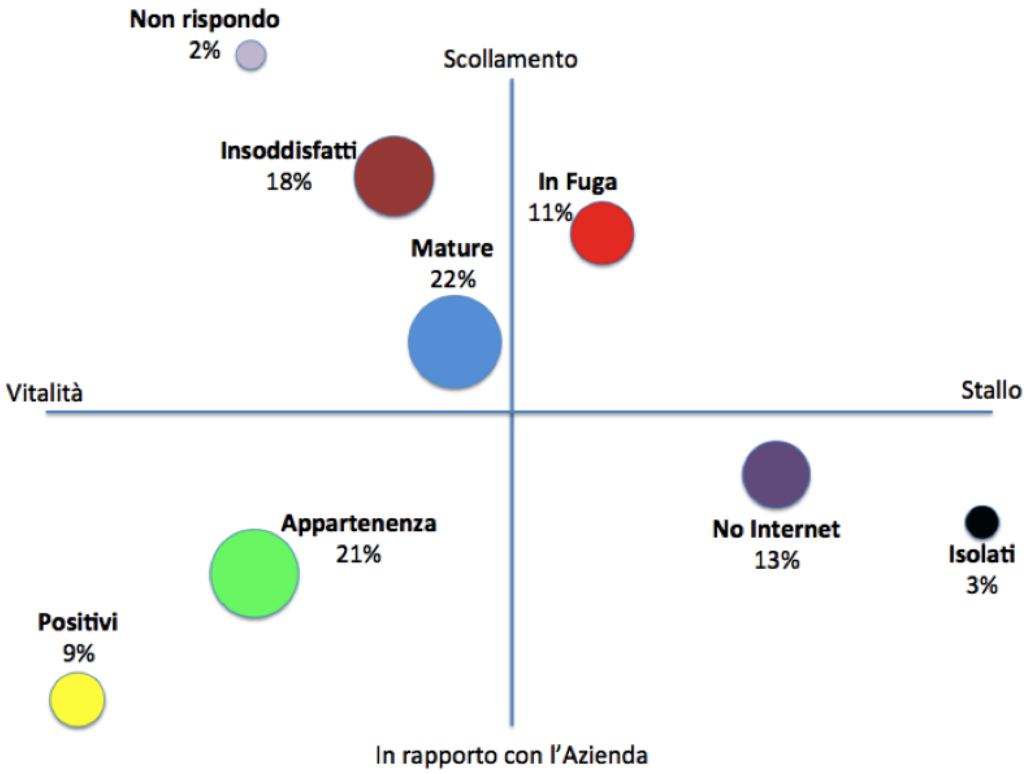

Figura 1. La mappa delle culture digitali.

Infine, in alto a sinistra del piano fattoriale, si delinea il quadrante "Inerzia" con tre diversi cluster. Il primo cluster, il più consistente, ma anche quello che si colloca più al centro del piano fattoriale, è costituito dalle "mature": abbastanza soddisfatte delle opportunità di carriera, del loro sviluppo professionale e del tipo di lavoro svolto; hanno una scarsa percezione delle possibilità offerte dalle nuove tecnologie digitali; nel tempo libero guardano la TV e frequentano gli amici; non hanno mai utilizzato i social network; utilizzano la intranet per le news e per consultare il cedolino paga; hanno un'attesa positiva nei confronti dell'innovazione digitale e una buona immagine dell'azienda in cui lavorano (che percepiscono come abbastanza competitiva e innovativa e molto orientata ai risultati). Forte il senso di appartenenza. Utilizzano il cellulare, ma non lo smartphone. In questo cluster troviamo la prevalenza di persone tra i 55 e i 65 anni d'età, donne. Sempre nello stesso quadrante, si evidenzia il cluster "insoddisfatti": caratterizzati da una percezione ambivalente dell'azienda (in azienda il lavoro è fondato poco sulla collaborazione, l'azienda è poco innovativa e poco orientata ai risultati, ma è abbastanza forte il senso di appartenenza e in azienda il posto di lavoro è sicuro); sono poco soddisfatti delle opportunità di carriera, del tipo di lavoro svolto e del loro sviluppo professionale; secondo loro per il management dell'azienda è poco importante innovare e comunicare; nel tempo libero utilizzano la rete internet, lo smartphone, l'email, il pc, il tablet. Utilizzano i social network per mantenere i rapporti con gli altri, guardano poca TV. Prevalenza degli uomini e della fascia d'età tra i 25 e i 34 anni. Un ultimo, piccolo, cluster del quadrante è costituito dai "non rispondo", ossia da quelle persone che hanno partecipato all'indagine, restituendo il questionario, ma lasciando la maggior parte delle domande senza risposta. Probabilmente non si fidano: non esprimono la propria opinione, ma nello stesso tempo non prendono posizione neanche astenendosi dal partecipare all'indagine.

Questo il quadro, la mappa, dei modelli culturali presenti in Azienda in rapporto all'innovazione. Una mappa che indica quanto il cambiamento sia correlato a modelli culturali che guardano al nuovo con curiosità; che affrontano la variabilità del contesto con attenzione e competenza. All'opposto modelli arroccati sulla rassicurante inerzia; fermi sulle posizioni raggiunte; chiusi alla possibilità di nuovi apprendimenti.

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Linee di sviluppo e di intervento

Le piattaforme digitali sviluppano nuove competenze di comunicazione e di convivenza. Nelle organizzazioni aumentano gli strumenti di condivisione della conoscenza e di rapporto continuo con l'altro (con il collega, ma anche con il responsabile). Si trasforma il concetto di ufficio, come spazio e tempo di lavoro, dando luogo a nuove forme di flessibilità. La programmazione lascia spazio all'esplorazione e all'innovazione. Aumentano le occasioni di espressione degli interessi e delle passioni personali.

Ma occorre mettersi in gioco: imparare nuove regole, abbondonare strade conosciute, sperimentare nuovi percorsi di lavoro. "Perché farlo?": si chiederà, ad esempio, il cluster delle "mature", ancorate a certezze e abitudini costruite in molti anni di vita aziendale, e lontane per età dalle tecnologie digitali. In realtà, sono disposte a seguire i nuovi orientamenti dell'azienda, verso cui nutrono un forte senso di appartenenza, ma aspettano che siano "dettati" dall'alto, che il nuovo diventi procedura, pratica riconosciuta. Aspettano che i primi ad adottare il cambiamento siano i manager. Poi loro si adegueranno.

Nella mappatura condotta, colpisce, in particolar modo, la posizione dei giovani. Quella parte di risorse tra i 25 e i 34 anni che denunciano una sensazione di forte scollamento tra l'essere nativi digitali, immersi in un modo digitale, fuori dall'azienda; per poi diventare analogici e lavorare con modalità analogiche, dentro una azienda con una cultura analogica. Una vera sensazione di scissione! Una macchina aziendale che li porta indietro in un tempo che non è il loro. Un tempo fatto di: fax, protocolli, telefoni fissi. Il punto critico, che merita attenzione e riflessione, sta nel fatto che i giovani indagati non sembrano riuscire a portare - loro - un po' di novità in azienda. Mantengono separati i due mondi (dentro e fuori), adeguandosi alle pratiche lavorative quotidiane. Non sembrano pensare di poter essere i promotori del cambiamento. Non sembrano cogliere che il bisogno dell'Azienda dove lavorano sia, in questo momento storico, quello di sollecitare innovazione e di aprire al nuovo. Non è sempre vero che assorbire le regole presenti e applicarle sia la soluzione migliore. I giovani potrebbero rappresentare i giusti alleati per promuovere cambiamento all'interno dell'organizzazione. Bisogna, però, dal loro fiducia; dar loro mandato e possibilità di espressione. Valorizzarli come attori e costruttori di futuro.

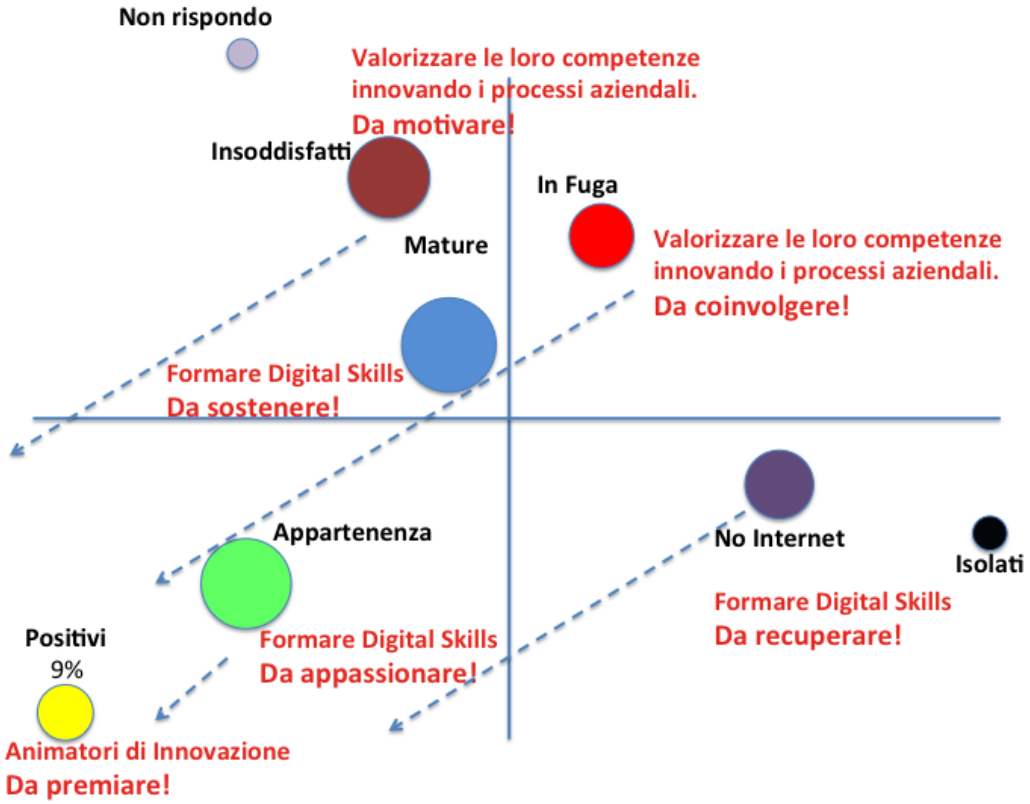

Figura 2. L'intervento sulle culture digitali.

La mappatura culturale condotta ci ha consentito di fotografare l'esistente e di partire dalle culture presenti per differenziare gli strumenti d'intervento.

Innanzitutto, sono stati restituiti i risultati della ricerca a tutte le persone della Direzione Risorse Umane. All'interno di momenti di aula dedicati, è stata avviata una riflessione comune sui risultati emersi dalla mappatura e sulle competenze digitali richieste per affrontare le trasformazioni organizzative in atto e, più in generale, le sfide della nostra epoca.

Ma la formazione, da sola, non basta. Sono stati avviati anche dei gruppi di lavoro per analizzare alcuni processi aziendali, ritenuti critici, e migliorarli attraverso l'utilizzo delle risorse digitali. Un primo gruppo di lavoro si è concentrato sulle modalità, sui contenuti e gli strumenti della comunicazione della Direzione Risorse Umane con/verso i diversi pubblici interni ed esterni alla direzione. Un secondo gruppo, invece, ha trattato il tema di come sviluppare all'interno dell'azienda la cultura del feedback, al fine di migliorare la collaborazione e il processo di valutazione delle prestazioni.

L'intero processo di trasformazione digitale ha visto il coinvolgimento dei manager HR attraverso la costituzione di un Comitato di progetto, che ha rafforzato il loro ruolo di committenza e di modello per le persone dell'azienda. Inoltre, per i manager della Direzione Risorse Umane, sono state sviluppate culture e competenze digitali all'interno di sessioni di *coaching* individuale.

Semplificare i processi, aiutare le persone a gestire il flusso di informazioni, costruire una cultura di collaborazione, di responsabilizzazione e di innovazione: sono questi gli obiettivi del "*Digital HR*" per accompagnare le imprese verso il futuro.

L'evoluzione della tecnologia digitale comporta l'apprendimento di nuove competenze e nuovi valori: responsabilità diffusa, lavoro per obiettivi, condivisione dell'informazione, trasparenza, monitoraggio e analisi dei dati. È necessario partire dalle culture interne, ascoltare e coinvolgere le persone nel processo di cambiamento, attivare una costante e virtuosa comunicazione interna, sviluppare piattaforme di condivisione, di *community* e di *team working*.

La trasformazione digitale richiede una rinnovata attenzione alle persone, alle loro emozioni, ai loro bisogni, alle loro aspettative, alla valorizzazione delle loro idee e del loro contributo.

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Co-creation in Italian Transmedia Production

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Abstract

This essay analyzes the forms of co-creation which have involved the operators in broadcast communication, the new creators of non-institutional content and the users in the context of transmedia production, with a particular focus on the Italian situation. The first part of the essay analyzes and compares the definitions of transmedia in literature, aiming to identify the specific characteristics of communication strategies which identify it and to clarify the differences with the concept of cross-media, which is often used wrongly as a synonym. In the second part of the essay, the main study models of transmedia structures in literature are used in order to analyze some emblematic cases of transmedia co-creation which have experimented some collaborative solutions over the last decade in Italy, leading to the production of contents designed for a distribution on multiple platforms, used in a coordinated and complementary manner.

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The Enabling Context: Transmedia Communication

In the 1990s, there was the stabilization of some technological, economic and social enabling factors which favored the development of a new approach to the design, distribution and enjoyment of cultural content based on the use of multiple media, in a coordinated and complementary manner, in support of a single communication project. In particular, the progressive intensification of the economic interests of large media conglomerates in various sectors of cultural production made it crucial to promote the various assets through forms of content development based on co-creation, which implied the early involvement of various complementary media sectors to the design of related contents and of multiplatform franchises from the very start of the project (Jenkins 2006, Hesmondhalgh 2002). A parallel process affected the media production technologies: miniaturization and lower prices favored their diffusion to a wide audience, not only represented by professionals, with a significant increase in the production of amateur or semi-professional content.

In the following decade, the stage of media content distribution also underwent a process of profound change: the birth of the media centered social network, beginning with MySpace and then with YouTube, creating new channels spreading semiprofessional contents which, for the first time, expanded from the context of domestic use to a potentially global audience (Manovich 2013). In order to describe the emerging figure of the non-professional media content producer, people used a phrase coined by Alvin Toffler, which identified a new subject who was at the same time producer and consumer of content: the *prosumer* (Toffler 1980). This phrase underlined the overcoming of the traditional separation between producers and users which characterized the industrial economy and it introduced the emergence of a participatory culture (Jenkins 2006) in which the different forms of reworking, re-appropriation and redistribution of popular culture enabled the interaction between the two historically distinct categories. This led to the emergence of new players operating, without tradition, in a creative field in which the rules for evaluation were kept within the same community of producers. They were the *outsiders* of digital creativity (Ricciardi 2009). According to some authors, including Manovich (Manovich 2013), the phenomenon of user generated content (content created by outsiders), was driven by the industry of consumer electronics, which wanted to convey and exploit the rhetoric of user-empowerment in order to market their products and by the same social media companies, which made a profit from the traffic generated by prosumers within their own networks.

The processes at the center of the scientific debate led multimedia companies to develop communication strategies which guided the audience through a constellation of related products, trying to anticipate the tactics implemented by outsiders in order to elaborate their own processes of fruition, re-appropriation and reworking of the content (De Certeau 1990 Manovich 2013). This is the model of transmedia communication and transmedia storytelling.

The considerations which led to the theory of the concept of transmedia storytelling were developed between the last decade of the twentieth century and the first decade of the twenty-first. In 1991, Marsha Kinder introduced the phrase transmedia intertextuality in her book *Playing with Power in Movies, Television and Video Games: from Muppet Babies to Teenage Mutant Ninja Turtles*, in order to describe a phenomenon that characterized some areas of the entertainment media production, in which fictional characters recurred in autonomous and related media texts, intended for various media (Kinder 1991).

In 2003, when the E-Content Report 8 of the European project ACTeN, titled *Cross-media,* was published, the focus was on the issue of cross-media, which would be accompanied by that of transmedia. The E-Content Report 8 was the first systematic study on the concept of cross-media and it identified the distinctive features of projects which used various communication medias in a complementary and coordinated way, in support of a specific theme, distinguishing them from cross-platform projects based on the transposition of the same text through different channels. According to this report, there were four qualifying elements in a cross-media project: the involvement of multiple media/distribution channels which supported one another with their specific strengths, therefore they did not merely reproduce the same content but they made an independent and significant contribution to the communication project; an integrated production, where different subjects, professionals or companies, collaborated in designing co-related content which led to mutual referral; accessibility of content through a plurality of devices; support of a single theme, story, objective, message by the different products.

Also in 2003, the essay *Transmedia Storytelling* by Henry Jenkins was published in *Technology Review*. In this essay, the author focused on the narrative projects, specifically analyzing the large multimedia franchises which gave birth to new models of co-creating fictional universes, capable of accommodating more stories and characters within declinable narrative lines for multiple media. Corporations can use this strategy to enhance their assets, intercepting and retaining an audience of different age groups, inviting them to move through a constellation of media to maximize their user experience.

Since then, the phrases cross-media and transmedia were used with similar meaning, until the Producers Guild of America settled the issue by formalizing the figure of the transmedia producer in its *Code of Credits* (the guidelines for securities that may be included in the credits of multimedia productions) of 2010. According to the *Code of Credits*, a transmedia narrative project or franchise must consist of at least three narratives, existing within the same fictional universe, and recounted on different platforms. The narrative extensions do not simply reproduce the same story but they offer a contribution at least partially different from those offered by other platforms. The transmedia producer deals with the design, development and production of transmedia content, managing the narrative continuity of the project through different platforms and creates original storylines for new platforms. He also deals with the design and development of the interactive components of the transmedia project[1].

A common feature in transmedia projects is the use of different media in a complementary and coordinated way to support a single communication project, accessible through a variety of media, where each channel of access provides a perspective or a contribution which is separate and distinct from the other and in which the fruition requires a strong performative component (the user must act, move from one media product to another in order to deepen the user experience and recompose the whole picture of the communication project).

The processes of creation of transmedia projects involve a significant cooperation between different media sectors, in order to attain a co-creation which can be outlined both in the field of broadcast production (with a systemic design which is prematurely shared by complementary sectors of the media industry and of the communicative universe that will host the various narrative lines) and from the perspective of participatory and cooperative design in which the most active segments of the public are involved, through strategies of engagement and peer production.

Co-creation Strategies in the Italian Transmedia Production

From the mid-2000s, in Italy, a number of transmedia projects oriented to co-creation between professionals/broadcasters and outsiders have been developed. This co-creation has been understood both as a co-participation in the development of content in multiple media sectors, and as a collaboration in the production between broadcast subjects and outsiders. In the following sections, we will analyze those Italian projects which have combined strategies of transmedia communication with productive solutions based on co-production either between different media sectors, in order to involve a wide range of audiences and to make them interact, or between broadcasters, media companies, outsiders and prosumers in order to include the contribution of the user-generated content in the enhancement processes. These projects will be analyzed with reference to the models of analysis of transmedia communication present in literature. Some common features that characterize the Italian experiments of transmedia co-creation will be highlighted.

In 2008 the show *Black Box* appeared on television and on the web. The show was produced by 360 Playmaker and MTV and it was broadcasted on MTV Italy. This was the first example of transmedia co-creation, that is a form of co-design practiced by different media sectors in order to create a product whose use implies that the user moves across multiple platforms in order to complete a process of additive comprehension of the story. Every episode of the show revolved around an individual story, narrativized and presented in short chapters, in which the main characters played themselves and the host intervened as a mediator, giving interpretations as the narration developed and interacting directly with the audience and with the main characters of the story. At the end of each TV episode, the main character was asked to

[1] The code of credits for transmedia projects is available at the following URL: http://www.producersguild.org/?page=coc_nm (accessed: September 30, 2016)

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reveal the story ending. The ending was not revealed on TV but on the web. The spectator then visited the MTV website in order to conclude his user experience: the story was fragmented in two sections, each one utilizing a different channel and being narratively independent from one another. What kind of transmedia strategy was adopted by Black Box? In 2006 Gary Hayes proposed a classification of the transmedia projects based on a scale which ranges between maximum and minimum redundancy of the content of the various assets. At one extreme we have those narrative projects (called pushed) which are presented on various media but in which the content carried by each asset has a low level of differentiation. At the other extreme, however, we have those projects that require a high interdependence of the content conveyed on different media channels and a low level of content redundancy. This content should be enjoyed in its entirety in order to experience the global narrative experience (the so-called experiences). Between these two extremes we can find the extra types and the bridge types. In the extra types some content is added to the main media product. This content is coordinated by the media product and it is distributed on various platforms, which offer additional materials aimed at the segment of audience represented by the fans. In the bridge types, each content is connected with the other through references and clues (bridges), and each asset has a different perspective on the story told while ensuring accessibility and autonomy from one another with respect to the content (Hayes 2006). *Black Box* adopted a bridge model, with a main media product (the TV program) and a web content which represents its digital extension. The goal is to encourage the audience to explore MTV's online channels and to create a community dedicated to the social enjoyment of the audio-visual content, which nevertheless remains the main content. Black Box engage its audience in a performative fruition while different media departments are involved in the co-creation of narrative adaptations of the story for the television and the web.

The web series *Freaks!* (2011-2013) by Claudio Di Biagio, Matteo Bruno and Guglielmo Scilla was an Italian transmedia project which paved the way to a strong partnership between broadcasters and creators of online content. *Freaks!* carried out a conversational interaction (Jensen 1998, 2008) based on spreadability (Jenkins, Ford, Green 2013) and media conversations (Manovich 2013). The authors of the series are members of the category of web authors called YouTube Stars, video makers who became popular thanks to their personal channels within the social platform of Youtube and have a large number of subscribers and views. The process of joining their audiences by working on a collective audiovisual work was the key to the success of *Freaks!*, which strengthened its spreadability thanks to the management of the medial conversation and of the dialogue with the audience acquired by individual YouTubers. This audience then contributes to the redistribution of the same videos (by embedding them in different contexts and on multiple platforms and social networks) and to the increase their information assets (through comments, integration of keywords, ratings...). In his book *Software Takes Command*, Lev Manovich gives a clear explanation of these dynamics, speaking of media conversations typical of social media:

> «One of the characteristics of social media is that it is often hard to say where “content” ends and the discussions of this content begin. […] Often “content,” “news” or “media” become tokens used to initiate or maintain a conversation. Their original meaning is less important than their function as such tokens» (Manovich 2013).

The online success of Freaks! generated interest among broadcasters, so that the series was one of the first examples of migration of a web series content to a national television channel (Deejay Tv). *Zio Gianni* of *The Pills* and *Il Candidato* of *La Buoncostume*, represent a further step towards processes of co-creation between broadcasters and Youtubers. These are actually products designed for television distribution which create a transmedia connection between the social platform and the television channel by putting in place the interactivity of conversation (Jensen 2008) and activating the online fan base of the authors, offering perspectives and complementary points of view on the characters of the series.

The Italian web series *Lost in Google* by *The Jackal* put in place a sort of collaborative writing and continual media conversation with the users, who could affect the screenplay of the following episodes with their comments, or see their narrative proposal published online on the official channels. In this case the co-creation of content involved the participation of the Online Communication company *Ciaopeople*, the youtubers *The Jackal* (their brand was acquired by

Ciaopeople following their online success) and the users of their video channel through an online platform. In fact, between 2011 and 2012, the web series engaged users through a conversational and registrational form of interaction (Jensen 2008): the best comments to each episode, either in the comment section of the episode on YouTube or on the official website, were used to write the next episode. Interactivity is intended here as a meta-designing activity, enabling participatory and collaborative mechanisms which are the basis of co-creation models mediated by technology (and by the interactive interface). The focus then turns, from interactive content to participatory storytelling, a type of narrative which is constructed by giving the users some control over the development of the story and by creating cultural activators, content which can be decoded through riddles and mysteries which engage the users and force them to take action in order to rebuild the plot and the story. This leads to a social, collaborative and performative experience: the users are invited to share information and skills, they need to act so that the storytelling may continue and, in many cases, they also need to interact with the authors and the storytellers in the creation of the story.

Another example of Italian transmedia project which led to the creation of communities around content experience, and encouraged forms of co-creation between authors and users is *Frammenti*. *Frammenti* was a transmedia series broadcasted on CurrentTV between 2009 and 2010. It is an Italian example of Alternate Reality Game which used co-creation strategies in the production of a transmedia serial.

According to Jeff Watson the *Alternate Reality Game* is a

> «form of interactive transmedia storytelling that [takes] the substance of everyday life and [weaves] it into narratives that layer additional meaning, depth, and interaction upon the real world. In an ARG, players discover the game through an encounter with one or more access points embedded in real world contexts. These access points, known in the parlance of ARGs as “rabbit holes”, lead players into a dynamic matrix of story components distributed across various kinds of digital and physical media» (Watson 2010).

In *Frammenti* an enigma was proposed in each episode of the television series. The viewers were invited to solve the enigma within a week, interacting with each other on the Web, communicating with the characters of the series through their profiles on social networks, exploring real places where actors hired by production gave some clues, in various Italian cities. In each episode of the series, they retraced the stages the players had gone through and they presented the solutions identified, thanks to which the players could continue their adventure. In this case, the Current producers experimented a formula of co-creation which allowed for forms of collaborative storytelling ascribable to the so-called *Experiences* in Gary Hayes's classification. The *Experiences* are stories in which the plot is fragmented into a multiplicity of micro-content scattered across multiple platforms, which the user must reconstruct through performing activities, games, online explorations and in the physical world.

In 2012 Andrea Phillips, in *A Creator's Guide to Transmedia Storytelling*, indicated the property of "fragmentation" as a characteristic feature of transmedia storytelling. Designing a transmedia story may implicate the fragmentation of the story into single portions which are then spread on multiple media products and distribution channels. It may also implicate that the story is told within a single media product (a film, a comic book, a book) and its fictional universe is expanded through additional content distributed on different media. In both cases the result is a high level of fragmentation of the story: a classification of transmedia projects can be given according to the size of the narrative fragments. These can be placed on a continuum (represented by the *Transmedia Fragmentation Spectrum Model*) ranging from projects consisting of large narrative blocks, or chunks, that coincide with individual media products (books, movies, television series...) with a high level of autonomy to projects whose narrative blocks are very small and interdependent: for example, the *Alternate Reality Game*, a project type of which *Frammenti* represents a unique example in the Italian broadcast scene.

In 2014 a web series project which implemented a transmedia *bridge* model for the promotion of a book published by the Italian editor Rizzoli, was launched on the web. The name of the series was *Under the Series*, it was produced by Anele in co-production with RCS and Trilud. Two elements created a diptych set in the same fictional universe: the 10-episode web series and the novel support each other and allow for the exploration of the fictional world from two different perspectives. This was not a mere transposition of the book but a transmedia

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storytelling in which each medium brings an independent and specific contribution to the process of experiencing the story. The characteristics of the target of the urban fantasy genre constituted the impulse and motivation for the first Italian experiment in transmedia co-creation which combined publishing companies and TV production companies (both authors and production companies worked directly on the expansion of the fictional universe). In his book *Transmedia Storytelling e Comunicazione*, Max Giovagnoli identified three communication systems which can characterize three types of transmedia project: the supportive communication system, in which different platforms support each other in promoting the main theme of the narrative project, the competitive communication system, which requires the creation of original and independent content for each asset in order to trigger competitive dynamics between the audience and the omnivorous communication system, in which the storytelling revolves around a main platform, usually the web, on which the other media depend in the distribution of the story (Giovagnoli 2013). *Under The Series* adopted a supportive communication system, like most of the Italian transmedia examples studied, in which a main media product (some editorial content, as in this case, or a film or television content) was the center to which the various audiences intercepted through other platforms of the transmedia system converged. *Under The Series* represents an example of that type of transmedia that Nuno Bernardo defined *Brand extension* in his book *Transmedia 2.0* (Bernardo 2012). Unlike *Stepping stone* projects, which are web-centered and test the effectiveness of a story on online digital platforms in order to extend it on different assets, and unlike *Organic transmedia* projects, "agnostic of platform", story-centric and not platform-centric, *Brand extension* is strongly anchored in a main media product, around which some complementary content set in the same fictional universe is created.

In 2015 the experimentation of transmedia storytelling reached the public service of the main Italian broadcaster, thus obtaining for the first time some real mainstream space. *Ray.it* is the RAI web platform launched in February 2015 from the collaboration between Rai Fiction, Technology and Production Management - CTO and the Department of Communications and External Relations. *Ray.it* is aimed at a young audience (15-30 years old), and it uses a transmedia approach aimed at extending the narratives of the most successful television series of RAI through a series of extra content and/or companion, especially designed for online use. Therefore, the complementary use of television and web communications wishes to create multiple points of contact between the audience and the television programs which are most popular among the specific target. The models that Gary Hayes defined as pushed and extras are used. They consist in the creation of a channel that ensures a multi-platform use of content without interruption (due to the availability of the television series on the web) and on the offer of extra content related to the fictional universes of the TV series, aimed primarily at an audience of fans, keen on interactivity of conversation (Jensen 2008, Manovich 2013) and eager to participate and collaborate.

Lo Staggista is a web series project of 2015 which represented the first Italian example of transmedia promotion put in place for an Italian blockbuster. The story of the web series took place on the set of the movie *Natale con il boss (Christmas with the Boss)*, produced by Filmauro, and it starred the intern in charge of filming the backstage. The transmedia model adopted here was the *bridge*, since the two parts of the content are independent from the point of view of usability (they are self-conclusive and usable independently from each other) and related from the point of view of the narrative. The Web series and the film were linked by some "bridges" that invited the viewer to experience all the complementary content (the fate of the protagonist of the web series, for example, was not revealed at the end of the series but in the film). The distribution of the series adopted a multi-platform approach: the directors Zero and Carlo Tozzi produced eight episodes aired on a double episode on MTV8 (television), on the web site Rds.it (web radio) and on the Filmauro Youtube channels (web video). Cinema, radio and the web represented complementary platforms for a project of co-creation (which involved audiovisual, radio and web production teams) aimed at promoting the film through a system of multi-platform contents.

Gabriele Mainetti's film *Lo chiamavano Geeg Robot*, released in 2016, is another example of how the transmedia promotion strategies are entering in the editorial plans of major publishers and mainstream producers, also in Italy. In order to promote the movie release in the cinemas, they created a comic which was strictly connected with the film, offering a parallel and complementary narrative, not simply a transposition but one element of a transmedia diptych which extends the fictional universe in which the story is set. The homonymous comic book was

therefore created thanks to the collaboration between the Italian distribution company Lucky Red and Italian sport newspaper Gazzetta dello Sport. The latter distributed the comic book at newsstands together with its newspaper. This was an example of co-creation similar to the strategy adopted by the best known and studied of transmedia franchises: *The Matrix* by the Wachowskis. *The Matrix* represented the reference point for the strategies of co-creation based on collaboration of different media sectors, from the earliest stages of the project, in the development of narrative content which is coordinated, complementary and set in the same fictional universe.

Both *Lo Staggista* and *Lo chiamavano Jeeg Robot* are examples of promotional projects which were developed through processes of transmedia co-creation. In his 2011 book *Getting Started in Transmedia Storytelling*, Robert Pratten identified three types of transmedia project: the *franchise*, the *portmanteau* and the *complex experiences*. The *franchise* consists of content which is autonomous and can be used independently (movies, comics, books...), but is set in the same fictional universe. The *portmanteau* are multi-platform projects which allow for a single narrative experience. Finally, the *complex experiences* combine the features of the previous two types: broadcast media products with a stand-alone access, interwoven with interactive and participatory experiences that allow the user to deepen and enjoy more intensely the user experience. These last two projects can therefore fall within the category of complex experiences mentioned by Robert Pratten, adopting a bridge model and a supportive communication system: the center, the main media product, is always the film content, whose transmedia extensions represent secondary narratives.

Conclusions

Transmedia projects are being offered by a growing number of broadcasters and players of online communication, defining and consolidating certain models of co-creation that are based on strategies of brand extension and on a two-step process, where successful *outsiders* are involved in the production processes of the broadcaster, also in order to enable a kind of interactivity in conversation which is seen as an opportunity for contact with the younger audience on social media. By using the analytical models of transmedia in the literature, this essay discussed different forms of co-creation, with particular reference to the Italian scenario: the cooperation between different media sectors in the development of narrative or communicative content which is coordinated and complementary, and the adoption by broadcasters and producers of strategies to create a strong link with the online audience, focusing on participatory and collaborative solutions aimed at involving the public in the elaboration and expansion of the stories told through the media products.

The experiences show that the Italian experimentation of transmedia co-creation is mainly linked with the less complex models of cross-platform design. The broadcast model, in both cinema and television, is predominant: the bridge structure, with a supportive communication system and brand extension goal, is the most common transmedia form. This is mainly due to its ability to support a main media product (broadcast) on which the majority of the production and marketing investments are concentrated. Web-centered solutions, organic transmedia, experiences and alternate reality games are still confined to independent forms of experimentation which do not give an impulse to forms of co-creation which involve collaboration between broadcasters and outsiders, except in rare cases (such as in the series *Frammenti*).

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Image-based Models Using Crowdsourcing Strategies

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Abstract

This paper aims to highlight the effectiveness of the collaboration between the modelling techniques that exploit the stereoscopic images of objects and the ability of the present-day technologies to generate images, both found in the web and gathered by other crowdsourcing techniques. Since nowadays the generation of models from images is a major low-cost resource, the whole strategy is aimed at obtaining benefits in the context of the documentation of Cultural Heritage (CH).
Assuming that the documentation of CH is the basis of the protection and the conservation policies, the chances of finding images and using them to create 3D models is particularly effective when the assets in question are at risk in danger zones (wars or areas subject to natural disasters) or in areas that, for various reasons, are difficult to access.
To demonstrate the advantage of using low-cost methods for the generation of 3D models of documentation with strategies that fall within the sphere of crowdsourcing, the case of the Vank cathedral modelling is presented. The Vank Cathedral in Isfahan in Iran is a building of the Safavid epoch (cent. XVII–XVIII) completely frescoed in the internal surfaces, where the architecture and especially the architectural decoration reach their peak.
The experimental section of the paper also explores some aspects of usability of the digital output from the image-based modelling methods. The availability of orthophotos allows and facilitates the iconographic reading of the frescoes, adding to the radiometric data, there is the metric potentiality of reading the proportions and the compositions of the organisation of the frescoes. Furthermore, simplified and suitably schematised models can be even printed and can be used in a didactic environment, such as the knowledge dissemination intended by the museums and other cultural institutions.

Keywords: Crowdsourcing, Cultural Heritage, SFM, point clouds, orthophotos, 3D printing.

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Introduction

The conservation and the valorisation of CH require an extensive documentation, both in properly historic-artistic terms, as well as regarding the physical characteristics of position, shape, colour, and geometry. In recent years, the documentation produced with digital tools of 3D survey has increased. A large number of assets around the world are physically maintained, exploiting new methods and techniques developed for 3D data recording.

The three-dimensional surveys may be accomplished through different tools and techniques with their own characteristics, problems and specificities. The two most common techniques for 3D data acquisition are the Terrestrial Laser Scanner (TLS, active sensor) and digital photogrammetry (passive sensor), which is more frequently adopted using dense matching techniques. (Chiabrando and Spanò 2013, 67–72; Barsanti et al. 2014)

Choosing the best techniques depends on many factors, including the type of object or scene to be detected, the material, the required accuracy, the project budget and the time constraints. Identifying the best way of working is the first and the most fundamental step to achieve the intended result. (Kersten and Lindstaedt 2012, 399–420)

As is known, TLS supports many different methods of acquisition data, which are rapid and automatic, but the major problems are that the costs are high and that there is a requirement for professional skills. On the other hand, advances in the fields of Photogrammetry and Computer Vision have led to significant enhancements, such as the Structure from Motion algorithm (SfM), which creates a high level of automation 3D point models of objects using overlapping images.

Regardless of the problems of scale and accuracy, which are to be dealt with under the section called image based models and crowdsourced images, in general, it is possible to assert that from these dense point models, continuous triangular surfaces, high-resolution orthoprojections of surfaces and digital surface models (DEMs) can be derived, which denotes all the 2D and 3D representations that are so useful in CH documentation projects.

This ease of building models of reality, even by non-experts, even if there is no requirement of a high precision, has triggered the connection of this interest with the crowdsourcing strategies, which raise the possibility of finding and having at disposal wide set of images related to assets.

Substantially, the meeting between crowdsourcing and models generation is particularly fruitful in the field of CH, since people are interested to be involved in processes of promotion and dissemination of the CH values. In parallel, there is an increasing awareness for contributing to the generation of digital models with the immense wealth of images available on the web or that can be collected by internet.

Crowdsourcing and Potentiality in Digital CH Domain

Despite the word “crowdsourcing” being a new coinage, it is a relatively old concept. An earliest projection of the word was first discovered in 1857 in the Oxford English Dictionary (OED). This provides evidence for the history and the utilisation of the word. The first appearance of the term crowdsourcing was in 2006 (Howe 2006). According to Howe, “crowdsourcing” represents the act of a company or an institution taking a function once performed by employees and outsourcing it to and undefined (and generally large) network of people in the form of an open call”. (Kaufmann 2014, 415)

In our time, crowdsourcing describes the act of involving many people in small pieces of a project, usually online. In educational and non-profit outreach programmes, crowdsourcing is developing in the forms of participating in an online course, collecting photos for a citizen-science project, uploading old photos for a community history project or participating in online discussions. In fact, crowdsourcing can enhance efficiency while minimising work and research costs, and by utilising the internet to request input from a dynamic and an enthusiastic group of clients can diminish the measure of time spent.

Many cultural heritage organisations, such as galleries, libraries, archives and museums (GLAMs) are utilising the digitisation of information in order to secure the long-term preservation of valuable archived material.

Some studies are deepening the relations among crowdsourcing and core activities of heritage organisations with the aim to clarify opportunities and challenges. For instance,

digitisation is not only a means to ensure a long-term preservation of the information concerning fragile carriers, but also a precondition for creating new access routes to collections. It is very interesting to observe how new trends aim to classify the different types of crowdsourcing in the GLAM domain in order to point out the phases in which crowdsourcing can have a key role in the so-called Digital Content Life Cycle, and lastly identify the mutual benefits for all stakeholders. (Oomen and Aroyo 2011)

The current account suggests an enormous potential for GLAMs, which makes crowdsourcing an essential part of their development process. These concepts can help collections to be used in interesting and creative ways that will promote them to new audiences, ensuring that they remain a source of inspiration and research for years to come. These projects also allow users to discover new ideas and follow their interests down routes that they may otherwise have never discovered. (Ridge 2013, 46)

Image-based Models and Crowdsourced Images

Scientists are aware that over the past two decades, laser scanning and digital photogrammetry have emerged as important additions in providing relevant potential for promoting a revolution in the documentation and the recording of archaeological evidences or other CH items and in its subsequent dissemination. (Campana 2014, 7)

The recent use of Unmanned Aerial Vehicle (UAV) photogrammetry has enlarged considerably the ability to deliver at different scales of application accurate, metric, and detailed 3D models while ensuring the estimate of the accuracy and the reliability of the unknown parameters from the measured image correspondences. (Colomina and Molina 2014, 79–97)

The high performance of the SFM systems in terms of accuracy of obtained models still depends on topographic systems, since the use of control points calculated by topographical methods enhance the quality of results. Nevertheless, the ability to search the highest sets of tie-point and to generate very complex point clouds makes this method increasingly independent of topographic systems. (Remondino 2011, 1104–1138)

Starting from this premise, and since CH of different types in the world is at major risk of natural and human hazards, some enhanced studies are deepening the chance to derive digital documentation for preservation of these memories with the use of images available in the web.

These studies assume that the recent access of mobile devices has led to the exponential increase of image and video resources that are freely available in internet repositories and social networks.

An adopted strategy is to exploit the efficient feature-based method for correlation algorithms (SIFT) in order to search corresponding points in different images. Since the search must be performed on millions of photos on the web, some authors propose a methodology (incremental spectral clustering methods) that optimises research and decreases outliers. (Ioannides et al. 2013)

Crowdsourced imagery, together with the SfM algorithm on which 3D reconstruction platform are based, are effectively used in the scenario of the already lost assets; in these cases, the geometric accuracy of the 3D models is totally unknown, but they are certainly an important digital resource. (Stathopoulou et al. 2015, 295–300; Kyriakaki et al. 2014, 431–52)

There are even studies aimed at optimising the 3D reconstruction derived from video resources (Alsadik 2016), and certainly the whole research field is rapidly evolving.

In consequence of these new possibilities, cultural institutions, in particular museums, have engaged with crowdsourcing and citizen science projects; in this way, crowdsourcing techniques play an important role in digitising and help in making a more open, connected and smart cultural heritage with more involved users and providers. Some projects aimed to reconstruct destroyed monuments of high recall: Project Mosul (created by M. Vincent and C. Coughenour in 2015, https://projectmosul.org) aims to involve the general public for providing crowdsourced images to virtually recreate 3D models of the heritage assets. Other solutions are targeted at a more common heritage and close to the local communities: the MicroPasts community provides an entirely free platform and an open source for online participants, which support online crowdsourcing and crowdfunding projects about the historical treasures (http://micropasts.org).

Very recently, examples of scientific works that combine image resources found on the web and the professional imagery for the 3D reconstruction workflow comparison have been made available. The study applied on Palmyra is meant to demonstrate the high potential in terms of detail and accuracy of the models obtained from these strategies as well as to reconstruct

models of the destroyed buildings to support the possible reconstruction projects. (Wahbeh et al. 2016)

To put some order among the many and varied experiences in a field of application fairly new and emerging as one that combines the crowdsourced resources and the 3D models generation, it is perhaps useful to make an attempt at a classification that clarifies the types of image retrieval:

- retrieval of images on the Web, using search engines that use image-matching algorithms or systems that retrieve the position of the shots from location-based systems. An example of search engine type of retrieval already available on the web is the TinEye system; an example of systems retrieving position of images is a study titled “Geo-localization of Crowdsourced Images for Collaborative 3D Modelling”, by S. Verstockt fulfilled in 2014 under the umbrella of COST action “Mapping and the Citizen Sensor” directed by N. Kerle.

- creation of websites or use of other systems related to social networks in order to launch search surveys of images and share resources freely collected by the public.

- trigger training campaigns aimed at volunteers and tourists with cultural interests to achieve minimum levels of competence for the acquisition of overlapping images in order to obtain sets of stereoscopic images that completely cover the objects of interest and that are suitable for 3D reconstructions.

It is necessary to be aware of the fact that to date the generation of 3D models, despite the availability of automated tools, such as the SfM strategy, is definitely required for specialised software and trained personnel but certainly the use of these instruments has spread in many areas of specialists working towards heritage conservation. Furthermore, it is significant that alongside the consolidated commercial platform (Agisoft Photoscan has been the primary platform, Pix4Dmapper is currently very much used by the availability of tools for analysis and data processing that others do not have), a growing number of open source solutions are available. An extensive list of open source solutions and perhaps not entirely complete or updated is available at SfM Wikipedia entry. Some of these software require elevated skills or they need a combined use to cover the entire workflow of an SfM model generation.

Experimental Section: The Vank Cathedral in Isfahan in Iran

The Test Case

The application experience that we report simulates the opportunity given to the third point of the preceding paragraph. The work is intended for the generation of a 3D model and the evaluation of its potential, starting from basic data that may have been collected by volunteers trained to collect images suitable for 3D modelling.

Therefore, this experimental section focuses on the documentation of the Vank Cathedral in Isfahan in Iran; it is a building of the Safavid epoch (cent. XVII-XVIII) that is an age within the architecture, and especially the architectural decoration reach their peak since the interior of the cathedral is enriched with extremely relevant decorations of frescoes (see Figure 2). (Haghnazarian 2006)

The Vank Cathedral was one of the principal holy places that has been established in Isfahan by Armenian immigrants settled by Shah Abbas I of the Safavid Dynasty after the Ottoman War. (1603–1605). Tens of thousands of immigrants settled in the Iranian provinces towards the south of the Aras River, as well as relocated Armenians, who had fled from the Ottoman genocide and settled in the New Julfa quarter, which was named in memory of their original homeland. (Pasdermadjian 1990)

The Vank Cathedral (began in 1655 and ended in 1664), despite its small size, has the classic structure of the "domed hall" with double shell like the Persian mosques and longitudinal plan with a semi-octagonal apse. The migration of Armenians to Isfahan is essential to mark the turning point. This fact promotes the development of innovative formulations of Iranian art that combine with Armenian and Western naturalistic works.

The experience applied to the church focuses on photorealistic reconstruction of the interior surfaces by orthophoto applications derived from the SfM algorithms in "stereoscopic" mode. The photographs were taken with a professional digital camera and the high-resolution overlapping images of the frescoed surfaces were acquired in order to obtain a large scale model of the decoration details. The use of topographic measurements of the control points has been specifically avoided with the aim of simulating the acquisition by non-experts, devoid of topographical measuring instruments.

Figure 1. A view of the exterior of the church, very similar to a mosque.

Figure 2. The beautiful frescoed walls of the Vank cathedral with the highlights of some critical elements for photogrammetric processing: the presence of chandeliers and transparent protections at visitors' heights.

Data Collection and Processing

All phases of a photogrammetric survey process, from the collection of images until the restitution of realistic materials, are strongly dependent on the shooting strategy and on the spatial position of cameras. Despite this, the complete coverage of all parts of the object, the stereoscopic overlap of 80–90 %, and possibly shooting a different scale images are quite easy, and do not seem to be hard to teach the fans of crowdsourcing for heritage protection.

The characteristics of the used camera are reported in Table 1, while the software used was PhotoScan by Agisoft, as it is perhaps most widely used in the CH applications.

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Table 1. Camera parameters for Nikon D7100. Complete datasheet available here: http://imaging.nikon.com/lineup/dslr/d7100/spec.htm

Lens	Nikon AF-S DX NIKKOR	focal distance 18 mm
Pixel size	0.004 × 0.004 mm	
Sensor	24 × 36 mm	6000 × 4000 pixel

About 200 shots were been acquired to fully cover the internal walls of the central room and the apse. A long series of nadiral upwards images (with the camera resting on the floor) were distributed along the longitudinal axis of the cathedral, together with two other stripes perpendicular to the first in correspondence with two symmetry axes of domes. The acquisition distance for the selected camera is about 3 m; this usually ensures that the appropriate architectural scale of the survey is 1:50. Such a distance provides a Ground Sampling Distance (GSD) of about 0.6 mm. These parameters are obviously valid for frames with horizontal optical axis. Since the image collection was simulated by volunteers and tourists, no devices to raise the camera were provided. So, images have been taken using three different inclinations on the vertical axis of the “domed hall”, and a vertical overlap of about 30% has been secured.

The experiments to obtain the overall photogrammetric block have been numerous. The encumbrances shown in Figure 2 (the chandeliers and the transparent protections) create either problems in the recognition of the tie-points or high levels of noise in the cloud, and they have been previously masked.

In the end, the best way was to calculate two photogrammetric blocks divided into the two main areas of the church. The nadiral image stripe acquired along the central axis of the church made it possible to achieve the union of the two blocks in a single project, and therefore get a single cloud that represents the entire interior of the cathedral.

The latter result, that of a single cloud, was essential to associate the appropriate scale to the model. In the absence of control points, two linear distances that are easily measurable on site, have been collected (see Figure 3) in order to be given as a constraint to the photogrammetric block in order to calculate the scale factor of the model.

The overall result has been the achievement of a point cloud that in terms of accuracy was not so much different from the many applications made with the use of the control points. The residuals were slightly higher, but settled around 2 cm.

The data analysis has been made using the software 3DReshaper by Technodigit, mainly for converting the point model in a continuous surface (mesh) and in order to achieve the model optimisation and the projection of the textures with the help of the oriented images (filtering the cloud, closing the mesh lacks etc.; see Figures 4 and 5). PointCab was rather the software used to make sections of the cloud with significant planes with the aim to realize Autodesk AutoCAD architectural drawings together with the integrated orthophotos (see Figures 6 and 7).

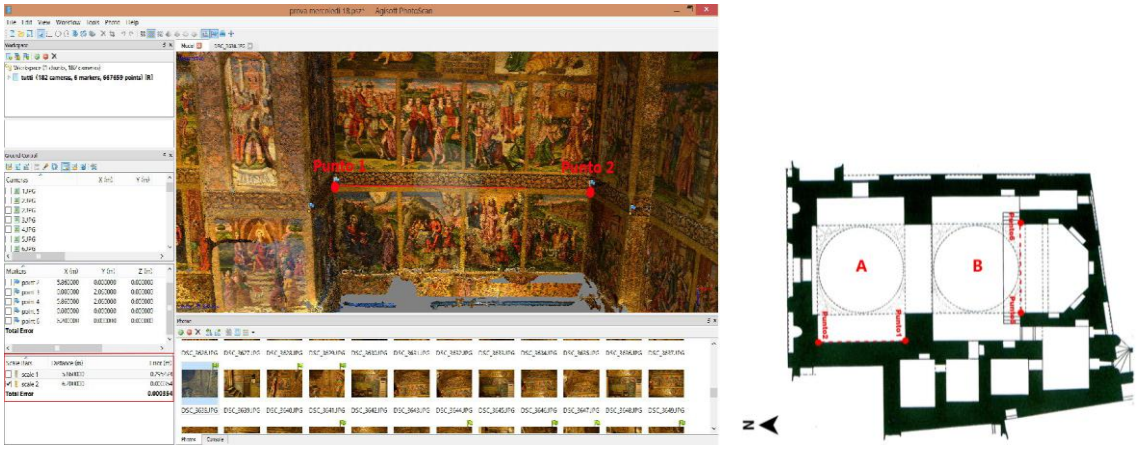

Figure 3. The two direct measures of distances on which we based the calculation of the model scale.

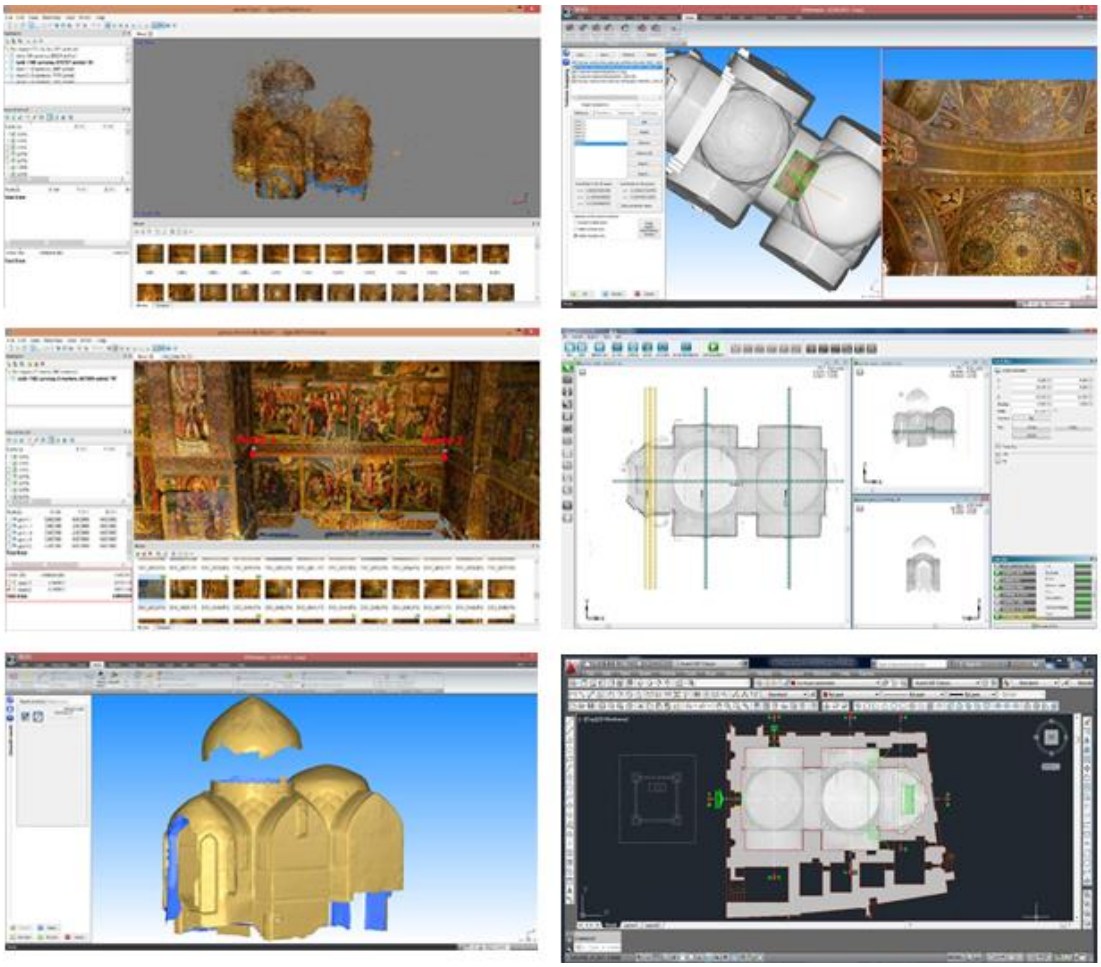

Figure 4. Some phases of the SfM workflow and the consequent processing aimed to obtain 2D and 3D representations.

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Figure 5. The entire meshed model with high-resolution textures representing frescoes; the lack of surface above the drum of the dome is obvious due to the impossibility to take pictures.

Figure 6. The complete vaults orthoprojections superimposed on the upwards plan.

Figure 7. Some examples of 2D architectural drawings with orthoprojections of frescoed walls and vaults.

The Mosaic of Orthophotos for the Interpretation of the Frescoes

Since the Vank cathedral is considerably featured by a new style in its time because of the combination of cultures, religions, styles, and iconographical formulations of various styles, especially in the field of interior decoration of the frescoes, the orthophotos have a preeminent role in this project. The interior walls of the Vank Cathedral were decorated with the 113 scenes arranged in five registers of the history of the New and the Old Testament, and also the story of Saint Gregory “Illuminatore” (Armenian *Lusaworič;* according to the tradition, he is the founder of Armenian Christianity)—the sense of reading from right to left starting from the apse.

According to one of the main goals of the project, the image-based model has been used to develop the representations of the walls surfaces in a single continuous image (the mosaic of several orthophotos) to continuously read the development of the decorative cycles. The orthophotos support the deep understanding of the liturgical sources of the frescoes; in fact, it is possible to focus on the composition and the iconographic reading of the large fresco cycles covering the entire stretch of the interior facades. This interpretation of the frescoes provides the possibility to recognise a new style for understanding the Armenian art in the Safavid period. In another publication (Hashemi and Nourollahichatabi 2015), a comparison has been attempted between the depictions of the Last Judgement of the Vank Cathedral with that of Franghias Kavertzas (XVII century, Venice) and that of Michelangelo, which is already the subject of specific studies. (Angheben 2006)

The variety of subjects treated in the frescoes cycles is perhaps understandable from the list below, which corresponds to the identified cycles in Figure 8:

- Images from the life of the prophets (from 1 to 8);
- Episodes of the Old Testament stories (from 9 to 34);

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- Episodes of the New Testament stories (from 35 to 60);
- The episodes of the Yahya murder, the miracle of Christ and the death of Mary (from 64 to 74);
- Miracles and stories of Christ (from 75 to 85);
- Episodes from the life of Saint Gregory (86);
- Description of seven sacred rites (from 107 to 113);
- Apocalypse;
- Heaven and hell – the seven floors of heaven;
- Christ and the apostles;
- Prophets before Jesus.

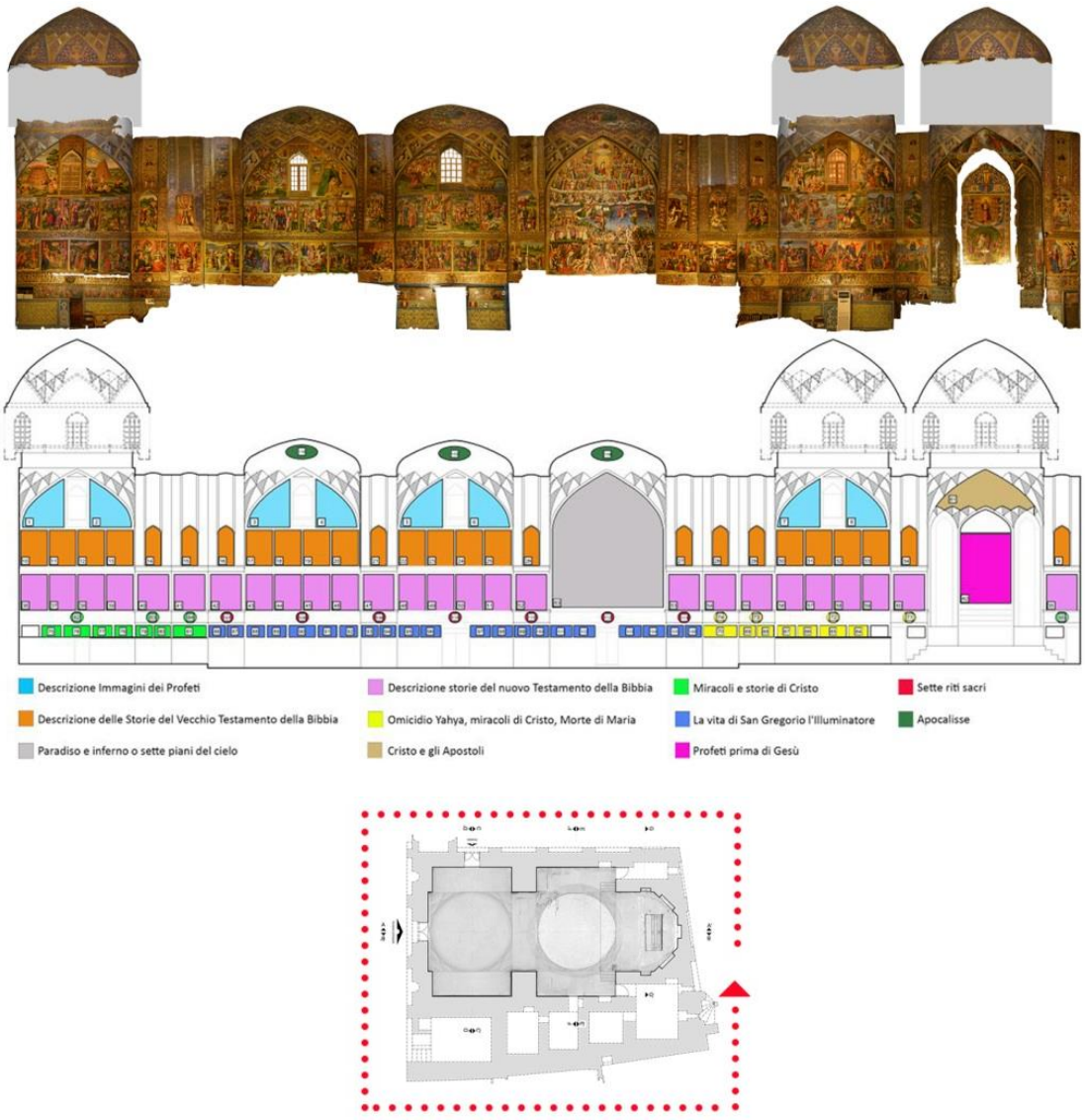

Figure 8. Compositional scheme of the various registers of the frescoes of Vank Cathedral represented by unique image composed by a mosaic of orthophotos.

An Example of the Iconographic Reading of the Frescoes: Ascent to Calvary

We propose an example to prove that orthophotos allow and facilitate the iconographic reading of the frescoes and thus support the reading and the analysis of metric and radiometric information. According to some general and established principles to read the iconography of sacred representations (Goldammer 2006), we selected a part of the third register of frescoes, which consists in seven scenes of Jesus' Passion explaining the story of the last events of Christ's earthly life from the episode Way to Calvary to Descent of Holy Spirit.

The iconic Ascent to Calvary is one of the episodes of the narrative scenes that presents how Christ, carrying the cross, has been aided by Simon of Cyrene and is surrounded by a crowd of spectators and soldiers.

In Figure 9, we have outlined that the composition of the fresco comprises an isosceles triangular element that divides the entire scene into three parts: the main character is located in the third part of the scene. In addition, the depth of the painted work is distinguished according to the importance of the characters; it has been pointed out with the use of various colours. In particular, the composition of the Vank cathedral frescoes shows a traditional structure, such as the Byzantine style, while the Western Renaissance painting style imprints dynamism of the composition along with the most advanced use of perspective, in order to create the appearance of depth.

Later, the representations of the Passion of Jesus, respectively of the Vank Cathedral, the painting by Duccio di Buoninsegna (we retrieved the picture of figure 9 from an online repository, http://www.artbible.info) and the one by an unknown Flemish painter (picture of Figure 9 retrieved from the Metropolitan Museum of Art on-line repository, http://www.metmuseum.org) have been compared. It is possible to notice the immobility of the figures in the painting by the painter from Siena, while the Armenian culture has a movement that is likewise adopted by the flamingo painter. In the last one, the background is entirely occupied by an urban view, which provides movement and reality of the scene.

In the light of these and many other comparisons (Hashemi and Nourollahichatabi 2015), we can assert that the most obvious characteristics of the Armenian art of the frescoes in the Vank Cathedral is an innovative combination with intermediate characteristics, which derive from western styles and are under the influence of Armenian and Persian traditions in the Safavid era.

3D Printing Technologies in Reconstruction of CH

Nowadays, the advent of 3D printers has opened up new horizons in the heritage field since 3D printing technologies offer wide opportunities in the reconstruction of objects domain, and the purposes connected to research, documentation, preservation and education are rapidly developing. Due to the increasing demand within the humanities and social sciences for the use of crowdsourced digitising of CH and the development of digital data capture technologies, the printing of 3d models of real objects are increasingly used to develop 3D data visualisations.

The 3D-printing process consists of three steps: creating a 3D model, changing that model into a file that can be executed on a 3D printer (a process known as slicing) and finally loading the model on the printer and having it printed. This paper does not intend to enter into the debate of using 3D printing for cultural heritage, or even to describe the procedural or critical aspects of the press, or even the benefits of different 3D printing systems.

Assuming that simplified and suitably schematised models can be printed and used in a didactic environment, such as the knowledge dissemination intended by the museums and other cultural institutions, we are going to present another outcome of the Vank cathedral image-based model.

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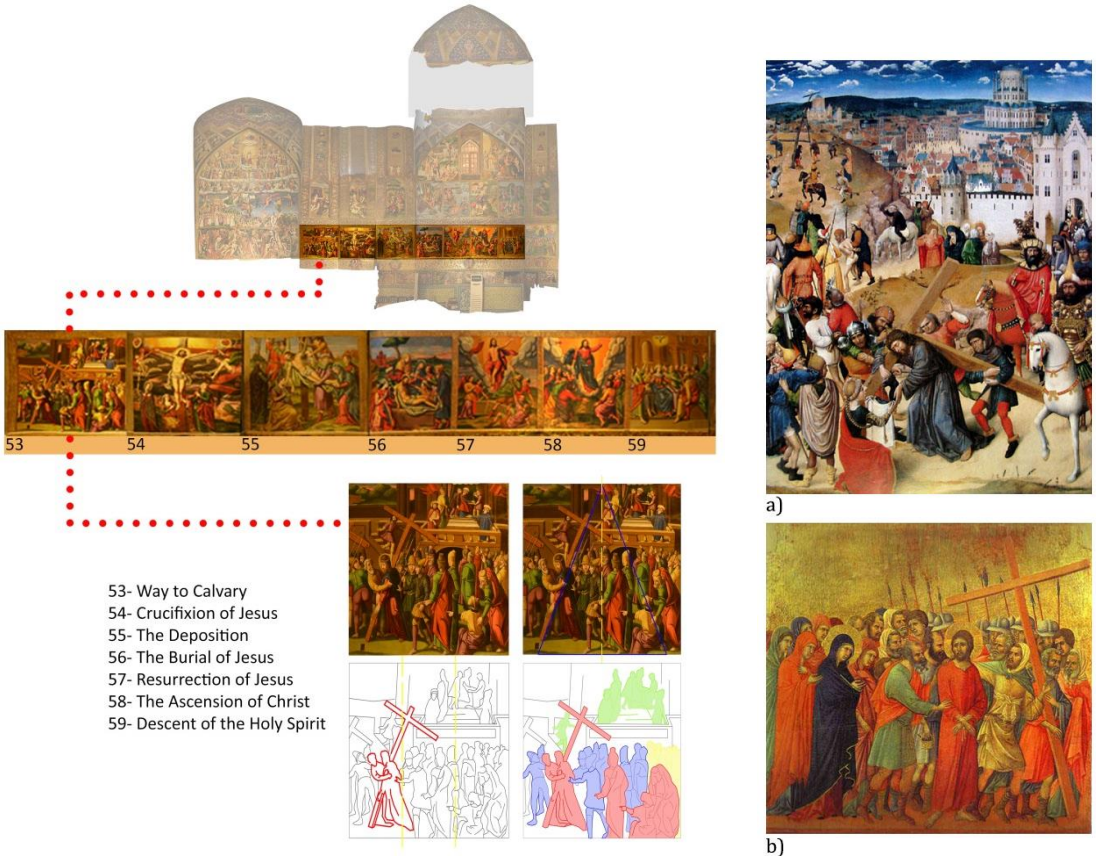

Figure 9. The analysing and the reading of the fresco ascent to Calvary. In the right: a) North Netherlandish Painter, Christ Bearing the Cross, 1470, Metropolitan Museum of Art, New York; b) Duccio di Buoninsegna, Maestà (recto), Road to Calvary, 1308–1311, Museo dell'Opera Metropolitana del Duomo, Siena.

The Vank Cathedral 3D Printed Model

The printed 3D model of the Vank Cathedral has been realized for easily communicating the geometry of the volume, the proportion of the walls, the vaults and the general structure. Of course it was necessary to complete the model in the missing parts (the cylinder under the dome and the lower portions of the walls covered by the transparent protection), and we aimed to build a printable model of half of the building, since the studied and significant part was the inside of the building. Such a half 3D printed model is able to refer to architectural features and proportions of the general composition of the building; so it can be compared with other samples.

After a large comparison with other Armenian Churches outside Iran (Cuneo 1989), the Holy Cross church is to be examined. This church on Aght'amar Island in Turkey's Lake Van is a medieval Armenian Apostolic church. It was built in the 10th century (915–922) with the dimensions for the interior space as 14.80 m by 11.5 m and the height of the dome as 20.40 m. The architectural style of this church has been influenced by the architectural style of Saint Hripsime (Der Nersessian 1974).

On the other hand, the Vank cathedral has a rectangular plan (19.50m by 10m) with two different sizes and shapes of domes covering the two parts of the church. The domes of the church reach the height of 17.50m and 12m thanks to the effective use of overlapping bricks typical of the Safavid architecture. They adopted a quadrilateral arch, which provides a double shell like the domes of mosques.

In Figure 10, the scaled 3D printed models can be explained to the public in this way that these two churches, even if religious, artistic, symbolic and other relations connect them or even if they present more or less the same proportional relationships, they are featured by different constructive systems. So in this respect, the domes are very different.

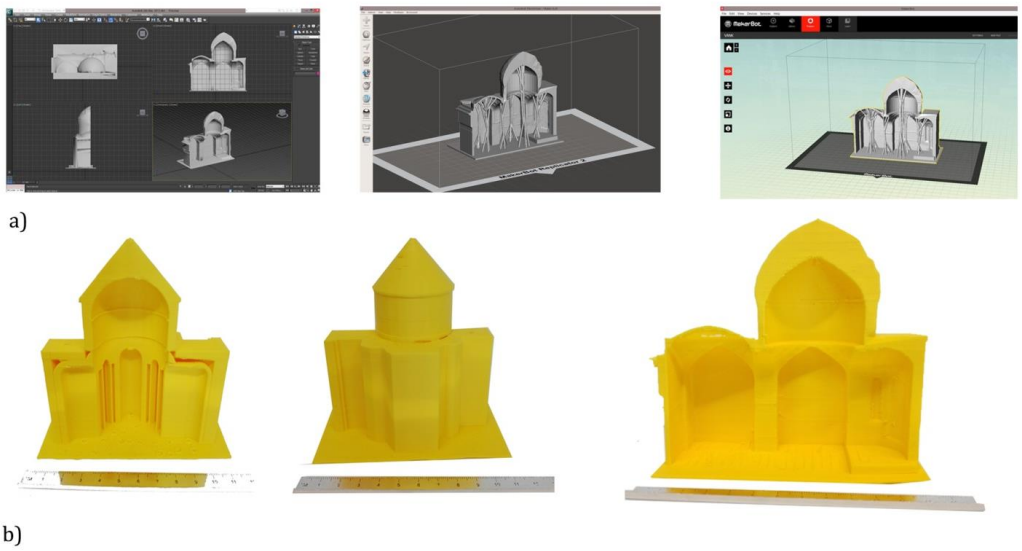

Figure 10. a) The reconstruction of semi volume with 3D-Modeling Software for the production of 3D printed model (3D Studio Max, Meshmixer, MakerBot Desktop) ; b) 3d printing models of the Church of the Holy Cross and of the Vank cathedral.

Conclusion

We believe that the results of this project leads in two different directions. The first is that now an accurate and a detailed, comprehensive documentation of the interior of Vank Cathedral is available.

Other considerations regarding the objectives, to which the new technologies can be addressed, are, if possible, more relevant. Actually, this test case is even a pretext to discuss the current opportunities to enhance the crowdsourced collection of image data concerning the Cultural Heritage scattered in the world with the aim to derive spatial data and models.

Starting from the consideration that recently the extensive prevalence of crowdsourcing activities and public participation in the CH domain as gathering, categorising and maintaining heritage collections has increased, the application of 3D technologies based on crowdsourced resources can be encouraged and developed.

If it is true that during the recent years, the image-based models have provided impressive results for cultural heritage, with an effective impact on preservation, valorisation and heritage documentation, it is undeniable that the accessibility of an accurate digital representation allows several possibilities of utilisation to the specialist or to ordinary people.

This is the reason why this research project employs a crowdsourcing strategy to collect images by non-specialists; the results of the test provide 2D architectural drawings and the high resolution photogrammetrical orthoprojection of frescoes adding to 3D digital model that can be effectively exploited by many specialists involved in CH conservation.

Lastly, today, we are all convinced that 3D printing technology can be earmarked for communication and dissemination projects to a broad audience, but the debate on the possibility of different uses is definitely alive.

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