



Workshop on “Leveraging Technological Change: The Role of Business Models and Ecosystems”

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Abstract handbook

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Keynotes

“Business model to support innovation or innovation on Business Model: Some lessons from the creative industries”

Prof. Pierre-Jean Benghozi (École Polytechnique and CNRS)

Abstract: In recent times creative industries management seems to have been reshaped by the influence of Information and Communication Technologies (ICTs). Constant experimentation and innovation in the business model (BM) has become one of the key sources of firms' competitive advantage. As a result, traditional BMs, which were dominant and stable in their respective industries, have given rise to multiple disruptive BMs and a variety of arrangements which successfully co-exist in the same segments. Moreover, one can see that in many cases the competition is mainly centered on the BM innovation rather than on the content, product and service itself.

A body of literature underlines these important current transformations supported by Internet and the ICTs. New technologies and the development of online markets have created opportunities for new dematerialized transactions and services, for market extension and globalization, for the design of new offerings, and for new customer relations. New configurations call for new strategies and new ways to build their competitive positions. The range of organizations is accompanied by the emergence of new actors - digital platforms - corresponding to as many different ecosystems

In order to gain access to new markets and to adapt the business to the new context, the actors try various innovative solutions. This central role of the BM and the ecosystems in ICT-related developments and corresponding innovative strategies was observed in recent years in the literature.

The creative industries are quite symptomatic of that standpoint since they became widely precursor of new business models of the Internet. The case of music, press or audiovisual exemplify systematic strategies meant to innovate and explore alternative business models, capable of ensuring sustainability and profitability. They pinpoint, in particular, four major common trends: the crossbreed of luxury and low cost strategies, the growing role of aggregating and distribution platforms, the customer control and economy of branding, the key part of free- economics in most dominant BM

Keywords: Business models, Innovation, ecosystems, creative industries

Bio: Pierre-Jean Benghozi graduated in Engineering, Management studies and Economics (PhD). He developed, since the early eighties, a pioneering research group on Information Technology, Telecommunications, Media and Culture. His current projects draw attention to the adoption and uses of ITC in large organizations, the structuring of ITC-supported markets and supply chains, the characterization of competitive business models, expressly in creative industries. He published on these topics more than 130 academic publications in French and

English. Chairman of the Scientific Interest Group dedicated to Culture - Media and Digital, board member of scientific committees in highest French institutions and numerous international scientific conferences and academic journals, Pierre-Jean Benghozi taught regularly in major French and foreign Universities. He developed, in an educational partnership jointly operated by the best French Universities and Grandes Ecoles, the international graduate program of excellence master IREN (Network Industries and Digital Economy). He is frequently requested as an expert by public bodies and private firms.

Research interests: Digital Economy and creative industries, Business models, Innovation systems

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“Reality check: What digitisation means for business models and ecosystems”

Prof. Thierry Rayna (ESG Management School)

Abstract: Digital technologies are highly disruptive to ecosystems and business models. As more and more industries ‘go digital’ (including, recently, manufacturing), it is crucial to understand precisely the changes these technologies bring about. Indeed, those changes are far too often underestimated and, in many industries, old business models are simply ‘brushed up’ under the false assumption that it is still ‘business as usual’. During this talk, we will see how digitisation radically alters the very economic nature of objects and how this, in turn, impacts competition and the role played by consumers in the ecosystem. The long-term effects of digitisation on society will also be discussed. Finally, the role of business model innovation in accommodating these changes will be emphasised.

Keywords: Digital Economy, Business Models, Prosumers, Competition, Social Change

Bio: Thierry Rayna is a Professor of Economics at the Department of Economics & Finance and Chair of Digital Business at the ESG Management School. He is also an Affiliate Professor at Imperial College London and Invited Professor at Moscow State University of Economics, Statistics and Informatics. He is currently Associate Editor of the Int. J. of Manufacturing Technology and Management (IJMTM). Thierry Rayna is a Digital Economy expert. His research focuses on the disruption of ecosystems and business models brought about by digitisation, in particular, and new technologies, in general, mainly in relation to the Creative and Cultural Industries. His research activities have led him to serve as an advisor for policy makers (e.g. U.S. Federal Trade Commission, Ministère de la Culture et de la Communication, European Patent Office) and major companies of the media, telecommunication and cultural industries. He is also a mentor of a few start-up companies. Over his career, Thierry Rayna has contributed to attract over €600K in research funding. His most recent research investigates the transformative effect of 3D Printing and additive manufacturing, Internet of Things, and Biomimicry.

Research interests: Digital economy, business models, ecosystems, creative and cultural industries, innovation, entrepreneurship.

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Sessions 1: The Role of Business Models and Ecosystems

“Changing Business Models in the Creative Industries”

Dr Nicola Searle (Intellectual Property Office)

Abstract: This research examines the business model response to the change from analogue to digital in the creative industries. Looking at both traditional and emerging business models, the project focuses on three sectors: television, computer games and music. A series of six case studies, two from each sector, provide illustrative cases of the business model response to challenges to enforcement of copyright and the advent of digital technologies.

This paper reports on the findings of qualitative research into business models comprising six case studies from 25 semi-structured interviews, participant observation and literature sources. The research incorporates a literature review to establish the business model methodology and analyse the current state of research. The research findings show that the creative industries are in a state of business model experimentation and that the roles of intermediaries are changing. Furthermore, the evidence suggests that the Intellectual Property (IP) framework may be secondary to other influences on business models.

Keywords: copyright, computer games, digital media, creative industries, music, film

Bio: Nicola Searle is an economist who specialises the economics of Intellectual Property and the creative industries. She joined the Intellectual Property Office (IPO) economics team in 2013 as an Economic Advisor and is responsible for the economic support of trademarks, designs and international policy. Prior to her role at the IPO, Nicola worked as a university researcher and a financial analyst. She completed her PhD on the economics of trade secrets at the University of St Andrews in 2010.

Research interests: Intellectual property, creative industries, business models, computer games

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“Making ecosystem deliver innovations: a cross-sector review”

Dr Rémi Maniak (Telecom ParisTech)

Abstract: The high-tech and industrial sectors face the same new challenge: new products and services rely on increasingly interconnected actors, with increasingly twinned value and investment sharing schemes. The communication will focus on how companies interact to make such initiatives happen, taking both a project management and a business model perspective. We gather and frame together several cases in the high-tech (Intel, Gemalto), digital (Google, Amazon...) and industrial sectors (Renault, Airbus). We propose to highlight how various theoretical frameworks (platform leadership, cooperative design...) can make explicit how these sectors manage innovative projects and create new business models. We will also discuss the suggestion that project management and business model are empirically twinned, since the cooperative configuration during the design project largely impacts the final business model. We open the discussion with a case of high tech and industrial sector: the connected vehicle.

Keywords: innovation management, business model, project management, cross-sector analysis.

Bio: Dr. Rémi Maniak is an associate professor at the Telecom ParisTech and assistant professor at the École Polytechnique Engineering Schools in Paris. He received his Ph.D. in Management Science from the École Polytechnique and is a graduate of the École Supérieure de Commerce de Paris (ESCP Europe). His research focuses on innovation management in large firms, ranging across strategic, organizational, and business model issues. He published his work in various scholar journals such as Journal of Product Innovation Management, International Journal of Project Management or Project Management Journal. He also regularly communicates at European conferences such as EGOS, EURAM or IRNOP.

Research interest: Global R&D, business model mapping, "Full Value" methodologies

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“Competing in the New Normal: Intangible Drivers of Value Creation in the Digital Economy”

Dr David Wong (Big Innovation Centre)

Abstract: The digital economy, spurred on by recent advances in information and communication technologies and the internet, has brought disruptive forces to the fore and created a ‘new normal’ in which firms compete. For firms seeking to grow and thrive in the digital economy, the name of the new game is intangibility.

Conventional strategic approaches alone will not serve firms well in the digital economy. By bringing together disparate theories and paradigms of value creation under a unified framework, this presentation suggests firms must also focus on harnessing seven fluid and constantly evolving intangible drivers of value creation. Smart configurations of these drivers to exploit their complementarities in ways appropriate to the firm's industry and line of business are the key to business model innovation, competitiveness and growth.

Although the presentation connects theory with practice by drawing on examples, cases and evidence from business and industry, the proposed typology of intangibles can lend itself to empirical research towards the development of a new taxonomy of business model themes in the digital economy, thus updating the framework first proposed in Amit and Zott's (2001) seminal work on value creation in e-business.

Keywords: competitive advantage, value creation, intangibles, digital economy

Bio: David is Head of Organisations and Business Models research at the Big Innovation Centre, a unique London-based initiative of Lancaster University that brings together some of the world's leading companies and key institutions from across the policy landscape to find innovative responses to business challenges and address gaps in the UK innovation ecosystem.

His main role at BIC is to help organisations understand what business model innovation is; why it is important for competitive advantage; and how their culture, structure and practices might be realigned to better facilitate business model innovation. He also helps design and incubate new business models for BIC's partner-led initiatives to explore the commercial potential of big data and healthcare innovation. His other areas of specialism include innovation strategy, organisational culture, cross-cultural management and relational analytics. He runs regular business model generation workshops for SMEs in London and the north west, and delivers seminars and lectures on competitive strategy in the digital economy.

Prior to this, David was Senior Researcher at Relationships Foundation, where he also provided oversight for its Consulting and Leadership Development practice. There he developed Europe's first ever family pressure index, created a behaviour-based model to help policymakers family-proof policy, and published on the impact of policy and time in frontline public services on wellbeing.

David was previously Director of the Centre for Knowledge and Business Leadership at the Asian Strategy and Leadership Institute, and has taught at the Judge Business School, Cambridge, where he is currently completing a PhD on ambidextrous organisational cultures. David took first class honours in Business Administration at the University of Malaya and holds an MPhil in Management Studies from the University of Cambridge.

He currently sits on the Advisory Board of Warwick University's WMG Professional and Executive Programme.

Research Interests: Business model innovation, organisational culture, ambidextrous organisations, dynamic capabilities, paradox theory, relational analytics.

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Session 2: Leveraging Technological change: Industry cases

“40 years of innovation in the video game industry: main technological, user’s experience and economic challenges and learnings”

Dr Myriam Davidovici (Telecom ParisTech)

Abstract: The video game industry has quickly evolved from a geek (70s) to long tail industry (00s) in which there are games suitable for all audiences from kids to senior people. Today, the video game industry has the highest worldwide revenues (\$66b in 2013) among cultural industries (movie, music, book). This evolution has however not followed a linear path: the industry has undergone some crisis and competition is becoming more intense with exit of some first innovative entrants, some market segments are dying and some others are emerging. Nevertheless, it has managed to overcome them successfully. In this presentation, we highlight the role of different types of breakthrough innovations (technological, design- genres-user’s experience, business model) on the underlying learning process that is shaping the current global industrial dynamics.

Keywords: Digital goods, digital business models, innovation, video games industry

Bio: Assistant Professor in industrial economics at Telecom-Paristech, school of IT engineering. In charge of a course in Management and Design of technological innovation, I am also very involved in short and long term innovation projects with students. Since 2009, I have been investigating the video and computer game industry. I started with the analysis of downstream open innovation strategies with players (modding) followed by many computer games developers. I explained how it is possible to mix open source organization and traditional copyrighted innovations to increase the value for both players’ community and developers. Then my interest focused on new digital business models such as social and free-to-play gaming that are poorly analyzed by economists, though a source of new entrants and new competition in the game industry. I am more generally interested in questions mixing technology, creativity, usages and business models.

Research Interests: Innovation and economics in the video game industry

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“Bit by Bit: Capturing the value from the digital fabrication revolution”

Dr Simon Ford (University of Cambridge)

Abstract: This presentation will introduce and discuss the industrial emergence of 3D printing that is currently being explored at the Centre for Technology Management in Cambridge. The presentation will include an overview of the main technologies, companies and historical developments to date, along with a description of how the project intends to research this topic.

Keywords: 3D printing, additive manufacturing, industrial emergence, business model, disruptive innovation

Bio: Simon is a Research Associate at the Centre for Technology Management, University of Cambridge. He works primarily in the area of technology and innovation management, and has conducted research projects on how established firms organize for breakthrough innovation, technology acquisition and protection, the emergence of new industries, the fuzzy front end of innovation, and visual planning tools.

Research Interests: 3D printing, industrial emergence and evolution, front end of innovation

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“Investment strategies in the value chain of the book publishing sector: how and where the R&D somehow matter in creative industries?”

Dr Elisa Salvador (École Polytechnique)

Abstract: Creative industries are capturing an ever increasing interest in recent years. Scientific literature in this field is growing and several local governments are calling for reports and discussion papers in order to support policy strategy guidelines. Notwithstanding, very few studies are dealing with a new and emerging topic such as technological innovation. In creative industries, innovation is in general considered from a single viewpoint: a means to develop new creative contents. However, one very important issue is surprisingly neglected both in the scientific literature and in the committed reports: this is the topic of technological innovations and, therefore, the characteristic and the management of R&D in creative industries. The present paper aims at understanding where R&D takes place in cultural sectors, which economic actors are taking charge of it, where they are located in the value chain, and how they are articulated with content producers. The research focuses on the publishing sector. A

systematic analysis of R&D developments concerning e-book technology has been achieved and supplemented with face-to-face interviews in selected case-studies. The methods provide an original cartography of the value chain. This framework helps to understand the new digital ecosystem of the publishing sector and the investment strategies carried out by editorial houses regarding R&D partnerships and new technological innovations.

Keywords: Creative industries; publishing industries; R&D; value chain; e-book

Bio: Elisa Salvador is affiliate researcher for the Chair Innovation and Regulation of Digital Services, Ecole Polytechnique of Paris (Management Research Center, PREG-CRG, UMR 7176 Ecole Polytechnique-CNRS), since 2012. She holds an International PhD in “Institutions, Economics&Law (IEL)” from the University of Turin (Italy), with a thesis on research spin-off firms in Italy (2010). She has worked for the Italian National Research Council (CNR) since 2001 on several projects focused on innovation policies. In 2005 she won the Italian National Research Council (CNR) award “Promotion of Research 2005”, Project for young researchers, with the research project “The financing of research spin-off firms: an analysis of the Italian case”. She recently collaborated with the Polytechnique of Turin (Italy) on the European project “Open Innovation in Alpine SMEs (OPEN-ALPS)”, with the Chaire Entrepreneuriat of the Business School ESCP Europe as well as with the Centre d’Etudes et de Recherche Amérique Latine Europe of the Business School ESCP Europe. Her present research focuses on R&D and innovation in cultural and creative industries. She published several scientific papers on research spin-offs, science parks, incubators and SMEs.

Research Interests: Research spin-off firms, innovation policies, SMEs, science parks, incubators, entrepreneurship education, cultural and creative industries.

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Session 3: The Rise of New Stakeholders

“Consumer-side Internet Structures”

Prof. John Darlington (Imperial College London)

Abstract: There has been much emphasis placed on the way the Internet has disintermediated many social and commercial activities and provided users and consumers with more direct access to goods and information. While it is certainly true that the Internet has diminished the role of many physical intermediaries such as travel agents or bookshops it is also the case that the new large-scale electronic intermediaries such as Google, Amazon or eBay have grown to replace and augment these activities. These intermediaries, particularly Google, are used because they provide access to useful content. They are also, in general, very profitable operations but this revenue, in the case of Google, is generated not from the sale of content but from the garnering of personal data to allow targeted advertising.

We argue that this structure has many long-term disadvantages for consumers and the general public including loss of privacy, dominance of oligopoly operators and loss of value for data, both content and personal behaviour patterns. We will present a new structure that concentrates more on demand-side expression of needs and allows individuals to control their own data and the way it is used. We will present three examples of the advantages of such a structure in public service organisation (Electronic Big Society), Internet life planning and consolidated supermarket shopping.

Keywords: Internet, demand-side structures, online shopping, intermediaries, data

Bio: John Darlington is a Professor in the Department of Computing at Imperial College London, Head of the Social Computing Group and Director of the London e-Science Centre. Professor Darlington has a long and distinguished track record in the development of innovative software and hardware technologies and in the provision and operation of facilities to support multidisciplinary applied computing. Professor Darlington has had a long-term interest in the power of the Internet to promote radical economic, social and cultural change. As early as 1997 he led an EPSRC ROPA project: "Electronic Trading: Simulation of New Patterns of Economic Interaction and Transport" that foreshadowed recent developments in Internet shopping and trading intermediaries. Professor Darlington and the London e-Science Centre led the influential UK e-Science project: "A Market for Computational Services" (with Sun Microsystems), that, in 2005, anticipated current developments in Cloud Computing.

Research interests: Internet, Cloud computing, Social Computing, Online market systems, Internet and network economics, Social change

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“When information technologies enable charity for free: the case of search engines”

Dr Julie Bastianutti (Lille 1 University)

Abstract: When it comes to social business, IT can provide innovative solutions and market opportunities. Since 2005, new kinds of search engines (SE) have appeared on the market. They do not aim at competing directly against the biggest market actors but rather at providing social value for their users. Partnerships with technology providers on one hand and NGOs and charities on the other are at the heart of their business model. Indeed, the SE market can be analyzed as a case of prescription market in which we consider both the structure of the product or service offered and the market configuration. The social SE are moreover a unique form of prescription, due to their specific social goal. The objective of the paper is to understand the underlying logics of social SE. We mobilize the concepts of prescription economics and market for virtue. We seek to highlight the specific structure of the social SE market (its industrial organization and the different business models) and the motivations of entrepreneurs. Our methodology is based on a multiple case study developing on several levels of analysis (embedded design): the strategies of entrepreneurs, the business models of organizations, and more specifically the partnerships. We construct a typology that allows us then to discuss the evolution of business models and reconfigurations of the prescription market. We show the emergence of a dominant model based on partnerships (technological and social) constituting the basis of a double market of prescription, allowing ecologically and socially responsible use of IT.

Keywords: inter-organisational partnerships; search engines; social entrepreneurship; business models; prescription economics; corporate social responsibility

Bio: Julie Bastianutti is assistant professor at the University of Lille 1 and researcher at LEM (Lille Economie & Management, UMR CNRS 8179) working on the relationships between strategy and CSR, and the emergence of CSR-based business models in the internet. She holds a PhD in management studies from the Ecole polytechnique (PREG-CRG) and graduated from the Ecole normale supérieure and Paris 1 Panthéon-Sorbonne University in social sciences and philosophy.

Research Interest: Strategy & CSR ; social business ; charity search engines

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“The VOLCROWE Project: Volunteer and Crowdsourcing Economics”

Dr Joe Cox (University of Portsmouth)

Abstract: VOLCROWE is a three year research project funded by the EPSRC and NEMODE in the UK, bringing together a team of researchers from the Universities of Portsmouth, Oxford, Manchester and Leeds. The project aims to develop a greater understanding of volunteer participation and engagement in crowdsourcing projects. Building upon and challenging the existing literature on the economics of altruism, VOLCROWE is developing new models of digital volunteering that will challenge a range of commonly held assumptions, in particular relating to the impact and sources of social capital formation and the role of religiosity in determining intensity of engagement. The validity of these models is being tested through detailed quantitative and qualitative analysis of participation data derived directly from the ‘Zooniverse’, a well-known group of highly successful crowdsourcing initiatives such as ‘Galaxy Zoo’ and ‘Ancient Lives’ where volunteering takes place entirely online within a virtual community. The project team will also be exploring the capabilities of the Zooniverse management team to explain how they achieve competitive advantage and asset accumulation, as well as the potential for transferability to crowdsourcing in the commercial sector.

Keywords: Crowdsourcing, volunteering, economics, big data, citizen science

Bio: Dr Joe Cox is a lecturer in economics at the University of Portsmouth Business School. His research interests are focused around the digital economy, including the economics of illegal file sharing and the video gaming industry. He has published a number of related papers in peer-reviewed academic journals, including the European Journal of Operational Research, Managerial and Decision Economics, The Journal of Cultural Economics and Information Economics and Policy. He was the recipient of the 2011 Neil Rackham prize for research dissemination and a member of the Association for Cultural Economics International (ACEI). Dr Cox brings to the project both a specialist background in economics, as well as knowledge of the analytical and statistical tools required to test assumptions of theoretical behavioural modelling against interrelationships between key variables appearing in ‘big’ datasets and to interpret in accordance with economic principles and ideas.

Research Interests: Digital economy, online communities, future business models

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