JOURNAL
OF CREATIVE INDUSTRIES
AND CULTURAL STUDIES

Vol. III

Title: Journal of Creative Industries and Cultural Studies – JOCIS

Editorial Directors:
Terry Flew, Queensland University of Technology (Australia)
Paulo Faustino, Porto University (Portugal)

Authors:
Paulo Faustino, Terry Flew, Ida Marie Helgetveit, Apurva Kirti Sharma, Asdrúbal Borges Formiga Sobrinho, Osmária da Cunha, Marcello de Souza Freitas, Hasan Bakhshi, Greg Hearn, Cori Stewart, Fulvia Santovito, Dinara Tokbaeva, Bruno Miguel Pires, João Neves, Diogo Resende, Mónica Rodrigues

Layout: mediaxxi - formalpress | Rita Justino
Cover Art: mediaxxi - formalpres | Rita Justino

Proofreading:
Dinara Tokbaeva | Westminster University
Mónica Rodrigues | Formalpress/Media XXI
Diogo Resende | Formalpress/Media XXI

Ownership: Formalpress, LDA - Media XXI – Publishing, Research and Consulting
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying or microfilming, recording or otherwise, without permission of the publisher.
Company Address: Formalpress – Publicações e Marketing, Lda.

Lisbon Region: Av. 25 de Abril Nº8 B C/V Drt.,
2620-185 Ramada
Telephone: 217 573 459
Fax: 217 576 316

Oporto Region: Rua João das Regras, 150, 5º esq.
Traseiras, 4000/291 Porto
Telephone: 225 029 137

Company website: mediaxxi@mediaxxi.com

Legal Deposit nº: 429781/17
ISSN: 5-607727-158028 00003

IMMAA Scientific Committee:
Paulo Faustino, Porto University (Portugal)
Eli Noam, Columbia University (EUA)
Elena Vartanova, Losomonov Moscow State University (Russian)
Monica Herrero, Navarra University (Spain)
Seongcheol Kim, Korea University (South Korea)
Steve Wildman, State Michigan University (EUA)
John Lavine, Northwestern University (EUA)
Christian Scholz, Saarland University (German)

Editorial Board:
Paulo Faustino, Porto University (Portugal)
Eli Noam, Columbia University (EUA)
Paul Clemenz Murschetz Berlin University of Digital Sciences (Germany)
Elena Vartanova, Losomonov Moscow State University (Russian)
Tena Peri Perišin, University of Zagreb (Croatia)
Monica Herrero, Navarra University (Spain)
Seongcheol Kim, Korea University (South Korea)
Steve Wildman, State Michigan University (EUA)
John Lavine, Northwestern University (EUA)
Christian Scholz, Saarland University (German)
Francisco Campos, Santiago de Compostela University (Spain)
Alan Albarran, North Texas University (EUA)
Rui Cádima, NOVA University Lisbon (Portugal)
Robert Picard, Oxford University (UK)
Sónia Virgínia, State University of Rio de Janeiro (Brasil)
Fernanda Ribeiro, Porto University (Portugal)
Jorge Pedro Sousa, University Fernando Pessoa (Portugal)
Min Hang, Tsinghua University (China)
Alfonso Tabernero, Navarra University (Spain)
Gregory Lowe, Tampere University (Finland)
Georgios Tsourvakas, Aristotle University of Thessaloniki (Greece)
Armando Malheiro, Porto University (Portugal)
Biser Zlatanov, Sofia University (Bulgaria)
Cinzia Dal Zotto, Neuchatêl University (Switzerland)
Francisco Belda, Sao Paulo State University (Brazil)
Terry Flew, Queensland University of Technology (Australia)
Dominique.Bourgeois, Fribourg University (Switzerland)
António Machuco, Porto University (Portugal)
Kiyoshi Nakamura, Waseda University, (Japan)
José Alvarez, Juan Carlos University (Spain)
José Cavaleiro, Lisbon Mass Media School (Portugal)
Patrick Badillo, University of Geneva (Switzerland)
Elisa Cerveira, Porto University (Portugal)
Yu-Li Liu, National Chengchi. University (Taiwan)
Franco Papandrea, University of Canberra. (Australia)
Amit Schejter, Penn State University (EUA)
George Sylvie, University of Texas (USA)
Zvezdan Vukanovic, University of Donja Gorica (Montenegro)
Dwayne Winseck, Carleton University, (Canadia)
Petrodos Iosifidis, Westminster University (UK)
John Oliver, Bournemouth University, (UK)

Jesus Timoteo, Complutense University of Madrid (Spain)
Fernando Zamith, Porto University (Portugal)
Marialva Barbosa, Federal University of Rio de Janeiro (Brazil)
Ilya Kiriya, National Research University Higher School of Economics (Russia)
Hans van Kranenburg, Radboud University Nijmegen (Netherlands)
Mark Deuze, Amesterdam University (Netherlands)
Catarina Menezes, Leiria Polytechnic Institute (Portugal)
Guillermo Mastrini, Nation Universidad of Quilmes (Argentina)
Nico Carpentier, Vrije Universiteit Brussel - Free University of Brussels (Belgium)
Janet Wask, Oregon University (EUA)
Robert Defillippi, Suffolk University (EUA)
José Simões, Saint Joseph University (China)
Antonio Hohlfeldt, Pontifice University of Rio Grande do Sul (Brazil)
Erik Hitters. Rotterdam University (Netherlands)
Adilson Cabral, Fluminense University (Brazil)
Mike Friedrichsen, Humboldt University (German)
Cinzia Colapinto, Venice University (Italy)
Jean Baptist Lesourd, University of Aix – Marseille (France)
Francisco Rojano, Malaga University (Spain)
Marco Gambaro, Milan University (Italy)
Stavros Georgiades, Frederick University (Cypros)
Richard Gershon, Western Michigan University (EUA)
Óscar Mealha, Aveiro University (Portugal)
Moisés Martins, Minho University (Portugal)
Maria Manuela Gomes de Azevedo Pinto, Porto University (Portugal)
Castulus Kobo, Macromedia University of Applied Sciences of Stuttgard (Germany)
Zvezdan Vukanovic, Abu Dhabi University (Emirates)

Editorial Directors:
Terry Flew, Queensland University of Technology
Paulo Faustino, Porto University

Edtorial Coordination:
Mónica Rodrigues | Formalpress/Media XXI

Editorial Assistants:
Dinara Tokbaeva | Westminster University
Diogo Resende | Formalpress/Media XXI
João Neves | Formalpress/MediaXXI
Bruno Pires | Formalpress/MediaXXI

Administration:
Gonçalo Ribeiro – Formalpress/Media XXI

JICIS

Vol. III

TABLE OF CONTENTS

Foreword

By Paulo Faustino

Paulo Faustino, Ph.D and Post Doc,

University of Porto:
Faculty of Arts and Humanities
Department of Communication
and Information Sciences,
Centre for Researching Communication,
Information and Digital Culture
CIC. Digital (Porto and Lisbon)

Dear reader,

Due to the rapid changes and societal challenges, such as the need to create qualified employment for young people and to find new ways to develop territories through strategies of smart specialization, the Creative and Cultural Industries have been given great importance as a sector capable of empowering economic development and sustainable society. There are many examples of countries, regions and cities - territories - that have developed on the basis of the creative and cultural industries, and in many cases the role of Public Policies has been decisive. And with more practical evidence of visible and measurable results, it is certain that creative and cultural activity has definitely entered the agenda of governments and politicians; and although public discourse on its importance can often be part of politicians' marketing (because it is also good for the public image and generally investment in creativity and culture is well accepted by society), the truth is that in the last decade it has been produced technical and scientific knowledge that demonstrates a growing economic/commercial and symbolic/aesthetic value of creative and cultural activities.

In fact, for these and other reasons and to better understand the challenges that the Creative and Cultural Industries face, it is justified an ever closer look not only of their actors and professionals, but also of researchers and other academic community with interest in these areas. From a market point of view, some of the main challenges of CCI include, for example, the impact of IT, the increase in competition and the growth of the proactive consumer's age: a consumer who produces content and who is insatiable in the search for new products and increasingly sophisticated services, with social networks such as Facebook and Twitter, which are essential tools in consolidating these dynamics. These threats raise some issues, namely (i) what types of innovation are found in CCI, (ii) what new creative products/services are being produced, (iii) how the production and delivery methods work, (iv) are CCI more innovative in their back office processes and in the relationships they establish with their customers and consumers?, (v) what is the potential for applying virtual reality in CCI business models? and (vi) what is the role of research and of school in the development of skills, as well as in the production and transfer of knowledge? The answers to these questions will surely help to find information and knowledge that can contribute to make these activities more competitive, sustainable and relevant to society.

Actually, from a market point of view, it is necessary to intensify the production of knowledge that can be useful in helping the creative industries find the way to innovation through a showcase of creative business models, relating the impacts of IT in the processes and methods to make their products more competitive in the global marketplace, also reflecting on the impact of IT on companies' innovation and internationalization processes. Knowledge production in these domains will also help creative companies introduce new concepts of innovation assessment, improve knowledge of the organization itself, identify and prioritize areas for improvement, establish realistic and viable goals, create priority criteria in planning, promote a better understanding of competitors and the competitive level of the market, allow greater efficiency in customer orientation to identify the critical success factors in their internal satisfaction, to learn from the best case studies to categorize the best practices in the several areas of the sector, allowing the optimization of creative business at various levels.

Therefore, JOCIS also intends to contribute to this purpose: to create, share and transfer useful knowledge in the field of CCI, which is why it is with great pleasure and pride that we present the third volume ofJournal of Creative industries and Cultural Studies - JOCIS. This volume consecrates important and interesting contents, its base being composed of five scientific articles, but also other contents that result from scientific activities (studies, events and publications) that also deserve to be highlighted.

Regarding the articles, "Defining the Cultural and Creative Industry: An Exploration of the Nigerian Cultural and Creative Ecosystem", by PhD Kizito Ogedi Alakwe, makes a portrait of the cultural and creative industries in Nigeria such as movie, music, fashion and publishing industries; "Mutually Beneficial Publisher and Artist Regulated Distribution Model for the Niche Music Industry", by professor Steffan Thomas, presents the challenges faced within the independent niche and minority language music market; "Experiential Media and Transforming Storytelling: A Theoretical Analysis", by professor John Pavlik, explores a new model of experiential media and how it will affect storytelling in the news; "Approaching the Potential of Cyber-Physical Systems to Tourism Projects", by professor Silvia Fernandes, is a result of the presentation made by the author at this year TOCRIA's conference, and explains how technology can help business management to improve the potential of a company in areas such as tourism; and "Economics of Joint Production and Implications for the Media and Cultural Industries: The Necessity of Application and Research", a guest article by professor Robert Picard and professor Min Hang, studies why different types of analysis are required in the joint production, and introduces the concepts of shut-down, split-off and tipping points.

Concerning the reports, for this issue we focused mainly on conferences held throughout the last months: TOCRIA's second conference took place in Lisbon, at the Nova School of Social Sciences and Humanities, between July 1st and 3rd. In this report we summarize the event, with a sample of several presentations, such as the ones from the president of Google Fund and Portuguese Press Association, João Palmeiro, and from the director of CITI at Columbia University, Eli Noam; this year's CREIMA's International School was held at the University of Oporto between 19th and 22nd of September. Professors Chris Bilton, Mark Deuze, James Breiner and Michal Glowacki all had presentations at the conference and we provide you a summary for each of them; we were also present at the annual congress of WAN-IFRA (World Association of Newspapers and News Publishers), held for the first time in Portugal, and will tell you all about the most interesting and relevant debates of this major event. Aside from the conferences, JOCIS presents "Blockchain Technology: Opportunities for media and creative industries" which explores this technology's potential in social, economic and artistic contexts.

For the interviews, we talked with Dr Chris Bilton, Associate Professor – Reader at the University of Warwick and the founder of MA in Creative and Media Enterprise; and with the general manager of The New York Times, Michael Greenspon, at WAN-IFRA conferences.

Lastly, as for book reviews, we suggest *Journalism with a Future; Competitiveness in Emerging Markets - Market Dynamics in the Age of Disruptive Technologies;* and *Selling Digital Music, Formatting Culture*.

We believe that the articles and other content in this volume will generate great interest in the scientific community and beyond; we also believe that JOCIS III consolidates this scientific editorial project, which will be reinforced with the indexing process that is under way. Throughout these three editions it has been quite motivating to observe the number of high quality papers that have been submitted for evaluation and respective publication.

In addition to wishing good readings, since we are at the beginning of the year, we wish each of our readers a great year of 2019!

ARTT

CLES

Defining the Cultural and Creative Industry: An Exploration of the Nigerian Cultural and Creative Ecosystem

Kizito Ogedi Alakwe

Keywords: Cultural Industry; Creative Industry; Nollywood; Cultural Heritage; Intellectual Property; Creative Economy

Abstract

The recency of the cultural and creative industries and the cultural diversity existing among the nations of the world have caused many societies, organisations and governments to define the industry based on the peculiarities of their specific culture and environment. Government agencies like the UK Department for Culture, Media and Sports and multilateral institutions like UNCTAD (United Nations Conference on Trade and Development) have all defined the industry by leveraging on specific criteria that they developed for that purpose. As an industry sector in Nigeria, the cultural and creative industry recently received the attention it deserves when Nollywood (the Nigerian Film Industry) was listed as a significant contributor to the economy of Nigeria, which is Africa's largest economy. This development has made it imperative to understand the components of the cultural and creative industry in Nigeria and leverage such information to define the industry in the Nigerian context. In conclusion, this paper posits that any definition of the cultural and creative industry must incorporate four essential elements: the producers, the regulators, creative cities and clusters and those industries that offer allied support services.

Kizito Alakwe holds a doctorate degree in media and communication from the School of Media and Communication, Pan-Atlantic University, Lagos – Nigeria. His primary research areas of interests are in Development Communication, Behaviour Change Communication, Cultural and Creative Industries and Marketing Communication.

Introduction

Every society possesses a richly diverse cultural heritage viewed as an asset to the people and which represents a shared identity that binds them together. Stakeholders within the cultural and creative industry exert optimal effort in preserving this heritage and the diverse cultural content within the context of the prevailing political and economic climate. Within the Nigerian context, the cultural and creative industries represent an ever--expanding complex of different economic sectors. In recent times, there has been an increase in focus on those sectors that have high creative intensity, leading to an urgent need towards achieving an all--encompassing definition of cultural and creative industry.

As is the case at the global level, the cultural and creative industries have been generating so much attention at the local level, principally as a result of the interconnection with new media technologies, and because they are considered as an essential source of innovation and contributors to national wealth (De-Miguel-Molina, et al., 2012). Cultural and creative industries promote the transition to new models of sustainable development based on green and smart economy and are becoming an important paradigm for the new European development strategies foreseen by Europe 2020 (Lazzeretti and Capone, 2015).

Despite the resonance at the global level and the growing relevance of the literature on the issues related to creative industries and the creative economy (Chuluunbaatar, Ottavia & Kung, 2013; Flew & Cunningham, 2010), there exists a raging debate as to which activities are significant enough to be considered as a part of the creative sector. According to the Department of Culture, Media and Sports (DCMS) of the United Kingdom, there is a need to adopt a more widely accepted model. Thus, a principal qualifying factor for a sector to be deemed as creative is a high percentage of creative occupations or what is called creative intensity, inherent within such sector (Bakhshi, Freeman and Higgs 2013). Conversely, others are of the view that the approach should be expanded to incorporate activities relating to crafts (Bertacchini and Borrione, 2013), tourism (Richards, 2011), events, or the experience economy (Power, 2009; Cooke, 2013) and digitisation of cultural assets (De Laurentis, 2006). This attempt to broaden the taxonomy of creative industries to incorporate diverse activities has led to further challenges and continuous evolution in the definition of the cultural and creative industries.

The term 'cultural industries' was originally used by Horkheimer and Adorno (2002) to refer to entertainment that emanated through the industrial production process. These include recorded music, publishing, film, and broadcasting. This position is different from the subsidised "arts" which includes museums and art galleries, the visual and performing arts (Galloway and Dunlop, 2007). This shares a close relationship with the cultural industries policy plan of the UNESCO in 1978, and that of the Council of Europe in 1980 (Garnham, 1990) and also the French cultural policy of the 1980s (Towse, 2000; Flew, 2002). According to Howkins (2002), conceptually, the creative industry started in the early 1990s in Australia. However, for most commentators on the subject, the term 'creative industries' came into being with the election of "New Labour" in Britain in 1997. Subsequently, the term "creative industries" became prominent in public policy (Flew, 2002; Caust, 2003; Pratt, 2004). Creative industries as a concept, however, is context specific. In some advanced capitalist economies where culture is supported, it has been widely adopted.

To most people, the disparity between the creative and the cultural industries is fuzzy. However, Cunningham (2001) provides a clear explanation of the differences between the two terms. He based his comparison on the historiography of the phrase cultural industries which he argues is "essentially… a concatenation of the arts and the established commercial or large--scale public sector media – a concatenation that didn't hold" (Cunningham, 2001, p. 24). He argues that the emergence of the World Wide Web and digitisation of media have drastically changed the original concept of the cultural industries which emphasised the visual and creative arts, broadcasting, music, and film. The implication, therefore, is that while the cultural industries emerged from advances in technology witnessed during the earlier part of the twentieth century, the creative industries were kick-started by the technological changes witnessed between the end of the twentieth century and the onset of the twenty-first century.

On this background, this paper seeks to identify the critical components of the cultural and creative industry in Nigeria and highlight the principal players within the industry. Leveraging review of extant literature and document analysis and observation, this paper goes further to elucidate on the concept of creative cities and clusters and how they all define the industry and most importantly proposes a definition of the Cultural and Creative Industry in the Nigerian context.

Towards an Ideal Definition of the Cultural and Creative Industry

The creative industries have struggled with some form of identity challenges occasioned by multiple definitions and inconsistent treatment on what qualifies as creative activity (Higgs, Cunningham and Bakhshi, 2008). The deliberations on the issue of a universal definition of the cultural and creative industry have proved to be difficult mainly because of the terminological clutter subsumed within the cultural perspectives. Consequently, most definitions of the industry are founded on an aggregation of five main criteria – creativity, intellectual property, symbolic meaning, use value and methods of production (Galloway and Dunlop, 2007).

Extant literature has proposed diverse definitions for the cultural and creative industry, all proposed in consideration of the different countries where those definitions emanated from and the different scholars proposing those definitions. Some of the definitions are presented below.

Table 1: Existing Definitions for Cultural and Creative Industries

EXISTING DEFINITIONS	SOURCE
"those industries that are based on individual creativity, skill and talent with the potential to create wealth and jobs through developing intellectual property" - includes thirteen sectors: advertising, architecture, the art and antiques market, crafts, design, designer fashion, film, interactive leisure software (i.e. video games), music, the performing arts, publishing, software, and television and radio.	DCMS (1998)
"those activities which deal primarily in symbolic goods – goods whose primary economic value is derived from their cultural value... This definition, then, includes what have been called the 'classical' cultural industries – broadcast media, film, publishing, recorded music, design, architecture, new media – and the 'traditional arts' – visual art, crafts, theatre, music theatre, concerts and performance, literature, museums and galleries – all those activities that have been eligible for public funding as 'art'..."	O'Connor, J (1999)
1 - The activities of the cultural industries involve some form of creativity in their production; 2 - The cultural industries are concerned with the generation and communication of symbolic meaning; 3 - Their output embodies, at least potentially, some form of intellectual property.	Throsby (2001)
Horkheimer and Adorno (2002) originally used the term cultural industries to refer to industrially produced commercial entertainment – Broadcasting, film, publishing, recorded music – as distinct from the subsidized "arts" – visual and performing arts, museums and galleries.	Horkheimer and Adorno (2002)
Howkins (2002) argues that the term "creative industry" should apply to any industry where "brain power is preponderant and where the outcome is intellectual property".	Howkins (2002)
"All industries involved in the creation, manufacture, production, broadcast and distribution and consumption of copyrighted works".	WIPO (2003)
UNESCO defines cultural and creative industries as "sectors of organized activity whose principal purpose is the production or reproduction, promotion, distribution and/or commercialization of goods, services and activities of a cultural, artistic or heritage-related nature."	UNESCO (2006)
"... creative industries embraces activities ranging from traditional folk art, cultural festivities, books, painting, music and performing arts to more technology-intensive sectors, such as design and the audiovisual industry, including film, television and radio. Also contained are service-oriented fields, such as architecture, advertising and new media products, such as digital animation and video-games."	UNCTAD (2010)

Taxonomy of the Cultural and Creative Industry in Nigeria

The evolution in the definition of the cultural and creative industries has made it possible to accommodate industry sectors that hitherto were not considered as creative. This can be attributed to the emergence of the internet and the new media which has proven to be a significant driving force in the creative economy. In Germany, nine core sectors have been identified to be part of the cultural and creative industries. This has been applied in all German studies and in some European reports. However, the UNCTAD Global Databank on Creative Economy and Industries offers 236 codes based on the classifications methodology as contained in the UNESCO framework for cultural statistics (Kwanashie, et al., 2009).

However, in consideration of the fact that a universal consensus is lacking on what defines the term "creative industries", a study commissioned by the British Council in Lagos (2013) attempt to establish a definition of what constitutes the creative industry in Nigeria (Dandaura, 2013). Their methodology consisted of engaging critical stakeholders across the nation as well as focus group discussion. Their report identified the following sectors as qualified to be included within the CCI sector. These includes:

- Advertising;
- Architecture;
- Arts and crafts;
- Fashion and design;
- Home video, television, film, and radio;
- Music;
- The performing arts – theatre, carnivals, drama, dance, comedy, and festivals:
- Publishing – books, literature materials, and e-resources;
- Tourism and hospitality – cuisine, night-clubs, events and museums, and monuments;
- Visual arts and animation – photography, graphic design, sculpture, drawing.

The growth trajectory of these sectors is diverse as some sectors are more impactful than the others in consideration of their contribution to the growth and development of the economy. Thus, the movie, music, and design sectors play a more contributory role in the Nigerian economy.

The Nigerian cultural and creative industry sector comprises the practitioners in the diverse sectors identified as part of the CCI, the service providers, and the regulators. The producers include those directly involved in individual creativity in the industry. These are the writers, publishers, screenwriters, cinematographers, artists (performing and creative), designers and so on. These producers are supported by a group I chose to call the service providers. The focus of this second group is to provide ancillary services to the industry. Such services include business, financial, and professional services, insurance and real estate. They also include distributive service which incorporates transportation and communications and personal services which focus on providing recreation, entertainment, hospitality and those services linked to personal appearances such as makeup artists, fitness services, and catering.

The third leg of this tripod relationship is the regulators. There exists a number of regulatory agencies within the sector, all set up to protect intellectual property and encourage the growth and development of the cultural and creative sector. The primary regulatory agencies in Nigeria are:

Table 2: Regulators of the Nigerian Cultural and Creative Industry

REGULATORY AGENCY	CORE FUNCTIONS
Nigerian Copyright Commission	The Nigerian Copyright Commission was set up via the Nigerian Copyright Act of 1992 and 1999 as amended. The core objective of the commission is to engender efficiency in service delivery and to also provide needed support to all players in the Nigerian cultural and creative industry sector. Their activities include legislative support, capacity building, advisory services, and enforcement.
National Film and Video Censors Board	The National Film and Video Censors Board was set up in 1993 to regulate the Nigerian film and video industry. The principal activity is to classify all films and video in Nigeria, whether produced locally or those imported. Such classification aims at helping rid the country of sub-standard and unclassified movies and films and the registration of all video clubs and outlets all over Nigeria.
Nigerian Broadcasting Corporation	The Nigerian Broadcasting Corporation was established by Section 1 of the National Broadcasting Commission Act of 2004 with primary responsibility to regulate and control the broadcasting industry in Nigeria. Their vision is to facilitate the development of a broadcasting industry that is sustainable and meets the economic and sociopolitical desires of the citizens of Nigeria.
National Council for Arts and Culture (NCAC)	The National Council for Arts and Culture (NCAC) was established in 1987 and is responsible for the coordination, development and promotion of the arts and culture in Nigeria. The core objective is to leverage on culture as a foundation to build a Nation that projects the rich cultural diversity.
Nigerian Tourism Development Corporation	The Nigerian Tourism Development Corporation (NTDC) is the apex tourism agency in Nigeria established via Decree 81 of 1992, now an act of the National Assembly (laws of the Federal Republic of Nigeria, Cap. 137). Principal responsibility is to make Nigeria a prime tourist destination in Africa and further present tourism as an industry that can contribute immensely to the growth and development of the Nigerian economy.
Advertising Practitioners Council of Nigeria	The Advertising Practitioners Council of Nigeria (APCON) was established in 1988 and was set up to regulate and control advertising practice in Nigeria. Core vision is to promote responsibility and ethical standards in advertising practice; acts as the conscience of the people and as a watchdog for consumers.
Architects Registration Council of Nigeria (ARCON)	The Architects Registration Council of Nigeria (ARCON) was established by the Architects Act of July 1969 to determine the standards and skills required by individuals before becoming a member of the profession.

The Nigerian Creative Sectors

Dandaura (2013), in conjunction with the British Council, identified ten different sectors within the cultural and creative industry. While these sectors contribute to the growth and development of the economy, their percentage contributions are not the same. However, whether movies, dance, craft fashion or stage drama, they all represent creativity and the conversion of imaginative ideas into reality.

The Movie Industry

The Nigerian movie industry emerged many decades ago and is made up of Nollywood that caters for the English speaking movies, the Yoruba movie industry, Kannywood that produces films in Hausa and others that produce movies in Igbo and other indigenous Nigerian languages. The boom experienced within the industry was triggered in 1992 by the direct to video system which was driven by VHS, VCD, and the DVD technology. The first successful video to be shot using this technology was 'Living in Bondage', and its success became the harbinger of a new era in movie production in Nigeria. The growth of the industry can be attributed to the rich cultural diversity which offers a wealth of information and materials from which the movie makers can easily draw from. The content usually appeals to the masses within the country and even to foreigners that share same or similar culture. The strong themes visible are religion, magic, and societal issues like rape and domestic abuse.

In 2009, UNESCO described Nollywood as the largest film industry in terms of output – second only to Bollywood, the Indian film industry. Globally, Nigerian movies are in high demand owing mainly to the vast number of Nigerians residing in different parts of the world. The industry was rated as the third most valuable film industry in the world after generating a total of 1.7 trillion Naira. According to Oh (2014), revenues from this sector trail those of Bollywood and Hollywood at the global box office ($1.6 billion and $9.8 billion in 2012, respectively). Officially, Nollywood contributes an average of $600 millions yearly to the economy of Nigeria, with most of these receipts coming from the Africans living abroad (Oh, 2014). In recognition of the enormous potential inherent in the Nigerian movie industry, the federal government has partnered with diverse international groups and has gone further to set aside funds to support the industry. There is a growing international recognition of Nigerian movie stars at the global stage with the sector attracting foreign artists to act side by side with local stars in local movies as exemplified by the film Bello in 2013. Aside from the government, there has been a marked increase in investment from private organisations and multilateral agencies (Moudio, 2013).

The Music Industry

The music industry in Nigeria has witnessed phenomenal growth in the last ten years with its popularity extending far beyond Nigeria to the international music space. The success of the industry can be seen from the recognition of works by Femi Kuti, who won the 1999 KORA Music Award and was nominated on three different occasions for the Grammy

Award. The feat at KORA was repeated by the duo of P-Square in 2010 while 2 Face Idibia won the best-selling African artist award at the World Music Awards in 2008 and BET African artist of the year 2011. Other artists like Tiwa Savage, D'Banj and Davido, have, at different fora, won accolades for the Nigerian music industry. Also instructive is the increase in number of international collaborations within the last couple of years. Such collaborations include ventures with notable western artists like Joe, R. Kelly, Beyoncé, 50 Cent, Jay-Z, Wyclef Jean, Kirk Franklin, and Rick Ross. Despite the success, concerns exist as regards to standardisation from the viewpoint of stakeholders in the industry (Adedeji, 2016). According to data obtained from PricewaterhouseCoopers, Nigeria's music industry accounted for total revenue of US$44 millions in 2017. This is an increase from a total of US$32 millions in 2012. Growth forecast is at 0.9%, and revenue is estimated to reach US$73 millions by the year 2021 (Pricewaterhouse-Coopers, 2017).

Although Nigeria is the most populous country and the biggest economy in Africa, spending on music is meagre. Legitimate music retailers struggle side by side for the market with highly sophisticated but illegal dealers who engage in pirated CDs. This has led to artists complaining of low or non-existent returns on the release of their albums and has further compelled them to depend on live performances as their primary source of income. The advent of subscription services is a welcome development in this regards. Today, we have Deezer, iROKING and Spinlet representing subscription services currently operating within the Nigerian environment.

The Arts and Crafts

Like many other creative industry subsectors, arts and crafts enjoy a rich cultural heritage that leverages the multiculturalist nature of Nigeria. However, the sector has suffered so much neglect owing to the governments' focus on oil and gas exploration and exploitation. Objects of arts possess intrinsic artistic values that endear them to the beholder. Predominant works or arts and crafts incorporate activities in pottery, weaving, blacksmith (including goldsmith and silversmith), jewellery, leather works and others. A unique feature of arts and crafts is that it offers the craftsmen the fulfilment of being involved in the total production process (Irivweiri, 2009).

The arts industry is highly fragmented and consists of mainly sole proprietors and artisans who engage in the business for income. Most of the operators in this industry operate small scale, and this creates a vacuum readily filled by the influx of foreign alternative to such products. A considerable challenge militating against the growth of the industry is the difficulty in enforcing the rights to specific creative works (Nwogu, 2014).

The Fashion Industry

There has been an unprecedented level of exposure to the Nigerian fashion industry in recent times which has translated into unique business opportunities for the operators in the industry. Today, Nigerian designers are regularly featured in international fashion shows and have gained footholds among global celebrities. This growth is a result of the institution of fashion weeks coupled with the explosion of new and social media. The emergence of a promising number of marketing and sales platforms has helped Nigerian designers to project their products to a mass market. This is in addition to the developments in fashion retailing that has increased the number of local and international brand shops seeking to carry Nigerian designers' products. Thus, fashion is now less imported to Nigeria from the western world as part of the cultural imperialism. Nigeria fashion is now a result of a symbiosis between non Nigerian (primarily western) and Nigerian influences. Intricate designs are now being created using local "Ankara" (100% cotton African wax print with vibrant patterns), and "Batik" (fabric produced through a technique of wax-resist dyeing) presented in multicoloured and bright hues for maximum attraction. Some of these designs are now being printed on different fabric – cotton, silk and many others simply to create a unique product. All these efforts have succeeded in attracting famous players in the international fashion industry as Nigerian fashion is now being patronised by foreign musicians. Renowned international brands that have participated in the Lagos Fashion and Designer Week include MyTheresa.com, Selfridges, and Browns UK.

According to Mrs. Funmi Ladipo Ajila, the President of Fashion Designers Association of Nigeria (FADAN), the Nigerian fashion industry is worth over N2 trillion (Ajila, 2015). She adds that the garment, textile and the footwear subsection of the creative industry contributed 0.47% to the Nigeria's GDP. She attributed this success to the activities of foreign investors in addition to patronage from the teeming Nigeria population who have grown to trust and demand the unique and beautiful products from local designers.

Tourism and Hospitality

The Nigerian tourism industry incorporates the provision of lodging services, cultural events, restaurants, and theme parks. In recent times, the sector has witnessed an influx of international brands, especially in the hotel and hospitality sectors with existing parks and tourist centres being rehabilitated. Analysts in the sector all agree that tourism has the potential of contributing significantly to foreign exchange revenue and thus facilitate the much sought after diversification of the economy. Nigeria is blessed with pleasant tropical climate, diversity of wildlife, historical sites, beaches, waterfalls, all crowned with a welcoming and culturally rich population (Bankole, 2002). Nigeria is blessed with unique and diverse weather conditions: the semi-temperate weather of the Jos Plateau, the humid weather in the Southern part of the country and the Harmattan in the North. Vegetation range from the mangrove rainforest of the Nigerian Delta, the grassland and shrubs of the North to the tropical rainforest of the South East and South West.

According to Taylor (1973), tourism assets such as sandy beaches, waterfalls, springs, climate, and sunshine are prerequisites for full-scale development of the tourism industry in any country. Thus, these sites do not create a tourism business on their own but are seen as resources waiting to be tapped into for economic growth. Private sector organisations, as well as state governments, are today engaged in different business within this sector. Examples include the Obudu cattle ranch, which also gave life to the mountain breed of cattle, the Calabar carnival, which is now being replicated in Imo, Rivers, and Akwa Ibom States, among others. There also exists the Argungu fishing festival, the Adaworisha masquerade in Lagos and many others.

Publishing

Historically, the advent of book publishing in Nigeria can be traced to the setting up of the first printing press in Calabar in 1846 by the Presbyterian mission (Oyeyinka, Aganbi and Atewolara-Odule, 2016). The objective then was to propagate Christianity through the provision of religious literature to new converts. Centuries later, there were prospects of a robust publishing sector as Nigeria had a vibrant publishing industry accounting for the largest in Africa. Unfortunately, most of this collapsed with the economic downturn of the 1980s.

In recent time, there has been some marked improvement in the business of publishing in Nigeria. According to the National Bureau of Statistics (2016a), the publishing industry contributes US$79.55 millions representing 0.03% of Nigeria's gross domestic product (GDP). Usually, authors are paid in the form of royalties annually. Most of the companies in this sector are not listed on the stock exchange making it difficult to access information on revenue and how much is paid to writers as royalties (Nwankwo, 2017).

Aside from University Press Plc and Learn Africa Plc, there exists a number of emerging publishers in Nigeria such as Kachifo, Parresia Publishers and Cassava Republic. This new crop of publishers has facilitated the publishing of creative works in Nigeria. The lack of a robust publishing industry in Nigeria has led to the emergence of author-publishers who are known for producing poor quality books and literature materials.

Advertising

From the establishment of the West African Publicity Limited by UAC in 1928, the advertising industry has grown to a huge industry aptly classified under the creative industry. The Association of Advertising

Agencies of Nigeria, AAAN has disclosed that advertising expenditures for 2013 grew to N125 billion from N91 billion in 2012, explaining that the figure represents advertising spend from the organised private sector alone (Ekwujuru, 2014)!

The importance of advertising in the economy is evident when we consider the need to promote goods and services. However, as a result of the low reward associated with advertising, many agencies have set up 'media independent' subsidiaries. Also of interest is the emerging trend of seeking international affiliations. Many of the big agencies in Nigeria has one form of business relationship with foreign counterparts or the other; a strategy that is driven by the influx of foreign brands into our local environment. According to Doghudje (1990), these connections avail the local agencies the opportunity for foreign training facilities and make it easier to win and retain accounts of blue-chip companies and multinationals. Another development is the emergence of hot shops which are small-sized agencies focused on developing creatives concepts for more prominent agencies or to their clients. Most often, such mini-agencies are managed by creative artists and copywriters.

Architecture

Though there is an association of architects in Nigeria, the architecture industry in Nigeria is fragmented. As a result of globalisation and evolution within the industry, there exists a widening gap between Nigerian architecture and Nigerian culture as can be seen across the many cities of Nigeria. Today, there is little or no correlation between these structures and the environments where they are found.

Across the main cities in Nigeria, architectural designs are relatively homogenous. However, the semi-urban and rural areas are dotted with buildings that characterise and represent the multicultural nature of Nigeria and are classified into two broad groups – the Muslim north and the predominantly Christian south. What we refer to today as Nigerian architecture is a pre-potency of imported themes and models that have little correlation with the traditional cultural heritage (Rikko and Gwatau, 2011). The effects of colonialism, exposure to western education and urbanisation has resulted in the gradual disappearance of the traditional courtyard type of homes associated with Nigerian culture.The industry is regulated by the Architects Registration Council of Nigeria (ARCON), a body responsible for determining the standards and skills required by individuals before becoming a member of the profession.

"As a result of globalization and evolution within the industry, there exists a widening gap between Nigerian architecture and Nigerian culture, (…) there is little or no correlation between these structures and the environments where they are found"

The Performing Arts

Performance by musicians, singers, storytellers, and actors has long been accorded legal protection nationally and internationally (Odunaike, 2016). The sector constitutes a specific genre of intellectual property in Nigeria. Performers focus on interpreting, translating and transmitting stories, songs, folklore and diverse literary works through performances and thus constitute an intrinsic part of the creative value chain.

Performance in Nigeria dates back to the pre-literary period. However, the integration of performance with intellectual property rights emerged recently with the introduction of legislatures that accords certain rights to performers. Etymologically, performance in Nigeria can be traced to the old Western Nigeria and the traditional Yoruba travelling theatre – *Alarinjo* (Ojuade, 2002). In consonance with the multicultural makeup of the nation, there exist diverse traditional performances linked to specific ethnic group. The *Egungun* masquerade in Yoruba land; *Ekong* masquerades in Ibibio (present day Akwa Ibom state); *Borgu* puppet show and the *Yankamanci* in the North, the Tiv *Kwag-hir* among others (Odunaike, 2016).

However, contemporary theatre in Nigeria can be traced to the works of Wole Soyinka which include *Trials of Brother Jero* (1960), *The Lion and the Jewel* (1963), *Kongi Harvest* (1965), and many others. Other eminent Nigerians who played a critical role in the growth of the performing arts include Ola Rotimi, Kola Ogunmola, Duro-Ladipo, Adeyemi Afolayan and Oyin Adejobi. The broadcast media also contributed heavily at this early stage with the production of television series such as *Cock Crow at Dawn*, *Village Headmaster*, *New Masquerade* and many others. The success recorded in Nollywood in recent years has been a boost for the performing arts.

Visual Arts

The Nigerian art market comprises a small group of new and established collectors, a network of art galleries spread across the nation, annual auctions in Lagos and London, and a considerable number of paintings and sculptures produced by both students and professionals. Most activities in this sector aggregate within the city of Lagos, the commercial capital of Nigeria. As of 2012, the number of Lagos-based collectors stood at seventy. With a robust and ever-rising middle class, the potential of building a vibrant art market exists. Consequently, there has been renewed interest in Nigerian arts both locally and internationally. El Anatsui, the Nigerian-based Ghanaian, holds the record for auction sales. His 'Another Plot' was sold for US$1,180,000.00 in 2012 (Castellote, 2015).

At the 2013 Bonham's Africa Now auction, records were broken by the works of renowned artists: Ben Enwonwu, Erhabor Emokpae, Uche Okeke, and Uzo Egonu. These are testimonies of the growing popularity of Nigerian artists. For instance, all the top ten artworks at Bonham 2013 and 2014 event were by Nigerian artists living in Nigeria or those residing abroad. Works by Yusuf Grillo, Gani Odutokun, and Peju Alatise increased in value during this period. Worthy of mention are the works of Bruce Onabrakpeya.

Overall, the growing interest in both modern and contemporary African arts saw to the increase in revenue at Bonhams in 2014. With reference to arts, Nigeria is now seen as the new China in response to the scramble for artworks from Nigeria (Castellote, 2015).

Clusters, Creative Cities, and Regions

According to Flew (2002), a critical element in the development of the cultural and creative industry is locational geography or the formation of creative cities and clusters. This has been associated with what Porter (1998) defines as "geographic concentrations of interconnected companies and institutions in a specific field" (Porter, 1998, p. 78). Clusters emerge as a result of a conglomeration of specialised suppliers, necessary infrastructure, producers of complementary products, specialised customers and academic and research institutions that promise specialist knowledge, information, and training, technical and educational support. Popular examples include the Italian leather industry, New York's Silicon Valley, Hollywood and Nollywood film industry and the German chemicals industry. According to Florida (2012), cities with significant concentration of the creative class tend to be economic winners whereas those with a higher concentration of working class tend to become economically stagnant. Florida (2012) went further to state that job generation is increasingly becoming the prerogative of cities and not of corporations, and that cities…

> "…give rise to the clustering, density, and interaction that generate economic growth. They speed the metabolism of daily life, and they accelerate the combinations and re-combinations that spur innovation, business formation, job creation, and economic growth" (Florida, 2012).

Clusters facilitate the generation of substantial competitive advantage within them. This happens in three different ways: access to specialist input in terms of labour, technology and knowledge; promoting innovation through capacity enhancement and facilitating quick and flexible response to new opportunities; and, finally, promoting the formation of new business by encouraging access to requisite labour, capital, skills, and technology. However, with the advent of new media and world reaching digital platforms, it is possible to distribute ones' creative product to a wide range of audiences and at the same time, source for materials from any part of the globe – as far as the requisite bandwidth is available. The implication is that product distribution to workplace, homes, institutions and content sourcing is no longer linked to a location. This decline in the importance of location was predicted at the inception of New Media technologies.

Contrary to this view, however, location exerts some significant influence in the cultural and creative industries in Nigeria. The Nollywood industry is more active in Lagos, Asaba, Jos, Ibadan, Kano and Enugu whereas the publishing industry is more prominent in Lagos and Ibadan. For the music industry, huge clusters exist in Lagos for contemporary music while for local and religious music, Aba, Onitsha are pre-eminent. Fashion is more evident and organised in Lagos but with an enormous informal gatherings in Aba. Even within Lagos, there still exist some form of clusters with sales of video and music predominant in Idumota and Alaba, respectively.

"With the advent of new media and world reaching digital platforms, it is possible to distribute ones' creative product to a wide range of audiences and at the same time, source for materials from any part of the globe"

Why do these industries aggregate as clusters in these locations? Interviews and desk research reveals that the creation of these clusters are connected to the availability of essential infrastructure, technology, labour force, market demand, but most importantly, state government policies. Governments can stimulate the establishment of clusters through tax rebates, the establishment of training and research institutions and the provision of funding which is a huge requirement in the cultural and creative industry. The availability of these incentives always facilitates the movement to and location for creative clusters. For instance, the location of the National Film Institute in Jos is believed to contribute immensely to the Nollywood cluster in this place. This, of course, is in addition to the semi-temperate climate and topography. Markets for finished goods are also a critical determinant in the creation of creative clusters. The need for a market for creative products is imperative. Thus, the Alaba International Markets and the Idumota markets are huge pipelines through which music and films are distributed to diverse markets globally.

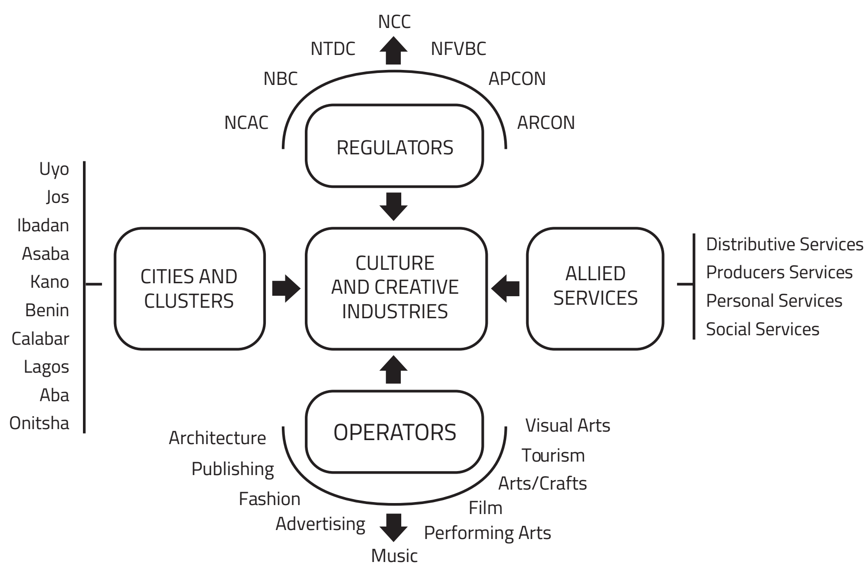
Some Nigerian cities have initiated plans to develop their creative and cultural industries through private initiatives, public interventions, and government policies. Specifically, this is usually in the form of a significant policy objective; the creation of Tinapa by the Cross River State government was to drive the establishment of a film industry cluster in that region.

Existing Definitions Versus the New Construct

From the foregoing, the cultural and creative industries have received different definition from various organisation and scholars as they struggle to arrive at a unified and standard definition of the industry. The DCMS defined the industry from the perspective of wealth and job creation which is made possible by intellectual property. Emphasis on intellectual property was also given by Howkins (2002), Throsby (2001), WIPO (2003), and UNESCO (2006). Curiously, in defining the industry, UNESCO (2006) and WIPO (2003), referred to a broader classification that encompasses diverse activities and actors in addition to the core productive activities. UNESCO made specific reference to "all sectors of organised activity..." and WIPO referred to "...all industries...". By being silent on the specific industry sector or activity, their definition reads like a safe attempt to incorporate any industry component, actor or activity that might be identified in the future.

These definitions were all silent on, or at best, made tangential reference to the regulators and creative cities and clusters which have all evolved to be an integral part of the cultural and creative industry, especially in emerging markets of sub-Saharan Africa with emphasis on Nigeria. Moreover, existing definitions took cognisance of the local environment where such definitions emanated from. The need for a localised definition in the Nigerian context is therefore apt given the uniqueness of the industry in Nigeria and the need to take into consideration all the components of the cultural and creative industry. The attempt at a new localised definition drew heavily from the critical elements as highlighted by Galloway and Dunlop (2007). Consequently, in the Nigerian context, this paper posits that any definition of the cultural and creative industries must incorporate four essential elements: the producers, the regulators, creative cities and clusters and those industries that offer allied support services.

Figure 1: Components of the Nigerian Creative Industry.
Source: Own elaboration



The convergence of the individual sectors (creative cities, allied services, regulators and the industries) gives rise to the cultural and creative industry. There is a considerable interdependence between these sectors to ensure an end to value creation across the chain. Consequently, the cultural and creative industries, therefore, refer to those industries that depend on individual creativity with the capacity to attract intellectual property rights which can be commercialised for economic benefits and incorporate the regulators, the creative cities and clusters as well as allied and support services. This definition is a pragmatic attempt to capture all the critical elements that coalesce into the Cultural and Creative Industry in Nigeria.

Conclusion

Nigeria's economy has evolved to be one of the biggest in Africa and with a population of about 174 millions, the expectation is that by the year 2020, it will grow to become one of the top twenty economies in the world. A new entrant and significant contributor to the recent rebasing of the economy is the cultural and creative sector. The importance of this sector, given the tremendous contribution it is making towards the growth of the Nigerian economy, makes it imperative to identify the components of the cultural and creative ecosystem, highlight the potentials of the industry, bring to the fore the challenges inherent in the industry, but most importantly, propose an all-encompassing definition of the industry in the context of the Nigerian environment. Based on this review, therefore, the cultural and creative industries incorporate not just the core industries of film, music, fashion and so on but also the creative cities, the regulators and those that offer allied services. By bringing together these four critical components, a new definition is proposed that takes cognisance of the unique Nigerian environment.

Such definition will drive focus and direction for the industry and consequently stimulate growth and development across the four cardinal component of the industry as proposed. In addition, a comprehensive mapping exercise is recommended which will lay the necessary foundation to facilitate future policies that will address the requirements for growth of the cultural and creative industries in Nigeria.

References

Adedeji, Wale. 2016. "The Nigerian music industry: Challenges, prospects and possibilities." *International Journal of Recent Research in Social Sciences and Humanities* 3 (1): 261-271.

Ajila, Funmi Ladipo. 2015. "Unlocking potential in Nigeria's creative industry." *National Mirror*, January 14. Accessed May 23, 2016. http://nationalmirroronline.net/new/unlocking-potential-in-nigerias-creative-industry/.

Bakhshi, H, A Freeman, and P Higgs. 2013. *A dynamic mapping of the UK's creative industries*. London: NESTA.

Bankole, Abiodun. 2002. "The Nigerian tourism sector: Economic contributions, constraints and opportunities." *Journal of Hospitality Financial Management* 10 (1): 71-89.

Bertacchini, E, and P Borrione. 2013. "The geography of the Italian creative economy: The spatial role of the design and craft based industries." *Regional Studies* 47 (2): 135-147.

Bilton, C, and R Leary . 2004. "What can managers do for creativity? Brokering creativity in the creative industries." *International Journal of Cultural Policy* 8 (1): 49-64.

Castellote, Jess. 2015. "Nigeria: Art rising." *Masterpiece: The art of fine living*, Jul-Sept: 28-29.

Caust, J. 2003. "Putting the "art' back into arts policy making: How arts policy has been "captured" by the economists and the marketers." *International Journal of Cultural Policy* 9 (1): 51-63.

Chuluunbaatar, E, D B Ottavia, and S F Kung. 2013. "The development of academic research in cultural and creative industries: A critical examination of current situations and future possibilities." *International Journal of Cultural and Creative Industries* 1 (1): 4-15.

Cooke, P. 2013. "From creative cluster to innovation platform: The rise of the Doctor Who experience in creative city Cardiff." In *Handbook on the experience economy*, edited by J Sundbo and F Sorensen, 381-405. Cheltenham UK: Edward Elgar.

Cunningham, S. 2001. "From cultural to creative industries, theory, industry and policy implications." *Culturelink* (Special Issue): 19-32.

Dandaura, Emmanuel S. 2013. *Mapping of Nigeria creative industries: Report of Lagos pilot study (Music, Fashion, and Film)*. Lagos: British Council.

DCMS. 2007. *Staying ahead: The economic performance of the UK's creative industries*. London: Department for Culture, Media and Sports.

DCMS. 1998. *The creative industries mapping document*. London: Department for Culture, Media and Sports.

De Laurentis, C. 2006. "Digital knowledge exploitation: ICT, memory institutions and innovation from cultural assets." *Journal of Technology Transfer* 31 (1): 77-89.

De-Miguel-Molina, B, J L Hervas-Oliver, R Boix, and M De-Miguel-Molina. 2012. "The importance of creative industry agglomerations in explaining the wealth of European regions." *European Planning Studies* 20 (8): 1263-1280.

Doghuje, Christopher. 1990. "The advertising agency scene in Nigeria." In *Advertising and public relations*, edited by Charles Okigbo. Enugu: Department of Mass Communications.

Ekwujuru, Princewill. 2014. "Nigeria's advertising expenditure for 2013 hits N125bn." *Vanguard Newspapers*, March 14. Accessed May 22, 2016. http://www.vanguardngr.com/2014/03/nigerias-advertising-expenditure-2013-hits-n125bn/.

Flew, T. 2002. "Beyond ad hocery: Defining the creative industries." *Cultural Sites, Cultural Theory, Cultural Policy.* Te Papa, Wellington, New Zealand: Second International Conference on Cultural Policy Research. Accessed May 28, 2016. http://eprints.qut.edu.au/archive/00000256.

Flew, Terry, and S D Cunningham. 2010. "Creative industries after the first decade of debate." *The Information Society* 26 (2): 113-123.

Florida, Richard. 2012. *The rise of the creative class - Revisited*. New York: Basic Books.

Galloway, Susan, and Stewart Dunlop. 2007. "A critique of definitions of the cultural and creative industries in public policy." *International Journal of Cultural Policy* (Taylor & Francis) 13 (1): 17-31. doi:10.1080/10286630701201657.

Garnham, Nicholas. 1990. *Capitalism and communication: Global culture and the economics of information.* London: Sage.

Higgs, Peter, Stuart Cunningham, and Hasan Bakhshi. 2008. *Beyond the creative industries: Mapping the creative economy in the United Kingdom.* London: NESTA.

Horkheimer, Max, and Theodor Adorno. 2002. *Dialectic of Enlightenment: Philosophical fragments.* Edited by Gunzelin Schmid Noerr. Translated by Edmund Jephcott. Stanford, CA: Stanford University Press.

Howkins, John. 2002. *The Creative Economy.* London: Penguin.

Irivweiri, G O. 2009. "Arts and crafts as springboard for sustainable development and industrialization in Nigeria." *International Journal of Creativity and Technical Development* 1 (1-3): 1-18.

Kwanashie, Mike, Jonathan A Aremu, Kingsley Okoi, and Kola Oladukun. 2009. *The impact of the arts, culture and creative industries on Nigeria's economy.* Agoralumiere.

Lash, S, and J Urry. 2004. *Economics of signs and spaces.* London: Sage.

Lazzeretti, Luciana, and Francesco Capone. 2015. "Narrow or broad definition of cultural and creative industries: Evidence from Tuscany, Italy." *International Journal of Cultural and Creative Industries* 2 (2): 4-19.

Martin, C. 2004. "Defining culture and communication for the purpose of national and international statistics program." *Third international conference on Cultural Policy Research.* Montreal. Accessed May 28, 2016. http://www.hec.ca/iccpr/PDF_Texts/Martin_Claude.pdf .

Moudio, Rebecca. 2013. "Nigerian film industry: A potential goldmine." *Africa Renewal*, May: 24-25. - 2013. "UN African Renewal Online." *www.un.org*. May. Accessed May 22, 2016. http://www.un.org/africarenewal/magazine/may-2013/nigeria%E2%80%99s-film-industry-potential-gold-mine.

Nwankwo, Allwell Okechukwu. 2017. "Nigeria's ink economy: Positioning the creative writer for glocal value creation and extraction." *International Journal of Cultural and Creative Industries* 4 (2): 48-57.

Nwogu, Mary Imelda Obianuju. 2014. "The challenges of the Nigerian copyright commission (NCC) in the fight against copyright piracy in Nigeria." *Global Journal of Politics and Law Research* 2 (5): 22-34. http://www.eajournals.org/wp-content/uploads/The-Challenges-Of-The-Nigerian-Copyright-Commission-Ncc-In-The-Fight-Against-Copyright-Piracy-In-Nigeria.pdf.

O'Connor, J. 1999. "The Definition of 'Cultural Industries'." Manchester: Manchester Institute for Popular Culture. Accessed January 12, 2017. http://mmu.ac.uk/h-ss/mipc/iciss/home2.htm.

Odunaike, Dorcas A. 2016. "Performers' rights and evolution of performance in Nigeria." *Journal of Law, Policy and Globalization* 53: 61-71.

Oh, Eric. 2014. *Nigeria's film industry: Nollywood looks to expand globally.* Washington DC: United States International Trade Commission (USITC).

Ojuade, Jeleel Olasunkanmi. 2002. "The secularization of Bata Dance in Nigeria." *Nigerian Theatre Journal* 7 (1): 55.

Oyewole, Sandra. 2014. "A peek inside Nigeria's film industry." Edited by Catherine Jewell. *WIPO Magazine* 2.

Oyeyinka, Ojo Titiloye, Victor Em Aganbi, and Odukunle Atewolara-Odule. 2016. "Problems of book publishing industry in Nigeria." *Journal of Research and Development* 2 (10): 1-8.

Power, D. 2009. "Culture, creativity and experience in Nordic and Scandinavian cultural policy." *International Journal of Cultural Policy* 15 (4): 445-460.

Pratt, A C. 2004. "The cultural economy, a call for spatialised "production of culture" perspectives." *International Journal of Cultural Studies* 7 (1): 117-128.

PricewaterhouseCoopers. 2017. *Entertainment and media outlook: 2017 - 2021: An African Perspective.* Sunninghill South Africa: PricewaterhouseCoopers., 134-135. Accessed April 02, 2018. http://apo.af/7daxLH.

Richards, G. 2011. "Creativity and tourism: The state of the art." *Annals of Tourism Research* 34 (8): 1225-1253.

Rikko, L S, and D Gwatau. 2011. "The Nigerian architecture: The trend in housing development." *Journal of Geography and Regional Planning* 4 (5): 273-278. Accessed August 25, 2017. http://www.academicjournals.org/JGRP.

Throsby, D. 2001. *Economics and culture.* Cambridge: Cambridge University Press.

Towse, R. 2000. "Cultural economics, copyright and the cultural industries." *The Long Run conference, Erasmus University.* Rotterdam.

Towse, R. 2000. "Cultural industries." In *A handbook of cultural economics*, edited by R Towse, 170-182. Cheltenham: Edward Elgar Publishing Limited.

Towse, R. 2003. "Cultural industries." In *A handbook of cultural economics*, edited by R Towse, 170-182. Cheltenham UK: Edward Elgar.

UNCTAD. 2010. *Creative economy report.* United Nations Conference on Trade and Development, 217-218.

UNESCO. 2006. *Understanding creatives industries: Cultural statistics for public-policy making.* Paris: UNESCO.

Williams, R. 1981. *Culture.* London: Fontana.

WIPO. 2003. *Guide on surveying the economic contribution of the copyright-based industries.* Geneva: World Intellectual Property Organization (WIPO).

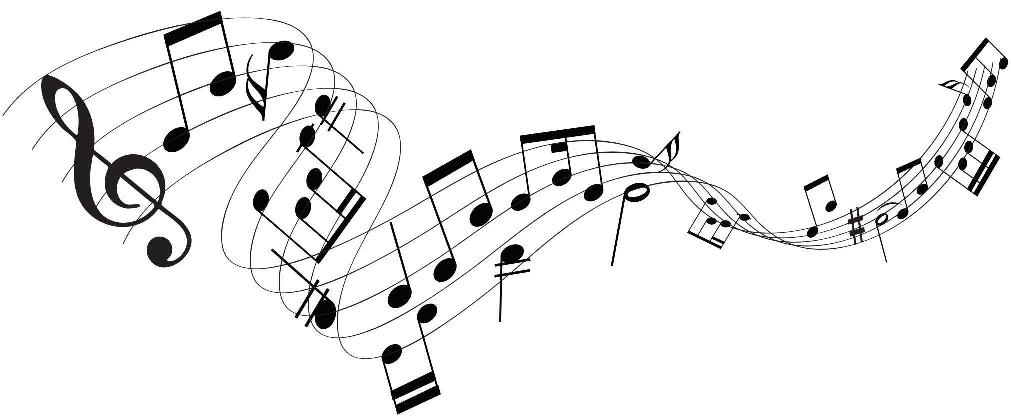
Mutually Beneficial Publisher and Artist Regulated Distribution Model for the Niche Music Industry

Steffan Thomas, Bangor University

Keywords: Niche Music Industry, Mutually Beneficial,
Alternative Model, Enhanced Engagement

Abstract

Copyright and intellectual protection cannot always answer the requirements for a niche independent or minority language music publisher or artist. This paper assesses the challenges faced within the independent niche and minority language music market, and seeks to establish a model which could generate a sustainable digital income and reap remuneration for creativity. Using Varian's (2005) fourteen business model categorisations as a framework, four types of business model solutions are considered: a price based model; a control model; a bundled model; and finally an enhanced content and relationship model. This paper concludes with a conceptual model which could be mutually beneficial for publishers and consumers of niche music. The niche, independent or minority language artists or publishers will be referred to as micro or SME companies (Small-to-Medium sized Enterprises) within this paper. Micro and SME's as a classification, rather than independent publishers, limits the scope of the proposed model's application to companies with a staff of fewer than 25 and a turnover below £10million. These are companies with limited resources to invest in researching and developing a digital distribution strategy.



Steffan Thomas lectures at Bangor University's School of Music and Media on a range of modules addressing issues within the creative industries. Prior to joining the University Steffan has worked for an independent record label as well as within independent radio and television.

Introduction

Revenue from recorded music has been declining for over a decade. This decline is a result of several factors. Recently the recession has fronted part of the blame, however, the uptake in Internet broadband technology resulting in a downturn in CD sales, and the increasing competition for music's attention amongst other media online must also share the burden of blame (Gloria, 2011 and Rampprasad et al. 2012). Despite the reported downturn in the recorded music industry's revenue, the International Federation of the Phonographic Industry (IFPI) has consistently reported a continued year on year growth in revenue for the industry (IFPI, 2016). Recent data has indicated that streaming along with bundled offerings has displaced piracy and is now contributing to increased revenue in relation to digital music consumption (Aguiar and Waldfogel, 2017). The industry has not only grown in terms of monetary value, but also in the amount of people participating in the industry. The Internet opened the market to pirates, but equally to amateur musicians looking to self-promote and self-publish. YouTube, for example, is currently streaming around six billion hours of video each month (Mahanti, 2014). A consumer's method of discovering new music has changed greatly with many young consumers turning to YouTube for music videos as a source of music entertainment (Nguyen, 2014). Whilst performance rights societies have granted licenses to YouTube, the level of revenue returning to niche independent labels via such platforms is largely negligible and does not offer a sustainable business solution compared to previous physical sales.

The current economic circumstances facing the niche and independent music industry are difficult. More individuals are taking a share of the market, but it remains difficult for an individual artist to generate a sustainable income. The Internet has shrunk the physical sales market and made disseminating culture faster and easier than ever before, thus the perception of value for an online product has become a challenge (Cameron, 2016).

Technology Challenging the Distribution Model

Music streaming, downloading, file sharing and social media applications have all become methods of music consumption, meaning that there has never been an easier time for music consumers to find, download or listen to music. Music publishers fear that without a presence on music websites such as Spotify, We7, Deezer or SoundCloud, their music will not be discovered, used or bought. However, due in large to the oligopoly that the technology companies have obtained, it is difficult for micro and SME publishing companies to secure a digital contract that works in their favour.

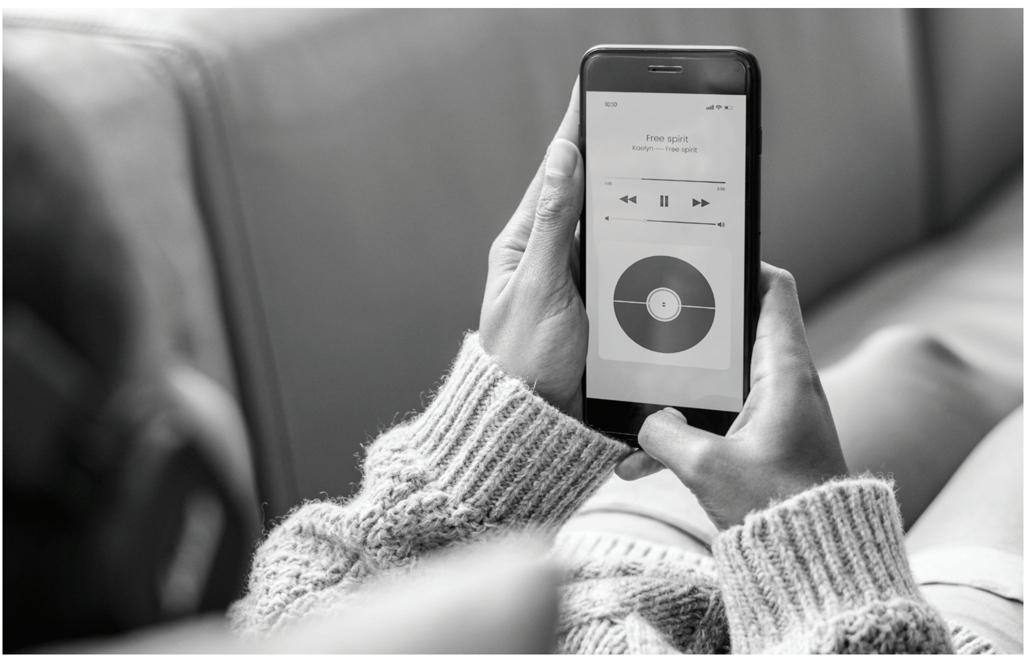
Today the opinion held by consumers of the music industry is at best cynical and at worst negative towards an ill respected industry (Halttunen et al. 2010). It's an industry that has enjoyed high profits over the years, and has traded on fashion and consumer driven demand for the latest single / album or music consumption technology such as portable cassette players and Mini Disks. However, consumers now hold the largest influence over the way the music industry can progress, especially with so much music being available for free over the Internet.

When MP3 as a file format arrived on the market in the late 1990's it was not developed in consultation with the industry. Rather than embracing the new technology, it was feared by the industry and initially dismissed (Leyshon, 2014). In the same period Napster became the fastest downloaded software with estimations about the number of downloads running into billions of tracks a year (Rutter, 2010). As the music industry was not responsible for the compressed music file technology, its development happened before the industry was able to develop a business strategy to exploit its potential.

Whilst many in the music industry would like to see the return of the controlled and profitable market place for music sales, in reality replication is not possible (Wikström, 2013). Therefore, in order to develop a future business model, it has become necessary to consider the consumer perspective and their role in music distribution.

Changed Consumer Consumption Methods

The service value chain is common to all production processes, and ultimately the role for the publisher is to add value (Chang et al. 2016). There has been little change in the way that music is created since the



“The danger in digital distribution as shown in social behaviour research is that consumers don’t feel accountable for their actions when operating online, therefore the guilt of piracy is not felt in the same way as physical tangible theft”

emergence of the digital era, the difference being the tools which are used to distribute and consume the product. For digital music, the only area that differs from the physical sales model is the acquisition process due to a change in technology (Liao et al. 2010). There is no need to produce plastic covers, burn CDs or stock envelopes for posting digital tracks. However, the remainder of the chain continues to operate in much the same process as vinyl or cassettes had previously (Bockstedt et al. 2005).

Music is a personal experience, and whilst music has previously been sold on the back of social recommendation, it came from trusted sources of friends in established social groups (Luo et al. 2012). The Internet has succeeded in creating an environment whereby social recommendations can influence consumer choice whilst remaining relatively anonymous. The danger in digital distribution as shown in social behaviour research is that consumers don’t feel accountable for their actions when operating online, therefore the guilt of piracy is not felt in the same way as physical tangible theft (Coyle et al. 2009 and Wang and McClung, 2012). Likewise, content has become so ubiquitous online, it is becoming difficult to dissuade consumers from participating in piracy (Halttunen et al. 2010).

For consumers, value is measured via many contributory factors, from positive to negative experiences, benefit or sacrifice, time against energy, and the risk involved in consuming, downloading or purchasing the music. Risk is a changing element within the music industry as theoretically the Internet has the possibility to convert risks back into benefits (Liao et al. 2017). Piracy can be quick and cheap, however if caught may result in prosecution (Higgins, 2011). The biggest challenge for the industry in the future will be to generate a successful digital supply chain based on a trusting relationship.

Opportunities Within the Digital Market

Kwahk and Ge (2012) stated that ‘e-commerce websites should try to encourage users, especially expert users, to share information about their shopping experiences and knowledge’ (2012: 1821). Amazon, for example, invites consumers to share reviews and details about their latest purchases via Facebook or Twitter. The influence of such a shared link is much stronger than if a producer / retailer placed the product directly on a social media platform. A social recommendation loads the product with a higher level of value and demand. Equally Liu et al. (2012) stated that there is a need to understand the products target market before marketing online.

When Napster was launched, it demonstrated a sustained demand for music, but also that people would trade quality for price (Rutter, 2010). Its appeal was the ease of use and the broad range of music available in one place. The music industry continued to work against Napster despite its popularity. Napster was free from the physical container of traditional sales, and 'outside the packaged unit sale model that the music industry was so focused upon and enthusiastic to control' (Rutter, 2010: 412). The requirement for control is a challenge when music's perceived value comes after a consumer has experienced the product. For an entertainment product, its consumption comes first with value assignment second, which potentially leads to little or no incentive to purchase once the experience has been gained (Poort et al. 2011). Yet, consumers continue to spend and acquire. The challenge in a future model is ascertaining the motivation, then maximising on the marketing mix and consumer relationships. Online distribution has demonstrated a continued market demand, and enables publishers to explore new ways of understanding the consumer.

Niche, Independent Music: the Challenge of Technology in Music Sales

The main challenge facing the micro and SME music industry is applying theory to their business. Whilst micro and SME's are keen to try new approaches, they often have limited resources in respect of staff, time and finances. Another key challenge being to ensure that the music remains protected from file sharing and illegal downloading whilst being flexible enough to promote to potential customers online.

The online market place initially levelled the playing field for micro and SME's (Teece, 2010). E-commerce gave micro and SME's access to a worldwide audience; and with a functional, well indexed website there is the possibility to drive large volumes of traffic to a website. However, since the emergence of the Internet, web developers have been devising new methods and techniques to enable e-commerce websites to purchase commercial advantage over rivals and gain exposure. SEO (Search Engine Optimisation) processes, multiple registrations of URL's, strategically placed adverts and strong connections between chains of companies co-working on promotions will increase traffic. These processes come at a price, quickly pushing micro and SME's towards a marginal share of the audience once more (Hammond, 2014).

Whilst a major label would be able to withstand the financial impact of piracy and reduced sales for longer, for micro and SME music publishing companies the effect is more difficult to overcome. Managing and adapting to changes in technology and distribution within the wider industry was always going to be a challenge for micro and SME companies. Fighting for exposure online, whilst also coping with diminishing physical sales, makes it a tougher environment in which to be commercially successful (Belk, 2014). Micro and SME's are often unable to negotiate with large digital aggregators such as iTunes for more favourable rates and are forced to accept the given terms. Equally for a micro or SME, allowing their music to be streamed on services such as Spotify, is considered essential for their legitimacy as publishers and artists (McLean et al. 2010). Within streaming services, whilst the level of usage may be significant for a micro or SME, streaming services would not find it viable to accurately calculate the value generated, and consequently they pay a percentage back to the SME based on a nominated allocation of funds rather than actual usage. Due to the many and varied complex routes to market that micro and SME music publishers face, it is difficult to know whether there is value gained by placing their music across all platforms or whether any hope of digital income is diminished through providing free access and a lack of scarcity.

Aspects of Firm Size in The Transition to Digital

E-commerce has been viewed as an equal playing field for retailers. However, aspects of firm size remain a problem for publishers (Oliveira and Martins, 2011; Christensen, 2013). The major labels are big enough to invest in their own branded distribution routes to market, however they choose to use avenues such as iTunes as they can secure the best deals with an established infrastructure. Micro or SME's are not big enough to get favourable distribution deals with online aggregators, therefore opt to use a third-party distribution channel in order to become part of a larger offering. Third party distribution companies enable micro and SME's to be represented by a conglomerate of small publishers. However, at times in the niche or minority language music sector micro SME's (companies that may only be individual artists with their own label) haven't a large enough catalogue to approach a third-party aggregator making digital distribution financially challenging.

Timing a company's response to change is also a critical factor when entering a new market. An early response could result in high setup costs; meanwhile a late response allows consumers to progress and discover alternative products, making it difficult to recapture their previous loyalty. Gradual repositioning was successful for SME's in the conversion from cassette to CD. However, due to the rapid growth of digital, and the need to invest in new technology and software, retrenchment is most likely the only remaining option for many micro or SME's entering the digital market (Oliveira and Martins, 2011; Christensen, 2013). Radical repositioning may result in isolating segments of consumers who have been equally slow to adapt. For micro and SME's in a changing market there are many factors restricting their approach, primarily cost. For a micro or SME with a small digital revenue, the rate to recapture the investment is often a primary reason for failing to adapt in the first place (Hracs, 2012).

Solutions

Varian (2005) reviewed the position of the music industry and categorised fourteen potential business models. However, each of the business models in themselves have problems and according to Varian, 'none is likely to yield any sort of social optimum' (2005: 136). The focus of this paper is to address a business model that could be utilised and controlled by a niche or minority language artist or publisher. Using Varian's fourteen categorisations there are broadly four different business models. Some models address controlling price, others regulate control and access during the distribution process, there are models for bundling the product and finally models relying on enhanced relationships and content. The next section will consider the implications of these solutions before combining the most feasible elements into an engagement model which could be utilised within the micro and SME market.

"Whilst a major label would be able to withstand the financial impact of piracy and reduced sales for longer, for micro and SME music publishing companies the effect is more difficult to overcome"

Price Models

Varian's (2005) price orientated business models suggested either making the original cheaper than a copy, or making the copy more expensive than the original. There is recognition in the model for the reduced production cost enabling a lower price point. However, the reduced price model does not offer an attractive or financially sustainable model to artists. The alternative price model suggested raising the price, then controlling access via digital right management software (DRM). After the disruption to the music industry caused by Napster and the resulting court cases it was thought that digital rights management could create a 'more appropriate [and] practical online music business model because digital rights management (DRM) is a tool to facilitate online business and should not influence or constrain the business in any way by limiting either online or offline purchasing' (Kwok, 2002: 18). DRM should in theory go undetected within the music file. iTunes used DRM technology up until 2008, however, thereafter it was removed in recognition that once the tracks are moved it becomes largely irrelevant as the DRM's path to the file is lost.

Ultimately all music consumers would operate via legal methods. In return, those who do legally purchase should be rewarded with flexibility in the music product. Papies et al. (2011) felt that 'restricting downloads through severe DRM systems [would] hinder the spread of commercial downloading and exclude many consumers from the market' (2011: 790). Consumers expect their music to be multi-platform and accessible at multiple access points. The more encompassing the system can be the more successful it will become. The use of DRMs to protect the intellectual property of a digital product has strengths and weaknesses. On the one hand DRM offers a solution for combating or restricting piracy, monetising the music, and adding security to digital content. The challenge in this solution is that although piracy should be combated, and content producers remunerated for their creations, DRMs do not reward loyal consumers. DRM does little to enhance the product and there is little additional customer value offered except legality combined with restrictions for the files use.

Control Models

The second classification of business model suggested by Varian (2005) was to control the market. The monitoring model would also make use of technology such as DRM. Using technology to restrict and control the online music industry appeared to be the obvious solution at the outset of the Internet era. However, consumers expect a flexible product that can be shared and used via a variety of platforms. Ultimately, restrictive technology does not provide a long term or sustainable approach to securing the music industry as it initially penalises consumers who have acquired music via legal methods.

Also suggested within the controlled market place model was the possibility to advertise yourself, advertise something else, offer site licenses to access content behind a paywall online or a media tax on other media content which could be used to fund music production. Whilst these models could provide stable income to music publishers and artists, there is a reliance on third parties, which as indicated previously, makes negotiating terms challenging for lesser known publishers or artists.

These initial business model classifications (Price and Control) offer little incentive to the niche artists or publisher as they either isolate consumers due to the raised price point, or damage sustainability due to the low return on their production. The final two business model classifications offer potential for development within the niche or minority language market suggesting; bundling products or offerings, followed by models to enhance content and relationships.

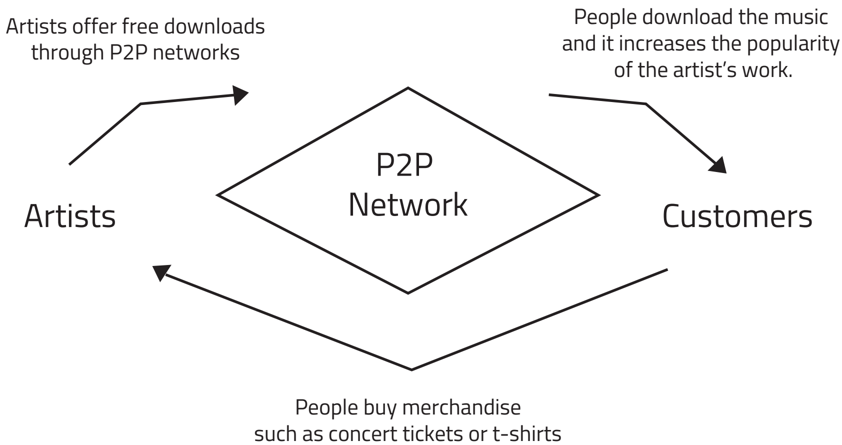
Bundled Models

Whilst the law has done little to deter piracy, piracy has been meeting consumer needs and setting new expectations of the industry in respect of price point. The final section of this paper considers potential business models that navigate the law, but utilise alternative methods of distribution. A future model needs to overcome the difficulties of being the 'post Napster distribution model'. Previous models have been suggested such as a Promotion model [fig.1], whereby the music is given for free, and artists sell merchandise as suggested by Torbay et al. (2004).

Many variations of promotion models have been suggested in the prior literature (Fischbeck, 2000; Bhattacharjee et al. 2003; Torbay et al. 2004; Koster, 2008 and Elberse, 2010). The problem with these models is that the labels drive them, in the hope that consumers buy into the forced exposure. Ideally a future model needs to work with and for consumers in a mutually beneficial relationship.

A similar approach was suggested by Zhu and MacQuarrie (2003) to bundle music sales: they claimed that the bigger the bundle, the higher the profit. Once the consumer has committed to a purchase the producers cost of attracting the sale is complete, therefore any additional sales became a bonus. Bundling keeps production costs down, however increases profits via the greater possibility of up-selling.

Figure 1: A Promotion Model
Source: Torbay et al. 2004



Enhanced Content & Relationship Models

Finally, Varian (2005) suggested six categorisations which could be applied to the business model of enhancing the relationship and content of the music. Varian suggested selling physical complements or selling information complements such as merchandise and album notes. Selling subscriptions to specific back catalogues and selling personalised versions of the product. The final models were a ransom model based on a pay what you want or subscription platform and a model based on prizes, awards and commissions, which would strengthen the consumer / artist relationship and generate a sense of ownership in the product.

Technology now enables consumers to share experiences and to recommend products. Social networks offer potential beneficial marketing avenues for music publishers. Social communities need to be developed from within (Rose et al. 2011). It is difficult to create a forced environment online and expect consumers to join. It takes time to create an active community. An online community could be used to promote new products and encourage viral sharing of videos, clips and other material, however consumers will only join the online relationship if they stand to gain something from the process. 'People seek relationship engagement in which the benefits exceed the costs' (Shih and Huang, 2012: 3).

An artist using Facebook as a promotional tool works best when the artist rather than the record label is generating the content. Dialogue in online communities needs to be a two-way process, not a location for hard sell and promotion. 'Positive "feedback" helps community members strengthen or sustain ongoing social interactions [...] Two-way communication is also a meaning-creating process that enables members to develop congruent values' (Shih and Huang, 2012: 6). By allowing members to openly discuss, share and engage with the artists and each other within the online group it helps members achieve similar values.

"An online community could be used to promote new products and encourage viral sharing of videos, clips and other material, however consumers will only join the online relationship if they stand to gain something from the process"

Recognising that consumers want to engage, share and maximise from the potential of digital technology offers the opportunity to collaborate in a mutually beneficial network which favours both the producer and the consumer. Digital distribution, social networks as well as physical experiences can now be combined to provide a sustainable production model. Danaher et al. (2010) suggested that the biggest pirates are also the biggest music users and the most likely to spend money on attending live music performances. Considering that a vast amount of music is sold as a direct result of social recommendation, it could be argued that pirates are an artist's main promoter. Given this there is a need to maximise the content and foster positive relationships with consumers within a controlled network.

Hypotheses

Whilst some micro and SME's are using all available forms of distribution for online sales, there may be greater ways of utilising social media to gain awareness of the products. Sites such as Facebook could become valuable places to encourage trendsetters to follow and share music and products as a significant proportion of music purchasing is generated via social recommendation (Sharma et al. 2012). Technical, legal, control based solutions do not add value, nor are particularly viable for the micro and SME market. The technology is often cost prohibitive, and due to the scale of an independent publisher within the market place influencing technical or legal regulations is beyond their scope. Having reviewed Varian's (2005) business model classifications it is suggested that control could be introduced to the market via:

1 - Understanding consumer purchases and how they consider music as part of their daily lives, placing the niche or minority language music publisher in a stronger position to promote and target their audiences.

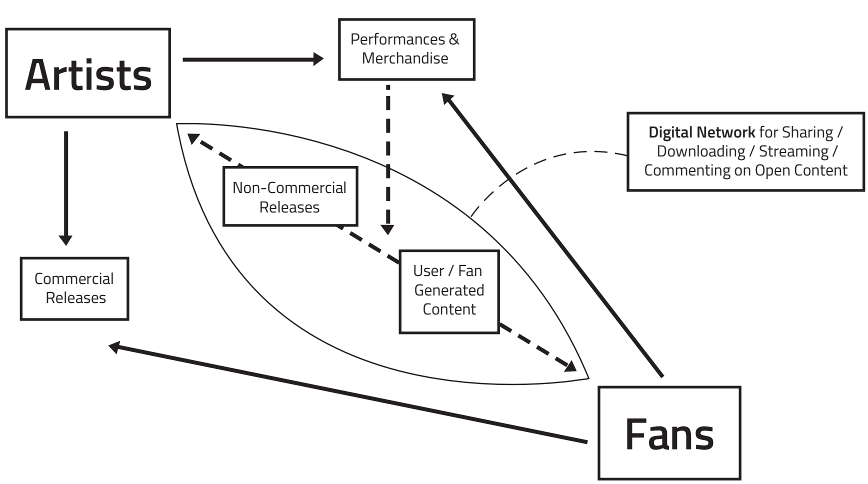
2 - Supporting consumers wanting to engage via a legal method of music acquisition, so long as legal alternatives work equally as well as the illegal methods.

3 - Generating a two-way relationships, leading to more loyal fans.

Concept

Consideration has been given to four potential approaches to re-engaging the music consumer in a legal and sustainable music industry. Using technical or legal enforcement offers little value enhancement for consumers and largely targets consumers who are already legally engaged. However, consumers' growing power and awareness of digital methods of acquisition suggests a need for a digitally innovative platform. Taking the ease of access provided by social networks and the trusting collaborative and self-regulating approach of online communities, a balanced, mutually beneficial model for engagement [fig.2] offers a platform for artists to promote and share in a value enhancing environment.

Figure 2: Mutually Beneficial Model for Engagement
Source: Adapted from Thomas, 2015



The music industry is now largely driven by the digital market and artists are seeking online exposure in order to legitimise their status (Belk, 2014). As well as artists wishing to have a digital platform from which to promote their work, consumers are seeking online engagement, as it provides easy access (Nguyen, 2014). A digital platform also allows a 'try before you buy' opportunity to experience the product (Cameron, 2016). The mutually beneficial model for engagement offers the two-way relationship which is vital to the sustainability of the music industry as suggested by Shih and Huang (2012). This platform is financially supported by commercial releases and promoted through the experiential elements of the artist's creativity in performances and merchandise.

Torbay et al. (2004) model indicated that value could be generated by creating performance and merchandising opportunities to support the sales process. Likewise both Varian (2005) and Elberse (2010) indicated that bundling the music productions could lead to a greater sense of value for consumers, whilst increasing the artists' revenue. The digital network for sharing between the artists and fans enables both commercial and non-commercial publications to be shared and enjoyed by consumers. By using a transparent two-way network it adds value and meaning to the consumer relationship (Chang et al. 22016), and by allowing consumers to make social recommendations, it adds validity (Luo et al. 2012) reducing the risk to consumers (Liao et al. 2017). The model reduces the need to pirate as non-commercial works are shared, whilst also reducing the risk or purchasing an unknown or un-experienced product. This model maximises the consumers desire to share experiences (Kwahk and Ge, 2012).

This proposed model [fig.2] could be utilised at a local, national, international or genre level of music. The fundamental aspect which is vital to its success is the mutual gains achieved via the digital network. Music sharing is an oral tradition, the music industry must adapt to the consumers' needs for a valuable relationship along with their desire for a digitally accessible platform to maximise the potential of a sustainable music industry. The model allows for financial reward to be passed from the consumer to the artist, whilst also maintaining a transparent and collaborative relationship.

Conclusion

In the post Napster era, the music industry needs to convince consumers that music is worth its price. Artists and publishers need to demonstrate added value along with a reason to engage once more in legal purchases. The music industry has spent a long time fighting online technology, however the advances in technology should now assist the development of an exciting and engaging method of distributing music.

Change in market control is needed or else the rate of decline will make it impossible to sustain a business in which to operate as a niche artist or publisher. The music industry must get ahead of technology; or at least find a method of co-working in a way that enables both publishers and consumers to benefit from the output. If introduced with transparency and trust, the micro and SME music sector can prosper and generate its own niche in the digital market place. The continued dependence on social networks will eventually lead to downloading and streaming becoming a part of the mainstream acquisition process, therefore digital marketing via digital networks will increase the digital sales.

Strategies that publishers and artists follow need to take account for their size and influence. When considering a digital distribution strategy, platform intensity and integration needs to be considered. Whilst iTunes or Spotify rate highly in the consumers' awareness, they have such a high intensity of distribution they may not offer the most successful method of promoting the music to the micro and SME's target audience. There is a danger after attracting a consumer online, that they become distracted by the larger catalogues on offer. Utilising a controlled digital network regulated from within by the artists and fans ensures a direct return on investment and a trusting and rewarding relationship for both parties.

References

Aguiar, L. and Waldfogel, J. (2017). As streaming reaches flood stage, does it stimulate or depress music sales?. *International Journal of Industrial Organization*.

Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67(8), 1595-1600.

Bhattacharjee, S., Lertwachara, K., Gopal, R.D. and Marsden, J.R. (2003, January). No more shadow boxing with online music piracy: strategic business models to enhance revenues. In System Sciences (2003). Proceedings of the 36th Annual Hawaii International Conference, 11-pp. IEEE.

Bockstedt, J., Kauffman, R.J. and Riggins, F.J. (2005, January). The move to artist-led online music distribution: Explaining structural changes in the digital music market. In System Sciences (2005). HICSS'05. Proceedings of the 38th Annual Hawaii International Conference, 180a-180a. IEEE.

Cameron, S. (2016). Past, present and future: music economics at the crossroads. Journal of Cultural Economics, 40(1), pp.1-12.

Chang, J., Liu, S., Huang, H., Qi, D. and Zhao, Z., 2016, July. Study on online music business model innovation based on value chain theory. In Logistics, Informatics and Service Sciences (LISS), 2016 International Conference, 1-6. IEEE.

Christensen, C.M., 2013. The innovator's dilemma: when new technologies cause great firms to fail. Harvard Business Review Press.

Coyle, J.R., Gould, S.J., Gupta, P. and Gupta, R. (2009). "To buy or to pirate": The matrix of music consumers' acquisition-mode decision-making. *Journal of Business Research*, 62(10), 1031-1037.

Danaher, B., Dhanasobhon, S., Smith, M.D. and Telang, R. (2010). Converting pirates without cannibalizing purchasers: The impact of digital distribution on physical sales and internet piracy. Marketing science, 29(6), 1138-1151.

Elberse, A. (2010). Bye-bye bundles: The unbundling of music in digital channels. Journal of Marketing, 74(3), 107-123.

Fischbeck, B. (2000). Digital Music business models. e-Business II.

Gloria, M.J.T. (2011). Considerations for creative commons: an examination for motivations of adoption or non-adoption of creative commons licenses. Ph.D. University of Texas.

Halttunen, V., Makkonen, M. and Frank, L. (2010). Indifferent behaviour of young digital content Consumers–An interview study. Information Assurance and Security Letters, 1, 66-71.

Hammond, R.G. (2014). Profit Leak? Pre Release File Sharing and the Music Industry. Southern Economic Journal, 81(2), 387-408.

Higgins, G. (2011). Value and Choice: Examining Their Roles in Digital Piracy. Cyber Criminology: Exploring Internet Crimes and Criminal Behavior, 141-154.

Hracs, B.J. (2012). A creative industry in transition: The rise of digitally driven independent music production. Growth and Change, 43(3), 442-461.

International Federation of the Phonographic Industry International Federation of the Phonographic Industry, IFPI Global Music Report 2016. Available at: http://gmr.ifpi.org [Accessed June 25, 2017].

Koster, A. (2011). The emerging music business model: back to the future?. Journal of Business Case Studies (JBCS), 4(10), 17-22.

Kwahk, K.Y. and Ge, X. (2012, January). The effects of social media on E-commerce: A perspective of social impact theory. In System Science (HICSS), 2012 45th Hawaii International Conference, 1814-1823. IEEE.

Kwok, S.H. (2002). Digital rights management for the online music business. ACM Sigecom exchanges, 3(3), 17-24.

Leyshon, A. (2014). Reformatted: Code, networks, and the transformation of the music industry. Oxford University Press, USA.

Liao, C., Huang, Y.J., To, P.L. and Lu, Y.T., 2017. Factors driving digital music purchases. Social Behavior and Personality: an international journal, 45(4), 583-598.

Liu, D., Yang, T. and Tan, L. (2012). Research on the Model Consumption Behavior and Social Networks Role of Digital Music. JSW, 7(6), 1281-1288.

Luo, J., Ba, S. and Zhang, H. (2012). The effectiveness of online shopping characteristics and well-designed websites on satisfaction.

Mahanti, A., (2014). The Evolving Streaming Media Landscape. IEEE Internet Computing, 18(1), 4-6.

McLean, R., Oliver, P.G. and Wainwright, D.W. (2010). The myths of empowerment through information communication technologies: an exploration of the music industries and fan bases. Management Decision, 48(9), 1365-1377.

Nguyen, G.D., Dejean, S. and Moreau, F. (2014). On the complementarity between online and offline music consumption: the case of free streaming. Journal of Cultural Economics, 38(4), 315-330.

Oliveira, T. and Martins, M.F. (2011). Literature review of information technology adoption models at firm level. The electronic journal information systems evaluation, 14(1), 110-121.

Papies, D., Eggers, F. and Wlömert, N. (2011). Music for free? How free ad-funded downloads affect consumer choice. Journal of the Academy of Marketing Science, 39(5), 777-794.

Poort, J., Rutten, P. and Van Eijk, N. (2011). Legal, economic and cultural aspects of file sharing.

Ramaprasad, J., Desmeules, R. & Bassellier, G. (2012). Can social media transform the online music industry? A look at shared value and shared social responsibility. McGill University, Montreal.

Rose, S., Hair, N. and Clark, M. (2011). Online customer experience: A review of the business to consumer online purchase context. International Journal of Management Reviews, 13(1), 24-39.

Rutter, J. (2010). Consumers, crime and the downloading of music. Prometheus, 28(4), 411-418.

Sharma, R., Morales-Arroyo, M. and Pandey, T. (2012). The emergence of electronic word-of-mouth as a marketing channel for the digital marketplace.

Shih, H.P. and Huang, E. (2014). Influences of Web interactivity and social identity and bonds on the quality of online discussion in a virtual community. Information Systems Frontiers, 16(4), 627-641.

Teece, D.J. (2010). Business models, business strategy and innovation. Long range planning, 43(2), 172-194.

Thomas, S., 2015. A consumer investigation: Monetising, marketing and distributing digital music in a niche and minority language market – the situation in Wales (PhD). Bangor University, Bangor, Wales.

Torbay, M., Pigneur, Y. and Usunier, J.C. (2004, September). Business models for music distribution after the P2P revolution. In Web Delivering of Music, 2004. WEDELMUSIC 2004. Proceedings of the Fourth International Conference, 172-179. IEEE.

Varian, H.R. (2005). Copying and copyright. The Journal of Economic Perspectives, 19(2), 121-138.

Wang, X. and McClung, S.R. (2012). The immorality of illegal downloading: The role of anticipated guilt and general emotions. Computers in Human Behavior, 28(1), 153-159.

Wikström, P., 2013. The music industry: Music in the cloud. Polity.

Zhu, K. and MacQuarrie, B. (2003). The economics of digital bundling: the impact of digitization and bundling on the music industry. Communications of the ACM, 46(9), 264-270.

Experiential Media and Transforming Storytelling: A Theoretical Analysis

John V. Pavlik, Rutgers University

Keywords: Experiential Media, Storytelling, Augmented Reality, Virtual Reality

Abstract

Journalism and media content rests on a foundation of storytelling. Shaping this storytelling is the quality of the medium of content delivery and the nature of public engagement. With the development of digital, networked media, the audience's role is transforming to be more of an active user who experiences stories as a participant rather than as a passive receiver of content.

This article proposes a new model of experiential media based on six primary qualities of the digital environment. These qualities are 1) interactivity, 2) immersion, 3) multi-sensory presentation, 4) algorithmic and data-driven, 5) first-person perspective, and 6) a natural user interface. Augmented reality and virtual reality are among the most-widely discussed experiential media forms, but others include, for instance, advanced ultra-high-definition video. Experiential media bring implications for the nature, production, impact and the future of mediated storytelling.

John V. Pavlik is Professor of Journalism and Media Studies in the School of Communication and Information at Rutgers, the State University of New Jersey. He has written widely on the impact of new technology on journalism, media and society.

Introduction

Media of communication have evolved substantially over time, with certain technological changes portending significant shifts in the nature, production and impact of mediated storytelling (Carey, 1989). Moving from writing on stone tablets to papyrus, the advent of the printing press with movable type, the invention of photography and motion pictures, the discovery of wireless communication, and the invention of television are among the most notable milestones in the historical development of modern communication media (McLuhan, 1964). The invention and rise of the Internet and digital, or computerized media, have ushered in a sea-change in mediated communication. Moreover, the advent of ubiquitous, networked, multi-functional mobile and wearable digital media have enabled the development of what this paper calls experiential media. These emerging media forms have the potential to shape society, perhaps even "democratize culture and art," as Flew and Faustino stated with regard to earlier media transformations (2018: 9).

This paper examines how experiential media forms such as augmented and virtual reality can enable content creators to design stories for users as participants in immersive, multi-sensory and interactive first-person narratives (Pavlik, 2017a). This is in contrast to traditional media environments in which audience members tend to more often passively watch, listen or read the narrative from a third-person's perspective.

A Historical Context of Mediated Storytelling

Telling of stories is fundamental to media and journalism. These stories can take many forms, depending on the nature of the medium of communication and its level of audience engagement. As the digital age of media advances, the shape of storytelling is shifting dramatically, and the audience is becoming more akin to a user of or participant in the story rather than a passive recipient of the narrative.

To frame this analysis, it is useful to briefly provide some historical context as to the nature of storytelling in traditional, pre-computerized analogue media, such as newspapers, books, magazines, radio, television and motion pictures. Stories are among the most common form of media content, although there is a substantial amount of media content that is not necessarily in a narrative form, such as most of the recorded music.

Figure 1 presents a basic model of analogue media storytelling. It is somewhat of an oversimplification of the nature of mediated storytelling in the traditional, analogue media, but it captures many of its essential elements. In general, analogue media stories tend to feature linear narrative structures (Pinault, 1992). That is, they have a beginning, middle and an end, and audiences usually engage with them in that order. These stories typically feature one or two modalities, sight and sound. Stories tend to be fixed; they are produced, recorded, published, distributed, and do not change subsequently, although sometimes news media will publish corrections when errors are detected. Analogue media stories are often episodic in nature; in other words, they tend to revolve around an event or a set of related events (Mittel, 2015). This is especially the case with journalism (Harcup, 2009). Perspective is an important element in a story, and in analogue media, the perspective or point of view usually comes from a third person, again especially in journalism. That is, a narrative tells the story from the point of view of a central character, a news source or subject, or a protagonist, but is typically reviewed by a third party. Reporters, for instance, tell stories about what public figures, such as an elected official, do or say, or what happened to someone caught in a natural disaster such as a flood, an earthquake or a hurricane. As such, audiences engage with stories in a relatively passive form (McQuail, Blumler, and Brown, 1972). They receive or consume stories published or made available. They read, watch or listen to the story.

Figure 1:
Model of Analog Media Storytelling

- Linear structure (beginning, middle, end)
- Single/dual modality (sight, sound)
- Static (fixed)
- Episodic (event-centered)
- 3rd-person perspective: telling and showing
- Passive audience

The Development of Experiential Media

Technological change has facilitated a transformation in the nature and impact of mediated communication and storytelling. Traditional mass media have given way to an interactive network of increasingly mobile, global and immersive media (Pool, 1983). Increasingly ubiquitous, multi-sensory and wearable digital media have contributed to what this paper describes as the experiential media.

Experiential media forms enable the user to experience stories as a participant in a first-person narrative, rather than merely watch, listen or read the story from a third-person voyeuristic vantage point. 1st or 2nd person perspectives are possible in analogue media, and has been used (e.g., radio plays of the 1930s, '40s and '50s often used this approach), but it has not been a typical creative choice of media storytellers.

Immersive platforms such as 360-degree video, virtual reality (VR) and augmented reality (AR) are among the most familiar forms of experiential media. Such experiential media fall along the virtuality continuum theorized by Milgram, Takemura, Utsumi and Kishino (1994). On one end is AR which blends users' real-world and virtual experiences, and on the other end are completely synthetic experiences or computerized experiences that replace users' direct contact with the physical world. These immersive, participatory formats are especially amenable to a 1st-person perspective. Together, some are describing the combined forms as extended reality (XR) (Gownder, Voce, Mai, and Lynch, 2016).

“Experiential media forms enable the user to experience stories as a participant in a first-person narrative, rather than merely watch, listen or read the story from a third-person voyeuristic vantage point”

This paper defines experience in terms of making practical contact with and directly observing objects, facts, or events. In other words, it is something to do and observe for oneself. There is a substantial body of research on user experience (UX) (Hassenzahl, 2013). This research suggests that compelling user experiences are increasingly possible through well-designed technological interfaces (Marcus, 2015). In terms of experiential media, this conceptualization refers to the degree of doing something while engaging one or more of the senses via a digital communication platform. This conceptual framework is reflected in the work of Jeremy Bailenson (2018) at Stanford’s Virtual Reality (VR) laboratory. Bailenson describes VR as “experience on demand” (2018:1).

Experience is not the exclusive capacity of experiential media; other media can, for example, let audiences experience an emotional state such as fear or joy. All media to a certain degree involve users doing something, however, limited in complexity. But analogue media cannot generally allow audiences to do something beyond the use of a medium, such as to turn a page of a book, read words on that page or change a TV channel.

Experiential media enable users not just to experience the medium, but also to participate or engage in a story or content itself. Users do not merely imagine. A helpful example is Edgar Allan Poe’s classic tale from 1839, *The Fall of the House of Usher*. In the story, Roderick Usher relates how he acquired a morbid acuteness of senses or hyperesthesia. Colours, sounds, scents and taste are intense beyond tolerance. It is one thing to imagine such acuteness, as might readers of a story or listeners to a radio play retelling the tale or even viewers of a movie depicting the story through sight and sound. It is other to gain practical insight through an immersive, interactive, and multisensory VR experience based on the tale in which a user enters the character of Master Usher.

Another historical example is the 19th century Lumiere brothers’ motion picture, *Demolition of a Wall*, which illustrates the nature of the development of experiential media. The Lumiere brothers’ 1896 film #40 showed this simple real-life story through moving pictures. 20th-century movie productions with synchronized audio could include the sounds of the demolition. The 21st-century experiential media could let users swing the hammer virtually and partake in the demolition of the wall; a haptic interface could even let users feel the impact of each blow (Parisi, Paterson and Archer, 2015). The relative advantages, disadvantages and consequences of engaging only users’ imagination versus engaging their entire being have yet to be fully investigated but it could make for valuable research.

AR and VR and other experiential media forms have emerged as significant parts of the global media marketplace in the early 21st century. But in fact, their development has been underway for more than a century. However, one does not suggest that this development is either a linear progression or a technologically determined process. Instead, a confluence of factors, including commercial interests, government policies and cultural factors has shaped the prospects and problems coincident with the emergence of experiential media in the creative and cultural industries.

Yet, we can point to several notable milestones in the development of more experiential media forms. In 1901, L. Frank Baum, famous as the author of *The Wizard of Oz*, imagined an electronic "character marker", which arguably signals the first conceptualization of augmented reality. In 1935, Stanley G. Weinbaum published a short story, *Pygmalion's Spectacles*, in which he described electronic goggles that immerse the wearer in a virtual world featuring holographic displays with smell and touch. In 1949, science fiction writer Ray Bradbury envisioned an electronic, multi-sensory and interactive nursery for a short story titled *The Veldt*. Children in the nursery control the experience simply through thought. If they imagine the African veldt, the nursery becomes that veldt, complete with lions. Not surprisingly, things go awry in the story and bring dire consequences.

In 1957, Martin Heilig invented the "Sensorama", the analogue machine that allowed up to four people to simultaneously experience "the illusion of reality using a 3D motion picture with smell, stereo sound, vibrations of the seat, and wind in the hair to create the illusion" (Heilig, 2017). In 1968, Ivan Sutherland developed the first head-worn display. In 1987, Jaron Lanier coined the phrase "virtual reality", and designed the first commercial VR headset (Virtual Reality Society, 2017). In 1989, Steve Mann developed the first functional and networked wearable computer (Mann, 2017). In 1990, aerospace engineer Thomas P. Caudell coined the term "augmented reality" (AR) (Lee, 2012). AR has a natural application to journalism and media, in which the news and other media have historically functioned to augment the public's experience with reality.

These imaginings and inventions long preceded the 21st-century launch of consumer-oriented VR headsets such as the Oculus Rift, or AR platforms such as the iPhone X and the Samsung Galaxy S9. AR can augment user views of reality. Readers might imagine standing in front of New York City's Flatiron building, Manhattan's original skyscraper. By pointing a mobile device at the building, an AR app could overlay information telling the user about the building or facilitating social media engagement. In contrast, VR could allow a user to enter into the building virtually, becoming immersed in a narrative about the building's history and story. Named the Fuller Building when built in 1902, the Flatiron building once featured stories projected onto its exterior via a magic lantern, an early image projector (Alexiou, 2010; Vermeir, 2005).

With the rise of experiential media, the creative and cultural industries are on the verge of the third stage of mediated story-telling. For most of media history, the first stage of mediated stories featured telling of tales using words, especially in a written form (Schramm, 1988). Written narratives in printed media, including newspapers, magazines and books, provided a major platform for primarily textual storytelling.

The 20th century saw the rise of the second stage of mediated storytelling, the one that involved showing and hearing stories in media via photography, moving images and over the air on radio or the wireless. These stories tended to follow largely the same basic narrative approach as printed media but added more audio and visual elements to the storytelling. Many scholars have explored aspects of the evolution of mediated storytelling throughout these first two stages (Spiegl, 2017). Jenkins (2010) and others articulated the development of transmedia storytelling as content narratives that have been adapted to and designed for multiple mediated environments. Murray (2017) conceptualized a storytelling transformation in an online environment in which users can interact and engage in virtual narratives.

By 2018, the creative and cultural industries have reached the beginning of the third stage of mediated stories, the one characterized by story experiencing rather than storytelling. These experiential stories operate on networked, digital platforms, including augmented reality (AR) and virtual reality (VR). Experiential stories signal a potential transformation of the creative and cultural media industries on several levels, including content, practice and industry structures, especially in terms of public engagement. Experiential stories are developed in nonfiction and fiction media realms, including journalism, cinema, games and art.

Importantly, although newer media forms keep emerging, they do not necessarily supplant earlier forms; in many cases, they complement or extend the capacity of storytelling in new directions. The newer forms can become increasingly dominant, but not necessarily to the exclusion of earlier forms. When radio emerged in the early 20th century, for example, it became the dominant platform (at least in terms of audience and revenues for much of the world) for storytelling in the form of the theatre of the air (Pavlik, 2017b).

But newspapers, magazines, motion pictures and books continued to play an important role. Television eventually came to largely displace radio as the dominant storytelling medium. Experiential media are likely to grow in importance as a story-experiencing environment, but other media will continue to play a significant role in public storytelling. These opportunities will be shaped and constrained by economic, cultural and political forces that surround and form the basis for the global media system (Adorno, 1991).

Contemporary Experiential Media

Experiential media allow users to actively engage, navigate and to a large degree control immersive narratives or stories, at least within the content framework and parameters provided within the platform. AR layers digital content onto users' real-world experiences via mobile or wearable devices. For example, a smartphone user running an AR app might point his/her device at a nearby building and see or hear a geo-located narrative linked to that building, perhaps about a current or past event or a person associated with the location. In more immersive fashion, users wearing smart-glasses might look at that building and see or hear AR overlays that blend seamlessly into the location. Sometimes AR is anchored as interactive 3D objects in the user's immediate physical environment. Some describe this form of AR as Mixed Reality or MR.

In 2018, *The New York Time*s launched an AR, or MR, news reporting initiative. Coinciding with the 2018 Winter Olympics in Seoul, South Korea, the AR-enabled news experience allowed a user to see an Olympic figure skater in 3D photorealistic form appear before her or him via a smartphone, and anchored to the floor, or another flat surface, such as a table. iPhone users could interact with a life-size 3D version of U.S. figure skater Nathan Chen, who appears virtually before them. "From this view, you can see Chen's arms and legs are tight to his axis of rotation, which helps him spin faster than 400 r.p.m.", the report states (Branch, 2018).

In September 2017, *The Washington Post* introduced geo-located AR stories through its app, enabling users to access locative stories about iconic buildings. The *Post*'s first AR story explores the National Museum of African American History and Culture in Washington, D.C. This use of AR is somewhat akin to audio guides or tours in museums or other venues, but story-oriented and multi-media in format.

VR headsets supplant users' direct world experience with computer-mediated content or stories. Enveloping 360-degree images, video, animation and the like fill the user's entire field of view. Geospatial, high-fidelity audio enriches the user's immersive experience in the narrative. Next-generation systems may deliver such mediated experiences via volumetric displays that no longer require the user to don a headset or hold and look at a mobile device. Rather, AR and VR narratives will be projected into a 3D space or volume, bringing to digital life Heilig's half-century-old multi-user Sensorama but in a dis-intermediated form. Ultra-high-definition (UHD) video platforms including 8K UHD delivered at 240 frames per second may envelop users in lifelike high-fidelity, 3D audio and visual displays.

Qualities of Experiential Media

Experiential media feature six primary qualities of relevance to mediated stories. These qualities emerge from the capabilities inherent in contemporary digital, networked media platforms. These qualities are interaction, immersion, multi-sensory presentation, algorithmic and data-driven, first-person perspective, and natural user interface.

Interaction

Interaction refers to the exchange that occurs between or among users and content or mediated stories. In experiential media, interaction takes two main forms. First is interaction via a computer or communications network between and among public and media storytellers. Second is the interaction that can occur between a user and content or the story itself.

Social-networks increasingly feature experiential formats. Snapchat, for example, uses geo-located augmented reality to facilitate user interaction. Users create their own stories via Snapchat and can overlay geo-filters, or geographically located augments, to situate their stories or to creatively manipulate images and videos of human or animal story subjects and then share them (e.g., an AR-enhanced selfie).

Content interaction allows users to access embedded content or navigate layered story elements. In experiential media, such content interaction becomes the essence of the story experience and the user interface. *The Times's* Olympics AR report illustrates this aspect of interaction.

Interactive documentaries (I-Docs) emerged in the early 21st century as an international standard in journalism storytelling in the experiential media realm (Pavlik and Pavlik, 2016). Among the award-winning examples of such I-Docs is *Inside Haiti*, an interactive, online non-fiction simulation that allows users to virtually travel to Haiti and experience the aftermath of the earthquake that devastated the island nation in 2010. Users can journey interactively through the narrative in the first-person as an earthquake survivor, an aid worker, or a journalist on assignment. In each role, a user faces decision points, and then experiences (through sight and sound) the consequences of those choices.

Immersion

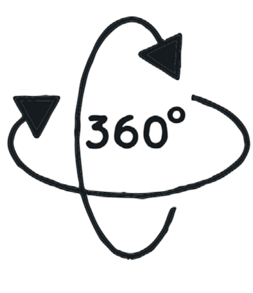
The second primary quality of experiential media stories is immersion. Experiential media envelop the user within a story (Carter, 2015). This is the essence of immersion. Users are surrounded by spherical, 360-degree imagery, video and computer-generated imagery and sound. Immersion can also mean enveloping the user in a real-world, physical space using augmented or mixed reality on a handheld or wearable device, even including haptic interfaces (e.g., wearable digital bodysuit).

Höllerer, Feiner, and Pavlik (1999) developed an early prototype immersive storytelling format. They dubbed their immersive format "The Situated Documentary". Situated Documentaries were developed and experienced using a wearable computer system, the research team called the Mobile Journalist Workstation (MJW). Storytellers used MJW to embed non-fiction, documentary stories in real-world locations. The MJW included a head-worn display with graphics and video display and audio playback, wireless Internet connectivity or Wi-Fi, geolocation via the Global Position Satellite system (GPS), a 360-degree video camera (developed by Columbia Computer Science Professor Shree Nayar), and a handheld interactive display.

Situated Documentaries feature a variety of media types to deliver story experiences, including 360-degree video (a precursor to VR) and AR, layering digital content tagged onto real-world objects and seen through and interacted with wearable or handheld platforms. Users navigate through stories or content via gaze approximation, allowing hands-free operation. The system tracks where users look, and if they gaze at an object, real or digital, for a half second, it is automatically selected via an algorithm - much as a cursor pointed at the object and a mouse click might do.

Students using the MJW reported or produced several Situated Documentaries, including one of the 1968 Columbia student revolt or strike, Enrico Fermi's nuclear pile (a precursor to his work on the Manhattan project), and the Bloomingdale Asylum (for the insane in the 19th century), which was located on the Columbia campus before it was a college campus; one asylum building remains to this day.

Users stand on the campus, looking around the College Walk area. Overlaid onto the real-world scene and displayed on the head-worn system are immersive bits of 2D and 3D AR content. These include photos and videos from the past and 3D digital visualizations of buildings that once occupied a space which today contains another building, geographically synchronized onto the actual locations where they once existed or where past events once occurred. For instance, users experiencing the 1968 student revolt story see a photo of Mark Rudd, a student leader of a revolutionary group of the day called Students for a Democratic Society (SDS) overlaid onto the location of the University's President's former office, and then hear an actuality (audio recording of his voice) of Rudd speaking. He explains what he found in the Columbia President's office: "his girly magazines and letters about moving out the Blacks and the Puerto Ricans" who were in the way of the University's plans to turn nearby Morningside Park into a new gymnasium or exercise facility. This Situated Documentary format is somewhat analogous to a virtual time-traveling platform. The student producers even developed an applet that enables users to move back or forward through time by tapping the display and selecting the desired year.



By 2016, immersive 360-degree video stories had become a mainstream media storytelling feature. Among the leading venues for such storytelling in journalism are *The New York Times*, the Associated Press, *USA Today*, the *Wall Street Journal*, NBC and many others around the world such as *The Guardian* and the BBC. *The New York Times* introduced its 360-degree video storytelling on Nov. 5, 2016, with a story called "The Displaced." *The Times* also distributed to one million of its subscribers a low-cost headset called Google Cardboard. Users inserted their smartphone into the Cardboard viewer and running *The Times*' VR app could experience "The Displaced" story, journeying virtually to three refugee camps in Syria, Ukraine and Sudan, and experiencing life there from the point of view of a child refugee.

Research has shown that virtual environments can enhance a user's sense of presence in a virtual, mediated space (Witmer and Singer, 1998; Zahoric and Jenison, 1998). Studies have shown how immersive content, including on high-resolution television, can increase the user's sense of presence and produce other cognitive and affective outcomes as well (Kim and Biocca, 1997). At the Pennsylvania State University's Media Effects Research Laboratory research has shown that immersive stories, especially experienced from the point of view of a single protagonist, are especially likely to generate for the user a sense of presence at the site depicted in the narrative and for her or him to experience heightened empathy with the protagonist (Sundar, Kang and Oprean, 2017). Research at the Tow Center for Digital Journalism at Columbia University has confirmed these findings (Archer and Finger, 2018).

The New York Times' 2017 immersive "Antarctica" series merits a special note. The four-part series of 360-degree video stories invite the user on a journey to Antarctica, a location few may ever get a chance to visit in real life. But the story of Antarctica is one of central importance in contemporary global affairs. Whether due to climate change or geopolitics, Antarctica is vital to the world's environment and may serve as far more than just an early warning system for the effects of global warming. *The Times'* immersive undersea journey is a powerful experience that can help build public understanding of the state of the endangered, remote continent.

Although the 360-degree format offers storytelling immersion, it lacks some of the essential qualities that would constitute full VR. Among them is what is known as six degrees of freedom (DOF). DOF refers to "the ways an object (or person) can move within a space. There are a total of six degrees of freedom in a three-dimensional space. The six DOF can be divided into two categories, rotational movements and translational movements. Each category has three DOF. Both orientation tracking (rotation) and positional tracking (translation) are required to have a truly immersive VR experience" (XinReality, 2018). These DOFs in full-scale VR essentially allow the user to not only look about in all directions but also to move about in a three-dimensional virtual space or volume.

In 2018, full-scale six DOF VR experiences are very expensive to produce and are available mainly in the VR game environment. Some six DOF cinematic VR experiences are being developed, but journalism stories that offer full immersion with six DOF are still primarily on the horizon, although VR journalism pioneer Nonny de la Peña has been leading the development of some examples. De la Peña is the founder and CEO of the Emblematic Group, a VR and AR company headquartered in Los Angeles, CA. She is known for her work in creating 360-degree video and VR journalism stories. De la Peña says VR is an empathy machine and that VR journalism can transform the user into a new kind of eye-witness to events. Her VR stories include *Greenland Melting* (De la Peña, 2017a), produced with PBS Frontline, taking users to Greenland's melting glaciers, and *After Solitary*, produced with PBS Frontline, enabling users to enter a solitary confinement cell in a Maine (U.S.) State Prison (De la Peña, 2017b).

De la Peña is not only creating powerful experiential narratives. She is also shaping the contours and grammar of a new story medium. Among de la Peña's most important early VR works is 'Hunger in Los Angeles', a non-fiction VR experience premiered at the 2012 Sundance Film Festival. She followed that narrative experience with *Out of Exile: Daniel's Story*. Users experience the story of a young gay man coming out to his homophobic family. This VR film was named one of the best of the Sundance festival in 2017.

AR is increasingly a part of a wide spectrum of objects in the physical world, from objects of art to the news. To illustrate, the author and his doctoral student, Frank Bridges, embedded AR into elements of a monograph on AR in storytelling (Pavlik and Bridges, 2013). They augmented an image of a Chinese handscroll "Heaven and Earth", created in 1964 and on loan to the Metropolitan Museum of Art from the Nanjing Museum in China. With permission, the co-authors added a short video of a curator from the Met explaining the meaning and significance of the hand scroll. They also created an original video shot with an iPhone to an image of Mr. Pete Seeger's unique banjo signature. A legendary American folk singer, the late Mr. Seeger was also a civil rights activist, environmentalist and storyteller. Seeger explained to the author how he developed his signature and the author recorded a short video and embedded it as an augment into a copy of his signature.

The tools for creating and experiencing AR are developing and expanding rapidly. Some of the AR apps news media have used in their story content include HP Reveal (formerly Aurasma), which the author and Bridges used in their monograph. *Prosthetic Reality*, an art book, features the EyeJack AR app and illustrates the potential to embed animation, audio and interaction in visual art.

2017 saw the development of advanced AR technologies in television newsrooms around the world to aid in storytelling. CBS News, for instance, a TV news network headquartered in New York City, in August 2017 employed AR to tell viewers a story about an unusual upcoming astronomical event: a total solar eclipse that would pass over most of the U.S. for the first time in nearly a century. The story featured an animated, digital version of the solar system, including the Sun, Earth and Moon, which rotated as the news operation's chief meteorologist walked about the studio and explained what viewers soon could expect to experience. The AR was of high resolution and three-dimensional quality appeared to the naked eye as though the mini-solar system was, in fact, present in the CBS news studio.

"Experiential media are also likely to offer users engagement beyond the five human senses soon. Neuro-reality is a working prototype format (…)"

Multi-Sensory Presentation

Stories offered via experiential media can engage all five human senses. Lifelike sight and sound are common, and tactile or haptic experience is increasingly available, even expected, and can facilitate user memory or emotion (Kappers, Van Erp, Bergmann Tiest, Van Der Helm, 2012). Eidetic memory, or memory stored or recalled as distinct images, might be especially likely to be enhanced by compelling visual and haptic VR experiences. Haptic user experience can be with virtual or physical objects and can be generated via devices of many forms connected to the Internet. The Internet of Things (IoT) already includes an estimated 50 billion objects worldwide ranging in format from multispectral sensors to drones and robots; IoT can serve as an almost limitless resource for the generation of data-driven, multi-sensory experiential content (Pepper, 2015).

Experiential media are also likely to offer users engagement beyond the five human senses soon. Neuro-reality is a working prototype format for games and persons with a disability (Houser, 2017). Neuro-reality allows users to engage experiential platforms via thought or mind control, sometimes even via a wireless interface. More than simply a means of content navigation, neuro-reality may enable new forms of human senses. There are several commercial and research initiatives underway to advance neuro-reality, including EyeMynd, Neurolink (Elon Musk is the founder) and Kernel, a company seeking to develop a neuroprosthesis (Lant, 2017). A research project based on neuro-reality is developing a system to create a new human sense, the one that would allow a user's mind to engage directly with data, such as the stock exchange. This project may signal a step in the human evolution toward the so-called singularity (Eden, Moor, Soraker, and Steinhart, 2012).

VR may also enable the expansion of human experience. In the VR system called Birdly, users experience the dream of human flight (Hynes, 2015). Developed in 2014 by Max Rheiner at his media lab in Switzerland, Birdly allows users to virtually fly bird-like over the city of San Francisco.

Algorithmic and Data-Driven Media

Experiential media and the stories they enable are increasingly data-driven for geo-location and other dynamic customization of content or stories, including reactive or responsive displays that can track and respond to the tracking of users' eye movements or respiration. Data about users' location, preferences or digital behaviours and physiological responses, for instance, enable stories to automatically adapt to that location or users' presentation preferences or more. For instance, a story might adapt to the time of day, users' background or interests or emotions, or previous choices in an earlier part of the narrative.

As a part of this process of story adaptation, experiential media utilize algorithm-enabled features to adjust the narrative or its presentation (e.g., with or without sound). Such algorithms are a pre-cursor to full artificial intelligence (AI), machine learning and neural networks, which could deliver real-time, automatic user customization and user interaction. Increasingly, experiential media can engage automated content interaction via algorithm, or AI, and data.

Illustrating the role of AI in an interactive, shared, public experiential media setting is an interactive billboard placed in London's Canary Wharf in observance of International Women's Day on 5 March 2015 (Wallwork, 2015). The billboard featured a story of domestic violence. With an embedded AI-enabled camera watching the faces of those passing by, each time a person looked at the billboard the sign's image of a battered woman's face healed ever so slightly. Once enough people looked at the face, helping it to heal, the message shifted to read, "Don't turn a blind eye to domestic violence." Then the system would reset for another public interactive experience.

AI plays a potentially significant role in most experiential media stories. Thousands of AI-generated stories are already being produced each year by organizations such as the Associated Press (AP). Likewise, a software robot called QuakeBot illustrates the potential of AI and data for storytelling. Designed by a human reporter, the algorithmic robot "Quakebot" automatically captures in real-time the data feed on the U.S. Geological Survey (Slate, 2014). When an earthquake of 4.2 magnitude occurred in Southern California in early 2014, Quakebot automatically dove into the data stream to gather the needed information about the magnitude, epicentre and time of the seismic event. Quakebot then wrote the story and sent an electronic alert to its human editor, notifying him of the breaking news. The human editor quickly double checked to confirm the occurrence of the earthquake, and then forwarded the story for publication on LATimes.com. Future news bots may be capable of producing immersive, interactive, and multi-sensory stories generated algorithmically from IoT data and more.

AI is integral in the production of high-resolution 360-degree or VR live action video. Google's Jump video compiler automatically seams together 16 streams of ultra-high definition video shot on the advanced Google omnidirectional VR camera rig to create a compelling omnidirectional video. High-speed data processing, including that enabled by advanced AI and ultra-fast data processing, eliminates an immersive media problem known as the latency effect (Mastin, 2017). The latency effect refers to any perceptible delay the user experiences between taking an action, such as clicking on a digital object and getting a response from the system. Perceived latency interferes with users' sense of reality or presence in the game or narrative. Eliminating or minimizing the latency effect helps to heighten the users' sense of reality and presence in the narrative.

Certainly, the potential for AI-enabled systems to generate errors or to invade human privacy is substantial. The reduction of this potential will require the development of significant and powerful mechanisms to detect and minimize possible problems. Acclaimed science fiction writer Isaac Asimov once proposed three laws of robotics that he designed to "eliminate" the potential for AI-enabled machines to harm humans or generate other negative consequences" (Asimov, 1950). A similar approach may be central to the development of AI in experiential media. In the future, a design that frames AI as an augmentation to human performance rather than as a replacement is likely to become essential.

First-Person Perspective

In experiential media, stories increasingly engage users into a first-person perspective, letting them experience narratives as the protagonist or a central character of the story. By being placed inside the story, users become participants in an "I" or "we" (collaborative, multi-user) format, pursuing a narrative alone or with others.

Identity in such stories can become fluid. A curious 2017 example is the immersive simulation called *Everything* (O'Reilly, 2017). *Everything* lets users become virtually anything in the universe, animate or inanimate, and follow the story from the point of view of an atom, a plant, a bear or a star. Users can create their own universe. There are no right or wrong choices. It is a simulation of exploration. Users can repeat an experience or live it virtually from multiple points of view.

Natural User Interface

Natural user interface (NUI) design is of critical importance to stories in an experiential media environment. When people engage with the real world, they do so in a highly intuitive manner. People look at things, touch, smell, and hear them. To get information, people simply ask questions using their voice or other means of communication (e.g., a gesture) they have in common with others. In traditional computing environments, users need to first master a variety of skills, beginning with language, and then specialized skills such as using a computer keyboard, to interact with others or with computer content or data. If experiential media are to offer the user a sense of actual experience, then it is essential that users can navigate or interact in an intuitive manner as much as they do in the physical world.

Increasingly, immersive media platforms support such natural user interface (NUI) design. Among the most widely experienced in 2018 are interactive, Internet-connected 360-degree audio platforms that allow voice interaction. Popular platforms include Amazon Echo with Alexa and Google Home. With the Echo, the user speaks to the device, first saying the activation word, Alexa. Then the user follows with a statement, command or a question such as "Alexa, good morning", "Alexa, play Spotify", "Alexa, what's the news", or "Alexa, raise the volume". Alexa responds accordingly, assuming it understands the user's statement. Amazon is developing Alexa to be integrated into a wide variety of devices and platforms, from automobiles to dishwashers. Likewise, Amazon is reportedly developing smartglasses that will support Alexa and likely will feature a high definition camera, AR, and two-way audio and video. Interactive, voice-based games have been designed for the Echo, with Alexa acting as the user's assistant. One is called The Wayne Investigation. Modelled after a 1940s-style radio play, the Investigation challenges the user to solve the double-murder of Bruce Wayne's parents. Wayne is better known to comic book fans as Batman. Users hear Alexa provide an audio scene setting, and then proceed to try to solve the murder by asking Alexa questions and hearing her describe the evidence. Audio effects help advance the narrative engagement as well.

Gesture navigation is a similarly increasingly important feature of NUI design. Users can control or navigate experiential content simply by looking at an object or waving a hand or finger or nodding a head or blinking an eye.

Thought control through a brain-machine interface (BMI) and neuro-reality are fast approaching as well. Already in use for persons with disabilities and in prototype form for VR games, users will be able to control or navigate through an experiential narrative simply by thinking a command, a choice or a communication. This may be the real advent of Bradbury's *The Veldt* from 1949.

Also on the horizon are implantable chips that will further advance AR and VR impact via BMI. Implantable radio-frequency identification (RFID) chips are already in growing use for various applications including medicine, disability treatment, and the workplace, and may soon enable interactive media experiences that fuse directly with the human mind.

For many, wearing a headset, or implanting a digital chip, is unthinkable. It's far too much an encumbrance or an invasive threat to privacy. Consequently, many are skeptical about the potential for fully immersive, interactive, multi-sensory experiential stories. But others are embracing these new immersive media forms and using them to create arts and other experiences (Zolfagharifard, 2013).

Diverse Platforms

There are many media platforms for experiential media, and they offer varying degrees of capacity with regard to the six qualities identified in this paper. These platforms are rapidly evolving and reaching a growing installed base around the world. The platforms include Samsung Gear VR and Google Daydream View for limited immersion; Oculus Rift and HTC Vive for richer immersion, interaction and multisensory experiences.

VR usage worldwide is growing. A GlobalWebIndex (2017) study of 350,000 US households with Internet access indicates 8% have a VR headset. About 90% of U.S. households have Internet access, so this 8% translates into some 7.5 million households with a VR headset. The same study suggests VR headset ownership is rising rapidly, having almost doubled from just 5% in June 2017. Those surveyed indicate they want more and better content or experiential stories designed for an immersive experience.

Other research indicates that the worldwide installed VR headset base totalled 24 million in 2017 and is expected to reach 77 million by 2021. As a percentage of the world's total population, this is still small, but it is not insignificant in terms of an emerging platform for delivering experiential stories. Moreover, VR headsets represent only a small portion of the total experiential media landscape, which is much closer to 50% when the adoption of smartphones and UHD video systems is considered. Smartphones are a primary platform for AR and MR.

On the experiential horizon is what is known as three-dimensional volumetric displays. These platforms project 3D virtual objects into space or volume, without users needing head-worn displays. The images, video and animations are lifelike in appearance, apparently solid, 3D objects. They are geo-located AR/MR (mixed reality). Volumetric projections can be animated, interactive, and photo-realistic. The approaches to creating volumetric displays are varied, including lasers and retinal displays, as well as fast moving light emitting diodes (LEDs) and holography.

Ultra-high definition (UD) video and high fidelity spatial audio also can enable the delivery of stories that create highly lifelike user experiences. With 8K resolution and spatial audio, persons watching, and hearing video and video delivered via slightly curved OLED screens can, like those wearing a VR headset, gain a sense of immersion in the narrative or scene (Seel, 2016). Ultra-high definition (UHD) holographic projections such as those at the Theoriz Visual Studio in France illustrate the potential for blending the physical with the virtual in an interactive UHD narrative environment (Theoriz editors, 2018).

One of the most vexing problems associated with the expansion of experiential media and the platforms needed to create and engage them is their high cost, both in terms of production as well as user access. A digital divide between those with access and those without will persist and possibly widen (Castells, 2002). Solving problems of inequality of access to the tools of production, distribution and access in these experiential creative and cultural industries is essential but not easily addressed.

Experiential Media Story Model

Figure 2 provides a summary of the experiential story model, drawing upon a synthesis of prior research on each of the six primary qualities it articulates.

Figure 2: Experiential Story Model

- Immersion, including 6 DOF (de la Peña, Weil, Llobera, Giannopoulos, Pomés, Spanlang, Friedman, Sanchez-Vives, and Slater, 2010).

- Interaction, including non-linear narrative structure (Bostan and Marsh, 2012).

- Multi-Sensory presentation (Shams and Seitz, 2008).

- Algorithmic, data-driven and dynamic, featuring contextualization and real-time customization (Lindén, 2017).

- First-person perspective (*Oxford Reference*, 2018).

- Natural User Interface Design (Mann, 2003).

In contrast to the analogue media storytelling model presented in Figure 1, the experiential story model is far more complex. All the capacities of analogue media are still available in the story production palette. Yet, some are modified and enhanced, and new capabilities are introduced. Experiential stories feature structures that are increasingly non-linear. They are immersive, interactive and multi-sensory. Such stories can be dynamic, algorithm- and data-driven, even featuring AI. Stories can be contextualized or linked to other online content. Contextualization is especially likely in journalistic stories featuring 360-degree images and video in which the user can look about and see the events in a wider field of view. Perspective is shifting away from the somewhat detached third-person perspective and toward the highly engaged first-person viewpoint. In fully immersive VR, users can move about freely with six degrees of freedom. A natural user interface design not only makes user engagement and navigation intuitive, but it makes the story experience increasingly lifelike and seemingly real for the user, especially with a rich blend of multi-sensory presentation including sight, sound and haptics.

Concluding Reflections: What Experiential Stories May Bring

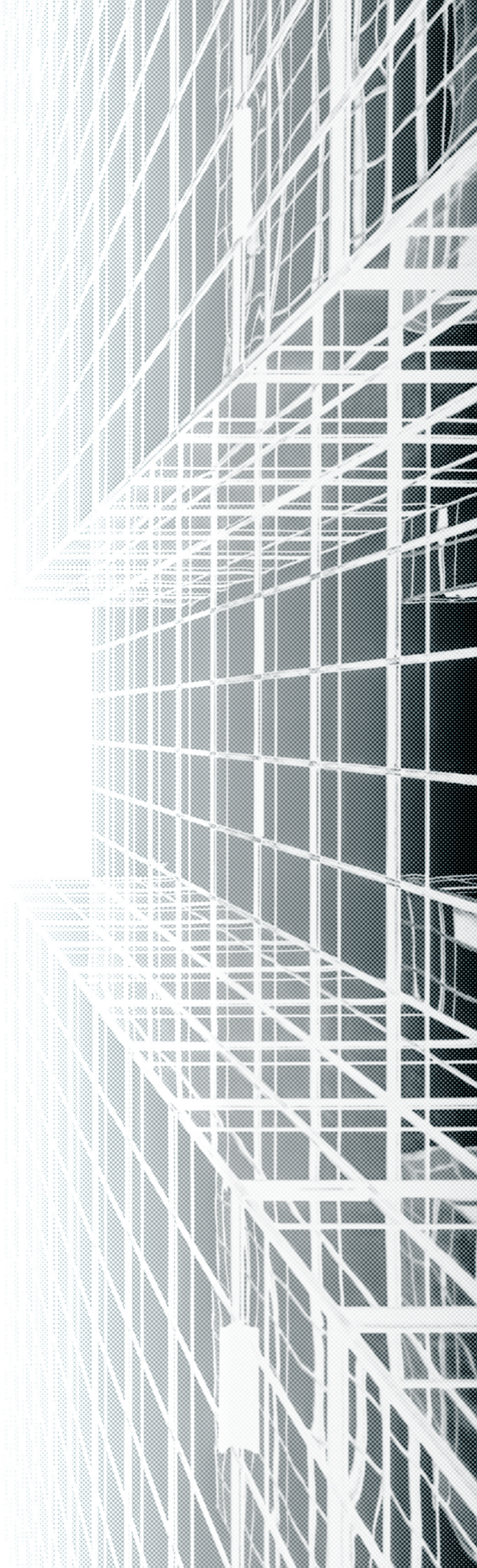
Experiential media bring the possibility of a transformation of media content from storytelling to story experiencing. This transformation offers users and society potentially positive, beneficial outcomes. Research indicates experiential stories can increase user engagement. Experiential stories can produce a greater sense of user presence in a narrative. Experiential stories can generate greater empathy among users. Ultimately, users may transform from passive audience members to active participants in a story, seeing, hearing, touching or otherwise experiencing events and issues for themselves.

All of these outcomes may be especially important in journalism and other story forms where topics of importance are explored or presented in narrative form. Increasing user engagement, empathy and understanding can facilitate the development of a public better informed and able to participate in the public sphere. Yet there are also significant risks that may accompany experiential media stories. Ethical concerns abound. Potential invasions of privacy, threats to security, commercial exploitation, harmful health effects, and misinformation may be part of both the intended and unintended consequences of an experiential future.

Experiential media stories may blur the boundary between the real and the artificial. Users may develop false memories that seem totally real. Experiential stories may create the illusion of choice, when in fact the actual choice is highly constrained within the presented virtual world; the options are simply far more complex. One day, disintermediated multi-sensory story experiences may be delivered via volumetric displays featuring 3D, photorealistic and interactive animation and live action. Such stories may become virtually indistinguishable from reality. The fake news of 2018 may morph into the artificial reality of 2028. Synthetic may be an even better way to think of this digitally driven realm, which may increasingly imitate reality. The implications of the process of public discourse and democratic governance are profound.

User engagement via neuro-reality may deliver experiential stories directly into the human brain. Unobtrusive, ubiquitous and persistent experiential stories may be more than powerful tools of propaganda. They may become an irresistible means of thought control and bring profound psychological or neurological consequences. Story creators may hold the key to the development of a culturally and politically beneficial experiential media environment. By using emerging experiential media ethically, story creators can help to ensure that interactive, immersive and multi-sensory narratives are a powerful source of insight and inspiration for future generations, and not just a Pandora's box of digital disasters and algorithm-driven social control.

Users, or those who consume or experience those narratives, also will play a crucial role in ensuring that the future of experiential media is a positive one. Users will need to engage in experiential media with a critical lens and be on guard for experiential news narratives that are deliberately false, deceptive or otherwise potentially harmful. Experiential media literacy will be an important subject for life in the digital age. Yet, a commitment to freedom of expression among both story creators and users will be vital as well. Only through a robust and open environment can experiential media yield stories that are creative, diverse and continually advance public engagement and insight.



References

Adorno, Theodor W. (1991). The Culture Industry: Selected essays on mass culture, Routledge, London.

Alexiou, Alice Sparberg (2010). *The Flatiron: The New York Landmark and the Incomparable City that Arose With It*. New York: Thomas Dunne/St. Martin's, ISBN 978-0-312-38468-5

Archer, Dan and Katharina Finger (03/15/18). "Walking in another's virtual shoes." Columbia Journalism Review. Retrieved 03/16/18 from https://www.cjr.org/tow_center_reports/virtual-reality-news-empathy.php

Asimov, Isaac (1950). "Runaround". *I, Robot* (The Isaac Asimov Collection ed.). New York City: Doubleday. p. 40. ISBN 0-385-42304-7. This is an exact transcription of the laws. They also appear in the front of the book, and in both places there is no «to» in the 2nd law.

Bailenson, Jeremy (2018). *Experience on Demand: What Virtual Reality Is, How It Works, and What It Can Do.* New York: W.W. Norton & Company: 1.

Baum, L. Frank (1901). *The Master Key: An Electrical Fairy Tale, Founded Upon the Mysteries of Electricity and the Optimism of Its Devotees*. Indianapolis, IN: Bobbs-Merrill.

Bostan, Barbaros and Tim Marsh (2012). "Fundamentals of interactive storytelling". 3 (8). *Online Academic Journal of Information Technology*.

Bradbury, Ray. "The Veldt." Retrieved 03/23/17 from http://mrjost.weebly.com/uploads/1/2/8/8/12884680/the_veldt.pdf

Branch, John (05 February 2018). "Augmented Reality: Four of the Best Olympians, as You've Never Seen Them." *The New York Times.* Retrieved 26 March 2018 from https://www.nytimes.com/interactive/2018/02/05/sports/olympics/ar-augmented-reality-olympic-athletes-ul.html

Carey, James. "A Cultural Approach to Communication." Communication as Culture: Essays on Media and Society. Boston: Unwin Hyman, 1989: 15.

Carter, Bryan. "Experiencing the Harlem Renaissance". A Companion to the Harlem Renaissance. Ed. Cherene Sherrard-Johnson. Oxford: John Wiley & Sons LTD, 2015.

Castells, Manuel (2002). *The Internet Galaxy: Reflections on the Internet, Business and Society.* Oxford, UK: Oxford University Press.

De la Peña, Nonny (2017a). "Greenland Melting." Emblematic Group. http://emblematicgroup.com/experiences/greenland-melting/

De la Peña, Nonny (2017b). "After Solitary." Emblematic Group. http://emblematicgroup.com/experiences/solitary-confinement/

De la Peña, Nonny, Peggy Weil, Joan Llobera, Elias Giannopoulos, Ausiàs Pomés, Bernhard Spanlang, Doron Friedman, Maria V. Sanchez-Vives, and Mel Slater. "Immersive Journalism: Immersive Virtual Reality for the First Person Experience of News," Presence: Teleoperators and Virtual Environments 19, no. 4 (2010): 291 – 301.

Eden, A.H., Moor, J.H., Soraker, J.H., Steinhart, E. (Eds.). Singularity hypotheses: A Scientific and Philosophical Assessment. Dordrecht: Springer. 2012. pp. 1–2. ISBN 9783642325601.

Flew, Terry and Paulo Faustino (editors). "Foreword." The Journal of Creative Industries and Cultural Practices. Vol. 1, No. 1. 2018: p. 9.

GlobalWebIndex (2017). "GWI Data Coverage 2017.pdf" GlobalWebIndex. Retrieved 02/0618 from https://cdn2.hubspot.net/hubfs/304927/GWI%20Guide%202017.pdf

Gownder, J.P., Christopher Voce, Michelle Mai, and Diane Lynch (May 10, 2016). "Breakout Vendors: Virtual And Augmented Reality." Retrieved 03/06/18 from https://www.forrester.com/report/Breakout+Vendors+Virtual+And+Augmented+Reality/-/E-RES134187

Harcup, Tony (2009). *Journalism: Principles and Practice*. Thousand Oaks, California: Sage Publications, ISBN 978-1847872500.

Hassenzahl, Marc (2013). "User Experience and Experience Design." Chapter in Armin Zahirovic, Jonas Lowgren, John M. Carroll, Marc Hassenzahl and Thomas Ericsson (editors). *The Encyclopedia of Human-Computer Interaction, 2nd Ed.* Retrieved 02/06/18 from https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/user-experience-and-experience-design

Heilig, Morton (2017). "InventorVR." Retrieved 03/23/17 from http://www.mortonheilig.com/InventorVR.html

Höllerer, T., S. Feiner, J. Pavlik, "Situated Documentaries: Embedding Multimedia Presentations in the Real World," In: Proc. ISWC '99 (Third Int. Symp. On Wearable Computers), San Francisco, CA, October 18-19, 1999: 79-86.

Houser, Kristin (26 July 2017). "Neuroreality: The New Reality is Coming. And It's a Brain Computer Interface." Futurism. Retrieved 26 March 2018 from https://futurism.com/neuroreality-the-new-reality-is-coming-and-its-a-brain-computer-interface/

Jenkins, Henry. "Transmedia Storytelling and Entertainment: An annotated syllabus." Jo*urnal of Media & Cultural Studies*. Volume 24, 2010 – Issue 6: Entertainment Industries.

Kappers, Astrid M. L., Jan B.F. Van Erp, Wouter M. Bergmann Tiest, Frans C.T. Van Der Helm, editors. (2012) Haptics: Generating and Perceiving Tangible Sensations, Part II: 7th Edition. International Conference, Eurohaptics 2010. Conference Proceedings: 307.

Kim, Taeyong and Frank Biocca (09/97), "Telepresence via Television: Two Dimensions of Telepresence May Have Different Connections to Memory and Persuasion." *Journal of Computer-Mediated Communication*. Volume 3, Issue 2, page 0.

Lant, Karla (03 July 2017). "Duke Neuroscientist: Brain Augmentation Will Allow Us to Make a New Kind of Human." *Futurism*. Retrieved 26 March 2018 https://futurism.com/duke-neuroscientist-brain-augmentation-will-allow-us-to-make-a-new-kind-of-human/

Lee, Kangdon (March 2012). "Augmented Reality in Education and Training" (PDF). *Techtrends: Linking Research & Practice To Improve Learning*. 56 (2). Retrieved 2014-05-15.

Lindén, Carl-Gustav (2017). "Algorithms for journalism: The future of news work." *The Journal of Media Innovations* 4.1 (2017), 60-76. DOI: http://dx.doi.org/10.5617/jmi.v4i1.2420

Lumiere, Louis (1896). *Demolition of a Wall.* Retrieved 03/06/18 from https://www.youtube.com/watch?v=9p0HI9t5IB0

Mann, Steve (2017). "Steve Mann home page." Retrieved 26 March 2018 from http://www.eecg.toronto.edu/~mann/

Mann, Steve (February 2003). "Existential Technology: Wearable Computing Is Not the Real Issue!" Leonardo 36 (1). *JSTOR* 1577273. Retrieved 02/06/18 from https://www.mitpressjournals.org/doi/abs/10.1162/002409403321152239

Marcus, Aaron (2015). *Design, User Experience, and Usability: Design Discourse*. Springer. ISBN 3319208861. Retrieved 02/06/18 from https://books.google.com/books?id=fLU0CgAAQBAJ

Mastin, Pete (17 April 2017). "How latency is killing online gaming." *VentureBeat.* Retrieved 26 March 2018 https://venturebeat.com/2016/04/17/how-latency-is-killing-online-gaming/

McLuhan, Marshall (1964). *The Medium is the Message*. Originally published in 1964 by Mentor, New York; reissued 1994, MIT Press, Cambridge, Massachusetts with an introduction by Lewis Lapham. See http://web.mit.edu/allanmc/www/mcluhan.mediummessage.pdf

McQuail,, D., Blumler, J. G., & Brown, J. R. (1972). *The television audience: A revised perspective.* Media studies: A reader. London: Longman. pp. 271–284.

Milgram, Paul, H. Takemura, A. Utsumi and F. Kishino (1994). "Augmented Reality: A class of displays on the reality-virtuality continuum" (pdf). *Proceedings of Telemanipulator and Telepresence Technologies.* pp. 2351–34.

Mittell, Jason (2015). *Complex TV: The Poetics of Contemporary Television Storytelling*. NYU Press. ISBN 9780814769607.

Murray, Janet H. (2017). *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. The MIT Press. ISBN 978-0-262-63187-7.

OReilly, David (20 December 2017). "What is Everything?" Everything. Retrieved 26 March 2018 http://www.everything-game.com/features/

Oxford Reference (2018). "Overview: First-person narrative". Retrieved 02/06/18 from http://www.oxfordreference.com/view/10.1093/oi/authority.20110803095820156.

Parisi, David, Mark Paterson and Jason Archer (2015). "Call for publications: Haptic Media Studies,: *New Media & Society*. Retrieved 03/06/18 from https://networks.h-net.org/node/7842/discussions/84847/cfp-haptic-media-studies

Pavlik, John V. (2017b). *Masterful Stories: Lessons from Golden Age Radio.* (New York: Routledge Press).

Pavlik, John V. (2017a). "Experiential Media and Transforming Storytelling." Lecture delivered at the Academy of Fine Arts, Vienna, Austria, 29 October 2017.

Pavlik, John V. and Franklin Bridges. "The Emergence of Augmented Reality (AR) as a Storytelling Medium in Journalism. " *Journalism and Communication Monographs,* Volume 15 Issue 1 March 2013 pp. 4 - 59.

Pavlik, John V. and Jackie O. Pavlik (2016) "Understanding Quality in Digital Storytelling: A Theoretically Based Analysis of the Interactive Documentary." Chapter in *Media Business, Innovation*, Mike Friedrichsen and Yahya Kamalipour (Eds): *Digital Transformation in Journalism and News Media,* 978-3-319-27785-1, 370469_1_En, (28) (Berlin: Springer Science+Business Media.

Pepper, Robert (10/19/15). CITI conference. Columbia University, New York.

Pinault, David (1992). *Story-Telling Techniques in the Arabian Nights.* Brill Publishers. pp. 86–94. ISBN 90-04-09530-6.

Poe, Edgar Allan (1839). *The Fall of the House of Usher.* Project Gutenberg. Retrieved 02/06/18 from https://www.gutenberg.org/files/932/932-h/932-h.htm.

Pool, Ithiel de Sola (1983). *Technologies of Freedom.* Boston, MA: Belnap Press.

Zolfagharifard, Ellie (29/08/13). "Would you have tattoo IMPLANTED under your skin? Artist has chip placed inside his hand that reveals artwork when read by a smartphone." Daily Mail. Retrieved 03/06/18 from http://www.dailymail.co.uk/sciencetech/article-2405596/Artist-Anthony-Antonellis-creates-digital-tattoo-implanting-RFID-chip-hand.html

Schramm, Wilbur. (1988). *The story of human communication: Cave painting to microchip.* New York: Harper & Row.

Seel, Peter B. (2016). “Telepresence and Immersion with Ultra-High-Definition Digital Displays.” Chapter in John V. Pavlik (editor). *Digital Technology and the Future of Broadcasting*. New York: Routledge: 94-106.

Shams, Ladan and Aaron R. Seitz (2008). “Benefits of multisensory learning.” *Opinion - Trends in Cognitive Sciences,* Cell Press. Vol.xxx No.x.

Slate. “Quakebot.” *Slate.* 03/17/14. Retrieved 08/09/17 from http://www.slate.com/blogs/future_tense/2014/03/17/quakebot_los_angeles_times_robot_journalist_writes_article_on_la_earthquake.html

Spiegl, Andreas, 29 October 2017, comments to the author at the Academy of Fine Arts Vienna, Austria.

Stanley G. Weinbaum (1935). “Pygmalion’s Spectacles.” Project Gutenberg. Retrieved 02/06/18 from https://www.gutenberg.org/files/22893/22893-h/22893-h.htm

Sundar, S. Shyam, Jin Kang and Danielle Oprean. “Immersive Journalism Affects our Perceptions and Cognitions.” 11/2017. *Cyberpsychology, Behavior, and Social Networking.* Vol. 20, No. 11.

Sutherland, Ivan E. (1968). “A head-mounted three dimensional display”. Proceedings of AFIPS 68, pp. 757-7.

Theoriz Editors (2018). Retrieved 26 March 2018 from http://www.theoriz.com/

Vermeir, Koen. “The Magic of the Magic Lantern (1660-1700): On Analogical Demonstration and the Visualization of the Invisible.” *British Journal for the History of Science* 38,2 (2005): 127-159.

Virtual Reality Society. Retrieved 03/23/17 from http://www.vrs.org.uk/virtual-reality/who-coined-the-term.html

Wallwork, Ellen (03 May 2015). “Women’s Aid Interactive Billboard Dares You To Face Domestic Violence Without Flinching.” HuffPost. Retrieved 26 March 2018 http://www.huffingtonpost.co.uk/2015/03/05/womens-aid-domestic-violence-interactive-billboard_n_6800450.html

Witmer, B.G and Singer, M.J. (1998). “Measuring Presence in Virtual Environments.” *Presence: Teleoperators and Virtual Environments*, 7(3), 225-240.

XinReality “DOF” (2018). Retrieved 03/04/18 from https://xinreality.com/wiki/Degrees_of_freedom

Zahoric, P. and Jenison, R.L. (1998). “Presence and Being-in-the-World.” *Presence: Teleoperators and Virtual Environments*, 7(1), 78-89.

Approaching the Potential of Cyber-Physical Systems to Tourism Projects

Silvia Fernandes, Research Centre for Spatial and Organizational Dynamics, Faculty of Economics, University of Algarve

Keywords: Information Systems, Portfolio, Process Architecture, Enterprise Architecture, Knowledge-Base, Internet

Abstract

We are witnessing the need for a quick and intelligent reaction from organizations to the level and speed of change in business processes. This is often associated with the emerging of new information systems and technologies, bursting problems like the persistence of wrong information, systems not fully used and slow response. This requires two main actions: synchronizing people's visions and strategies within the organization and selecting the information which is relevant for the strategic goals. The main challenge of the proposed approach is to choose the information systems' portfolio management aligned with the enterprise architecture. This integration leads to modelling the process architecture of the company, which in turn serves as a reference for knowledge-base management to cope with business prospects. This kind of flexible framework can contribute to managing the potential adherence to new systems such as the mobile, cloud, big-data or IoT-based services that tend to proliferate especially in such areas as tourism and health.

Silvia Fernandes is an Assistant Professor at the Faculty of Economics of the University of Algarve. She holds a Ph.D. in Information Economics and is member of the Research Centre for Spatial and Organizational Dynamics. She lectures Information Technology, Innovation Economics and Entrepreneurship in undergraduate and master courses. She has several publications in books, journals, and communications in national/international conferences in themes such as enterprise information systems, innovation performance, emergent technologies, etc. (sfernan@ualg.pt)

Introduction

Since the transition from the industrial society to the information society, it was necessary to organize and select data in enterprises. This organization gave rise to new values that are equal to or more important than the traditional ones, such as information and knowledge. Technology has brought so much change that its current association with the human capital has led to even greater potential of the information itself. Information technologies (IT) are the platform for the company's ability to develop information systems (IS) that meet the new management requirements. For example, an increasing ability to control large volumes of data in big databases, such as data warehouses using advanced tools for relating those data (data mining), responds to more selective and diverse costumers. Some changes require rethinking of the ways to present products and services and seeking for different dissemination channels. Therefore, companies should organize their IT/IS to be able to develop new solutions to maintain or enhance their competitive position in the market.

In current business scenarios information society and knowledge management play complementary roles. Connectivity, mobility, pervasiveness and real-time reaction are some of the keywords in today's vocabulary of enterprise information systems. The sustainability of competitive advantage is found in a company's ability to channel the critical information to generate business intelligence that enables it to constantly rethink its goals and methods to suit its needs in real time. Given the actual pace of change and business instability, companies have to manage real-time business events well. This requires adopting new attitudes and ways of managing business intelligence to address numerous emerging challenges.

Information Systems in Portugal

The Portuguese Economy

In Portugal, the companies (mostly small and medium-sized) invest little in R&D (research and development) due to their limited financial and organizational capacity. Therefore, information systems are an important resource for their business performance. In terms of most innovative sectors in the Portuguese economy, which according to Sarkar (2014) tend to be more supported by IT/IS, the Community Innovation Survey (CIS) provides useful information. The EU (European Union) employs this statistical instrument to monitor Europe's progress in the area of innovation, which is conducted by each EU nation's own statistical offices. In Portugal, following the methodological recommendations of Eurostat, the CIS aims to directly collect information on innovation (product, process, marketing, and organizational) in companies. It explores how firms interrelate with their surrounding external environment in order to access information considered important for the development of new projects or the completion of existing ones. Firms may use external agents as information sources or engage in more formal cooperation activities, meaning their active participation with other enterprises or institutions relies on innovation.

The recent CIS (period 2010-2012) revealed that the main innovating sectors of the Portuguese economy are: research-based (computer, civil engineering, R&D), knowledge-based (insurance, health) or service-based (retail trade). The external sources/agents most commonly used by the research-based sector are universities, suppliers are most commonly used by the knowledge-based sector and firms' group is most commonly used by the service-based sector. Private customers are important sources for all types of sectors, which means that Portuguese firms generally use customers' information and relations for innovation purposes. These results are in line with the fact that Portuguese economy is mainly based on small and medium-sized firms (SME) that increasingly focus on services and knowledge provision. Customers' data allows to expand the knowledge base within the applied research and transform knowledge into goods and services (Sánchez-González & Herrera, 2014).

The IT/IS that Portuguese companies should bet on, especially those with a culture of customer service, are based on business intelligence tools such as CRM (Customer Relationship Management), ERP (Enterprise Resource Planning), big-data tools and analytics. These tools, complemented on well-planned platforms (even integrating data from social media) contribute towards the implementation of new ideas, design of new products and services, improvement of existing processes and creation of new ones. Given this enormous potential which may lead to a reconfiguration of the business model, managers should not only be familiar with these systems, but also get involved with their adoption from the beginning and cover all processes in the organization.

IT/IS Potential

Many Portuguese firms have been founded due to the development of financial systems which automatically process invoices and other reports from balance sheets. However, after analyzing the process of decision support, it became clear that managers make decisions based on many other documents and data in order to know which products they can offer, in which amount, and which is the best way for distribution, the best location for shopping, etc. In addition to that, the enormous amount of data that results from having a website, leads to the use of new database management tools (e.g. MySQL). An ERP can manage these issues by making it possible to integrate different business functions and documents to inform product traceability, i.e. from the order moment to knowing its stock level. Information flows became more rapid and complete by contributing to a better inventory management and a greater consistency with customer's needs (Vasilev and Georgiev, 2003).

Companies can also implement ERP new modules tailored to their business reality (health, banking, commerce, etc.) to become more flexible. Unlike departmental systems, an ERP is multifunctional. It covers different levels or functions of an organization.

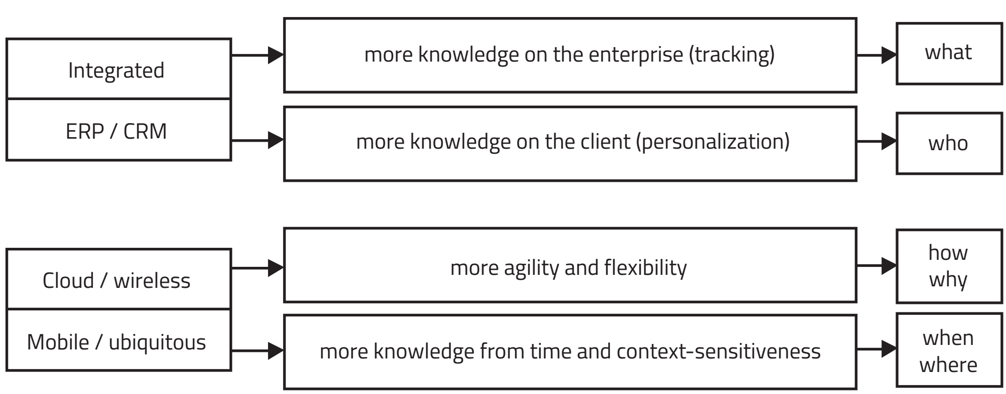
ERPs are integrated systems that make the information flow easily between different areas of an organization to be shared by different processes. The information is then accumulated in a single huge repository (a data warehouse), which is available to all business units at all functional levels. As a result of that, managers can receive a more accurate information about anything they need in real-time (Laudon and Laudon, 2004). This type of system answers to queries such as: inform customers if an ordered product is in stock; maintain customers informed of the whole processing course of their orders; easy communication between production and financial areas to define new production plans, etc. In contrast to that, departmental systems create more fragmentation of data which results in expensive and complex links that proliferate in companies, as these systems function separately. By consolidating the data, ERP systems help to eliminate unnecessary or redundant links having a positive impact on business efficiency and performance.

On the other hand, CRM tools consist of analytical functions to manage the relationship with clients, consolidate information from different sources or channels of communication (phone, email, web, wireless points) to answer queries such as: what is the value of a certain client for the company; which customers are the most loyal; which customers bring in the most profit, etc. Then companies can use the answers to these questions to acquire new customers; improve their products/services to further customize them according to customers' preferences; etc. CRM techniques are used to select and combine key information from different points of view to help companies create unique services or successful innovations. CRM processes can also (by means of advanced techniques like data mining) capture profiles, attitudes and behaviors that haven't been noticed before. These tools are effective in engaging a customer to the point of expecting the services s/he has previously outlined (Vasilev and Georgiev, 2003).

Besides being a key for business performance, these trends can be a way of knowledge-base enhancement (Gudas, 2008; Fernandes, 2013). Figure 1 illustrates this aspect through the main lines of information systems' support and the consequent enterprise knowledge expansion, as third and fourth blocks allow to answer questions like how/why and when/where.

Figure 1: Main Lines of Information Systems' Support and Knowledge-Base Enhancement

Source: Own Elaboration



Another relevant trend to mention is the widespread use of mobile platforms due to their ubiquity (the concept of being everywhere at the same time, related with pervasive devices – time and context-sensitive). These attributes have to do with the critical role that time and place play in today's communications. Facing the increasing geographical scope and time-sensitiveness of services (a real-time response), their development is making the difference. Under the provision of services, mobile systems have the potential to control the execution of activities by creating processes that may resolve many problems related to the on-time delivery in any requested place. Ubiquitous systems provide mechanisms for selection and alignment of processes that meet the aspects of a context and accurately reflect its constant changes. This pervasive nature, related with the capacity of different integrated devices functioning together, has changed the way of conducting activities and interacting with workers at various locations using different systems.

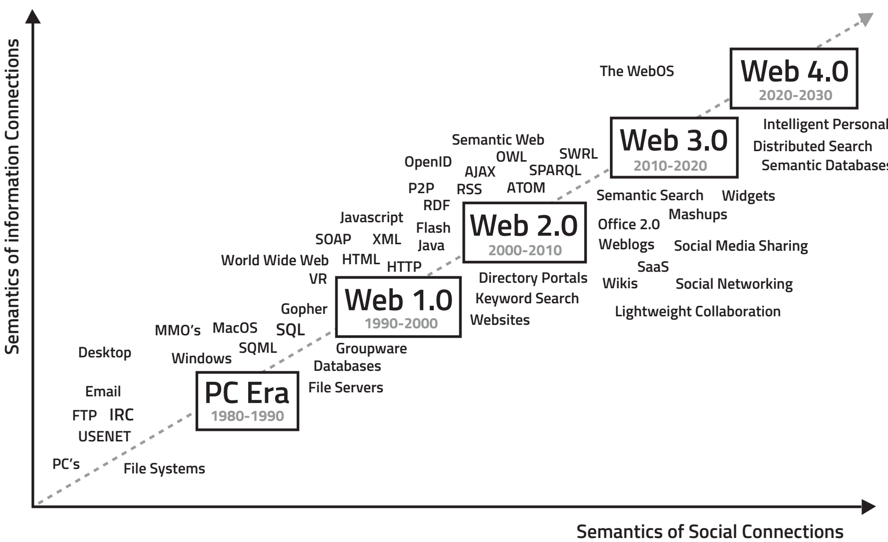
The Multiplying Effect of Internet

The Internet's expansion and the exponential number of customers and employees it has brought to companies to promote and sell their products, has led to a need for tools that can help to cope with this trend. The major challenge is keeping the same relationship patterns of interacting with more customers and stakeholders. The multiplying effect of this aspect, from a growing number of companies placed online, adds the need to compete more in real time. It justifies the increased adoption of the enterprise information systems mentioned above such as ERP, CRM, cloud, mobile, among others. Companies should therefore consider the implementation of these tools from a strategic perspective, to fully exploit their potential closely in line with their business needs for better business event monitoring.

As far as the Internet's potential is concerned, Figure 2 shows that there is an emergent trend brought by social networks. It is the semantic web (or intelligent web) related with semantic databases containing data from different sources (social networks, mobile apps, etc.).

Figure 2: The Generations of Web Are Coming

Source: http://www.novaspivack.com/articles



These sources and its interoperability are really important to be explored by enterprises and researchers because many sources are included in the Web 2.0 (blogs, wikis, video sharing, web services, apps, etc.), which is rapidly evolving to Web 3.0 (also known as 'intelligent web'). This level will enable the use of autonomous agents to perform tasks for the user. Thus, applications will become more and more approachable to the needs of the real world. An aim is to create a capability that anticipates user needs, easily integrates available information, and provides ubiquitous access and personalized content. Tags and keywords are ways to help organize and retrieve web resources (Borrero and Caballero, 2013).

Promising Business Models

The overwhelming potential of the internet requires companies to have more flexible information and process architectures. The main goal is to manage knowledge and adhere to new business models supported by mobile, cloud or big-data systems that tend to disrupt several areas such as tourism and health. Recent discussions about smart cities and regions (bridging the physical and digital) have touched upon those issues. For example, future European structural investment funds are based on developing and matching these research and innovation strengths to the business needs (European Commission, 2016).

Furthermore, a network of smart devices can be set up to enhance the work of any business and its services. For example, in tourism, there can be a better assistance to tourists through mobile apps for managing the experience of touring of a place by smart coordination of the objects

"This pervasive nature (...) has changed the way of conducting activities and interacting with workers at various locations using different systems."

at that place. This will enhance the overall experience of the tourist (information regarding the shortest route to reach there, traffic congestion in that route, alternate ways to reach the place). Mobile tours can be provided to tourists giving details of all the local attractions, restaurants, etc. and assisting them throughout their trip.

Mobile work empowerment is also possible, which is important for real-time or critical activities such as healthcare. Networked sensors, either worn on the body or embedded in one's living environments, make possible the gathering of rich information indicative of one's physical and mental health. Captured on a continual basis, aggregated and effectively mined, such information can bring about a positive transformative change in healthcare (Hassanalieragh et al., 2015; Tyagi et al., 2016). The combination of wearable technologies with related apps at a smartphone can serve to integrate and monitor patient information and sensing throughout healthcare records and systems (Niewolny, 2013). However, there are certain implications like concerns over privacy of personal data generated by smart devices due to over-tolerance in technology. These concerns need to be addressed (Kaur and Kaur, 2016).

Which Information System? Portfolio?

The issues raised by Figures 1 and 2 remind of the need of a good information systems's portfolio and its management. There is a common problem in companies which relates to an increasing amount of data ('big data') and of non-integrated information systems, affecting companies' performance and its relationships with customers and employees. Two main factors that lead to this problem are:

- The factor that there are many new information systems and technologies in organizations (such as ERP/CRM, clouds, sites, social networks, etc.) whose potential is far from being fully exploited, either in themselves or in integration with other existing systems;

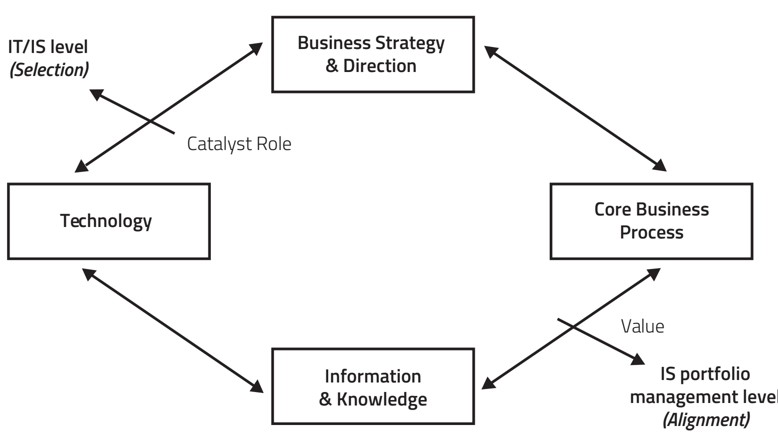
- The other factor is that people's work habits differ in terms of: training, willingness to work with technologies, willingness to cooperate with others, among other individual differences.

These factors raise the need for the information systems' portfolio management and a working architecture/culture in which people would synchronize their processes and visions within the organization, in accordance with the same mind-set targets. This leads to an exercise of collecting the relevant information (Robbins, 2006). For example, creative thinking makes people approach problems and solutions, in order to put existing ideas together in new combinations (Amabile, 1998).

The present work aims to develop an approach to these issues, which can be referred to as a portfolio approach to information systems management. It should be understood here, as information systems' portfolio the set of tools and methodologies for business intelligence (ERP/CRM, intranets, clouds, social networks, etc.). This approach aims to bring attention to the appropriate management of this portfolio, i.e., the selection and alignment with business goals (Figure 3).

Figure 3: Information Systems' Portfolio and Its Strategic Role

Source: Adapted From Kraft (2002)



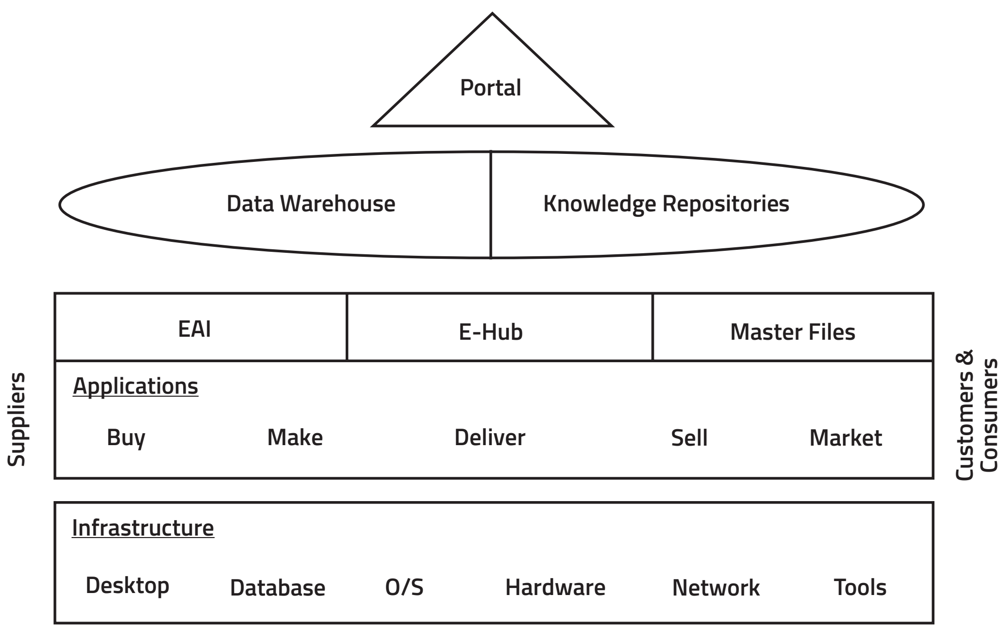
IT/IS Selection and Alignment

IT is playing an increasing role in almost every company's business development and innovation. In some industries IT has been a strategic differentiator for years. Then development of strategies, processes, products and services should consider technological opportunities and limitations (a catalyst role). Then an IS/IT portfolio which supports knowledge and intelligence for the core processes is crucial for a value-added business. A data warehouse is the most appropriate 'data center' or meta-knowledge support for it, because it normally keeps data from all departments and functions in the organization. The following case, at Kraft foods group (through Figures 4 and 5), illustrates an example of IS portfolio management and its IT support for a value-added business.

1) At the IT/IS level (*Selection*):

Figure 4: An IS Portfolio and Its IT Support (at Kraft Foods Group)

Source: Kraft (2002)



2) At the IS portfolio management level (*Alignment*):

Figure 5: Strategies and IS Support (at Kraft Foods Group)

Source: Kraft (2002)

It has become fashionable for companies to have data warehouse (DW), data mining (DM) and data analytics (DA), but often the expectations are higher than these data, tools and techniques can realistically give back. For example, data analyzes (DA) allow to identify competitive advantages, however some are not feasible to be implemented by the companies given the tremendous changes it entails (Ross et al., 2013). Companies should begin using these services realising how to use the data and tools they already have. In fact, there are few companies that take advantage of their existent data, either few or many, to make decisions. It requires having a day-to-day practice, throughout the organization, and a decision-making process culture which is based on data. Companies must begin to take advantage of their operational data and make daily decisions based on them.

A company that does the appropriate organizational and cultural change to its work processes:

- is more able to take advantage of its data;

- hardly goes back in its decisions;

- can reach a management level which is extremely difficult to replicate by its competitors.

Furthermore, it gives access to data to all its organizational levels in real time; defines procedures and reviews them on a regular basis considering the day-to-day events. Thus, decisions are based on the evidence of data (Ross et al., 2013). Such a company also empowers its employees, an aspect initiated by the most innovative firms. If each decision-maker uses his/her 'source of truth', then the organization loses energy discussing the truth and is not focused on decision, change, efficiency and improvement.

The Importance of Enterprise Arquitechture

Communication is desirable and necessary in transferring knowledge in an organization. One of the stages of knowledge creation model of Nonaka and Takeuchi (1995) is socialization, which arises from tacit knowledge exchange between individuals. The shared experiences and their articulation consolidate knowledge, creating shared mental models and forms of trust. Nonaka said that knowledge is created by individuals (an organization cannot create knowledge without individuals), and the organization has a role in expanding the knowledge created by its individuals and transforming it into organizational knowledge.

System analysts deal more with the need to synchronize views in having dialogues with the entities that request them for systems' development. In order to do this, they use models to represent the reality they need to appreciate, like a structured design or architecture, to quickly explore and find a solution (Ambler et al., 2005). Ontologies have been increasingly used as the models that represent a set of concepts within a domain and the relationships between them, in order to infer on the objects of that domain. Ontologies generally describe individuals, classes, attributes, relationships. They are used in artificial intelligence, web semantics, software engineering and information architecture, as forms of representing knowledge about an event.

New computing paradigms, given the speed of change they cause in business processes, should be increasingly addressed using the enterprise architecture approach (Spewak and Hill, 1992). Enterprise architecture (EA) consists of defining and understanding the different elements that shape an organization and how those elements are inter-related (Sousa et al., 2006). In particular, EA provides a strategic context for the evolution of the IT system in response to the constantly changing needs of the business environment (Palli and Behara, 2014). It raises the importance of identifying and analysing enterprise processes. The next section concerns the contribution that process architecture can have to the issue under discussion. Information systems' portfolio management requires an increasing need of modeling data and process flows for better discerning and acting at its selection and alignment with business perspectives.

The Contribution of the Process Architecture

This concept reflects the concern on drawing or modeling organizational processes for a better adequation of IT/IS in supporting business needs. For example, Zachman's framework (Table 1) crosses the prospects of a company's management with the support given by the information systems. This approach has also served as internal IS creation. The resulting matrix of this crossing exercise has the following structure:

Table 1: Zachman's Framework (Ontology)

Source: Zachman (2008)

	What	*How*	*Where*	*Who*	*When*	*Why*
	Inventory	Process	Distribution	Responsibility	Timing	Motivation
Executive perspective (identification)	data types	procedures and changes	types of networks	organizational types	deadlines	motives
Business management perspective (definition)	business entities, relationships	business inputs/ outputs	locations and connections	roles, tasks	intervals, moments	means, business goals
Architecture perspective (representation) System	system entities, relationships	system inputs/ outputs	locations and system connections	roles, system tasks	intervals, moments	means, system goals
Engineer perspective (specification) Technology	technology entities, relationships	technology inputs/ outputs	locations and technology connections	roles, technology tasks	intervals, moments	means, technology goals
Technician perspective (configuration) Tool	tool entities, relationships	Tool inputs/ outputs	locations and connections	roles, tool tasks	intervals, moments	Tool, means, goals
Enterprise perspective (instantiation) Operation	operational entities, relationships	operational inputs/ outputs	locations and operational connections	roles, operational tasks	intervals, moments	means, operational goals

The Zachman Framework is typically depicted as a bounded 6x6 matrix with the communication interrogatives as columns and the reification transformations as rows. The Framework's classifications are represented by the cells, which are the intersection between the interrogatives and the transformations. This matrix constitutes the total set of descriptive representations that are relevant for describing an enterprise. This is a meta-model (ontology) which may serve for discussing the most adequate IS portfolio for a company. It can also help the IS portfolio management, through crossing the perspectives of business with the support from the IT/IS needed (Ross, 2013).

For this reason, the modern IS designing is more focused on processes – e.g. business process modeling (BPM). Besides the emerging problems, the cross-functional links (interactions) that perform a product or service entirely also emerge from this modelling. This structure can discuss questions like:

- Do you rework and use work-arounds because some information is missing or inaccurate?

- Do you have multiple ways of doing work where one process would be more efficient and cost-effective?

- Do you need to streamline your processes and reduce complexity?

- Is the market demanding that you cut costs and are more agile? (BPMessentials, 2015)

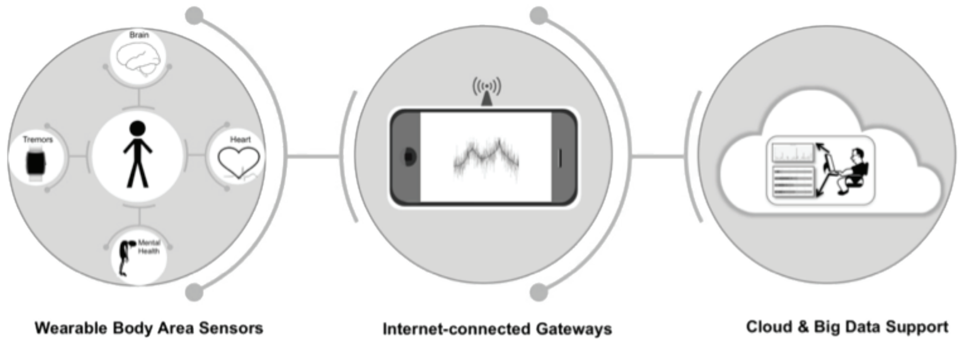
Process modeling can take up to 6 months. Then, the analysis can take another 6 months after that. But it doesn't have to. A structured approach, which is centered on process architecture, uses cross-functional team skills of subject matter experts, and the required techniques to analyze current process and build a more optimized process. To be fully effective, BPM must not be approached as an IT toolset only but rather as an environment where a business process-oriented view is the means of communicating business needs throughout an organization (iGrafx, 2016).

Cases From Process-Based System's Approach

Processes integrate the activities that really add value (receive inputs and turn them into results for the company). A decision-making culture based on processes helps to understand and define the different elements that shape an organization and how those elements inter-relate inside and outside of it (a holistic approach). This also helps to envison connecting devices in multiple industries such as health, automotive and consumer spaces. For each of them, the need for devices that can report or react to certain things provides a new level of convenience, efficiency and automation (see Figure 6). For instance, healthcare practitioners are closely watching the development of this trend to see if the Internet of Things (IoT) will be a part of their future. Some hospitals have begun implementing 'smart beds' that can detect when they are occupied and when a patient is attempting to get up. It can also adjust itself to ensure appropriate pressure and support is applied to the patient without manual interaction of nurses. Another area where smart technology can be an asset is coupled with home medication dispensers to automatically upload data to the cloud when medication is not taken or any other indicators for which the care team should be alerted (Chouffani, 2015).

Figure 6: Wearable Internet of Things[1]

Source: Niewolny (2013)



Also in tourism, IoT has the potential to transform the entire travel experience, and many hospitality companies are investing heavily in this technology, keeping the customer at the forefront. The first area of tourism is the marketing of the destinations, products and services. Selling tourism products and services online is not only price-conscious but also an inspiration for travelers throughout the world. Digital marketing, search engine marketing, mobile and location based marketing reach the potential traveler today within seconds. The second area is the infrastructure of the organization which determines the readiness to respond to customer requirements. Since more travelers expect personalized services, tourism businesses should have tools that can store and monitor information that meet the customers' needs (Prajapati, 2014). For example, mobile keys were already introduced this year by some hoteliers (Starwood, Hilton). Guests no longer need to wait in line at the front desk. A mobile app notifies guests when their room is ready. Once at the room, guests simply wave their phone in front of the lock to open the door. Mobile keys increase guest satisfaction and the likelihood of a customer booking a room through a hotel's app or a website. Each guest can then be monitored by room identity, which allows hotels to collect data about guests' preferences in order to offer them a more customized experience during their next stay (Lubetkin, 2016). IoT also makes it possible to perform preventive maintenance remotely. Malfunctioning equipment can be detected and analyzed long before it becomes a major issue.

Thus, these technologies create a smart tourism setting that supplies tourism consumers more relevant information, better decision support, greater mobility, and more enjoyable experiences (Gretzel, 2011; Sigala and Chalkiti, 2014). These smart systems can include a wide range of technologies such as decision support systems and the more recent context-aware systems, autonomous agents searching and mining web sources, ambient intelligence and augmented realities (Lamsfus et al., 2015). In smart tourism, technology is seen as an infrastructure, rather than as individual information systems and encompasses a variety of smart technologies that integrate hardware, software,

1 - http://www.ele.uri.edu/faculty/kunalm/491_591.xhtml

and apps to provide a real-time awareness of the real world and advanced analytics to help people make more intelligent decisions about alternatives, as well as actions that will optimize business processes (Washburn et al., 2010).

The New Paradigm: IoT and Industry

Trends in IoT

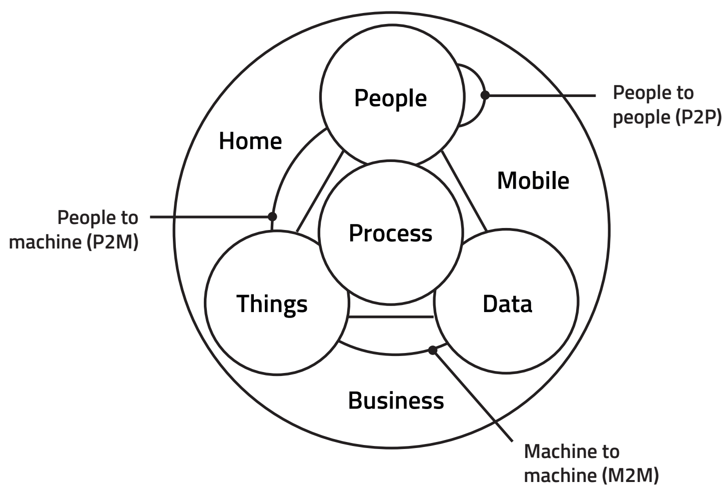
In Portugal, the companies (mostly SMEs) invest little in research and development due to their limited financial capacity. A recent CIS (Cis2012) revealed that main innovating sectors in the Portuguese economy are research-based, knowledge-based or service-based. Despite the industry being heavily dispersed in Portugal, it should follow emerging technological trends for greater innovation and service growth. A relevant trend to consider is the widespread use of mobile-online platforms. It has to do with the critical role that time and place play in modern services.

The internet expansion and the exponential number of customers it has brought to companies to promote and sell their products, has led to the need for tools that could help to cope with this trend. The overwhelming potential of internet requires a more flexible business process architecture. When internet penetrates all activities, many aspects of management and organizational structure will change. Rapid digital change in a society and economy mean more demand for digital skills and competences. Education and training must address this need, which requires investment in infrastructure (eg. broadband, digital devices), training for teachers, organisational change and the development of high-quality educational resources, including apps and software.

Figure 7 illustrates the wave of unstoppable growth of the Internet through IoT, which brings the confluence between people, processes, information and things.

Figure 7: Key Potentials of IoT

Source: RES (2013)



The five main factors that feed the IoT are:

- the use of assets (cost reduction);

- employee productivity (greater efficiency in tasks);

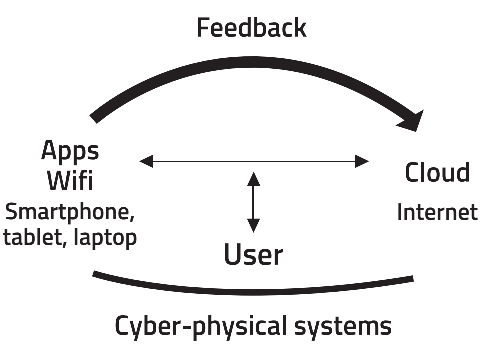
- supply chain and logistics (elimination of expenses);

- user experience (increase of customers);

- innovation ('time to market' reduced).

The technological trends including cloud, mobility, big data and increased processing capacity are driving the economy of IoT. This is creating an unprecedented opportunity to connect what was still disconnected among people, processes, information and things (RES, 2013). Then, a question is increasingly shaking enterprises and business models: how can they deal and profit from these opportunities? The information systems' portolio selection and alignment can help. Figure 8 shows these trends together with their potential scale and scope, reaching the need of effective interfaces for cyber-physical solutions.

Figure 8: Cyber-Physical Systems and Apps
Source: Own Elaboration



Enterprise and information architectures can play a very relevant role in dealing with the challenges of cyber-physical systems.

Open Architecture for Interface Design

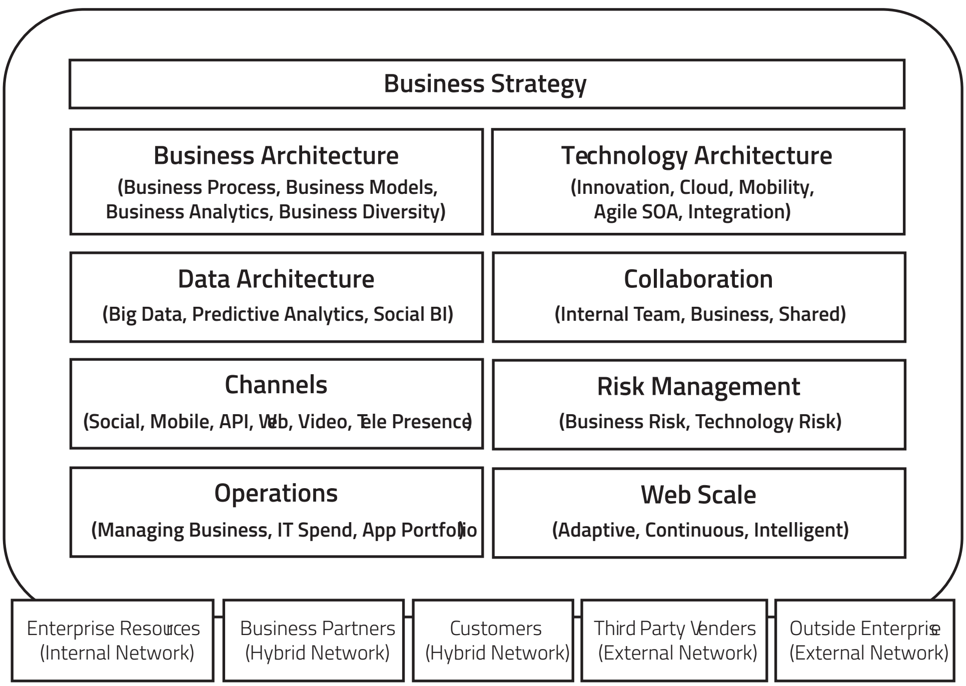
There are many enterprise architecture models (EA), and each of them takes a slightly different approach. But in every model there is an explicit transition from business to IT - from goals and requirements to applications and systems. However, this transition or boundary can be less explicit due to abstract business process requirements and methods dictated by the new IT tools. User interface design and mobile connectivity are showing that the boundary between enterprise architecture model and development is softening to a zone rather than a line, and greater flexibility within this zone is essential to get more differentiating outcomes (Nolle, 2016).

According to Palli and Behara (2014), unless there is an open EA, there will be gaps and architecture conflicts such as: lack of consistency due to an absence of standards; dissipation of critical information and knowledge about the deployed solutions; redundancy and a lack of flexibility in the deployed solutions; non-adoption of the next generation technologies; a lack of integration and interoperability between applications; fragile and costly interfaces within incongruent applications.

Traditional EA is a more framework-centered and tool-driven approach. Most of its function is technology-centric and defined as a one-time initiative. Application building principles are business-constrained before they are completed. The next generation EA (NGEA) is a business-centric, global, agile, continuous and social digital network. Organizations adopt latest digital capabilities like social web, service-oriented architecture (SOA), big-data analytics, cloud computing, virtualization, IoT, etc. These technologies are interrelated and fit together to define NGEA for an organization (Palli and Behara, 2014).

A business model is shifting from a traditional EA to a digital architecture which addresses networked community capabilities (interacting with users and other agents through social media), globalization (borderless enterprise), product/service innovation (open and virtual innovation), collaboration (employees in decision-making, mobile work), flexibility (to choose technologies, infrastructure, applications). See Figure 9.

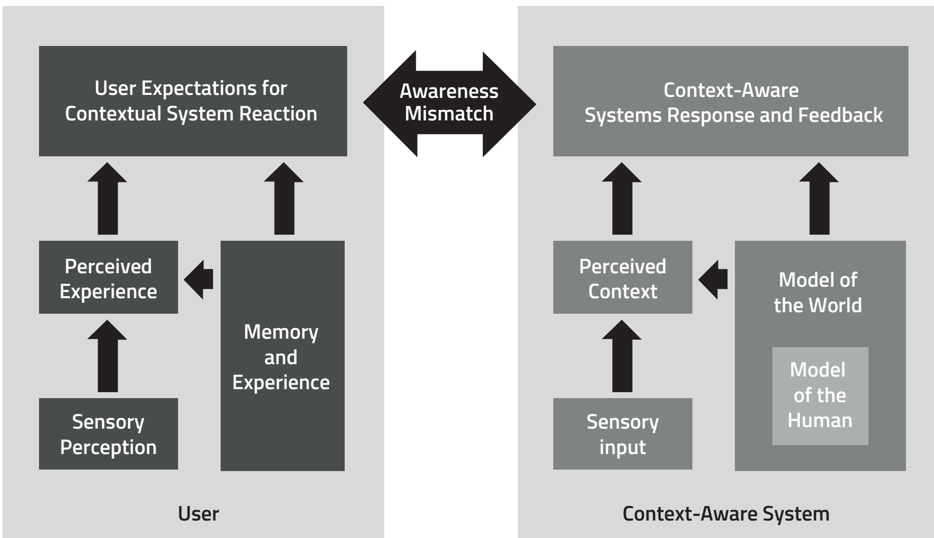
Figure 9: Next Generation EA Model



EA results should integrate with business planning and focus on business model architecture defining business outcome metrics. Also, EA program definition should not span for years. It should deliver business value in months or weeks.

Figure 10 illustrates the importance of NGEA for an awareness match: a user's perception and experience lead to the user's expectations that can be captured from the sensory input by an enterprise and its IT/IS, if they are context aware. Therefore, an open EA model should include a model of the user driving the enterprise systems' reaction (Schmidt, 2013).

Figure 10: Next Generation EA and Awareness Match



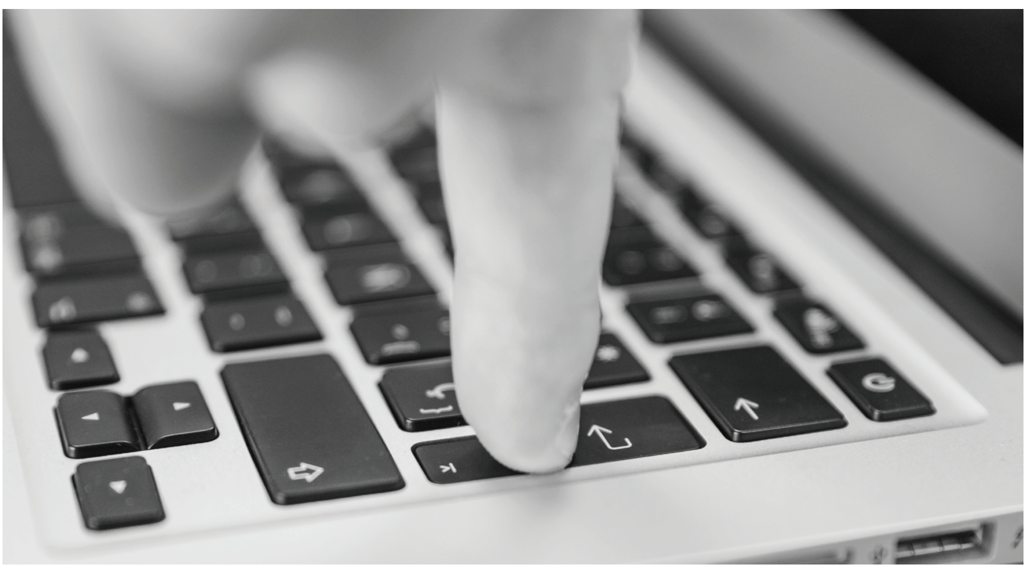
In current systems, a wide variety of sensors are used to acquire contextual information. Some examples of sensors used are: GPS (for location, speed), light and vision (to detect objects, activities), microphones (for data about noise, talking), gyroscopes (for movement, orientation), magnetic sensors (for compass to determine orientation), touch sensing (to detect user interaction), temperature sensors (to assess environments), etc. (Schmidt, 2013). Other sensors serve to detect the physiological context of a user, such as galvanic skin response. Its measures can be used to determine skin reactions (e.g. surprise or fear - lie detectors). All these types of sensors can be used to feed the enterprise systems with context information. The quality of the information obtained may be improved by using a set of sensors rather than just one set. It results into more advanced and effective user interfaces.

To match sensory information with the context, perception tasks are done by means of machine learning and data mining. It contributes to increasing of the system's understanding and interaction with its surrounding environment. This enables user interface design which challenges business models to become more flexible, innovative and agile. These IT - cloud, wireless, sensors, etc. create systems that can act differently in different contexts. If they are well designed, they match users' expectations in the context (an awareness match). It is also essential that users understand the varying behavior of the application and know how to link it to the situations they find themselves in.

Context-awareness is a very challenging area of human-computer interaction. This is very important for tourism projects and related business models, by the ability of clients to be providers in their own right. Also, by having access to every piece of information they need to make an informed choice about where they go and how they experience it. Airbnb, Uber and My Ticket are good examples (Tnooz, 2017).

These trends involve the new digital supply networks (DSN) that integrate information from many different sources and locations to drive physical acts of production and distribution. The result is a virtual world, which mirrors and informs the physical world. By leveraging both the traditional and the new, such as sensor-based data-sets (unstructured data), DSN enable integrated views of the supply network and create rapid responses to changing situations. It can then be potentially expanded by the capabilities of advanced physical technologies, such as robotics, drones, additive manufacturing and autonomous vehicles. It is relevant for connecting stakeholders, smart services, waste reduction, and process optimization.

"It is also essential that users understand the varying behavior of the application and know how to link it to the situations they find themselves in."



Conclusion and Future Research

The nature of business processes is changing, often due to the speed of emergence of new information technologies. It brings many challenges to organizations, which add up to those challenges that have not been fully resolved yet. It boils down to two main drivers of this paper's approach: there are so many systems and technologies that organizations are not going to make the best of them; moreover, people do not continuously tune their visions and processes at different levels of the organization, in order to obtain real-time relevant information. These two aspects lead to the necessity of a working model (architecture) to plan and facilitate the alignment throughout an entire organization, by iteratively selecting critical business information on time.

An easy to understand and communicate informational architecture of a company and its business can help identify the information, consistent with the company's mission, objectives and critical success factors. It is mainly modeled with objects such as: processes (functional and cross-functional, internal and external); resources (functional and cross-functional, internal and external) and outputs (internal and external). This supports information systems' portfolio management while it helps to identify the requirements for those systems in harmony with the company's business objectives.

However, given the heterogeneity of objects and data characterizing them, the conversion between structured and unstructured data is one of the most pressing issues. On this subject, the authors Carvalho and Ferreira (2001) carried out a survey for technological tools assessment, related with knowledge management and conversion between tacit and explicit knowledge. Some of these tools are: knowledge portals (corporate intranets and extranets); knowledge maps (lists of "who knows what": skills/profiles); EDM (Electronic Document Management: cataloging, indexing, etc.); OLAP (Online Analytical Processes for data normalization); data mining (advanced techniques to explore large amounts of data looking for consistent patterns); among others.

These tools within this digital transformation (IoT, cyber-physical and mobile systems) can contribute to achieving the higher levels of performance within the supply chain capabilities. These tools can also help to create new sources of revenue by providing new and faster access to markets, and supporting the production of smart products.


NODE 01
NODE 04
NODE 05
NODE 02
NODE 06
NODE 03
BLOCK 01
BLOCK 01
NODE 01
NODE 02

Acknowledgments:

This paper is financed by the National Funds provided by FCT- The Foundation for Science and Technology throught the project UID/SOC/04020/2013.

References

Adams, H. (2015). Increase IT flexibility by adopting enterprise architecture and service oriented architecture. Acceded in 12th of January 2017, on the Web site of: https://www.linkedin.com/pulse/increase-flexibility-adopting-enterprise-architecture-hayden-adams.

Amabile, TM (1998).Amabile, T. (1998). How to Kill Creativity. *Harvard Business Review* .How to kill creativity. *Harvard Business Review*. 76(5): 76-87.

Ambler, S., Nalbone, J.Ambler, S., Nalbone, J. e Vizdos, M.and Vizdos, M. (2005). *Enterprise Unified Process: Extending the Rational Unified Process* (2005). *The enterprise unified process: Extending the rational unified process*, Prentice Hall. New Jersey.

Borrero, J. and Caballero, E. (2013). Crawling big data in a new frontier for socioeconomic research: Testing with social tagging. *Journal of Spatial and Organizational Dynamics*. 1(1): 3-24.

BPMessentials (2015). Analyzing and optimizing a BPM process. Acceded in 14th of June 2016, on the Web site of: http://www.bpmessentials.com/analysis-and-redesign/.

Carvalho, R e Ferreira, M. (2001), Using Information Technology to Support Knowledge Conversion Processes. *Information Research* .Carvalho, R and Ferreira, M. (2001). Using information technology to support knowledge conversion processes. *Information Research*. 7(1): 1-24.7(1): 1-24.

European Commission (2016). Smart regions conference. Acceded in 12th of October 2016, on the Web site of: http://ec.europa.eu/regional_policy/en/conferences/smart-regions/.

Fernandes, S. (2013). Aligning technology with business: A continuous effort. *CIEO Spatial and Organizational Dynamics Discussion Papers*. 12: 26-37.

Gretzel, U. (2011) Intelligent systems in tourism: A social science perspective. *Annals of Tourism Research*. 38(3): 757–779.

Gudas, S. (2008). Enterprise knowledge management aspects and layers. Paper presented at the 12th World Multi-Conference on Systemics, Cybernetics and Informatics. Florida.

Hassanalieragh, M. *et al.* (2015). Health monitoring and management using internet-of-things (IoT) sensing with cloud-based processing: Opportunities and challenges. Paper presented at the 12th IEEE International Conference on Services Computing, New York. USA.

Hustad, E. and Lange, C. (2014). Service-oriented architecture projects in practice: A study of a shared document service implementation. *Procedia Technology*. 16: 684-693. doi:10.1016/j.protcy.2014.10.017.

iGrafx (2016). Business process management. Acceded in 14th of June 2016, on the Web site of: http://www.igrafx.com/es/solutions/business-challenges/business-process-management.

i-Scoop (2017). Smart industry and smart manufacturing – industrial transformation. Acceded in 29th of January 2018, on the Web site of: https://www.i-scoop.eu/manufacturing-industry/#The_difference_and_similarities_between_smart_industry_and_smart_manufacturing

Kaur, K. and Kaur, R. (2016). Internet of things to promote tourism: An insight into smart tourism. *International Journal of Recent Trends in Engineering & Research*. 2(4): 357-361.

Kraft (2002). Information systems portfolio management. Acceded in 16th of February 2016, on the Web site of: http://www.kraftfoodsgroup.com/home/index.aspx.

Lamsfus, C., Wang, D., Alzua-Sorzabal, A. & Xiang, Z. (2015) Going Mobile Defining Context for On-the-Go Travelers. *Journal of Travel Research*. 54(6): 691-701.

Laudon, C.Laudon, C. e Laudon, J.and Laudon, J.(2004). *Management Information Systems: managing the Digital Firm* , 9ª Edição. Prentice Hall. (2004). *Management information systems: Managing the digital firm,* 9th edition, Prentice Hall. Boston.

Lubetkin, M. (2016) Tourism and the Internet of Things-IoT. Acceded in 31th of January 2017, on the Web site of: https://medium.com/3baysover-tourism-networking/tourism-and-the-internet-of-things-iot-e41b125e7ddd#.3prmu1rb8.

Niewolny, D. (2013). How the internet of things is revolutionizing healthcare, Freescale. Acceded in 4th of November 2016, on the Web site of: https://cache.freescale.com/files/corporate/doc/white_paper/IOTREVHEALCARWP.pdf.

Nolle, T. (2016). Enterprise architecture model helps to maximize mobile empowerment. Acceded in 10th of October 2016, on the Web site of: http://searchsoa.techtarget.com/tip/Enterprise-architecture-model-helps-to-maximize-mobile-empowerment?utm_medium=EM&asrc=EM_NLN_65809390&utm_campaign=20161007_Enterprise%20architecture%20holds%20the%20secret%20to%20mobile_fchurchville&utm_source=NLN&track=NL-1806&ad=910397&src=910397.

Nonaka, I.Nonaka, I. e Takeuchi, H.(1995). *The Knowledge-Creating Company.* Oxford Press. and Takeuchi, H. (1995). *The knowledge-creating company*, Oxford Press. New York.

Palli, P. and Behara, G. (2014). Enterprise architecture: A practitioner view. Acceded in 2nd of January 2017, on the Web site of: https://blog.opengroup.org/2014/09/17/enterprise-architecture-a-practitioner-view/.

Prajapati, V. (2014) Mobile technology advancements speed up the growth of tourism worldwide. Acceded in 31th of January 2017, on the Web site of: http://www.techprevue.com/mobile-technology-advancements-speed-up-the-growth-of-tourism/.

RES (2013). 6 claves que debes conocer sobre internet de las cosas. Acceded in 2nd of February 2017, on the Web site of: http://www.ecointeligencia.com/2013/09/6-claves-internet-de-las-cosas-iot/.

Robbins, SP (2006). *Comportamento Organizacional* .Robbins, S. (2006). *Organizational behavior.* 10ª Edição.10th Edition, Prentice Hall. Canada.

Ross, J. (2013). Jeanne Ross of MIT CISR on enterprise architecture. Acceded in 17th of February 2016, on the Web site of: http://www.youtube.com/watch?v=fel6_-v10Dk.

Ross, J., Beath, C. and Quaadgras, A. (2013). You may not need big data after all. Acceded in 17th of February 2016, on the Web site of: https://hbr.org/2013/12/you-may-not-need-big-data-after-all.

Sánchez-González, G. and Herrera, L. (2014). Effects of customer cooperation on knowledge generation activities and innovation results of firms. *Business Research Quarterly.* 17(4): 292-302.

Sarkar, S. (2014). *Entrepreneurship and innovation*, Escolar Editora. Portugal.

Schmidt (2013). Context-aware computing. Retrieved from https://www.interaction-design.org/literature/book/the-encyclopedia-of-human-computer-interaction-2nd-ed/context-aware-computing-context-awareness-context-aware-user-interfaces-and-implicit-interaction.

Sigala, M. & Chalkiti, K. (2014) Investigating the exploitation of web 2.0 for knowledge management in the Greek tourism industry: An utilisation–importance analysis. *Computers in Human Behavior*. 30: 800-812.

Sousa, P., Caetano, A., Vasconcelos, A., Pereira, C. and Tribolet, J. (2006). Enterprise architecture modeling with the unified modeling language. In: P. Ritten (ed.), *Enterprise modelling and computing with UML*. IRM Press. Hershey.

Spewak,S.Spewak, S. e Hill, Sand Hill, S.(1992). *Enterprise Architecture Planning: Developing a Blueprint for Data, Apllications and Technology* . (1992). *Enterprise architecture planning: Developing a blueprint for data, applications and technology*, John Wiley & Sons. New Jersey.

Tnooz (2017). Travel and the fourth industrial revolution. Acceded in 14th of May 2018, on the Web site of: https://www.tnooz.com/article/travel-fourth-industrial-revolution/

Tyagi, S., Agarwal, A. and Maheshwari, P. (2016). A conceptual framework for IoT-based healthcare system using cloud computing. Paper presented at the 6th International Conference on Cloud System and Big Data Engineering, Noida. India.

Vasilev, J.Vasilev, J. e Georgiev, G. (2003and Georgiev, G. (2003). Tendencies in the Development of ERP Systems. Tendencies in the development of ERP systems. Paper presented at the International Conference on Computer Systems and Technologies. Economical University of VarnaPaper presented at the International Conference on Computer Systems and Technologies, Economical University of Varna.Bulgária. Bulgaria.

Washburn, D., Sindhu, U., Balaouras, S., Dines, R. A., Hayes, N. & Nelson, L. E. (2010) Helping CIOs understand "smart city" initiatives. Acceded in 1st of March 2015, on the Web site of: http://www.uwforum.org/upload/board/forrester_help_cios_smart_city.pdf.

Zachman, J. (2008) Concise definition of the Zachman framework. Acceded in 17th of February 2016, on the Web site of: https://www.zachman.com/about-the-zachman-framework.

Economics of Joint Production and Implications for the Media and Cultural Industries: The Necessity of Application and Research

Min Hang, Tsinghua University, China
and Robert Picard, Oxford University, UK

Keywords: Media and Cultural Economics; Joint Production and Products; Shut-Down Point; Split-Off Point; Timeline Analysis

Abstract

This article addresses an issue of joint production arising from the media and cultural industries. Joint production is a production process that yields two or more products simultaneously. In the media and cultural industries, the application of digital technology has made it possible for producers to generate products both online and offline, therefore, a common production process can yield outcome for multiple platforms. This changing feature has brought with it many implications – from the managerial perspective, it has altered economic rationales guiding managers' decision making on whether or not to cease production on the traditional platforms. The current study explores why different types of analysis are required in the joint production. This study introduces the concepts of shut-down, split-off and tipping points that need to be considered. The authors also propose an approach of timeline analysis that may move the investigation of joint production forward for the next steps.

Dr Min Hang is an Associate Professor in media management and economics at Tsinghua University, China. She chairs Tsinghua Global Business Journalism Program and is deputy director of Media Management Research Center at Tsinghua University. Hang holds a doctoral degree in Business Administration from Jönköping University, Sweden. She is the author of a number of academic publications on media management and economics, cultural industry studies, business journalism and economic communications. | hangmin@tsinghua.edu.cn

Prof. Robert G. Picard is a Senior Research Fellow at the Reuters Institute in the Department of Politics and International Relations at the University of Oxford. He is the author and editor of over thirty books and has written hundreds of articles on media issues for scholarly journals and industry publications. Picard has been editor of the *Journal of Media Business Studies* and *The Journal of Media Economics*.

Introduction

Media and cultural industries are important sources of employment and economic growth globally. Much attention has been paid to the economics and management of media and cultural products in the recent years; the current article addresses an issue arising from such industries – with the increasing consumption of media and cultural products online, due to the accelerated advancement of digital technology – an issue of joint production.

Joint production is a production process that yields two or more products simultaneously. In the media and cultural industries, the application of digital technology has made it possible for producers to generate media and cultural products both online and offline, thus a common process can yield outcome for multiple platforms. This changing feature of production has brought with it many implications. From the managerial perspective, it has altered economic rationales guiding managerial decision-making on whether or not to end production on the traditional platforms, as with the proliferation of digital technology, more people are migrating from offline to online.

In view of these, the article aims to investigate the economics of joint production. It discusses why different types of analysis are required in joint production and introduces the concepts of shut-down, split-off and tipping points that need to be considered. The article explains the rationales for managerial decision-making in the media and cultural industries; it also proposes an approach of timeline analysis that can move the investigation of joint production forward for the next steps.

A Concern of the Legacy Media in the Contemporary Digital Era

In the contemporary digital era, consumers' behaviours are changing dramatically, legacy media are facing severe challenges of losing customers in their traditional platforms; consequently, an increasing number of companies have chosen to shut down their traditional operation or even exit the market.

At a fundamental level, firms shut down their business when costs exceed revenue, capital is unavailable or too expensive, or when consumers no longer wish to consume their products (Picard, 2011). They don't quit merely because a better technology is available. Companies in the newspaper industry, for example, particularly in the mature North American and European markets, have responded to changing conditions by reorganizing, downsizing, and cutting costs, by creating joint products (Picard, 2014) and by implementing renewal strategies based on offering digital news products as well as print products (Kung, 2015).

These joint products are important as they alter the traditional economics rationales for media and cultural companies and require different types of economic and business analyses. In business economic terms, a joint product is one produced with one or more other products using a common input or process with undifferentiated joint costs (Hirschey, 2009).

In the media and cultural industries, many companies are rapidly adapting to digital distribution and its business opportunities and increasingly implementing strategies to give primacy to digital distribution. These developments are addressing the short-term challenges of many legacy media firms that led to forecasts of their imminent exit from the market.

These developments also require different analyses when trying to consider whether to end traditional production and when. For newspaper companies, for instance, because papers are operating in both print and digital spaces, the economically rational point for ending print publication will likely extend past the point at which print product losses occur, because the print and digital offerings are operating as joint products rather than discrete, independent products (Picard, 2003, 2008).

Therefore, the issue of a joint product should be analyzed in line with the specific characteristics of media and cultural products, considering challenges faced by the legacy media in a digital era. The text below will explore how the joint product nature of many firms in the media and cultural industries are addressed in determining whether and when one traditional product should be ended based on the concepts of shut-down point, split-off point, and tipping point. It will also examine the implications of those concepts and analysis to the tipping point in the process of digital products operations.

"Companies in the newspaper industry (…) have responded to changing conditions by reorganizing, downsizing, and cutting costs, by creating joint products and by implementing renewal strategies based on offering digital news products as well as print products"

The Roles of Shutdown and Spin-Off Points

In economics, the shut-down and spin-off point concepts provide the means for assessing when products are no longer viable and a company should consider ending production. Although uses of the two are related, they are not substitutable concepts for decision-making but apply to specific circumstances: the first for single products and the second for joint projects.

Shut-Down Point

When a company producing a single product[1] can no longer minimize losses and maximize profits, it reaches what is called as the "*shut-down point*", that is, the point at which it is no longer rational to continue with production. The shut-down point is based on neoclassical economics that asserts rational behaviour guides business decisions (Himmelweit, Roberto & Andrew, 2001).

A *shut-down* refers to an organizational decision not to produce anything during a specific period of time because current market conditions are not appropriate for the continuation of production. After a short-run shutdown decision, companies may also make decisions to exit the market, whereas *exit* refers to a long-run decision to leave the market permanently. In normal conditions, firms usually make decisions to shut down if the revenue that it would get from producing is less than its variable costs of production.

What determines a shut-down decision is a crucial question for firms to consider. The neoclassical economics believes that a firm makes the shut-down decision if the total revenue is smaller than the variable costs, that is, $TR<VC$. If further dividing both sides of this inequality by the quantity Q, it can be written as:

$$\text{Shut down if } TR/Q < VC/Q.$$

As the average revenue for any firm is simply the good's price P, and VC/Q is the average variable cost AVC. Therefore, the firm's shut-down criterion is also noted as:

$$\text{Shut down if } P<AVC.$$

This shows that a firm chooses to shut down if the price of the good is less than the average variable cost of production. When deciding whether or not to produce, the firm compares the price it receives to the average variable cost. If the price doesn't cover the average variable cost, the firm is better off stopping production, it may reopen in the future if conditions change and the price exceeds the average variable cost.

These are neoclassical economics rationales guiding managerial decision-making in a competitive market's profit-maximizing strategy. Despite it, however, new institutional and behavioural economics research has shown that many firms aren't fully rational and tend to hang on to failing products too long because executives put off tough decisions and psychologically dismiss evidence of failure (Horn, Lovallo & Viguerie, 2008). Nevertheless, the shut-

1 - A newspaper or a television program, for example. Single product in this context should not be confused with the concepts of dual products or 2-sided products that describe the conditions such as selling circulation and then selling that audience to advertisers (Picard, 1998 and 2011).

down point concept provides the theoretically correct point at which product shutdown should occur.

Determining whether and when to end production also requires a clear understanding of the costs of production inputs, capital invested, and productivity. These are sometimes analyzed using the Cobb-Douglas production function, which is adapted to examine the impact of inputs on output at the macro level (Saito, 1975; Douglas, 1976). The Cobb-Douglas production function presents a simplified model of the economy in which production output is determined by the amount of labour involved and the amount of capital invested (Aigner & Chu,1968).

The Cobb-Douglas function can help managers to determine whether additional input will produce additional output and if the additional investment is rational. It can also determine price efficacy when combined with cost data. The function can be used as the bases of a basic macro-level decision on whether or not to continue production and allows managers to understand where their product is on the different potential outcomes (Zellner, Kmenta & Drèze, 1966; Goldberg, 1968; Coelli et al, 2005).

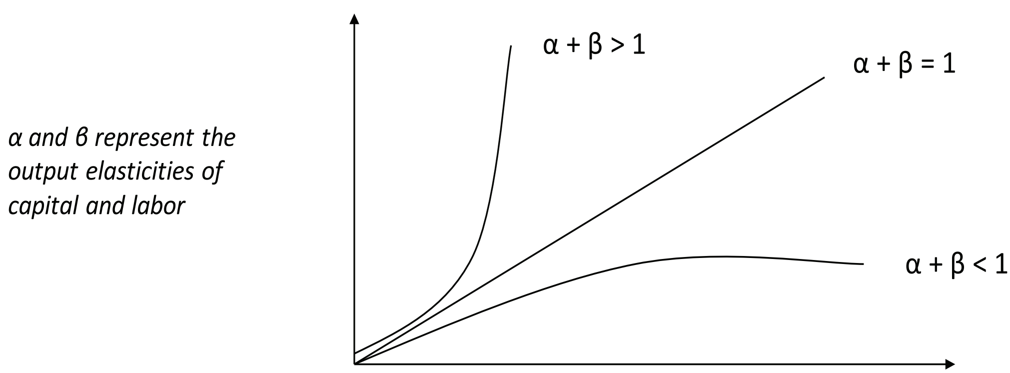
The Cobb-Douglas formula is expressed as:

$$Q=AL\alpha K\beta \ (\ 0<\alpha,\beta<1\ )$$

Where,
Q = total production
L = labor input
K = capital input
A = total factor productivity

α and β are the output elasticities of capital and labour, respectively, these values are constants determined by available technology

Figure 1: The Cobb-Douglas Model (Original)



The Tinbergen–Solow equation is a modified version of the Cobb–Douglas production function, which incorporates technological change that is not reflected in the latter one (Day & Boserup, 1992). The Tinbergen–Solow equation proposes that at a fixed time noted as *t,* economic output is still a function of labour and capital, but as technological progress grows at a rate of r >0, the attainable economic outputs increase (Day, 1999; Wu, Yu & Wang, 2014). The Tinbergen–Solow equation is also called as an adjusted Cobb-Douglas formula, which is expressed as:

$$Y_t=A_tL^{\alpha}K^{\beta}$$

$Y_{t:}$ Productivity at certain time

If $\alpha + \beta = 1$,
the production function
has constant returns to scale.

If $\alpha + \beta < 1$,
returns to scale are decreasing,

and If $\alpha + \beta > 1$,
returns to scale are increasing.

Both Cobb–Douglas and Tinbergen–Solow production function consider the relationship of output to input to help managers determine whether additional input will produce additional output and if the additional investment is rational. These equations provide theoretical models for managers to understand shut-down decisions, mainly at the macro level. However, when it is used at the micro level, the production function requires further adjustment, especially when more than one product is involved. Therefore, at the company-level, combined with cost data, a breakeven point (BEF) analysis can also help managers to determine the level of production for optimal efficiency (Render & Stair, 2006; Cafferky & Wentworth, 2010).

"When a company is involved in producing joint products (...) the concepts of split-off points and cost allocation must be considered in determining the efficacy of each product."

The breakeven point is the sales volume at which a business earns exactly no money. It is useful to determine the amount of remaining capacity after the breakeven point is reached, which indicates the maximum amount of profit that can be generated. Usually, managers constantly monitor the breakeven point, particularly in regard to the last item, in order to reduce the breakeven point whenever possible. Ways to monitor the breakeven point include cost analysis, margin analysis, outsourcing, pricing and etc.

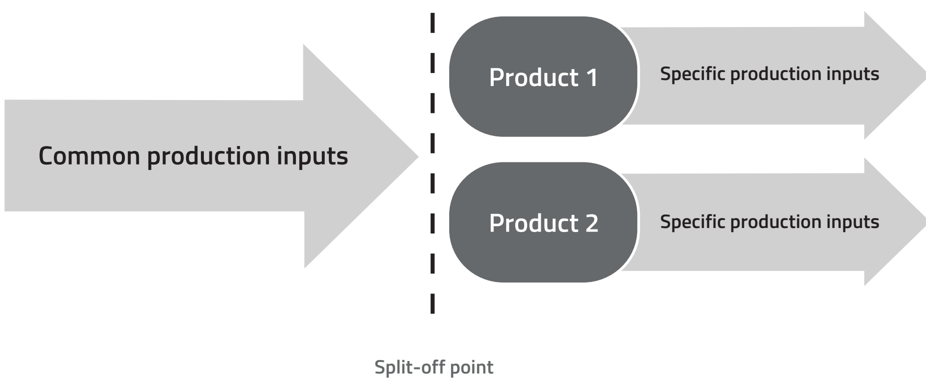
All the above classic explanations of how companies maximize returns are significantly complicated, however, when the issue of joint products is involved because companies incur and share production processes and costs for two or more products, thus providing benefits of economies of scope. In these setting, producers must optimize output and price for all products individually and collectively.

Product Split-Off Point and Cost Allocation

When a company is involved in producing joint products – such as print and digital news products – the concepts of split--off points and cost allocation must be considered in determining the efficacy of each product.

To pursue efficiency of joint products, managers require a clear understanding of costs and attribution of costs to the separate products is required because all costs of the enterprise are rarely shared equally (Horngren, Datar & Rajan, 2011). To do this, business accountants and economists employ the concept of *split-off point,* that is, the point at which common production ends (Hartley, 1971). Prior to a split-off point the costs are common; subsequent to the split-off point, the costs can be separated and directly allocated to a product (Schneider, 1986). In practice, fixed costs (buildings, basic administrative functions, etc.) are held constant and only variable costs are allocated to the separate products. The joint production costs in question then involve inputs, including labour. Individual product costs include the portion of joint costs for which each product is responsible, plus costs incurred after the split-off point.

Figure 2: The Split-Off Point Concept



To allocate costs prior to the split-off, two primary methods are employed. The first is based on physical measurement of the output, such as weight or volume, and the second is based on a measurement of market value. The first is appropriate for commodities, such as steel, and not appropriate for consideration of many media and cultural products because they involve both physical and non-physical products. Market value measurement is thus the appropriate means for allocating costs, and allocations must comply with domestic accounting principles and international financial reporting standards.

The two most commonly employed market measurements are to allocated costs based on sales value as of the split-off point or based on gross margin of each product (Bragg, 2014). Most firms employ the first because it is the simpler of the two; the second is typically employed when it is not possible to establish sales value at split-off. In the second method, all costs after split-off are calculated for each product and these are subtracted from the revenue each product earns.

In the case of media and cultural products, especially for traditional media production, such as newspapers production then, using split-off point analysis would require identifying income associated with the print and digital products and then separating basic administrative, managerial, facilities and IT costs as joint fixed costs, allocating additional fixed costs for printing facilities and physical distribution to the print product, allocating additional fixed costs for IT and digital distribution to digital product(s), and proportionally allocating editorial and advertising costs to the print and digital products. Only then could a determination be made whether one or the other was profitable and whether a shutdown of one would be possible given the need of the surviving product to cover not only its individual product costs but the joint fixed costs as well.

Tipping Points

In strategy and decision-making literature, points of change are often referred to as "tipping points." These points represent the moments at which social, economic and other environmental factors create an overwhelming impetus that produces change or effects (Gladwell, 2000). The concept was derived from research in virology and evolutional biology and has since been applied in a number of disciplines and to a variety of social, health and political issues (Bissell & Caiado, 2015; Campbell, Einhorn & Reiss, 2004).

In business and economics, it is typically evidenced by the point at which a technology, product or industry standard become dominant, creating irreversible change that renders alternatives unsustainable or when certain ideas or things become market highly successful (Berger, 2013).

Discrete individual changes combine overtime to bring the system or market to the tipping point. In a business setting, this is the point by which company managers must make decisions to change or risk losing their enterprises altogether. Often requires doing something significantly different from in the past or to make a choice they would prefer not to make.

Tipping points are thus linked to change and the evolution of products and industries because they cause demand changes and create new economies of scale and scope in production and/or distribution that affect the abilities of producers to continue efficient and profitable operation.

When considering what is happening to the media and cultural industries, several identifiable tipping points are relevant:

1 - When most consumers have requisite technology to use the competing innovative product – in the case digital media and cultural products, for example, it can be measured by PC penetration, Internet access, and smartphone penetration. This tipping point has been reached in most developed nations and most other nations.

2 - When content income exceeds advertising income, thus making consumers the more important customer of the media and cultural products. This can be measured by content revenue and advertising revenue. In the newspaper industry, for example, this tipping point was passed in 2014, when it received $92.6 billion in circulation revenue and $87 billion in ad income (WAN-IFRA, 2015). In many countries, however, the point has not yet been reached.

3 - When digital income exceeds traditional income, making the digital product(s) more important to the company. The indicators

for determining whether the tipping point has been reached are the comparison between online and offline revenues. This point has not yet been reached on the industry level in most media and cultural industries.

4 - When mobile use exceeds desktop tablet use, meaning that smartphones and connected tablets have become the primary digital product and greater attention must be paid to them. The Indicators will be the proportions of the audience using desktops, smartphones and tablets to access content.

5 - When time spent consuming media and cultural content online matches or exceeds that of offline. At this point, the exposure of readers to both products equalizes or changes.

6 - When the traditional offline income no longer pays offline costs. At this point, companies need to make shutdown point and split-off point analyses, combined with other assessments such as brand importance, to determine whether to keep traditional offline operations alive.

What Does This Mean to the Media and Cultural Products?

The concepts presented here indicated that determining when to shut down traditional operations is not a simple task and that significant analysis needs to be done at the individual firm and industry level before decisions are made with significant credence.

The joint product issue is central to the traditional media and cultural industries – including print, newspapers, magazines, books, video, art, exhibition etc. – today, because most major producers also offer digital products that are based on their offline products. The managerial economic challenges in determining the futures of the traditional media and cultural products confuse many managers and industry observers because many do not comprehend the economic and financial aspects of joint products. That confusion is compounded because many media and cultural enterprises do not merely joint products, but multi-sided products as well.

Decisions of whether and when to shut down are not merely ones of technology and the cost benefits they may produce, but involve firms reaching shutdown point for a product *and* the implications of costs for joint products evidenced through split-off analysis.

This leads to the questions of what is happening in that regard and where are we now. We cannot answer those questions without using aggregate average industry data, and future research agenda is needed to gain better understandings.

This, of course, leads to the questions of what is actually happening in that regard and where are we now. Operational data from an individual company is required for an enterprise-level analysis and aggregate average industry data is required to answer those questions at the industry level. Thus, significant future research is needed to undertake such analysis, apply techniques outlined here, and gain a better understanding of the contemporary condition of newspaper firms.


EUR/USD - 1,35379 - 00:00:00 14 giu (EEST)
EUR/USD (Bid), Ticks, # 300 / 300
23:35
23:40
23:46
Gold, spot - 1.276,820 - 23:00:00 13 giu (CEST)
Gold, spot (Bid), 1 minute, # 159 / 300, Logarithmic, Heikin Ashi
20:30 20:40 20:50 21:00 21:10 21:20 21:30 21:40 21:50 22:00 22:10 22:20 22:30
giu/13/14
News
Search
Alerts
Settings
13 June 2014
Quote List [2]
World Markets
Name
Dow Jones

A Research Agenda Ahead

A further research agenda is firstly built at the production level to understanding joint production and the shifting roles of traditional offline and digital products in the composite. There are joint products in fixed and variable proportions, media and cultural industries provide a variety of examples in both cases. However, the joint production of media and cultural online and offline products usually adopts variable proportions, and the role of online and offline products in the production is transforming in response to the changing market conditions.

In the early stage of joint production, usually traditional offline products are major outputs from the manufacturing process, and costs allocated mostly on the offline, whilst digital offerings are only secondly (minor) products in the production, receiving much fewer allocations of joint costs.
Yet, with the advancement of digital technology and changing consumption patterns increasingly migrating online, demand for digital products exceeds the traditional offline products, and digital overpasses offline to become major products, receiving more resource allocation. This is the case in many western markets with mature media and cultural industries. Digital products are increasingly competing for resources, and the offline business has been declined in proportion for costs allocation.

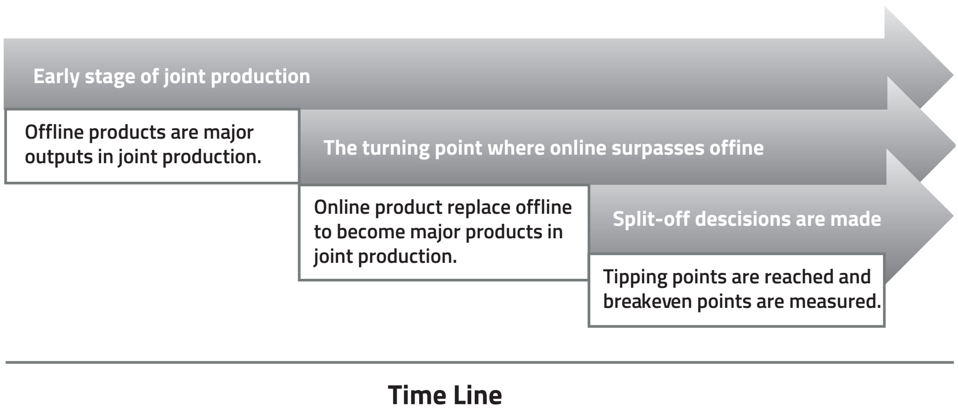
Therefore, to project the future of the media and cultural industries, the first step is to find out the turning point where online replaces offline to become major products in the joint production. This is an important turning point as decision-making on resource allocation is primarily based on the profits realization of major products. The shifting role between offline and online depicts a changing strategic core in the production and a new pattern of business. The turning point where online surpasses offline in joint production can be found empirically from investing cost allocation in media and cultural enterprises and studying the profits margin of production.

After this turning point, the traditional offline business may continue to decline, reaching a second point where a split-off decision needs to be made. Thus, the second step of investigation is to find out the split-off points that end the joint production. Measurements based on market value can be applied, sales value or a gross margin of each product are variables to employ. To conduct such analysis, the economic logic is to compare an output with an input to ensure profit, and the accounting principles propose a breakeven point (where Total Revenue = Total Costs) to consider, in order to make rational decisions. However, the major challenge here is to separate costs and profits between online and offline, in regard to administrative, managerial, editorial and other supporting activities. And also, the multi-sided nature of media and cultural products adds the complexity of analysis. Therefore, to move the empirical study forward, aggregate industry data can be employed for the next step, and investigation for tipping points at macro-level can be made.

"With the advancement of digital technology and changing consumption patterns increasingly migrating online, demand for digital products exceeds the traditional offline products."

The tipping points are identifiable when, for example, the majority of consumers use digital products, content income exceeds advertising, online income exceeds offline, mobile use exceeds desktop, time spent consuming content online exceeds offline, and when traditional income does not pay costs. These points can be projected using industry data, and a timeline analysis technique can be employed to visualize the trend. The Timeline Analysis (TA) supports future prediction, situation assessment, event projection and Indications. Figure 3 below provides an example of timeline analysis of tipping point, spin-off point and the point where digital surpasses offline in joint production.

Figure 3: Timeline Analysis of Split-off Points and Tipping Points (Original)



When the issues of shut-down, split-off and tipping point are considered in the media and cultural industries, there are a couple of special features of media and cultural products need to be considered, as well as geographic market differences in producing such products.

First of all, the issue of duality matters when the shut-down and split-off decisions are made in the media and cultural companies. Media firms operate in a dual-product market (Picard, 1989), and duality is an important feature of media and cultural products, which means that on the one hand, these products generate economic profits and on the other hand, they also promote social value. So, in order to safeguard positive externality from media and cultural products, social optimal in the supply-demand equilibrium needs to be considered rather than market optimal. This dual character of economic and cultural good poses challenges to decision-making for media managers.

Meanwhile, producing media and cultural content is a creative process, requiring artistic inspirations and intuitive inputs, different from other industrial firms, where the production is organized with structured forms and formalized process. Therefore, the decision on shut-down and split-off of media and cultural production should be made in line with the special features of the creative production.

Also, even if the growth of media and cultural industries is a global phenomenon, geographic market differences are obvious: the emerging countries still have a large potential for traditional offline business, and developed nations are migrating to digital in a faster pace. Therefore, traditional media maintain a longer life circle in the developing nations, reaching the tipping point of print and digital in a later stage. China, for instance, provides such a striking example: the traditional newspaper companies still embrace great potential to grow, and print business remains to be a cash cow for media firms, especially in many government-owned media and cultural organizations.

Moreover, with the advancement of digital technology, nowadays, an increasing number of media and cultural firms produce multiple products, not merely joint products. It is getting to be more common for the firms to have one production yielding to multiple end products, in electronic, mobile and other social media forms, hence the issue of joint production is becoming more complicated, and economics rationales analyzing shut-down, split-off and tipping points need to be further modified in order to address the sophistication of media and cultural multiple products production.

To sum up, tipping points occur differently in different product lines and different sectors of the media and cultural industries. Thus, analyses on shut-down, spin-off and tipping points vary, and more industry evidence from different markets are needed for further steps of the investigation. A future research agenda will be built on more comprehensive empirical data at both industry and company levels. Evidence of the cost of production and other organizational accounting information are also needed for the decision-making on shut-down, spin-off and tipping points in the media and cultural firms. The current study has discussed the necessity of application of economics theories for media and cultural production, providing an analytical preparation for future research endeavours, later empirical explanations together with industry investigations will further enhance our understandings on the economics of joint production in the media and cultural industries.

References

Aigner, D. J., & Chu, S. F. (1968). On estimating the industry production function. *The American Economic Review*, 826-839.

Berger, J. (2013). *Contagious: Why Things Catch On*. Simon & Schuster.

Bissell, J & Caiado, C. (2015). *Tipping Points: Modelling Social Problems and Health*. New York: Wiley.

Bragg, S. M. (2014). *Cost Accounting Fundamentals: Fourth Edition: Essential Concepts and Examples*, 4th Edition. Accounting tools.

Cafferky, M. & Wentworth, J. (2010). *Break Even Analysis*, Business Expert Press.

Campbell, K. M., Einhorn, R. J. & Reiss, M. B. (2014). eds. *The Nuclear Tipping Point: Why States Reconsider Their Nuclear Choices*. Washington, D.C.: Brookings Institution.

Coelli, T. J., Rao, D. S. P., O'Donnell, C. J., & Battese, G. E. (2005). *An introduction to efficiency and productivity analysis*. Springer Science & Business Media.

Day, R. H. (1999). *Complex Economic Dynamics: An introduction to macroeconomic dynamics,* Volume 2, The MIT Press.

Day, R. H., & Boserup, E. (1992). Chaos and evolution in economic processes. In *Nonlinearities, Disequilibria and Simulation* (pp. 261-278). Palgrave Macmillan, London.

Douglas, P. (1976). The Cobb-Douglas Production Function Once Again: Its History, Its Testing, and Some New Empirical Values, *Journal of Political Economy,* 84 (5): 903–916.

Gladwell, M. (2000). *The Tipping Point: How Little Things Can Make a Big Difference*. New York: Little Brown.

Goldberger, A.S. (1968). The Interpretation and Estimation of Cobb-Douglas Functions, *Econometrica,* Vol. 36, No. 3/4 (Jul. - Oct., 1968), pp. 464-472.

Hartley, R. V. (1971). Decision Making When Joint Products are Involved. *The Accounting Review*, Vol. 46, No. 4, pp. 746-755.

Himmelweit, S., Roberto, S., & Andrew, T. (2001). *Microeconomics: Neoclassical and Institutional Perspectives on Economic Behaviour*. London: Cengage Learning.

Hirschey, Mark (2009). *Fundamentals of Management Economics*. Marion, OH: South-Western, Cengage Learning.

Horn, J. T, Lovallo, D. P. & Viguerie, S. P. (2006). *Learning to Let Go: Making Better Exit Decisions*, McKinsey Quarterly, 2:65-75.

Horngren, C. T., Datar, S. M. & Rajan, M. V. (2011). *Cost Accounting: A Managerial Emphasis*, 14th Edition. Upper Saddle River, NJ: Prentice-Hall.

Küng, Lucy (2015). *Innovators in Digital News.* London: I.B. Taurus.

Picard, R. G. (1989). *Media Economics: Concepts and Issues*. Newbury Park, CA: Sage Publications.

Picard, R. G. (2003) Cash Cows or Entrecôte: Publishing Companies and Disruptive Technologies, *Trends in Communication*, 11(2):227-136.

Picard, R. G. (2008). "News Consumption and the Business of Journalism" pp. 112-118 in Mary Collins, ed. *New Models for News*. Louisiana State University: Reilly Center for Media and Public Affairs, Manship School of Mass Communication, 2008.

Picard, R. G. (2011). *The Economics and Financing of Media Companies,* 2nd edition. New York: Fordham University Press.

Picard, R. G. (2014). Twilight or New Dawn of Journalism? Evidence from the Changing News Ecosystem, *Journalism Studies*, 15(4): 1-11.

Render, B., & Stair Jr, R. M. (2006). *Quantitative Analysis for Management, 12e*. Pearson Education India.

Satō, K. (1975). *Production functions and aggregation*. Amsterdam: North-Holland.

Schneider, A. (1986). Simultaneous Determination of Cost Allocations and Cost-Plus Prices for Joint Products, *Journal of Business Finance & Accounting*, Volume 13, Issue 2, pages 187–195.

WAN-IFRA (2015). *World Press Trends*. Paris: World Association of Newspapers and News Publishers.

Wu, W., Li, T., Yu, B., & Wang, J. (2014). Technological capability and technology management: Which dominates the development of China's telecommunications industry? *Chinese Management Studies*, *8*(2), 180-200.

Zellner, A., Kmenta, J. &Drèze, J. (1966). Specification and Estimation of Cobb-Douglas Production Function Models, *Econometrica*, Vol. 34, No. 4 (Oct., 1966), pp. 784-795.

JOCIS

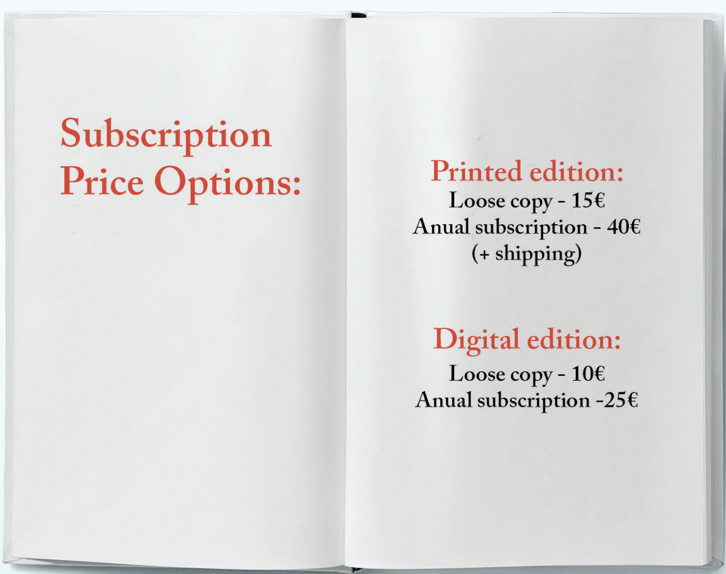
Call for papers

JOCIS INVITES YOU TO THE NEXT EDITION

For more information please visit: http://www.mediaxxi.com/jocis

JOCIS is a Scientific Journal, created by MediaXXI publishing house, aimed to the creative and cultural industries and studies, focused on the academic productions but also oriented to professionals and market who want to stay informed and expand their knowledge.

The JOCIS invites original, unpublished, quality research articles/case studies in the fields of creative and cultural studies for the January/February/March/April edition.



General topics:

Media & Communication in Creative Industries;
Publishing Market: present and future;
The Economy of Arts and Culture;
Marketing in Creative and Cultural Industries: specificities;
Management of Creative and Cultural Industries;
Entrepreneurship;
Clusters in Cultural Industries: impact and main issues;
Relation between academy and market;
Creative Cities;
Technology aplied to Creative Industries;
Popular Culture and Culture consumerism;
Theories and Methods in Cultural Studies;
Intercultural Commmunication;
Culture , leisure and tourism;
Empowerment and development of the market
in cultural and creative industries;

Manuscripts submission deadline: February 28

All papers must be submitted via email. If you would like to discuss your paper prior to submission, please refer to the given contact details.

Papers will be published in english however we accept papers in other languages and we will provide the translations of the accepted papers.

Covering letter: please attach to every submission a letter confirming that all authors have agreed to the submission and that the article is not currently being considered for publication by any other journal.

Authors are responsible for obtaining permissions from copyright holders for reproducing through any medium of communication any illustrations, tables, figures or lengthy quotations previously published elsewhere.

Proofs and offprints: authors will receive proofs of their articles and be asked to send corrections within 3 weeks. They will receive a complimentary copy of the journal.

All authors should confirm that the manuscript is not currently being considered for publication by any other journal and retain a copy of their manuscript.

media XXI
Moved by knowledge

RFP

ORTS

TOCRIA – Experts Discuss the Changes in the Tourism Industry

by Diogo Resende and João Neves

Introduction

The second conference of TOCRIA (Tourism and Creative Industries Academic Association) took place at the Nova School of Social Sciences and Humanities in Lisbon between July 1-3, 2018. The event was supported by the ongoing ITRACOTUR project (Initiative for the Transfer of the Knowledge on Tourism), in partnership with CEPESE, Media XXI, Portuguese Press Association, among other partners. This report is a summary of the key presentations of this event.

JOÃO PALMEIRO – President of Google Fund and Portuguese Press Association **(2nd July)**

The Role of Media and Brand Content in the Promotion of National Tourism

João Palmeiro began his presentation by posing an important question: "why do people travel?" In his words, there are several key reasons for travelling, whether abroad or within one's own country. These are leisure, getting to know other cultures and exchange experiences, as well as business reasons. Palmeiro also mentioned that the cultural industries can be the most useful for tourism when it comes to storytelling, based on an exchange of knowledge and experiences, along with exploring the local culture. Anthony Bourdain's show is a good example of storytelling.

For Palmeiro, the future of the tourism industry should consider different ways of visiting a city and tailoring tourist offers. Palmeiro is positive about the impact of digital technologies and AI in the tourism industry: "AI is there for us, not for itself." Moving on with his presentation, Palmeiro claimed that the modern way of thinking was a result of the endeavours envisaged by Henry, the Navigator, a key figure in the expansion of the Portuguese empire throughout the world. Applying this idea to tourism makes sense because, as Palmeiro believes, tourism is about pluralism and diversity above everything else. During the Portuguese expansion, Portugal was more open to pluralism and diversity than any other country in the world. When it comes to the way the media talk about tourism, it is usually focused on recommendations, having more and more stories about 'where to go on my next trip.'

For Palmeiro, more than an industry, tourism should instead be a way of being, a pathway for Portugal's development.

SÉRGIO GUERREIRO - Director of Knowledge Management, Turismo de Portugal
Chairman, OECD Tourism Committee & ETC Market Intelligence Group **(2nd July)**

Strategic Communication and Decision-Making Processes

Sérgio Guerreiro began his presentation by contextualizing Portugal's economic and social situation during the *Troika* financial intervention (2011-2014) and how it relates to the ongoing tourism boom. In that period, the tourism sector faced the need to become innovative because of the difficulties brought by an economic downturn. A severe rise in unemployment also led to the necessity of increasing the competitiveness and adding value to the tourism experience. In 2014 (the peak of the crisis), it was an "innovate or die" situation. According to Guerreiro, Portugal had some conditions that helped it to surpass the crisis, such as highly qualified people working in ICT and the support of institutional investments and business angels for attracting startups. Tourism is both an exportable mass industry and a field favourable for startups to test innovative ideas.

Nowadays, Portugal is the 14th most competitive tourism market in the world, even though it is placed in a modest 46th position in terms of the overall competitiveness of its economy. Guerreiro claimed that tourism is a composite product (a 'package') and that technology enables to maximize travellers' time. Afterwards, the speaker highlighted the work of the public institution Portugal Ventures, which is a venture capital company. Portugal Ventures provides specialized services to startups; it advises entrepreneurs on available financial instruments; participates in marketing campaigns and initiatives; mobilizes national and international mentorship programs and promotes the coordination of the entrepreneurial ecosystem agents and partnerships with accelerators and incubators. Therefore, Portugal Ventures is a key player in facilitating innovation in the tourism sector of the country.

Portugal has been investing in stimulating its entrepreneurial culture and ecosystem. An example of this is the successful Start-up Lisboa, which promotes access to funding too. All these initiatives, as well as the main flagship event (Web Summit) aim to add value to Portugal's brand as a place of innovation. Portugal is now more and more often viewed abroad as a country of innovation.

RICARDO BRAMÃO - Founder and Executive President of APORFEST **(2nd July)**

The Impact of Music and Festivals on Tourism Promotion

At the event, Ricardo Bramão, founder and executive president of APORFEST, presented his work on the impact of music festivals and how it relates to tourism. His presentation was based on the 1st edition of APORFEST's Annual Report and the 5th edition of the Profile of Festival Goers and Social Environment, both released in 2017. Its main goal is to present numbers and conclusions from his studies to TOCRIA's audience.

In 2017, 272 festivals occurred in Portugal, with 15% (38) of them celebrating their first edition. Those 272 festivals were attended by 2.5 million people, with foreigner public coming mostly from the United Kingdom, Spain and France. Most of the festivals were held in Lisbon and Oporto (96 and 79 in 2017, respectively).

The biggest festivals in Portugal are MEO Sudoeste, NOS Alive and Vodafone Paredes de Coura, which can bring up to 100.000 people to their locations in over three days. In a general sense, there are more small festivals (i.e., festivals that attract less or around 1.500 people) in Portugal than major or medium ones, with the majority being sponsored and named after their municipality.

Regarding the profile of an average festival goer, although almost equal, 55% is female, with more than half of the audience being in their 20s. As of the communication of the festivals, they reach their public mostly via digital channels – online ads, social media, and websites. TV ads were not used that often. Only 3% of those that answered the inquiry chose TV as their mean of receiving information about a festival.

Another thing which is worth mentioning, since it affects the promotion of tourism in these regions, is the acquisition of the festival tickets. 76% of the festival goers buy the tickets at least 6 months in advance. Moreover, 72% of the festival goers bought full access tickets to the events. As for the use of those festivals for brand awareness, 43% of those that took part in the study felt like brands did increase their personal experience of the festival.

ROSÁRIO MIRA (2nd July)

Quality of Tourism:
From Training to Intervention

The main goal of Rosário Mira's presentation was to explain the importance of knowledge and training and how it translates into the quality of tourism. The speaker looked at those topics through the perspectives of technical literature, the World Tourism Organization (WTO) and the Portuguese public decision-makers.

As the WTO keeps investing into qualification, the training and knowledge of tourism isn't any more a question which affects companies and the individual, but it's rather part of a condition that establishes creativity, innovation and entrepreneurship in tourism. In other words, without innovation, there's no knowledge, and without knowledge, the quality of tourism and touristic destination decreases. In this sense, it's important that the curriculum has an emphasis on specific features of each region, and it should be as multidisciplinary as ever, including tourism organizations, and tackling the studies of how tourism can and should be done by learning from the best cases. And with this in mind, the innovation comes from the human resources, the ones that stimulate and introduce changes in organizational practices through entrepreneurship.

To achieve that, WTO created the UNWTO. TedQual Certification System, a program which tries to secure the quality of the formation of tourism on a global level. With this program, the WTO are making sure that the future leaders are ready to use the ICT to contact clients, develop action plans with the local communities, establish creative partnerships with stakeholders, modernize company management through specialized knowledge of human resources, monitor competition and understand the opportunities to create and capture new businesses and markets, implement benchmarking processes, and know how to be entrepreneurs, innovators and socially responsible citizens.

As for the Portuguese decision-makers, they toned to understand that tourism development should serve to improve the quality of life of local residents. This responsibility falls to the local municipals that should develop new touristic destinations with the support of the local decision-makers. In this context, it's important to note that through training in human resources and entrepreneurship, the main goal of tourism, which is to attract loyal tourists, especially out of season tourists, can and will be achieved.

ÁLVARO DIAS (2nd July)

Creative Tourism and Poverty Reduction: Is It Possible to Offer Interactive Experiences to Tourists?

At the end of the first day of TOCRIA, a special session was held at the Portuguese Geography Society (PGS). At first, there was an opening speech by João Pereira Neto, perpetual secretary of the PGS, Anabela Félix Mateus, President of the Communication Science Section, Ana Pereira Neto, President of the Tourism Section, and Paulo Faustino, ITRACOTUR Coordinator and JOCIS Co-Editor. After that Álvaro Dias presented his paper on the link between creative tourism and the reduction of poverty, based on research conducted by a group of authors in Latin America. This research was a qualitative field study and it was aimed at contributing to local development.

For example, in the northeast region of Brazil there are barriers to local development through tourism, mostly due to the lack of funding and knowledge, inexistent market orientation and poor entrepreneurial spirit. Another important aspect to note is that most locals prefer to engage in a subsistence economy rather than engage with the market. One way to solve this issue, said Álvaro, was through external intervention, with an aim to help reduce and surpass those barriers. For example, rural production could be an initial area of intervention.

Other point that was discussed was the direct effect that tourism has on entrepreneurial management, with the main question resting in the fact that Latin America suffers a reputational problem, mainly due to crime. Through tourism, it is possible for local communities to gain a more positive connotation.

ELI NOAM – Director of CITI at Columbia University **(3rd July)**

The Impact of the Internet on Travel and Creative Industries

Professor Eli Noam, a recognized global leader in the field of media management, began his presentation with the following question: "Is the internet in the travel industry a substitute or a complement?" The professor claimed that the internet, by working as an alternative, may reduce the willingness to travel. Afterwards, Noam said that the conventional story about the impact of the internet in the travel industry highlights it as being quite positive, allowing internet users to receive feedback from other tourists, having a better navigation ability in the cities they visit, among other aspects, like voice translation apps for smartphones.

When it comes to new technologies, Professor Noam mentioned that AI will be useful for travel planning; AR for sightseeing tours and location-based services. As for the negative impacts of the internet on the travel industry, they vary. For instance, there is a 'hype curve', meaning that there is a positive reaction from tourists to news stories published in newspapers and magazines about a given destination, that may lead to disillusionment once they visit it. This usually happens with the so-called overhyped destinations. Other negative aspects include the higher ability for travellers to find cheaper alternatives, which increases price competition. Also, there is a problem with negative online reviews that might be biased, these can purposefully be unfair or malicious if they target a personal or a business enemy.

Moving on with his presentation, Professor Noam revealed that the Airbnb platform has an insignificant impact upon hotel revenues, with the exception of the cheaper hotels. According to the professor, there are valid alternatives to certain types of travel. For example, business travel and conventions can be replaced by electronic communications and 'the travelling gambler' can use online casinos (the electronic gambling industry is worth 100 billion dollars). In the academic field, virtual conferences are cheaper and more convenient, being a reality in the Columbia University.

Afterwards, Professor Noam posed a relevant question: "Why do people travel? Can that experience be substituted electronically?" According to him, travel is not a natural activity and it didn't exist for tens of thousands of years; migrations did exist, but these obviously weren't leisure travels. Therefore, travel is a very modern experience. VR (Virtual Reality) can generate experiences for existing travel locations, by providing additional onsite experiences. A possible impact of VR on travel will be a higher expectation of quality and a greater need for more exciting experiences, therefore, 'real places' must upgrade their offerings to match the virtual.

Conclusion

In this report, we intended to summarize the most relevant lectures and discussions presented at this conference about the future of the travel industry in connection with the creative industries. We also aimed at making the TOCRIA event reach a wider audience, including those that were unable to attend it, that by reading this report will be able to get the key ideas about the topics and ideas discussed at that forum.

CREIMA – World-Class Researchers Discuss the Future of Media and Creative Industries

by Bruno Pires and João Neves

Introduction

The second edition of the CREIMA (Creative Industries Media Management) conference and course took place at the Faculty of Arts and Humanities of the University of Porto between September 19-21, 2018. The event was supported by the ongoing Project of Innovation in Media, Entrepreneurship and Digital Drivers (PIMENED) in partnership with the International Media Management Association (IMMAA). This report is a summary of the most relevant presentations held at this event.

MICHAL GLOWACKI – University of Warsaw **(20th and 21st September)**

Creative and Media Industries Clusters

On the first of his two lectures at CREIMA, Michal Glowacki looked at the interplay and relationship between the creative sectors and the media industry clusters. His talk was largely based on his own in-depth research on this topic. The speaker started his presentation by referring to the functions and goals that make the cluster effect work in practice. He also aimed at answering the following key questions: "What makes the clusters successful? Is there a future for the media as a part of the creative clusters?"

In relation to the models of creative industries clusters and the media, Silicon Valley is still seen as a primary model. Many parts of the world tried to replicate it. However, according to some authors, there seems to be an erosion of this primary model. An example given by Michal is London, which managed to fuse traditional media companies with technology companies within its creative clusters. Therefore, London serves as the primary example of this blending at the European level. According to him, there is no universal model that can be applied when it comes to the relationship and interplay between the media and the creative clusters. Within that interplay, the media serve as a catalyst for the creative industries and activities; the creative clusters need the media. Therefore, the distinction between the media clusters and the creative clusters is blurred and they should be seen as one.

Afterwards, Glowacki provided some examples of how media clusters can work in association with accelerator programs and startups, along with universities. For instance, one case of such cluster is the Boston region, where Harvard and the MIT work in close relation to the local media. Another important example lies in the media clusters in Brussels, that have been thoroughly investigated, consisting of very diverse media institutions that gather together. In the case of Estonia (a very small Baltic state), the whole country can be seen as a cluster. Within his research, 10 cities with high technology clusters were analysed in order to map best practices; among them are the cities of Toronto, Boston, Austin, Detroit, Vienna, Copenhagen, London and Brussels. The methodology applied was based on grey literature and semi-structured interviews conducted with local politicians, academics and media professionals. An important conclusion is that the way these creative clusters function will differ according to local cultures and traditions. For instance, the Boston-based Cambridge Innovation

Center hosts many different activities and a co-working space, aiming at supporting young entrepreneurs and startups; also making a strong connection between local universities and creative industries. However, all of it follows a very commercial logic.

Among the relevant findings of Glowacki's research there seem to exist some important factors for the success of the creative media clusters, such as their infrastructure, an existence of a convenient network of public transports (hence, the importance of the cluster's location within a city), the leisure ('after-work') and community culture, the ability to think beyond the traditional business model and the connection of creative media clusters with local communities at the neighbourhood level.

Public Service Media and Creative Media Clusters

On his second presentation at CREIMA, Glowacki approached the issue of the Public Service Media (PSM) in relation to the Creative Media Clusters. The expert also presented possible innovative solutions for the future and sustainability of the PSM. He began his talk with the key question: "why do we need the media?" According to Glowacki, the media and especially the PSM provide a service that social media can't replace in terms of its contribution to citizenship, democratic consolidation and transparency. Therefore, the media are connected with democratic values and it has to support a democratic vision. One of the key goals of his research was to investigate the drivers and obstacles currently faced by the traditional media in order to become part of the creative media clusters, but also how the PSM is becoming more adaptable to address the interests of young audiences and serve the public in the 21st century.

Moving on to the next part of his talk, Glowacki provided a short history of the PSM (focusing on radio and television broadcasting), that emerged as a state monopoly, even if they initially were in private hands in some countries. During the 1920s and 1930s, the State saw the potential of the media to inform and educate the people. This monopoly lasted for a long time. The UK was the first country to open its market for independent television in 1954. Afterwards, the emergence of private media firms started to challenge the PSM model; nowadays, with the ongoing 4th revolution, the media institutions are being challenged by the machines, as can be seen with the ever-growing importance of data-driven analytics. Glowacki mentioned that the legacy media professionals he interviewed didn't really know what the impact of automated journalism will be.

Based on his field research, Glowacki assured that one of the biggest goals for the future of PSM is to change and innovate their own organizational structure and culture, which sometimes still operates under an old-fashioned infrastructure. These findings have led him to investigate the new types of media-making. "Google is not only a search engine, it is everywhere; it has become an active player to enhance and foster entrepreneurship." Glowacki mentioned. He provided the example of Google campuses that exist all over the world, as a new way of media making which is not only focused on producing broadcast pieces. Instead, they organize many different conferences and pitching sessions, functioning like a co-working space, where one can rent his/her own desk and contribute to the things that Google does. Furthermore, at the Google campus in Warsaw, the local director doesn't have his own office, instead he works next to the open space and interacts with people. Curiously, despite having a very different environment and way of working, the people interviewed at Google said that they were actually doing the same thing as the PSM, by following the same goals towards society and serving the public needs.

According to Glowacki, local media is the future and it can also be an alternative model for the PSM. Therefore, the media need to get closer to local communities and serve the public in a more community-driven fashion. One of the benefits of having a PSM, whether at a national or a local level is in its contribution to media pluralism and independence. In order to be successful and sustainable, the PSM should be innovative, diverse and accountable, always aiming to keep the public and civil society at the core of its activities. Glowacki claimed that a huge problem posed to the PSM lies in its institutional and organizational approach to media-making. It can be changed and adapted to a more fluid structure, which can encompass a public co-working space or the creation of a public service search engine (a BBC search engine, for instance), so that people can understand the public service value of these institutions.

JAMES BREINER – University of Navarra **(20th September)**

How to Build Media Credibility and Sustainable Value in the Post-Truth Era

On September 20th, Dr. James Breiner from the University of Navarra gave a speech titled "How to build media credibility and sustainable value in the post-truth era".

In the beginning of his speech James Breiner talked about targeted advertising. He used a cartoon to illustrate how media follows one's interests. Breiner said that "targeted advertising, done by technological platforms, is basically destroying the news business model…" This is why financing print publications with advertisement failed. Breiner reinforced this point by stating that "advertising as a funding source for the news, for the news that matters, is basically dead…".

Understanding that, general and untargeted advertisement makes no longer sense concerning the widespread digital presence. In connection to that, James Breiner pointed at two global trends: publishers are pivoting towards users and users seek trustworthy information. James Breiner argued that publishers are pivoting toward users because they realize they "don't have a future using advertising to fund high quality journalism", so they have to "go back to the users". However, Breiner reminded that "when you go back to the user you're talking about a different kind of journalism, it can't just be celebrities and sports figures and sex scandals. That's still a good business, but it's not a good business for serious news." Facing the increasing number of sensational news, aiming for the 'clickbait', and the rise of fake news, users seek trustworthy information. James Breiner said that "because there is so much junk in the social media and 24-hour television, people are looking for trustworthy, relevant to their lives."

According to Breiner, these two trends lead to the ten new paradigms for digital news media. It also concerns "how news media have to think about and develop their products based on the new reality". Those paradigms are:

- Community rather than audience;
- Users first: investors and advertisers second;
- Relationships rather than scale;
- Quality rather than quantity;
- Public service rather than for-profit business;
- Social capital rather than financial capital;
- Members rather than subscribers;
- Niche media rather than mass media;
- Rebirth of personal media: email and blogs;
- New genres spawned by new technologies.

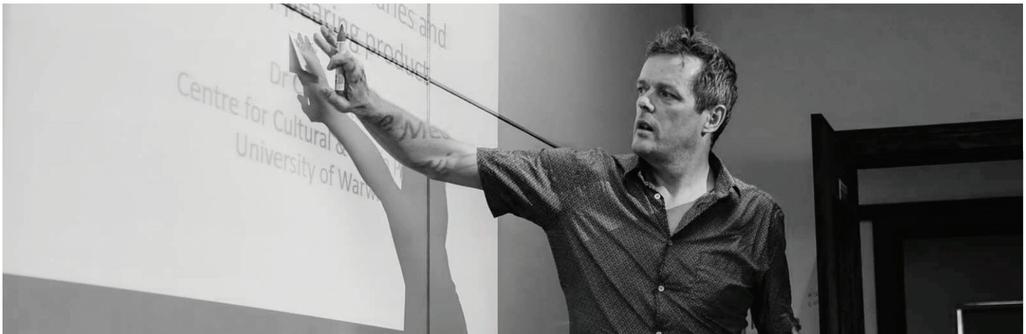
Following the previously mentioned paradigms, James Breiner reinforced them with some examples of digital investigative journalism outlets, where followers/partners/backers pay a yearly fee to support journalists' activities. It connects to what Breiner mentioned before about the importance of community rather than audience. This financial support allows these outlets to be independent and free from advertisers' pressure. Breiner clarified that in the following way: "This is not a commercial relationship, this is not a 'you pay me, I'll give you news'. This is a relationship 'we are interested in your needs and we are going to try to satisfy your needs, and we are going to try to help solve the problems that you've seen. We are going to cover news that the big media aren't covering, and that's our value proposition'."

One of the examples given by James Breiner was Aristegui Noticias, a Mexican public service media, which, according to Reuters Digital News Report 2017, is more accurate than CNN, TV Azteca or El Universal. Breiner highlighted Aristegui Noticias' level of engagement and loyalty, which allows them to have a stronger online presence (percentage of weekly usage) than other for-profit media businesses.

James Breiner ended his first speech by tackling the issue surrounding gender diversity of the management teams of Latin American digital native firms. Using some numbers from SembraMedia.org as a data source, Breiner showed that female directors and founders are present in 59% of all media, while 15% of media have only one female manager or their management teams consist entirely of women.

On September 21, James Breiner gave a second lecture called "They seem like dirty words, but journalism entrepreneurs need to say them". In his speech, he talked about the urgency for journalists to see the entrepreneurial side of the profession. For this reason, James presented some points about the future of the industry. So, as part of the entrepreneur spirit, journalism must be seen as a business which means that journalists need to pay attention to several other areas apart from just telling stories.

The 'dirty' words, that James Breiner highlighted, are as follows: money, business, marketing, customer, advertiser, profits, monetize. These words are seen as some sort of subversion of an activity considered to be a public service and its values, namely, pluralism. However, the more journalism relies on entrepreneurship, the more these words have to be updated and adopted for the sake of running the business.



CHRIS BILTON – University of Warwick **(21st September)**

Rethinking the Value Chain: The New Intermediaries and the Disappearing Product

Chris Bilton began his lecture by establishing and defining the different stages of the value chain of creative products and services: origination, development, production, marketing and distribution. A product often ends at its development stage (e.g.: film industry). The marketing stage is increasingly becoming more and more important. The distribution has radically changed due to the intervention of the big tech intermediaries. It happens in a world where record shops are disappearing and old companies like Blockbuster (the former rival of Netflix) disappeared altogether. According to Chris, the value of creative content is inherently related to what it makes a user/consumer feel. Therefore, the value of any given product/service is created only at the point of consumption.

During this presentation, the value chain was divided into two main zones: the highly uncertain zone of risk, which comprises the stages of origination, development and production, but also implies a lower financial investment; and the zone of exploitation, which includes marketing, distribution and consumption, implying a higher financial investment and lower uncertainty. According to Chris, creative industries is a very risky sector, in which artists are not well-paid, the development stage is particularly risky because of high uncertainty of the outcome: one cannot know if a product or service has value until it reaches the consumer. In addition to that, there is no strict correlation between production and consumption, it varies.

The new intermediaries such as the big tech companies like Facebook, Apple, Amazon, Netflix and Google (FAANG), have completely changed the industry structure over the last 20 years, displacing the traditional distributors. Another huge change brought by these intermediaries is that the product and content has become less important, contrary to the consumption and time. Therefore, these big tech companies have changed the way and context in which people consume culture. Context has become more important than content, in the words of Chris: "At the moment, content is not king, it is not the answer, context and the products surround, all that happens around the content it becomes where value really lies, so how and with whom and where you consume something becomes important."

After briefly referring the issue of the definition of creative industries, Chris reiterated that the value of any creative product or service depends on interpretation, which can be quite challenging from a business perspective because it is totally up to the consumer to define what is valuable and what is not. The social experience of consumption has become quite relevant too. There is a downside to it as well, as people don't value content and expect it to be free. In turn, it affects the earnings of authors and artists, which is usually quite low, especially in comparison with the massive earnings of these big tech companies that actually surpass the GDP of some countries.

Chris ended his presentation on a positive note claiming that small and medium creative enterprises have some things going for them. Therefore, according to Chris, they can overcome the challenges posed by the big tech companies' *monopoly*. For instance, the experience of buying a CD from an artist after a gig can be more rewarding than ordering it on Amazon. The same goes for going to a physical bookshop and talking to someone about books, instead of simply relying on Amazon's book recommendations. There is a way of establishing a closer relationship with users and fans, that can't be achieved by the tech intermediaries, and it is a niche that small and medium creative enterprises can certainly conquer.

MARK DEUZE - University of Amsterdam **(21st September)**

Making Media: Production, Practices, Professions, The Book Presentation

On September 21, on the last day of the event, Mark Deuze from the University of Amsterdam presented his book. He also shared insights about media and journalism and summarized key ideas of the people he had interviewed or worked with.

Mark Deuze began with saying that there is a "lack of studies that show how the media industries work from the inside out. Media research as a discipline was primarily interested in the content of media and its reception by audiences, but the production seems sort of a professional 'thing', and it doesn't really influence what people get from the media (...)". However, Deuze also pointed out that there has been a lot of production work in the past ten years, and corresponding to that production, research has also thrived. Mark Deuze numbered some recent academic books about media production and highlighted Chris Bilton's *The Disappearing Product*, which had actually been presented earlier on that day at CREIMA.

Afterwards, Deuze presented some books of his own about media industries. While trying to articulate what all media industries have in common, Mark Deuze said that most books about this topic are the same, as they address similar issues:

- "Where is my audience and why don't they pay for my work anymore?

- What am I going to do with digital?

- My business model used to be relatively stable and now it's all over the place.

- There are younger people who want to do my job for free."

Mark points that these are common issues, but all these industries came up with different solutions based on their own cases. For example, game industry appears to be incredibly effective in dealing with its audience, while the news industry is terrible at engaging its audience. It means that they can learn from each other and that was the point of the first book *Media Work*, based on 600 interviews with media professionals in four different countries.

Mark follows to his soon-to-be published book called *Making Media*, in which he tackles eleven themes that are: collapse, hybrid, affordance, technology, data, power, flexibility, precarity, affect, agency and entrepreneurship.

- Collapse – "Overall, we see an ongoing convergence of different domains, sectors and disciplines within and across the creative industries, bringing new challenges for managing media firms, business models and production processes"

- Hybrid – "Media products are becoming increasingly hybridized and are thus difficult to place into categories that can be isolated and therefore effectively managed"

- Affordance – Refers to cheaper and user-friendly technologies that offer new opportunities for digital innovation and creative potential while giving one access to a truly global market;

- Technology – Over the past twenty years consumer electronics was replaced by information technology as the most powerful sectoral force shaping how music and culture are mediated and experienced. It also gave rise to the new publishers;

- Data – A focus on big data and how it helps offering user-generated content and consumer engagement;

- Power – Content creation is no longer for professionals only, users also create;

- Flexibility – A key governing principle in media work: flexibility in the management of the organization, the workforce, work schedules and remunerations/rewards systems;

- Precarity – The change in labor conditions affects the life/work balance and brings uncertainty;

- Affect – How we relate with our creations and how we balance those feelings while trying to bring products to the market;

- Agency – Organized networks represent freelancers and negotiate with companies to secure better rates for freelancers and cheaper working spaces for companies;

- Entrepreneurship – The rise of entrepreneurship as an individual solution to overcome systemic problems;

Moving on talking about new media, Mark Deuze presented some insights over a five-year project he had embarked on in 2013, entitled *Beyond Journalism*, where he charts "the development of news startups around the world seeking to understand the ways digital journalism takes shape in the context of new organizational forms and new operational practices."

The book *Beyond Journalism* is a recognition of what it takes to be truly independent in journalism. In an interview with several journalism startups, it is what they have in common and recurrently came up during the interview:

- How they deal with precarity;

- How they make it work;

- Why they do what they do.

They deal with precarity the same way they deal with money they make, and the same way they pay their journalists, as there are many who pay very little. How they make it work is complicated, as very few actually make it work (some of the startups studied at the time no longer exist today), but the key point seems to be in being creative and flexible with how they combine their sources of revenue. Finally, why they do what they do is about digital belief, a belief that the internet will empower journalists, allowing them to set free from legacy institutions and become independent. Also, independent journalists working together is important for economic survival and sustainability. The cultural side of this independence is the freedom to pursue any stories they want and actually do good quality work. From the social standpoint, working together helps fighting social isolation, which is a side-effect of working as an independent journalist.

Mark Deuze ended his lecture by referring to two online projects, Journalism Elsewhere (journalismelsewhere.org), which is a network of scholars trying to study journalism outside its typical boundaries, and Multiple Journalism (multiplejournalism.org), which is a field guide for independent journalists.

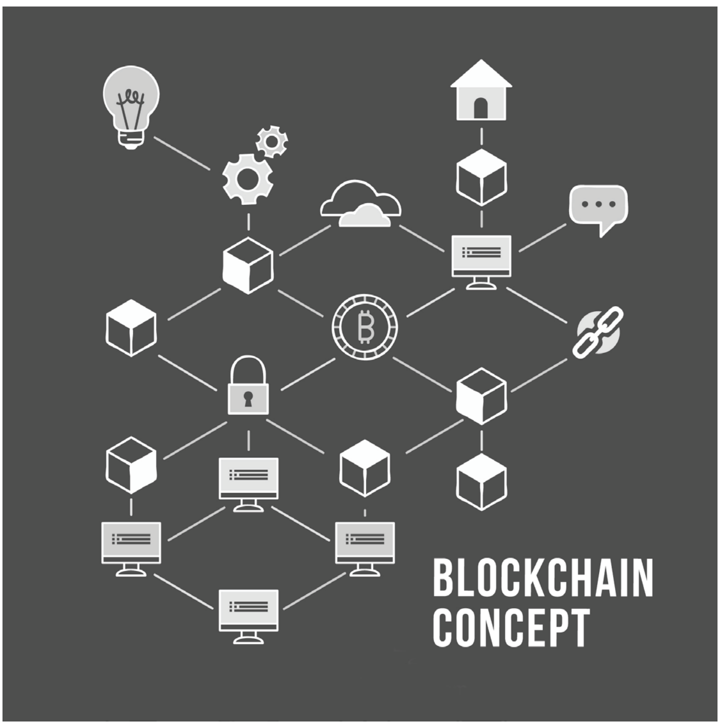
Conclusion

In this report, we aimed at summarizing the key lectures held at CREIMA, in which relevant research findings and solutions were presented regarding the future of the media and creative industries. Within this report, we also aimed at reaching a wider audience interested in these relevant topics and help this audience gain fresh insights offered by academic experts.

Blockchain Technology: Opportunities for Media and Creative Industries

by Vânia Sousa

This report aims to explore blockchain technology and its potential in social, economic and artistic contexts, from its origin to the present days. Blockchain can be an important opportunity for those authors and artists with less visibility not only to stand out in a market dominated by industry monopolies but also to take an active part in distribution and monetisation of their work. In the context of disintermediation, blockchain's allegedly wide potential promises to disrupt creative industries and the media industry in general.



Introduction

Blockchain technology is a relevant topic that undoubtedly marks modern day economy, society and technology. Blockchain positions itself as a potential solutfion for solving security and trust issues in the IoT (Internet of Things*)*. It also opens a range of different opportunities for functioning and transforming of digital markets and the internet itself.

Moreover, blockchain may soon be used for the storage of important social information, for instance, the electronic voting systems implemented in the city of Moscow based on blockchain technology assure electoral transparency (Scroxton, 2017).

Nevertheless, this technology is surrounded by controversy and difference of opinions between those who advocate that blockchain can completely amend the internet paradigm and the society in general, and those that simply condemn it to failure (Tapscott and Tapscott, 2016).

Often associated to crypto-currencies - being even mistaken with bitcoin - blockchain technology currently surpasses bitcoin's own relevance due to the possibilities of use that it offers in diverse sectors such as the financial, health, music, entertainment ones among others (Tucker, 2018).

In this sense, the author argues that it is paramount to approach the fundamentals of this emerging technology, from its origins in cryptography and in the *cypherpunk* movement, and envisage its possible implementation for the benefit of creative and media industries.

In its essence, blockchain consists of an online database whose information is stored in a successive chain of blocks. In each conducted transaction, the information is attached to the following block and a new record is generated. The latter is capable of being confirmed by every computer (knots) of the blockchain network (Casey and Vigna, 2018:13). Every registration is unchangeable, and each knot can verify the veracity and transparency of transactions. In this way, blockchain network participants trust each other not due to moral issues, but through the transparent and consensual functioning, provided by the technological system. Decentralising the confidence factor along with the concepts of disintermediation, transparency, privacy and online security arguably underlie blockchain technology (Herian, 2018). One of the most promising aspects of blockchain lies in the fight against the excessive centralisation of services and data by tech giants such as Google, Facebook or Amazon, that users place confidence in, sometimes disregarding their own privacy and property rights, in exchange for a convenient and mainly free service (Casey and Vigna, 2018:14).

In the context of blockchain technology, the market offers functioning creative and media industry products and services. This article provides an overview of these products that serve as an alternative to online services. Therefore, this article aims at answering the following questions: 1) How can creative industries and the media benefit from the blockchain technology? 2) Will the blockchain technology be able to support the activity of emerging creative artists through disintermediation?

The context the basic foundations of blockchain and bitcoin creation can be traced back to the *cypherpunk* movement[1]. This movement emerged in the end of 1980s, and according to the *Cypherpunk's Manifes-*

1 - Note that the *cypherpunk* movement differs from *cyberpunk* (a subgenre of science fiction).

to, its fundamental basis lies in the freedom of speech, free access to information, protection of online privacy through the use of technology and cryptography, as well as making *open source software* available (Hughes, 1993).

One of the basic principles of blockchain technology is to use an intelligent algorithm to solve a dilemma described in computer science, which involves the transmission of messages in a secure way, known as "Byzantine generals' problem" (Martins, 2018:46). In 2008, blockchain technology solved the issue of trust in decentralized networks through the resolution of an existing double spending fatal problem that prevented the practical validation of technology in financial contexts (Martins, 2008:39).

The academic article by the author Satoshi Nakamoto (an alias of an unknown author) published at bitcoin.org in 2008 titled: *Bitcoin: A Peer-to-Peer Electronic Cash System* (Nakamoto, 2008), ushered the first blockchain *killer app*: The bitcoin. This article demonstrated that blockchain's viability has a support of an autonomous value exchange system, arguing that the bitcoin is a "decentralized network of payments which is supported in a set of technologies and algorithms, with the generic designation of blockchain" (Martins, 2018: 55).

The blockchains may be assumed as private or public. The private ones have restricted access and/or conditional access to the source-code, being owned by closed groups or companies. On the other hand, the public ones were conceived in an open and decentralized way, allowing that any knot may be a part of the network and have the equal hierarchic level. Therefore, it is a decentralized network of computers which "use a common protocol assumed by all users that allows them to record transactions in the ledger of the database" (Preuskschat, 2017: 28). Furthermore, Preuskschat (2017:7) mentions that thanks to blockchain, the current information on the internet will reach a new evolutionary step titled "the internet of value". This internet evolution permits to grant digital representation to any store of value, including creative content, physical and intangible assets (Casey and Vigna, 2018:14), such as titles, records, certifications, archives, songs, in a digital and decentralized way, without having a third party acting as an intermediary.

Potential Benefits of Blockchain for Creative Producers

Apart from the crypto-currency universe, blockchain technology has several applications that may be used to establish the ownership of tangible assets like land and real estate objects, or to certify the authenticity of luxury, food and pharmaceutical items. In the field of intangible assets that is applicable to the creations of creative industries and media sectors, therefore the blockchain technology can constitute an important opportunity for authors with less exposure to the market, allowing them to protect their intellectual rights and receive direct and transparent remuneration without intermediaries. It may also allow these authors to directly take part in the distribution process of their creations by sharing their works and receiving income in the forms of micropayments and virtual currency, as well as by accessing the track record of how their creations, e.g. books, are used.

These transactions are made possible through the use of *smart contracts* (small, intelligent contracts between an author and a consumer) carried out in the blockchain network (Casey and Vigna, 2018:16). The blockchain network allows an attribution of a reputation system that cannot be falsified and generates a good conduct in the dealings. Some artists have already started using the blockchain technology to promote themselves. This is the case of singer/songwriter Imogen Heap who created her own blockchain - Mycelia2 (Perez, 2016), and also of singer Bjork who, in 2017, made her album available for purchase accepting crypto-currencies as a method of payment (Chapman, 2017).

Transparency of transactions related to creative work enables a producer to know who accessed the work, which profit it generated or even who accessed the content services, like small passages of a song or parts of a movie, for further use in creative products. For instance, the Basic Attention Token (BAT)3 platform, which connects authors and users through the browser Brave, opens a privileged channel of exchange between them by skirting the traditional survival scheme through advertising. By means of blockchain technology, several alternative online service platforms have been created. They gradually gained more and more users by putting the "power of cryptography in the hands of the individual" (Coelho, 2017).

For instance, the **Viberate**[4] platform is a live music ecosystem of crowdsourcing and an online market which is based on the blockchain technology. Viberate works simultaneously as a showcase for artists without agents. In addition to that, the **Sia platform**[5] also provides a decentralized storage of information in blockchain, thus freeing users from censorship or control on behalf of entities that run data centers.

The **LBRY**[6] protocol has similar goals; it is a channel for sharing digital content with a focus on video, which serves as an alternative to YouTube, while the latter is criticised by both creators and consumers for its practices of curatorship and editorial philosophy. Another domain, the **Creativechain**[7] platform, helps users sell, purchase and exchange assets between each other by avoiding any intermediaries. Creativechain acts in a transparent, public, incorruptible, and censorship-proof way by offering a system for intellectual property registration and specialised legal support. Intelligent contracts are generated for that (cryptographically signed, they guarantee an easy and economical alternative to traditional cultural and creative provision of service contracts). A similar service is offered by the **Valtitude**[8] platform, which offers its users an opportunity to search the record of inventions, works of art, contracts and NDAs,

---

2 - Blockchain Mycelia provides online services of interactive music and can be accessed here: http://myceliaformusic.org

3 - Platform Basic Attention Token (BAT) can be accessed here: https://brave.com

4 - Viberate platform can be accessed here: https://www.viberate.io/

5 - Sia platform can be accessed here: https://sia.tech

6 - LBRY platform can be accessed here: https://lbry.io/what

7 - *White paper* on the Creative Chain platform is available here: https://www.creativechain.org/whitepaper

8 - Valtitude platform can be accessed here: https://www.ipchaindatabase.com

that have been approved by the World Intellectual Property Organization. This aspect points to a significant potential of blockchain, which is in allowing the registration, look-up and validation of records of authorship or ownership in an easy, fast, unchangeable, safe and - above all - a cost-efficient way. In order to capitalise on that advantage in the context of copyright registration, such platforms as **Binded**[9] and **Ascribe**[10] allow authors to record digital images in the blockchain of bitcoin. After submission and validation of images, a client not only receives a cryptographic register which will function as a chronological proof of authorship, but is also attributed a digital certificate of authenticity for his/her work.

Conclusion

The blockchain technology currently surpasses the potential of the crypto-currency universe. To fully understand the potential of blockchain, one needs to go a few decades back, to its emergence in the *cypherpunk* movements and to the use of cryptography. blockchain can also become an alternative tool for the creative industries and the media, thanks to its functioning in a trustworthy, transparent, anonymous, fast, and particularly cost-efficient way, which artists and authors can benefit from.

The lack of regulation has been one of the main limitations to blockchain's implementation and its adoption by individual creative producers. However, thanks to blockchain creative authors can still obtain profits generated by their work directly and faster, they can also understand where and in which situations their products are used, by surveying the entire process of artistic creation.

It is evident that blockchain technology has an unsurpassable potential. Nevertheless, in order to be adopted by more people, it needs to improve and develop in several ways, from finding a solution for high data processing and the subsequent energetic impact of it, as well as the speed of access to information that, in comparison with other centralised technologies, is still inferior. Mass adoption of blockchain technology might occur in the near future not only due to its convenience, but also due to a network effect. Alongside the rise of social networks, whenever the number of users grows, to a great extent, influenced by social recommendation, the mass adoption of blockchain may be fuelled by users' conscious decision to implement better standards of individual privacy protection.

9 - Binded platform can be accessed here: https://binded.com

10 - Ascribe platform's terms of service are available from this address: https://www.ascribe.io/terms

References

Scroxton, Alex; Going mobile in Moscow: city digitisation the Russian way. [online]. (2017), [Accessed 17 jun.2018]. Available at: https://www.computerweekly.com/news/450416621/Going-mobile-in-Moscow-city-digitisation-the-Russian-way

Casey, Michael; Vigna, Paul; (2018). In blockchain we trust, MIT Technology Review (vol. 121 nº 3). Cambridge

Celho, Markswell; 7 aplicações e casos de uso do Blockchain.[online]. (2017), [Accessed. 14 jun.2018]. Available at: https://www.linkedin.com/pulse/7-aplica%C3%A7%C3%B5es-e-casos-de-uso-blockchains-markswell-coelho

Chapman, Ben; Bjork wants people to buy her new album with bitcoin. [online]. (2017), [Accessed. 14 abr.2018]. Available at: https://www.independent.co.uk/news/business/news/bjork-bitcoin-buy-new-album-utopia-digital-cryptocurrency-iceland-music-litecoin-dash-audiocoin-a8043691.html

Herian, Robert; How Blockchain Could Make Trusts More Transparent. [online]. (2006), [Accessed. 14.jun.2018]. Available at: https://www.coindesk.com/blockchain-trusts-more-transparent

Hughes, Eric; A Cypherpunk's Manifesto. [Em linha]. (1993), [Accessed]. 18 apr.2018]. Available at: https://www.activism.net/cypherpunk/manifesto.html

Martins, Pedro; (2018). Introdução à Blockchain, FCA. Lisboa

Nakamoto, Satoshi; Bitcoin: A Peer-to-Peer Electronic Cash System. [online]. (2008), [Accessed 26 apr.2018]. Available at: https://bitcoin.org/bitcoin.pdf

Peck, Morgen; (2018). Let's destroy Bitcoin, MIT Technology Review (vol. 121 nº3). Cambridge

Perez, Yessy; Imogen Heap: Decentralising the music industry with blockchain [online]. (2016), [Accessed. 19 apr. 2018]. Available at: http://myceliaformusic.org/2016/05/14/imogen-heap-decentralising-the-music-industry-with-blockchain

Preukschat, Álex; (2017). Blockchain: La Revolution Industrial de Internet, Gestión 2000. Barcelona

Tapscott, Don; Tapscott, Alex; Commentary: Five myths about the Blockchain revolution. [online]. (2016), [Accessed. 14 jun. 2018]. Available at: https://www.reuters.com/article/us-blockchains-technology-commentary-idUSKCN0Y22GC

Tucker, Ian; Blockchain: so much bigger than bitcoin... [online]. (2018), [Consult. 14 jun. 2018]. Available at: https://www.theguardian.com/technology/2018/jan/28/blockchain-so-much-bigger-than-bitcoin

Key Ideas Highlighted by Global Media Executives at the WAN-IFRA Congress

by João Neves

Source: WAN-IFRA - 70° World News Media Congress

Introduction

The annual congress of WAN-IFRA (World Association of Newspapers and News Publishers) is probably the most important annual event in the media industry. This year, for the first time, it took place in Portugal at the Estoril Congress Center on the 6-8th of June. A team working for the ongoing PIMENED project (Program of Innovation in Media, Entrepreneurship and Digital Drivers) at the University of Porto conducted a series of interviews with media executives who participated in the WAN-IFRA congress under the scientific coordination of Professor Paulo Faustino. Besides that, the team also attended multiple conference talks and presentations that took place during the congress. This report summarizes the most interesting and relevant ideas of this major event.

David Pemsel on adapting a world class newspaper to the digital age

The first conference we highlight comes from David Pemsel, the CEO of the Guardian Media Group. David was a keynote speaker at the "Leadership for Changing Times" panel. When Pemsel took over as CEO, *The Guardian* was facing a difficult financial situation which could have led to the newspaper's ultimate demise. The main point of his presentation at the WAN-IFRA conference was to outline the strategy used to bring *The Guardian* back on track. First, they had a clear and straight to the point strategy precisely based on simplicity: "One of the things that I care passionately about in relation to strategy is that it needs to be simple," Pemsel said. The point was to condense everything *The Guardian* does into just one page, thus building a new strategy based upon four key pillars: building the relationships with the readers; turn that relationship into a financial one; learn how to navigate the new advertising alignment, i.e., programmatic; learn how to control costs and balance the books in just three years.

The crucial aspect of *The Guardian*'s current success lies in "the bounds between a very strong purpose and a very clear financial framework," Pemsel said, adding that it comes along with strictly following the plan devised by him at the beginning of his tenure. One of the challenges faced by Pemsel was to find ways in which readers could contribute to the newspaper financially, without establishing a paywall. This strategy started with a simple message on different areas of the website: "This is the reality and the economics of the news business right now. You're currently using it for free. We don't want to tax your consumption, so would you possibly mind if perhaps just today make a financial contribution to this wonderful journalism that you enjoy?" Pemsel asked. This strategy, based on knowing how to target reader behavior and their predisposition to contribute, has paid off. Today, over 800,000 people help paying for *The Guardian*'s high-quality journalism as subscribers, members or contributors.

As soon as *The Guardian*'s financial stability was assured, GMG Ventures was launched, aimed at making investments in businesses that can boost *The Guardian*'s plans or disrupt them, encompassing fields like AI and advances in virtual reality among others. In conclusion, *The Guardian*'s CEO assured that: "We have no debts. We have a business model that is diversified. We have a unified group of people who not only values journalism, but understands the economics of how to fund it. And I feel we have enough things going on that we are beginning to advance into the next innovation around the corner."

Source: WAN-IFRA - 70° World News Media Congress (David Pemsel)

Miki Toliver King on the digital and subscription as a crucial revenue stream

The second talk I shall highlight was by Miki Toliver King, who is the Vice President of Marketing at *The Washington Post*. King took part in the Reader Revenue panel to discuss the best ways of establishing relations to get readers to pay for content. *The Washington Post*'s revenue strategy – similar to many other major media outlets – is based to a large extent on digital revenues. "One of the most important pieces of our revenue strategy in respect to readers has been our site," King said. For example, this is the case with *The New York Times* (see the interview with the NYT in this JOCIS issue). Attracting readers to the website is a fundamental point within the overall strategy of the WP: "We spend a lot of time focused on what is it we are doing on our site to make readers come back," King said. Another key revenue stream of *The Washington Post* is similar to the trend started with the NYT (see the aforementioned interview), which is about creating more subscription opportunities within the platform.

As of now, nearly 60 percent of the WP's new subscriptions comes from the website. King emphasized the importance associated with it: "I cannot underscore enough how important it is for us to always be testing and understanding what is it that drives new subscriptions on our site." This strategy has so far been a success. *The Washington Post* has over a million paid subscribers and an increasing readership both at the national and international levels. This shift occurred when Jeff Bezos, the founder of Amazon, bought the WP in 2013. Until then, despite the newspaper's international reputation, its coverage and audience remained largely local. According to King: "We don't think of ourselves as a local publication, we think of ourselves as one of the global publications of record." The Post has been really succeeding as both a national and an international brand, with 93% of its subscribers coming from outside of the Washington D.C. metropolitan area, according to King. During her presentation she talked about many other relevant topics, including paywalls, the marketing value of newsletters (the WP has more than 70 of them), working with major tech platforms, also with an aim of making it easier for readers to buy and renew subscription. The digital strategy has already paid off: in 2018 the WP had 88 million unique visitors per month on average, which represents an 84% increase in the last three years. This success comes from the brand value and core competencies associated with it: "Really understand what it is that your publication is known for, and where is it that most of your readers find value – double down on that, invest in that area, because that is where you are going to draw in more subscribers," King said.

Even though The Post's revenue strategy is mostly based on the digital component, its success is largely built on two traditional categories of journalism – political journalism and opinion. According to King: "Our Opinions' content is very much something that our subscribers look to and continue to revisit." Besides engaging with major tech and social media companies, The Post's strategy for attracting subscribers also relies heavily on their newsletters that work as reminders and serve as a way to interact with readers: "One, they expose the reader to our content, whether or not they come to our site, so that helps us to build a way of communicating with the reader and in some cases reminding them, giving them a brand reminder, when they are not on our site." King mentioned. As a final note on her presentation, King referred to the idea that offering every payment method available to subscribers and thus simplify-

Source: WAN-IFRA - 70° World News Media Congress (Miki Toliver King)

ing the process helped the WP to attract new subscribers: "We've tried to create a friction-free payment experience for any potential subscriber who would come to our site. So, after the end of last year, we essentially offered every payment method – both on mobile and desktop to any subscriber who comes to our site." King said.

Jason Kint and Tom Betts on the future of advertising

Tom Betts, Chief Data Officer of the Financial Times Group, spoke on "The Future: Advertising and Data" panel held at the Estoril Congress Center main auditorium on the last day of the event (8th June 2018). This session was moderated by Jason Kint, CEO of the Digital Content Next company. Betts's talk intended to address the issues related to aligning data strategy with business goals; he shared his views on how The Financial Times Group successfully managed to align itself with common goals, data ownership and platform relationships. Kint also talked about how media companies should build and strengthen their data strategy whilst many of them facing challenging times due to new regulations, including the brand new GDPR.

The revenue strategy of *The Financial Times* (as is the case with *The Washington Post* and *The New York Times*, as previously mentioned) is based on a successful equilibrium of digital subscription and ad revenue. During his talk, Betts put forward a lot of ideas. For instance, as far as media companies are concerned, Betts doesn't believe in the possibility of digital advertising to become the only source of revenue: "I can't really see a scenario where advertising alone continues to pay the bills. The challenge is not the composition of the revenue, but to find a model that will be sustainable and profitable in the long run." Furthermore, according to Betts, advertising is also an unstable source of revenue: "Advertising, as a source of revenue, intro-

Source: WAN-IFRA - 70° World News Media Congress (Jason Kint and Tom Betts)

duces volatility into the business." For that reason, Betts underlined the importance of subscription: "Reader revenue has brought more sustainability, which makes our business predictable and allows us to invest in user experience and things that matter to the reader." Therefore, *The Financial Times*' business model lies in the *perfect* mix of ad revenue and subscription.

Due to Betts being the chief data officer of *The Financial Times*, Kint asked him if data was important to see the whole picture. Betts responded that data was fundamental to understand the context and motivations of consumers, thus the FT uses metrics and measurements in order to comprehend, build and maintain readers' loyalty. When asked about the impact of social media on the FT's business, Betts replied that he didn't think of social media as an isolated *phenomenon*, instead, he believed it should be seen as a broader part of media consumption: "We want to see them as part of a broader picture of your media consumption so that we can understand where we need to dial up or down our investments. We can only do that if we understand the whole, not just the fragmented picture."

In conclusion, Betts emphasized the importance of the direct relationship with the readers and also shared a positive outlook on the future impacts of GDPR: "There's probably a system that will have to be changed to be in line with the GDPR. The way of advertising businesses is still very messy, especially the privacy regulations – it is all going to have to go. Nobody really understands what's going on in the digital marketing ecosystem. It's incredibly hard to pull apart. And that's one of the things, I think, GDPR is incredibly positive for."

Final conference – Mario Garcia's Storytelling Showfest

The final conference of the 70th WAN-IFRA Congress was by Dr. Mario García, CEO and Founder of García Media, USA. He is a habitual speaker at WAN-IFRA events. In an impressive display of his media knowledge, Dr. García presented multiple ways in which media companies and outlets tell stories nowadays – in what he described as "the journalism of interruptions and everywhereness." The main challenge for journalists is, according to García, to create content to satisfy an audience that will grant very little time to pay attention to any given news story: "How does one write, edit and design for an audience that gives us between 6 and 8 seconds before it dives into information." Despite being in the journalism business for quite a long time, García doesn't share a negative outlook upon the impact of new technologies on it; quite the contrary is true: "Storytelling is more vibrant and full of possibilities than ever before, and we have several platforms in which to present news and information." he said.

The session focused mostly on the smartphone as the main medium of access to information nowadays, with García asserting the importance "of keeping the thumb happy." He mentioned several times how it is relevant to grab readers' attention through the creation of content aimed specifically at people who predominantly read news on smartphones and don't really read print editions. Despite the predominance of news reading on the smartphone, García claims that the necessity and desire to keep up with the news of the world hasn't really changed, only the means of consumption did. To further illustrate his point, García displayed two curious images, in which people are doing exactly the same thing: reading the news. In the first picture of the early 20th century, one could see a group of people outside a building all lined up and reading a print newspaper; in the second contemporary picture, we could see a group of people all lined up outside a building and they are doing exactly the same thing, with the only difference being that they are reading news on their smartphones.

Given this technological shift, García believes that newsrooms have to adapt to this new reality and should go even further as to have teams dedicated exclusively at creating content for smartphones. He also gave several examples of how different types of technological media can cooperate to convey stories in a different way, adapting themselves to each kind of medium. Several news stories created for smartphones only were presented, with García highlighting how many of these resembled WhatsApp or Snapchat conversations, thus adapting journalism to the culture in which social networks have the biggest role ever.

Regarding the future of print media, García doesn't believe it will ever disappear (this opinion is contrary to *The New York Times'* manager – see the interview in this issue of JOCIS). In the future, what he thinks will disappear are the daily print editions of newspapers, mainly because people don't have time nor the attention span to read a whole issue of a daily newspaper, as they prefer to get their news online, mainly on their smartphones, but also on computers and tablets. Therefore, according to him, the future of print media will be in the form of weekly editions. Even though this wasn't mentioned during his presentation, a recent case in the Portuguese press seems to give reason to what García was explaining: *Diário de Notícias*, one of the old-

Source: WAN-IFRA - 70° World News Media Congress (Mario Garcia)

est publications in the Portuguese media landscape, ceased to come out as a daily print newspaper, now having only a print issue on Sundays and a daily digital edition. Another point that seems to correlate with this new format of *Diário de Notícias* and García's presentation lies in the following: people who read print newspapers during the weekends wish to unplug from smartphone notifications and the 'digital world' in general. Thus, they search for variety and for multiple supplements that are usually associated with weekly print newspapers, as is the case with *Diário de Notícias* which offers various supplements along with their print edition, changing every weekend.

García used *The New York Times* as an example to illustrate his point that multiple weekend supplements that come with the newspaper are a major reason for many people in New York City to continue to massively buy the print edition. He ended his presentation by claiming that he wished he was younger in order to be able to take part in adapting storytelling to the new technological landscape in the long run.

As a curious note, on his blog (https://www.garciamedia.com/#blog), García provided his personal account on Portuguese daily newspapers, acknowledging its variety and the necessity to fight for readers' attention. Afterwards, he mentioned the design of Portuguese newspapers: "The variety includes the down-market titles with big headlines and bright colors, as well as the classic-look newspapers, or, in the case of the newspaper *I*, a design that is contemporary and elegant."

Conclusion

In this brief account, *I* aimed at summarizing some of the many rich ideas voiced during the WAN-IFRA event in June in Estoril, Portugal. It was an impressive event that was organized mainly with the help of the Portuguese Press Association. The general impression is that the media industry, including print outlets, isn't dead and it has the tools to survive and strive in a world marked by technological innovation and disruption.

Source: WAN-IFRA - 70° World News Media Congress

XESCOM

Rede Internacional de Investigación
da Xestión da Comunicación

IMMAA PIMENED U.PORTO FLUP FACULDADE DE LETRAS UNIVERSIDADE DO PORTO

25-27 APRIL 2019

PORTO, PORTUGAL

FACULTY OF ARTS AND HUMANITIES OF UNIVERSITY OF PORTO

XESCOM: IV INTERNATIONAL SYMPOSIUM ON COMMUNICATION MANAGEMENT

COMMUNICATION, MEDIA, CREATIVE INDUSTRIES AND ENTREPRENEURSHIP IN THE DIGITAL ERA

Organized by XESCOM (Red Internacional de Investigación de Gestión de la Comunicación), in collaboration with IMMAA (International Media Management Academic Association), PIMENED (Project of Innovation in Media, Entrepreneurship and Digital Drivers) and University of Porto

XUNTA DE GALICIA · USC · Universida de Vigo · UNIVERSIDADE DA CORUÑA

Early Bird Registration
(until March 10, 2019)

Researchers of a general nature: 100€
Researchers members of XESCOM: 75€
Masters or PhD students: 75€

Late Registration
(until March 20, 2019)

Researchers of a general nature: 125€
Researchers members of XESCOM: 100€
Masters or PhD students: 100€

JUCIS · media XXI · CIC.DIGITAL CENTER FOR RESEARCH IN COMMUNICATION, INFORMATION AND DIGITAL CULTURE · CITCEM CULTURA, ESPAÇO E MEMÓRIA · NORTE2020 · PORTUGAL 2020 · UNIÃO EUROPEIA Fundo Europeu de Desenvolvimento Regional

International Symposium on Communication Management (XESCOM)

From 25th to 27th October 2019

For more information please visit www.xescom.com

XESCOM is a scientific collaboration project funded by Consellería de Cultura, Educación e Ordenación Universitaria of the Government of Galicia (Spain), launched in 2014 and involving nearly one hundred researchers from universities around the world. Since 2015, XESCOM has organized an international symposium to promote the meeting of researchers in the field of communication and other related areas. The 2019 edition, will be hosted in the city of Porto in Portugal.

This symposium was structured in order to promote forums dedicated to scientific research and analysis of the current situation of communication management in the media and in business and in institutional organizations, from a theoretical, instrumental and empirical perspective. In this sense, it is intended to address issues related to communication management, technological advances, social responsibility of the media and other issues that, every day, constitute a constant challenge for professionals in the area of communication and affiliated areas.

Important Dates:

Submission of abstracts: until February 10, 2019

Communication of the evaluation of abstracts: until February 20, 2019

Full communication submission: until March 10, 2019

Early registration: until March 10, 2019

Late registration: until March 20, 2019

Conference: from April 25 to 27, 2019

Annual Conference of the International Media Management Academic Association (IMMAA)

From 4th to 6th October 2019

For more information please visit www.immaa.org

In 2019, IMMAA Conference will be hosted by Northwestern University in Qatar, between the 4th and the 6th of October. IMMAA (International Media Management Academic Association) is a global association of academics researching critical issues of media management with the goal of improving practice and understanding of media markets and institutions for the ultimate benefit of media managers and the students who will be the media managers of the future. Its diverse international membership fosters and promotes an appreciation for the differences among countries and cultures that contribute to characteristics that differentiate national media markets and shape relationships among them. Past conferences were held in Chicago, San Francisco, Saarbrücken, New York, Lisbon, Pamplona, Moscow, Seoul, Sao Paulo and Stuttgart.

Research Topics:

- Value Creation and Business Models
- Disruption and Innovation in Media Markets
- Impact of latest Trends and Technologies
- Emerging Media Markets
- Media Entrepreneurship and Small Companies
- Venture Capital, Crowdfunding and Media Financing
- Cooperation and Competition in Media Markets
- Media Audience and Research Metrics
- Media Business Research Methods
- Mergers and Acquisitions (Tuck-in and Bolt-on)

Important Dates:

August 15, 2019: Deadline for submitting abstracts and panel proposals

August 31, 2019: Notification of abstract or panel proposal acceptance

August 15, 2019: Deadline for reduced fee (early-bird registrations)

September 15, 2019: Final registration deadline

October 4, 5 and 6, 2019: IMMAA

INTERNATIONAL MEDIA MANAGEMENT ACADEMIC ASSOCIATION

4TH TO 6TH OCTOBER 2019
Northwestern University in Qatar

IMMAA Conference - Qatar

Media Systems, Creative Industries Management and Business Sustainability

NORTHWESTERN UNIVERSITY IN QATAR

INTER

VIEWS

The New Challenges Faced by Media Business Models. An interview with Michael Greenspon

by João Neves

JOCIS interviewed Michael Greenspon, the general manager of NYT Licensing and print innovation for The New York Times at WAN-IFRA conference.

Do the main sources of revenue of *The New York Times*'s business come from a traditional, digital or a mixed model?

Michael Greenspon: It's a mixed model. Right now I would say we're roughly 60% print, probably 35% pure digital and 5% other. The other way we cut it is subscription, plus advertising, and we're probably 2/3 subscription.

What are you currently investing in the most: in the traditional, digital or in a mixed model?

We are investing more in digital.

What are the sources of revenue of your business?

Our biggest source of revenue is from subscriptions. The second largest source is advertising, and then we have a mix of other revenue streams, including licensing, affiliate revenue and rent.

Has the impact of the digital changed your sources of revenue?

Absolutely. We now have digital sources of revenue. The print sources have declined.

How important are potential partners for the success of your business model?

We need strong relationships with the platforms for a level of success. They are also competitors of ours, so it becomes an interesting relationship.

What kind of partners do you consider the most important to your business (technological partners or industry/traditional partners)?

To the overall company, I would say the technological partners.

What is your value proposition?

It's high quality journalism worth paying for.

Is your value proposition mostly based on your relationship with consumers, with technological distribution channels or with the rest of the media industry?

I would say consumer. We're a consumer-first business, so that relationship is far and away the most important.

Michael Greenspon is the general manager of NYT Licensing and print innovation for The New York Times. Michael has over 20 years of media business experience.

Are there any intentions to integrate contributions from the academic world into your business decisions in terms of R&D?

We're certainly knowledgeable and aware of the research that's going on, so it's a factor in the decision-making.

How do you integrate the academic contributions into your company in terms of R&D and decision-making?

It's building the knowledge base, so it's rare that it will be the tipping point in the decision. But it's helpful to see what direction people are moving or what direction people are thinking about.

Within your strategy to engage with your media consumers, what do you value the most: communication, product or easy access to the service?

We are the service, so it's that relationship.

Has the new General Data Protection Regulation (GDPR) caused any difficulties for the knowledge and creation of the profile of your consumer?

It's unclear at this point because it's brand new. It certainly has created a lot of work, but it's unclear what the actual impact will be.

Has the new advertisement alignment had an impact on the way the NYT buys or sells advertising space?

Absolutely. We are selling a lot less directly, so again, historically, we're a relationship business and that was true when it came to the consumer and the advertising side, where we had very personal relationships with the owners of the companies that were advertising. Now, a lot of it is programmatic, a lot of it is through Google and others. It is changing completely.

Are distribution networks or models that you use for distributing your product/ service suited to these changes in advertising?

I think so. For us, again, putting the licensing aside, the core business is about attracting people to our site, and it's less about distributing to other sites.

Are these distribution networks suited to your target audiences? Do you think something needs to be changed at this level?

I think so. I think that the relationship between media companies and the platforms has to evolve. I'm not quite sure in the face of GDPR how that evolves, but it needs to be a more symbiotic relationship.

“We need strong relationships with the platforms for a level of success. They are also competitors of ours, so it becomes an interesting relationship.”

How have your funding and income sources changed in the past two years?

Increasing subscribers and decreasing advertising.

Are these changes in line with the market or not?

We're outperforming the market.

What are the main challenges faced by your media company's business development? Are they technological, regulatory or commercial?

Commercial. We are a traditional print business. We are moving to a digital business and we're succeeding far more than everybody else, but we also have a fifteen-hundred-person newsroom. Right now our digital revenue is not sufficient to support that, so we need to grow it exponentially for the eventual day, hopefully very far into the future, when print is not there.

When do you think that will happen?

I say, back in the early 2000s, the chairman of our company famously said print would be gone in five years. Probably five years ago, we said print would be gone in ten years. I think I'll go to fifteen years, pushing it further out - five, ten, fifteen.

What is the importance and challenges posed by Artificial Intelligence and robotics technologies to your media business?

I have no idea. I think it will be more opportunity than challenge. It will help us with research, perhaps reducing costs.

What are the most important characteristics of the success of your business model? We've got a few options for you to choose from: technological innovation; relationship with the consumer; brand value; open innovation and co-creation, and others (please specify).

I'd say it's a couple of those. It's the relationship with the consumer but, at the end of the day, that is based on our brand value.

Does your business model require funding? If so, where will you find such funding?

We're self-funded.

In your opinion, what is currently changing in terms of management, marketing and administration of media companies?

It's less so in our company, but I think the primary place is a change in our marketing as they all switch from an advertiser supported model to a subscriber one. We did that ten years ago, so we're ahead, currently.

In your opinion, what is currently changing in terms of the work of journalists and content producers?

We're asking our journalists to fundamentally do the same thing, but in more ways. For the last 150 years, we have asked our journalists to protect democracy, to uncover hidden truths. We're still asking them to do that; we just now want them not only to write about it, but also to tweet about it, to go on TV and talk about it, and take out their camera and take a picture of it.

The Management of the Creative Industries Requires a Different Approach. An interview with Chris Bilton

by Dinara Tokbaeva

The leading creative and media business management scholar and culture researcher argues that strategy and creativity are and should be interlinked processes. Chris talked about various approaches to management and leadership of creative industries based on his research and experience, as well as how independent cultural producers can change their approach to the job in the fast-paced, digital environment.

How different is creative industries management compared to other sectors?

Chris Bilton: In the first place, defining 'the creative industries' is notoriously difficult – for example, I don't find the UK government definition very helpful, with its emphasis on 'individual creativity, skill and talent' and 'generating and exploiting intellectual property' – are there any industries which don't use individual talent and intellectual property in some form? I prefer to focus on Bourdieu's notion of 'symbolic goods' – what makes the creative industries and their products different from other types of industry is the fact they are dealing with ideas, images and experiences whose meaning and value depends upon an act of interpretation by the receiver. That simple definition is at the core of all the difficulties of managing the creative industries – unpredictability and subjectivity in the processes of production and consumption, consumer co-creation, short product life cycles, sustainability of project-based enterprise.

So I do think management of the creative industries requires a different approach. Managers need to be more adaptable, inclusive and interactive. They need to have excellent people skills and be able to work with small teams. They also need to understand the nature of the products or services they are dealing with – not just as 'products' but as carriers of symbolic meaning. This means that some of the artistic and creative sensibilities, which are often undervalued in our schools and universities, become integral to the tasks of management.

> **"Management of the creative industries requires a different approach. Managers need to be more adaptable, inclusive and interactive."**

Dr Chris Bilton is an Associate Professor – Reader at the University of Warwick and the founder of MA in Creative and Media Enterprises. Prior to joining academia, Chris worked as a writer, performer and arts manager in the UK. He was the Director of the Centre for Cultural Policy Studies from 2008 until 2014. Chris currently teaches Creativity and Organisation and Marketing and Markets at Warwick. He is an author of several volumes on creativity and regularly publishes in academic journals.

In your most recent book – *The Disappearing Product: Marketing and Markets in the Creative Industries* (2017) – you've argued that the new generation of intermediaries such as Google, Facebook, Amazon and Apple monopolise customer attention and may even devalue cultural products. What is the way for cultural producers to reclaim back their place in the current creative economy?

In the book, I argue that cultural producers must recognise that their ideas only become valuable through the act of consumption. Indeed you could argue that cultural products don't really exist outside the experience of consumption. This means that cultural producers need to take an interest in how their work is experienced by consumers – and if the consumer experience is effectively 'owned' by big tech companies (the so-called 'new intermediaries') then we have a problem. The solution is for cultural producers to reclaim that relationship with the consumer. To put it crudely, marketing is too important to be left to the intermediaries – cultural producers need to get involved too. In the book, I give some examples of how artists – especially musicians – are doing this, developing exciting new models of co-creation and audience experience through marketing.

In your 2009 book chapter on creativity in advertising, you talked about strategic creativity. Could you please expand on that by giving examples from various creative industries?

My co-author, Steve Cummings, and I felt that the separation of 'creativity' from 'strategy' was damaging to both – and also not a true reflection of either. Strategy is (or should be) creative, and creativity is (or should be) strategic. When a novelist is deciding which of several ideas to work up into a story, and which of several possible stories to work into a novel, that is a strategic decision-making process, based on her or his capabilities and understanding of her or his readership. When a director is rehearsing a play, they are making strategic interventions in the creative process of the actors, and connecting this into their own understanding of the play, the collaborative relationships with the designer and the lighting designer, the theatre building and especially with the experience of the audience. Again that is a strategic process – we argue that theatre direction and rehearsal offer valuable lessons in strategy and leadership, not just for the arts, but for any complex organisation.

What do you consider to be the biggest challenge(s) for creative organisations – motivation, managing innovation, coming up with a strategic plan or something else?

The biggest challenges are surely around the delivery and dissemination of the work. Ideas are cheap, ideas are easy – we are never going to run short of new ideas in the cultural and creative industries, the motivation and the capacity to innovate are always there. But none of this matters if we can't get people to take notice, if we can't get those innovative ideas to market. Historically, cultural policy has concerned itself mainly with production subsidy, based on a perception of market failure – people value cultural products, but they aren't prepared to pay for them. The bigger challenge is to connect cultural production with access to markets and finance (the two tend to go together – consider for example a film distribution deal). So building an infrastructure for distributing cultural products becomes a massive challenge for cultural policy – one that is currently being taken on instead by the likes of Google and Facebook.

The other huge challenge is a lack of diversity in the workforce – because of an assumption that creative work should be badly paid or unpaid, because of the importance of networking and knowing the right people to progress in a creative career, because a lot of 'high culture' especially is playing in to an audience of initiates rather than playing out to a wider public, the talent pool has become smaller and the barriers to entry for people from the 'wrong' background ('wrong' class, 'wrong' colour, 'wrong' gender) have grown higher. There has been a lot of interesting (and slightly depressing) research on this issue over the past 5-10 years. Again this seems like a challenge for policy initially, but creative organisations have a part to play too in opening up to a wider world of artists and audiences.

Could you please shed a light on the current project you are working on about the new forms of organisation in the creative industries? What are they and to what extent are they market- and/or industry-specific?

My current project is looking at new forms of creativity rather than new forms of organisation – together with my two co-authors, we are looking at how different, plural 'creativities' can work together combining different competencies, pathways and cultures. As for new forms of organisation, I think there are two challenges – how to balance individualism and autonomy with a unified organisational identity or brand, and how to balance one-off projects with continuity and growth. The interesting solutions are often in the form of networks – organisation as a pattern of decisions between people rather than as an institution. The way the advertising agency has evolved into a much more fluid set of relationships and partnerships rather than a one-stop shop might be one example of this.

What is the negative consequence of creativity, if any, for organisations and individuals?

In western culture, creativity is often equated (wrongly) with a restless pursuit of novelty and change for their own sake. This leads individuals to pursue a self-destructive dream of non-stop innovation or to become narcissistic self-promoters instead of working with others to build value. It leads some individuals to feel that they cannot contribute, because they don't conform to the stereotype. For organisations, there is a danger of casting aside the supposedly 'uncreative' ideas, products or staff members – only to discover too late that these were what allowed the 'creative'

parts of the organisation to function properly. Novelty without value is not really creativity. But we have allowed ourselves to believe that 'thinking different' and radical innovation are the key to unlock success in the creative economy. Actually, creativity is relational – definitions of what is novel and what is valuable depend upon a social and cultural context, and creativity must work within existing paradigms and values in order to change them.

How has the creative process changed for creative workers due to the rise of digital technologies? Which industries are the most and least affected?

The biggest challenge is perhaps the idea of 'free content'. Digital technologies of production and distribution reduce the marginal costs of reproducing and disseminating content to practically zero. Today we are used to consuming digital content – text, images, video, audio – without paying for it. And as Chris Anderson observed, it is very hard to compete against 'free'.

Of course, 'free' is an illusion. First, the person who wrote that book or made that music still needs somehow to be paid – the price may be zero but the cost of producing the content has not magically disappeared. Secondly, when we consume something for free, we become the commodity and we are paying for consumption with our attention and our time and our personal data. Unfortunately, these assets are not being funnelled back to pay the content creator, instead they are being syphoned off by third parties – the new intermediaries like Facebook and Google, which now have a near monopoly on digital advertising and online search, and whose market valuation is higher than the national GDP of many countries. Meanwhile, the earnings of writers and musicians continue to decline – in recent European surveys, the average wage of a published writer is less than the minimum wage. Can we afford for literature and music to become a part-time hobby rather than a viable living?

Music was the first industry to be affected by the phenomenon of free content, mainly because of the technologies of the MP3 format (originally intended to compress video, but applied to audio) and of file-sharing networks, represented by Napster and its imitators from 1999 onwards. Actually, music has also been one of the first industries to adapt, prioritising live music over recorded music and finding new ways to extract value through merchandising, image rights and fandom. The problems have not gone away, but arguably today's music industry is further down the road of adapting to the 'disappearing product' than many other creative and media sectors.

The newspaper industry is perhaps facing the biggest existential threat today, not least because the threat of 'free news' has been combined with the threat of 'fake news'. Hopefully consumers and governments are waking up to this, and realising that if we want to have a viable, functioning, accountable public sphere, we are going to have to find a way to pay for it, whether that's through subscription to 'bespoke' news services like Byline in the UK or the paid content of respected institutions like the FT or *Wall Street Journal,* or through public service broadcasting. The worrying part is a potential digital divide between those who can afford to pay for high quality, truthful journalism and those who cannot (or choose not to).


Acrylfarb
36 ml
302 Scharlach
36 ml
215 Zitron
36 ml

REV

NEWS


SELLING
DIGITAL
MUSIC
FORMATTING
CULTURE
JEREMY WADE MORRIS

Selling Digital Music: Formatting Culture

Jeremy Wade Morris

by Sam Babin

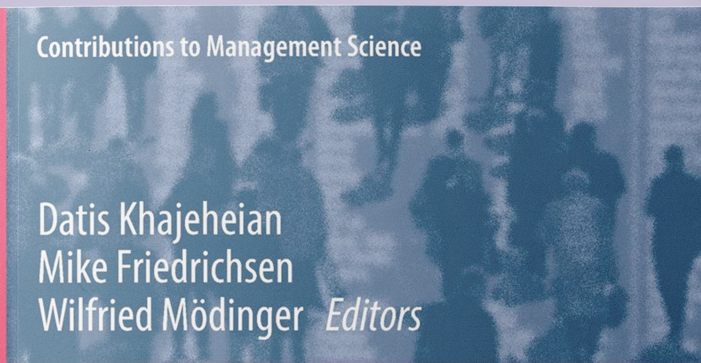
In **Selling Digital Music, Formatting Culture**, Jeremy Morris explores the digitisation of popular recorded music and its impact on the music industry. Morris highlights key points in the history of the distribution and consumption of recorded popular music from the 1980's to the 2000's to demonstrate that the transition from physical objects, like CDs, to digital music files was not an accident, but an intentional project that required great effort from hobbyists and technologists.

The book contains case studies of five different technological developments, which are identified as the most impactful contributions that led to the reshaping of the music commodity. These advancements and trends, organized into the five main chapters of the book, are software media players, metadata, file sharing, online music retailing and cloud computing. To investigate the technologies, Morris analyzes archived content, including academic research, trade articles and popular press materials. The case studies pay close attention to the labor that went into the creation of these significant developments.

Even though it is a common belief that digital music files are cheap, plentiful, and degrading to the quality and value of the recorded music commodity, the author argues that digitisation did not disrupt the role of recorded music as a commodity, but transformed it into something rich, special, and complex. Morris emphasizes that digital music files are tangible objects that, interestingly, become so through the use of technology. This work clarifies that although digital music files seem different from other physical objects, like vinyl records and CDs, they do have material attributes, such as interfaces (e.g., computers and digital portable devices) that are integral and required to access digital music files.

Selling Digital Music, Formatting Culture focuses on the digitisation of popular music, but provides insight into the more general issues of technological convergence and the transitional nature of cultural goods. It offers a revisualization of cultural commodification by shining light on the transformation of cultural commodities into digital objects. The knowledge this project provides can be applied to many areas beyond popular music because digitisation is currently occurring across many other cultural industries. Beyond a focused explanation of the complex history of digital music distribution and consumption, Morris explores wider issues related to industry, commerce, and popular culture.

Contributions to Management Science



Datis Khajeheian
Mike Friedrichsen
Wilfried Mödinger *Editors*

Competitiveness in Emerging Markets

Market Dynamics in the Age of Disruptive Technologies

Springer

Competitiveness in Emerging Markets: Market Dynamics in the Age of Disruptive Technologies

Datis Khajeheian, Mike Friedrichsen, Wilfried Mödinger

by Dinara Tokbaeva

In 2018, Springer published one more hardback in its Contributions to Management Science series: **Competitiveness in Emerging Markets – Market Dynamics in the Age of Disruptive Technologies**. Editors of this volume are Datis Khajeheian, associate professor of media management at the University of Tehran; Mike Friedrichsen, professor of media economics and media innovation and founding president at Berlin University of Digital Sciences; and Wilfried Mödinger, professor of marketing and management at Stuttgart Media University.

This book understands emerging markets in both conceptual and geographic terms. In general, it analyses the opportunity identification and exploitation in emerging markets with some unmet needs. In addition, some of the chapters focus on cases of how entrepreneurship was disrupted by digitisation in Latin America, Central and Eastern Europe, Iran and other emerging markets. While the book centres on competitiveness on an organisational level, each chapter takes a closer look at a specific industry case. In terms of industry range, it offers the most up-to-date account on the competitiveness of such firms as TV companies, digital music and film distributors, print media holdings, content producers, tech start-ups, multinational beverage companies, football businesses, auto insurance companies, commercial banks, and health organisations. Conceptually, the book looks at different stages of firms' growth and challenges associated with each stage, it delves into how personalities of entrepreneurs affect business effectiveness, what business strategies female entrepreneurs employ, and what challenges big data brings for SMEs and large organisations.

By all these means, this collection of 29 chapters offers a multi-dimensional insight into competitiveness in different markets. It's a huge advancement to the field of knowledge on the competitiveness of enterprises as it explores three interrelated theories: theory of the firm, theory of strategic acquisition, and theory of niche markets. Thus, the selection of inter-connected chapters can satisfy the most rigorous mind looking for answers to navigate one's way in a fast-paced digital environment. Recommended for executives, senior and junior managers wishing to expand their knowledge on boosting competitiveness in highly-volatile industries such as telecommunications, healthcare and others, the book is a rich source of information for academics and policy-makers whose field of expertise is entrepreneurship in different markets. The target audience also includes university students at undergraduate and graduate levels, including those in departments and schools of business and management, entrepreneurship, innovation/technology, communication, media studies, gender studies and sociology. Furthermore, the reading will be relevant to courses in globalisation, industrial organisation, organisational behaviour, marketing, and advertising.


media xxi
CONSULTING, RESEARCH & PUBLISHING
JOURNALISM
WITH A FUTURE
Iván Puentes-Rivera
Francisco Campos-Freire
Xosé López-García

Journalism With a Future

Iván Puentes-Rivera, Francisco Campos-Freire, Xosé López-García

by Mónica Rodrigues

Journalism with a Future studies the changes provoked by the digital revolution in communication and information which called into question the survival of traditional media and traditional business models.

Technological development allowed information to be instantaneous. It is no longer scarce, on the contrary, it is superabundant to a point that produces an excess of stimulae, making it harder and more overwhelming for consumers to understand facts. This ease of access to contents put a stress on many newspapers, forcing the closure of historic titles and the underemployment of great professionals. For the past few years, the Internet has brought a new narrative into communication with search engines, links and social networks that broadened interests, making the production of journalistic pieces quite complex.

Thus, it is crucial to understand new methods of making journalism and business models, for which academic researchers are essential. This is what this book sets out to do. Over ten chapters, various professionals from Spanish, Portuguese and Mexican universities present as solutions an improvement of techniques of production and fact-checking; independent fundraising; a change in attitude – more open, more alert and more flexible; collaboration between journalists, researchers and readers; and last but not least, an update of narrative techniques, which implies the inclusion of and adaptation to the new technologies, by making the most of cutting-edge audiovisual formats, virtual reality and transmedia.
However, the book also highlights that while keeping up with the ever-changing course of communication, journalists must never lose sight of the core characteristics that distinguish journalistic pieces from other texts and at the same time must guarantee the worth, quality and truthfulness of the content.

Journalism with a Future's tone is hopeful, although realistic. In a time when new information surges by the second with free access by simply clicking on a link, and when technologies are ever changing and by tomorrow something new and fresher will be invented, challenges and doubts naturally arise. However, the writer must trust that the reader wants to be correctly informed and prefers quality over quantity.

Published by Media XXI both in English and in Spanish **(Periodismo con Futuro)**, in order to reach a wider range of readers, coordinated by Iván Puentes-Rivera, Francisco Campos-Freire and Xosé López-García, **Journalism with a Future** is an extremely entertaining and informative reading for anyone interested in the areas of journalism and digital communication.

media XXI

Moved by knowledge

Media XXI is an international independent publishing house specialized in the area of communication, media, leisure, creative and cultural industries.

We offer the following services:

Translation and Proofreading

Supported by our collaborators and a network of international translators and highly qualified proofreaders specialized in the field of communication and social sciences that collaborate in the process of publishing and text translation.

Publishing and printing on demand

We provide printing services for small and large print runs, from 80 to 80 000 copies.

Author's edition and custom publishing

It includes, for example, the collecting, selection and publishing of contents.

Publishing in other languages

We publish in several languages, namely in English, Spanish, German, French, Portuguese and Mandarin, ensuring international marketing and sales.

Books and Scientific Publications

- Publishing of books and university publications
- Book and academic magazine distribution
- Educational and scientific work publishing

MediaXXI Publishing Process

1. Editing: we employ a team of qualified professionals, able to edit and suggest improvements to original works.
2. Design: we carefully paginate and design book covers and contents. Authors are welcome to collaborate in this process, by providing images, illustrations, prints, etc.
3. Support: we deal with all administrative aspects related to book publishing, from registration to legal deposit copies and ISBN.
4. Printing: the last step in book production, through various printing partnerships, including digital printing, ensuring publishing quality.
5. Promotion: we plan and execute all local and global communication and marketing tasks, as well as distribution, using the most appropriate channels, such as book shops, stalls, direct sales or digital platforms.

Other MediaXXI services

- Courses, training, seminars and conferences

- Executive courses and advanced training
- Professional training and modular courses
- Seminars, conferences and academic events

- Corporate communications and marketing

- Corporate magazine and newsletter publishing
- Support in contents design and writing
- Marketing and corporate communication plans

CIC.DIGITAL PORTO
CENTER FOR RESEARCH IN COMMUNICATION, INFORMATION AND DIGITAL CULTURE

For more information please visit:
http://cicdigitalporto.letras.up.pt/
or http://cicdigitalpolo.fcsh.unl.pt

The CENTER FOR RESEARCH IN COMMUNICATION, INFORMATION AND DIGITAL CULTURE (CIC·DIGITAL) is an inter-university and multi-located research unit devoted to research in Communication and Information Sciences.

It brings together four previous R&D units accredited by the Foundation for Science and Technology (CIMJ and CECL/FCSH, CETAC.MEDIA/FLUP+UA, CICANT/ULHT) and it is organized into four poles hosted in four of the most prestigious Portuguese universities: Faculty of Social and Human Sciences of the Nova University of Lisbon; Faculty of Arts, University of Porto; Aveiro University; Lusófona University of Humanities and Technologies.

The CIC.Digital corresponds to a specific and fundamental redesign of communication sciences,

requiring the gathering of knowledge and synergies between the communication sciences and the sciences and technologies of information and communication, which became their infrastructure and one of the meta-languages or the prevailing conditions of knowledge.

The consistency of CIC.Digital project is reinforced by the transversality assumed by media studies, weaving in a very significant way the theoretical and applied working program of the various research groups, under 4ICOM – a convergent agenda of transversal approaches, crossing the main axes between the different thematic lines and groups of research.