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**DISRUPTIVE TECHNOLOGIES AND INSTITUTIONAL PROCESSES  
IN THE CREATIVE INDUSTRIES: EVIDENCE FROM THE FIELDS  
OF TRADE BOOK PUBLISHING, ACADEMIC PUBLISHING AND  
MUSIC.**

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A dissertation submitted in satisfaction of the requirements for the degree of  
Doctor of Philosophy

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## Abstract

This thesis explores an important yet underexplored aspect of management studies, which is field-level responses to the entrance of a disruptive technology in an institutional field. Despite the relevance of digital technologies (such as the 3D printer) that not only improve competitive advantage of organisations but also alter consolidated settlements in the distribution, appropriation and use of resources within a field (for example, user-generated objects), current studies of institutional theory and technology have overlooked how actors respond to technologies that could potentially weaken their positions. Instead, existing studies have focused on how actors embed their interests in new technologies. Using qualitative methods in three empirical standalone papers, this dissertation explores three cases of how actors respond to the entrance of a disruptive technology in an institutional field. In Paper 1, co-authored with my thesis supervisors, we explore technology's affordances as integral to threats of disruption to institutional settlement in the light of the introduction of the electronic book in the field of trade book publishing. In this case, we found that incumbents used rules/affordances bundles to temper the disruptive potential of the technology. In Paper 2, I explore the case of scholarly book publishing in which the possibilities afforded by Internet technologies make research available in Open Access, thus threatening to disrupt established institutional settlements (commercial publishers' business models that are in place). In this case, the incumbents (the commercial publishers) address threats to undermine their privileged positions and interests effectively when they are not in a position to oppose a reconfiguration of current arrangements. In the third paper, I explore the case of the introduction of digital technologies into the music industry, in which unorganised and non-strategic actors - consumers - catalyse institutional change that organised actors adopt later. The dissertation's main contribution is to the literature on institutional theory. The three empirical papers generated insights into how, despite the arrival of technologies with disruptive potential, changes driven by the search for a new settlement between conflicting interests led the incumbents and organised actors to responses that co-opted the disruptive potential of the technology, leading to alternative explanations to straight processes of institutional change. Instead of explaining straight processes of institutional change, I put forward the three following accounts: the dialectal interaction between opposing frames as driven by the dual forces of material interests and social positioning, the co-existence between institutional change and stability, and the accommodation between opposing interests.

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## INTRODUCTION

As the 21st century dawns, there is a growing consensus that micro-electronically based information technologies are altering the way we live, work, communicate, and organize our activities. In fact, many people believe that we have entered a period of socio-economic change that will prove to be as monumental as the industrial revolution (Orlikowski and Barley, 2001: 146).

### **Overall Rationale for the Dissertation**

In light of the relevance of technology for organisations, as the quote above indicates, current research on management studies has advanced our understanding of how intrinsic characteristics of the new technologies are key for firms to maintain a competitive advantage (Baralou and Tsoukas, 2015; Ginsberg and Venkatraman, 1995; Sosa, 2016). Studies from this perspective show how organisations seek to capture the advantages of technological leadership to maintain a competitive advantage; for example, by obtaining a first-mover advantage (Lieberman and Montgomery, 1988), by minimising dependence on other firms (Dunford, 1987), or by managers' cognitive assessments of the potential impact of a new technology on a firm's performance (Ginsberg and Venkatraman, 1995). However, as Orlikowski and Barley (2001) stated in the quote above, technologies in the twenty-first century can have effects beyond bringing firms competitive advantage.

Digital technologies in particular have the potential to disrupt institutions at the field level (that is, to alter consolidated settlements in the distribution, appropriation and use of resources). For example, Internet-based companies such as Google, Amazon and Apple present ethical dilemmas such as the monetisation of 'social data', which has the potential to transform the social division of material and immaterial labour by inserting the 'every day' into circuits of commercialisation (Alaimo and Kallinikos, 2016). Despite the potential of technologies to disrupt institutional fields, most of the research on institutions and technology has focused on tracking whether or not institutional pressures create isomorphism for fields to adopt a new technology (Abrahamson and Rosenkopf, 1993; Chatterjee, Grewal, and

Sambamurthy, 2002). An increasing body of research, however, has explored how actors respond to technology-led change in institutional fields (Hargadon and Douglas, 2001; Munir and Phillips, 2005; Raviola and Norback, 2013). These studies have advanced the understanding of how central actors make technologies relevant in an institutional field by embedding their interests strategically to introduce change; for example, by exploiting established institutions while simultaneously retaining the flexibility to displace them (Hargadon and Douglas, 2001), by implementing strategies of social construction to transform the uses of a technology from a highly specialised activity to one that becomes part of everyday life (Munir and Phillips, 2005), or by making new actions associated with the new technology meaningful by drawing on the old technology as a ‘law book’ (Raviola and Norback, 2013). Current studies on the responses to new technologies have advanced the understanding of how actors embed their interests in an institutional field in light of the entrance of a new technology. However, they have overlooked how actors in institutional fields respond to disruptive technologies that could potentially alter consolidated settlements in the distribution, appropriation and use of resources, thus weakening their position. As a consequence, current studies on institutional theory have relatively overlooked the important effect of digital technologies on the responses of actors in institutional fields. To address this lack of research, this dissertation asks the following question – *how do actors respond to the entrance of a disruptive technology in an institutional field?*

In order to explore this research question, I studied three different case studies. The first is the case of electronic books in the field of trade book publishing, which has the potential to disrupt the institution of intellectual property. The second is the impact of the rise of awareness of the possibilities of Open Access research in light of the Internet-related technology in the field of scholarly publishing that has threatened to disrupt the incumbents’ existing model that restricts access to academic research to those who have a subscription.

The third case is the entrance of digital technologies in the music industry via Napster, a peer-to-peer platform that allowed users to distribute free music files on a massive scale, thus threatening to disrupt the existing ways in which incumbents captured value.

### **Three cases: The Impact of a Technology with Disruptive Potential in an Institutional Field.**

In Chapter 1, entitled “Fields in flux: institutional struggles over a disruptive technology in book publishing”, we explored the case of the entrance of the electronic book in the field of commercial book publishing in the UK. The electronic book affords the potential for behaviours associated with achieving an immediate concrete outcome and arising from the relation between an object (e.g., an IT artefact) and a goal-oriented actor or actors (cf. Volkoff and Strong, 2013), and of digital sharing on a massive scale with the potential of turning the book into a public good. This is both non-excludable and non-rivalrous in that individuals cannot be effectively excluded from use and utilisation by one individual does not reduce the availability to others (Gravelle and Rees, 1992; Mas-Colell and Whinston, 1995). The disruptive potential of the affordances of the new technology threatened to disrupt the institution of intellectual property rights and gave rise to social struggles that focused particularly on whether and how the application of intellectual property rights for digital products should be enforced.

Despite the importance of affordances in disrupting existing arrangements in institutional fields, such as the institution of intellectual property rights in light of a new digital technology, current research on institutional theory has focused on the cultural aspects of institutions (cognitive, normative and symbolic) (Munir and Phillips, 2005; Hargadon and Douglas, 2001). Consequently, the actual affordances of disruptive technologies have, surprisingly, been overlooked. In this chapter, we asked the question *how do actors in a field respond to the introduction of a ‘disruptive technology’?* In order to answer this question, we

traced the field of book publishing in the UK back to the mid-1990s when “e-book revolution led to the conviction that the publishing industry was on the edge of a fundamental change” (Thompson, 2009: 272). Following the data collection recommendations for a qualitative case study (Eisenhardt and Graebner, 2007), we combined an archival search with in-depth semi-structured interviews.

Our findings revealed that field-level responses to a new technology were not a linear, one-stage institutional process but a dialectical one, driven by the search for a new equilibrium amongst the interests of the various actors (represented by frames) as they attempted to design new arrangements (represented by the regulation of affordances) that would be compatible with the norms and assumptions related to the institution of intellectual property and to more general rights associated with the ownership of an object. Our study drew attention to the *technology-institution bundle* represented by the design of a technology and the institutional regulation of such a technology (Hargadon and Douglas, 2001). In addition, we contributed to the current research on institutions and technology that focused on cultural aspects and not on affordances (Munir and Phillips, 2005; Hargadon and Douglas, 2001). Our findings have also enriched our understanding of institutional change processes by portraying the field-level response to the introduction of a new technology not as a linear process change (Greenwood and Suddaby, 2006; Kraatz and Moore, 2002) but as a dialectical one that considers the struggle among incompatible institutional arrangements enacted by different actors as a driver of change.

In Chapter 2, entitled “Everything must change so that everything can stay the same: Open Access in UK academic publishing”, I investigated the field of scholarly publishing that is currently undergoing a technology-induced transformation towards Open Access (OA) - a system of distributing academic content in a digital format whereby the publisher makes a journal available and free to access for any individual with a computer and an Internet

connection. The transition towards Open Access has the potential to disrupt the current ways in which commercial publishers capture value by disrupting the subscription-based model that restricts access to academic research to those who can pay a fee. Despite the fact that the change could have disrupted commercial publishers (incumbents), they addressed the threat effectively and maintained their central position.

Current theories on institutional entrepreneurship have expanded our understanding on how actors in institutional fields can change the institutions (Garud, Jain and Kumaraswamy, 2002; Hargadon and Douglas, 2001; Maguire, Hardy and Lawrence, 2004). However, these theories do not explain how incumbents – such as the commercial publishers in this case – can substantially conform to change (in this case the transition towards OA) while simultaneously protecting their position. In order to address this theoretical puzzle, I ask the question *how can incumbents address threats to undermine their privileged positions and interests effectively when they are not in a position to oppose a reconfiguration of current arrangements?*

In order to explore this question, I investigated the transition towards Open Access by commercial publishers in the field of academic publishing in the UK between 2000 and 2017. Data included interviews with various key actors in the field and archival data. My findings revealed that, despite the challengers (represented by the scholar-led Open Access movement) drawing on the new possibilities of the Internet to disrupt the institutional arrangements in place, the incumbents contributed symbolically to the legitimation of new institutional arrangements. The field of academic publishing did not experience significant change in its central underlying positions. Consequently, these findings revealed how incumbents implemented practices that allowed them to maintain their structurally central position in the field (in other words, their legitimated identity in the field including their formal role; see Maguire, Hardy and Lawrence, 2004). Secondly, by describing a process in

which institutional change co-existed with stability, my findings contributed to current theories of institutional change. Current research tends to focus on one aspect of change at a time; for example, changes in practices (Lounsbury and Crumley, 2007; Furnari, 2014), regulations (Maguire and Hardy, 2009), organisational forms (Suddaby and Greenwood, 2006), organisational fields (Leblebici, Salancik and Copay, 1991) or institutional logics (Rao, Monin and Duran, 2001). Unlike existing theories that focus on one change element in isolation, my study showed how institutional change could be disruptive at the symbolic level while simultaneously entrenching practices that served the positions of dominant actors. Thus, my case revealed the inherently contradictory and complex nature of institutional change processes.

In the third empirical paper, entitled “From illegitimate practices of consumption to legitimate practices of distribution: the case of Napster and the digitalisation of the music industry”, I explored the case of the entrance of Napster in the music industry. Napster - a digital file-sharing platform - disrupted the music industry by offering a critical mass of 60 million consumers downloading music for free, thus violating intellectual property rights and preventing the music industry from making a profit from the associated copyrights. In Napster’s case, consumers could copy and distribute music files online on a massive scale without the consent of the copyright holder, widely considered piracy. Despite the illegitimacy of the practice of the digital consumption of music, Napster users contributed to its diffusion. In later stages, organised actors legitimated the practice of the digital consumption of music, thus bringing about relevant field-level changes.

Despite the relevance of consumers in the processes of field-level change in terms of digital technologies, such technologies have allowed users to circumvent various forms of authority. For example, the 3D printer allows the final users to print objects outside of legal regulations (e.g. a gun). Despite its importance, as well as the fact that consumers are a

crucial part of institutional fields, it is surprising that research on institutional theory has overlooked consumers. Only a few researchers (Ansari and Phillips, 2011; Scaraboto and Fisher, 2013) have theorised about the conditions and strategies under which consumers contribute to field-level change. These exceptions show how these unorganised groups of individuals without a ‘grand institutional plan’ trigger change that ‘falls under the radar’ of incumbents. Thus, overall, current studies of institutional theory have failed to explain how consumers bring about changes with the potential to disrupt the established arrangements in an organisational field. Thus, I asked the following question – *how do consumers introduce changes in an institutional field in light of a disruptive technology?*

Through an in-depth examination of the evolution of the field of music publishing, I provided an account of how practices generated by consumers can lead to field-level change. To address the question outlined above, I studied the diffusion of the practice of digital consumption in the music industry between 1999 when Napster appeared until the mid- to late-2000s. By that time, the field-level changes related to the practice of digital consumption had materialised into institutionalised practices of production and distribution based on the practice of digital consumption. I used archival documents to trace the changes in the practice of digital consumption. Through interpretative data analysis, I produced an in-depth single-case study, to address conceptual issues that were not transparent in existing theory (Yin, 1984).

I found that consumers were essential in the early stages of introducing innovation into a field because they revealed social and symbolic gains. Although consumers’ practical solutions disrupted the existing ways in which incumbents captured value via copyright, newcomers accommodated the changes in value tastes that consumers revealed, as well as offering ways to legitimise consumers’ illegitimate practical solutions (free sharing). As a

result, field positions and institutional arrangements were not changed radically - the process disrupts but does not displace the incumbents.

By theorising about the role of consumers in creating and diffusing new practices as a result of the disruptive effects of a new technology, this study advanced the understanding of a type of actor that, despite being part of the institutional fields, had either been neglected by current theories, or had been portrayed as ‘falling under the radar’ (Ansari and Phillips, 2011). In addition, this study provided a model of field-level accommodation that is “revolutionary in pace and developmental in scope” (Micelotta, 2017: 1902), and further enhances the understanding of how organised actors accommodated changes in value tastes that were initially revealed by consumers.

By explaining how actors respond to a disruptive technology in an institutional field, this dissertation contributes to current accounts of technology from an institutional perspective that have investigated how actors embed their interests in new technologies (Hargadon and Douglas, 2001, Munir and Phillips, 2005; Raviola and Norback, 2013) instead of examining how they respond to technologies that could potentially disrupt institutional arrangements in place, weakening their positions. The three cases in this dissertation portray three different responses to a disruptive technology. In the case of trade book publishing, incumbents blocked the disruptive potential of the new technology (as a pre-emptive measure before it caused field-level disruption) via the *technology/law bundle*. In the case of scholarly publishing, incumbents adopted the change (Open Access academic research) by symbolically adopting certain aspects of the reflections about the institutional arrangements. At the same time, they modified other elements of the institutional field - structures in terms of business models - to maintain their central position in the field. In the case of the music industry, although consumers’ exposure to a disruptive technology enabled by a platform (Napster) was essential at an early stage in order to bring innovation to a field, organised



actors later accommodated the changes in value tastes that the consumers had revealed. Despite the differences in these three responses, the resulting institutional change was similar, in that the responses of the incumbents (or new organised actors in the case of music publishing) co-opted the potentially disruptive effect of the new technology in such a way that the technology did not transform institutional arrangements in a transformational way.

My findings portrayed three different models of institutional change processes. First, a dialectical framework of institutional change that considers the struggle among incompatible institutional arrangements enacted by different actors as a driver of change. Second, a process in which institutional change co-exists with stability showing how institutional change can be disruptive at the symbolic level while simultaneously further entrenching practices that serve the position of central actors. Third, an institutional process of institutional accommodation in which organised actors co-opt the interests that unorganised groups of actors generated in light of the disruptive technology, and were incompatible with established field-level arrangements.

## **PAPER 1**

### **FIELDS IN FLUX: INSTITUTIONAL STRUGGLES OVER A DISRUPTIVE TECHNOLOGY IN BOOK PUBLISHING**

#### **Abstract**

We report on the case of the electronic book in the field of trade book publishing in the United Kingdom between 2000 and 2016. A combination of interviews and archival data allowed us to reveal how actors in a field respond to the introduction of a disruptive technology – understood as having the potential to alter consolidated settlements in the distribution, appropriation and use of resources within a field. Our findings advance understanding of the struggles to regulate new possibilities of action offered by Internet technologies and suggest that technologies can be disruptive – from an institutional standpoint – to the extent that they offer new affordances that expand the discretion of some actors and/or their access to and control over resources in ways that are detrimental to other actors. These responses highlight the dialectical nature of the ensuing institutional changes driven by the search for a new settlement between conflicting interests.

## INTRODUCTION

What do you mean by casual sharing? If you share a book with your entire classroom, this is not casual sharing. I think that in the era of digital, people are starting to think that everything should be free (Author, Interview).

Current literature on how actors respond to a new technology from an institutional theory perspective assumes that to the extent that institutional entrepreneurs embody their interests in the new institutional rules, the new technology will be legitimated (e.g., Munir and Phillips, 2005; Hargadon and Douglas, 2001). Within this research, the cultural aspects of institutions (e.g., cognitive, normative and symbolic) has received ample attention. However, the actual affordances of the technologies and ‘the potential for behaviors associated with achieving an immediate concrete outcome and arising from the relation between an object (e.g., an IT artefact) and a goal-oriented actor or actors’ (Volkoff and Strong, 2013), have surprisingly been overlooked. In a context where the socially controversial effects of new technologies – such as drones or 3-D printers – are increasingly salient (Economist, 2014), overlooking the active role of technology and its affordances gives us an impartial account of the relationship between technology and institutions.

To improve our understanding of technology’s affordances as integral to institutional processes, we explore how actors in a field respond to the introduction of a ‘disruptive technology’, that is, a technology that has the potential to alter consolidated settlements in the distribution, appropriation and use of resources within a field. In the case of book publishing, for instance, as the opening quote refers to, the electronic book (and digital sharing at a massive scale) risks turning the book into a public good that is both nonexcludable and nonrivalrous in that individuals cannot be effectively excluded from use and where utilisation by one individual does not reduce availability to others (Gravelle and Rees, 1992; Mas-Colell and Whinston, 1995). Because of the difficulty of setting ownership, therefore, public goods are contested resources. In the particular case of the electronic book, the new affordances

offered by this technology challenged existing institutional arrangements, giving rise to social struggles that focused particularly on whether and how the application of intellectual property rights (IPR) for digital products should be enforced. To engage the question of how actors in a field respond to the introduction of a ‘disruptive technology’, we draw on the notion of frames to understand the technology-institution bundle. Frames are an ‘interpretative schema that simplifies and condenses “the world out there”, thus organising experience in guiding action by rendering events or occurrences meaningful’ (Snow and Benford, 1992: 37). We also track the responses of authors, publishers, distributors and users to the introduction of the electronic book’s (e-book) disruptive technology in the United Kingdom between 2000 and 2016. Data collection combined archival search with 27 in-depth semistructured interviews with different types of field actors.

The responses to the disruptive technology are driven by the search for a new equilibrium amongst the interests of the various actors (represented by frames), as they attempt to design new arrangements (represented by the regulation of affordances) that will be compatible with norms and assumptions related to the institution of intellectual property and more general rights associated with the ownership of an object.

Our findings contribute to current theories on institutions and technology by improving our understanding of the responses to disruptive technology that can challenge existing regulations. We also suggest that technologies can be disruptive – from an institutional standpoint – to the extent that they offer new affordances (Volkoff and Strong, 2013) that expand the discretion of some actors and/or their access to and control over resources in ways that are detrimental to other actors. By doing so, these technologies upset consolidated equilibria underpinned by the institutional arrangements that regulate the use of technologies and the appropriation of resources produced in the field. These arrangements result from the implicit or explicit negotiation amongst actors and embody the settlement of their potentially

diverging interests. To the extent that novel technologies afford new, unregulated behaviours, actors who feel threatened by these actual or potential behaviours will mobilise to affect the design and regulation of the new technology.

First, our findings enrich our understanding of institutional change processes by portraying the field-level response to the introduction of a new technology not as a linear process change (e.g., Greenwood and Suddaby, 2006; Kraatz and Moore, 2002) but as a dialectical one, driven by the search for a new equilibrium amongst the interests of the various actors as they attempt to design new arrangements that will be compatible with their interests, in this particular case, rights associated with IPR and, more generally, with the ownership of an object.

Second, our findings contribute to current research on institutions and technology (e.g., Ang and Cummings, 1997; Garud, Jain and Kumaraswamy, 2002; Munir and Phillips, 2005) by improving our understanding of the processes that link the introduction of a disruptive technology and its institutional consequences. More concretely, our findings draw attention to the *technology-institution bundle* represented by the design of a technology and the institutional regulation of such technology (cf. Hargadon and Douglas, 2001) as the key focus of contestation following the introduction of a new technology in a field.

## **THEORETICAL BACKGROUND**

Central to the early accounts on organisations and technology is the notion that inherent functional and economic advantages of new technologies can trigger the transformation of industry structures and change the sources of competitive advantage (e.g., McFarlan, 1984; Scott and Morton, 1991). And in response to technological changes, organisations seek to capture advantages of technological leadership to maintain competitive advantage, for instance, by first-mover advantage (Lieberman and Montgomery, 1988), by minimising dependence with other firms (Dunford, 1987), or by manager's cognitive assessment of the

potential impact of a new technology on firm performance (Ginsberg and Venkatraman, 1995).

In contrast to these accounts, institutional studies of technology questioned the notion that inherent functional and economic advantages of new technologies can trigger industrial change and drew attention to the institutional environment that shapes the responses to new technologies in organisational fields (e.g., Barley, 1990; Garud and Kumaraswamy, 1995). For analytical purposes, current research on technology and institutional theory can be classified in two streams. The first explores how institutions shape the diffusion of technologies. The second investigates the interplay between the interests of institutional entrepreneurs and technologies as a source of institutional change.

### **Institutions Shape the Diffusion of Technologies**

Studies on how institutions shape the diffusion of technologies (e.g., Ang and Cummings, 1997; Currie and Guah, 2007; Davidson and William, 2007) drew attention on institutional pressures (Scott, 1995) and isomorphic processes (DiMaggio, 1988, 1991) as causes of diffusion. Central to these accounts was the notion of isomorphism as the ‘constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions’ (DiMaggio and Powell, 1983). The majority of studies from this perspective established a causal relationship between the characteristics of regulative and normative pillars of institutions and patterns in technology adoption (e.g., Abrahamson and Rosenkopf, 1993; Anchoadoguy, 1999; Casper, 2000), for instance, identifying sources of pressure (e.g., Benner and Ranganathang, 2012; Abrahamson and Rosenkopf, 1993) or how the institutional environment facilitates (e.g., Casper and Withley, 2004) or hinders (e.g., Anchoadoguy, 1999) technology diffusion.

Although the majority of research from this perspective tends to discount the ways by which organisations can respond strategically to institutional influences, a few exceptions

moved from simply tracking isomorphic processes of institutional diffusion to explain how organisations respond to institutional pressures (e.g., Ang and Cummings, 1997; Blaskovich and Mintchik, 2011). Ang and Cummings (1997), for instance, revealed that organisations can enact different strategic responses to institutional pressures for technology outsourcing and that different strategic responses are contingent to economic factors. In addition, Blaskovich and Mintchik (2011) revealed that the strategic responses to mimic institutional pressures in technology adoption are contingent to organisational skills.

Collectively, these studies improved our understanding of patterns of technology diffusion by revealing how organisations legitimate or not a new technology regardless of the assessment on how the innovation will benefit the adopters.

### **Technology as a Source of Institutional Change**

In contrast to the accounts that considered how institutional pressures explain whether new technologies get adopted or not, a second stream of research regarded technology and actors as independent variables having effects on institutions (the dependent variable). In this second stream, research highlighted how ‘institutional entrepreneurs’ – actors that create a whole new system of meaning that ties the functioning of disparate sets of institutions together (DiMaggio, 1988) – legitimate novel technologies. This perspective arises from a ‘structuralist’ understanding of technologies as both a medium and outcome of the actions of the institutional entrepreneurs (Giddens, 1984). Within this perspective, we can distinguish two separate areas of study: how institutional entrepreneurs legitimate novel technologies by discursive strategies and through political action.

*Legitimation of novel technologies through discursive strategies.* This group of studies addresses the issue of how actors align novel technologies with normative settings (institutional fields) to legitimate them discursively (e.g., Munir and Phillips, 2005; Maguire and Hardy, 2009). Studies from this perspective are based on the concept of theorisation:

‘development and specification of abstract categories and the elaboration of chains of cause and effect’ (Greenwood, Suddaby and Hinings, 2002: 61).

A first set of studies within this stream reveals how institutionalisation of a new technology occurs as the transmission of the novel technology from ‘not being legitimised in the field’ to ‘being legitimised in the field’, from source to target (e.g., Hargadon and Douglas, 2001; Raviola and Norbak, 2013). Hargadon and Douglas (2001), for instance, show how an institutional entrepreneur drew on an old institution as a discursive strategy to design a new technology according to features that could facilitate its use.

Whilst these studies offer insights on the strategies that the institutional entrepreneurs used, they also considered the institutionalisation of the novel technology as a binary event (adoption vs. nonadoption) with no space to ‘creatively transform’ the meanings of the technology along the process. Contrary to these perspectives, other studies (e.g., Munir and Phillips, 2005; Maguire and Hardy, 2008), instead of institutional change depending only on a single event or jolt for the change process, placed emphasis in how technologies and institutions coevolve. For example, Munir and Phillips (2005) show the process by which institutional entrepreneurs embody their interests in the resulting institutions through a typology of discursive strategies rooted in the production of texts. Similarly, Maguire and Hardy (2008) show how actors external to the field contribute to the deinstitutionalisation of a new technology by undermining the practices supporting a technology.

***Legitimation of novel technologies through political action.*** Whilst the previous set of studies concentrated on the narrative through which actors accommodate technologies in institutional fields according to their interests, a second area shows how ‘institutional entrepreneurs’ legitimate new technologies in an institutional field through political action (e.g., Barley, 1990; Leblebici, Salancik and Copay, 1991; Garud, Jain and Kumaraswamy, 2002). This perspective reveals how institutional entrepreneurs devise strategies of collective



action to either change institutions in existing fields (e.g., Barley, 1990) or to create new institutional fields (e.g., Garud et al., 2002; Leblebici et al., 1991). Barley (1990), for instance, shows how actors negotiate over institutionalised roles and patterns of interaction as a consequence of the entrance of a new technology in an organisation. Also focusing on institutional entrepreneurs' political action, Garud, Jain and Kumaraswamy (2002) show how actors deploy social and political skills aiming to balance the contradictions inherent in standard creation.

Recent research on how organisations respond to new technologies from an institutional perspective, therefore, depict the relationship between technology and institutions as a process in which institutional entrepreneurs respond to the new technology by producing changes in meanings (e.g., Munir and Phillips, 2005; Maguire and Hardy, 2009) or structures (e.g., Barley, 1990). For instance, by drawing on elements of the old institution to legitimate the new technology (e.g., Hargadon and Douglas, 2001; Raviola and Norbak, 2013) but leaving the technologies' features intact. These theories, therefore, treat meanings and structures as flexible and technologies as inflexible and assume that to the extent that institutional entrepreneurs embody their interests in the new institutional rules, the new technology will be legitimated. However, a few exceptions acknowledge that what the technologies make physically possible is important. For instance, Pinch (2008) regarded how a technology can take different meanings in different settings and transform these settings in the process. Theories on how actors respond to technologies in an institutional field tend to *blackbox* technology by treating it as the object of institutional entrepreneurship. As a consequence, current theories on institutions and technology do not provide a convincing explanation for the empirical reality of how technologies such as automated cars, drones or 3-D printers have the capacity to disrupt the rules or norms embedded in institutional fields, for instance, by offering some level of autonomy in their function, which gives a new edge to the

interaction between humans and technologies.

Therefore, by *blackboxing* technology, current research on institutional theory is particularly problematic in explaining processes in which the affordances of ‘disruptive technologies’ can expand the discretion of some actors and/or their access to and control of resources in ways that are detrimental to other actors and threaten consolidated equilibria underpinned by current arrangements. A possible explanation for the *blackboxing* of technology in current studies of technology and institutions can be in the fact that such studies have focused, instead, on general-purpose technologies – new methods of producing and inventing with inherent potential for general improvements in productivity gains (Bresnahan and Trajtenberg, 1995). Examples include photographic cameras (Munir and Phillips, 2005) and the electric light (Hargadon and Douglas, 2001), which are endogenous to the field. Thereafter, current studies have not paid particular attention to those technologies that can have an impact on an institutional field that goes beyond general improvements in productivity gains to disrupt the settlements of institutional fields.

To take a more active role for technology in studies of responses to new ones from an institutional perspective, we use the concept of affordance that originated with Gibson (1986) and that was later used by Volkoff and Strong (2013) to define ‘the potential for behaviors associated with achieving an immediate concrete outcome and arising from the relation between an object (e.g., an IT artifact) and a goal-oriented actor or actors’. Affordance-based information technology research has largely focused on how different visual cues support the perception of affordances or how perceptual cues can be learned as social inventions (Leonardi, 2011; Markus and Silver, 2008; Zammuto, Griffith, Majchrzak, Dougherty and Faraj, 2007). For instance, Zammuto and colleagues (2007) identify five affordances framed as capabilities. In our research, however, we draw on the concept of affordances to explore not only the phenomenon of actors’ perception of affordances, as current research on the

subject has done, but also, on how actors respond to the introduction of a technology with disruptive potential.

These considerations indicate that we only have a simplified understanding of how actors respond to disruptive technologies. Addressing this issue, however, is important to improve our understanding on how disruptive technologies can change fields and not just on how institutional entrepreneurs can benefit from them as current research explains.

To address this question, we draw on the notion of frames to understand the technology-institution bundle. Frames are an ‘interpretative schema that simplifies and condenses “the world out there”, thus organising experience in guiding action by rendering events or occurrences meaningful’ (Snow and Benford, 1992: 37). The use of framing, as Scott (2003: 880) argues, is central to the cultural-cognitive aspect of institutions that ‘involves the creation of shared conceptions that constitute the nature of social reality and the frames through which meaning is made’.

## **METHODS**

### **Research Setting**

Our research was based on a qualitative case study in the field of trade book publishing in the United Kingdom. We define and delimit the field of trade book publishing by studying “the sector of the publishing industry that is concerned with publishing books, both fiction and non-fiction, that are intended for general readers and sold primarily through bookstores and other retail outlets” (Thompson, 2012: 12). The study traces the field back to the year 2000, when the first electronic books entered the field, till the year 2017. In 2017, at the time of the study, the field had not achieved a settlement regarding the responses to the disruptive technology. As a consequence, we refer to the state of the field as ‘in flux’ as what will ultimately settle the arrangements in this field was unknown at the time of the study.

In the field of trade book publishing in the UK, the so called ‘e-book revolution’ from the

mid-1990s, led to the conviction that “the publishing industry was on the edge of a fundamental change” (Thompson, 2013: 272). By 2008, the sales of e-books raised sharply - by leap of 400% in 2008 - thanks to the introduction of the Amazon Kindle. The *dematerialisation* of support of the electronic book - from physical to digital - together with the increasing popularisation of the Internet, presented the consumers the possibility of copy (before only restricted to those equipped with the printing press). As a consequence, the fear of digital piracy - the unauthorized reproduction of digital books protected by intellectual property that deprives both publishers and authors from revenue - generated the need for publishers to respond to the disruptive technology.

The field of trade book publishing in the United Kingdom, thereafter, makes a compelling case for the study of the responses to a disruptive technology because the disruptive elements of the technology were quite salient. Thereafter, the disruptive potential of the technology was readily transparent in that field (Eisenhardt, 1989; Yin, 2003). In addition, because the events were fairly recent, many of the participants were still alive and available for interviews. Moreover, the fact that events related to how the electronic book could disrupt the Intellectual Property Rights were well documented in the media meant that we could draw upon numerous data sources.

### **Data Collection**

Data collection followed common recommendations for qualitative case study (Eisenhardt and Graebner, 2007) and combined archival search with in-depth semistructured interviews. Table 3 describes our data sources and how to use them.

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The 27 interviews were conducted between October 2014 and June 2017. Interviews lasted between 30 minutes and 2 hours and were tape-recorded. They had an open-ended

format allowing us to capture a rich description of the events associated with the struggle over regulating the affordances of the e-book.

Representativeness of the different subject positions in the field led the selection of informants. To capture how events unfolded because of the arrival of the e-book, we reached out to informants through different methods, for example, actors that appeared in the archival data, encounters at the field configuring events, referrals and extensive online searching. The list of informants includes a mix of positions related to DRM (pro-hard DRM, pro-social DRM and anti-DRM) and roles in the field (i.e., publishers from different backgrounds, authors, activists, and DRM distributors).

We also carefully searched industry-specific magazines. Articles from such magazines offer specialised coverage for a certain audience, typically participants in a specific field. Our final compilation of archival data includes articles from these magazines, blog posts generated by authors and publishers and the national popular press. In addition, we have transcribed relevant talks – either on-site or through videos from the Internet – from field configuring events: important mechanisms for bringing about change in institutional fields (Lampel and Meyer, 2008). The total number of pages of relevant articles plus transcriptions of talks in events analysed is 2205.

### **Data Analysis**

Our analysis proceeded through multiple steps. For simplicity, we present three stages sequentially although, in reality, multiple iterations occur. The first step – a narrative summary of the regulatory struggles following the disruptive technology (see Table 4) – focused on gaining a broad understanding of the implementation of the disruptive technology in the institutional field drawing on multiple data sources. We used the relevant quotes from archival data to develop a narrative and a chronology of events (Langley, 1999). In addition, we triangulated archival data with accounts from informants from the interviews. We traced

the evolution of the field from the entrance of the technology (the e-book) in 2000 until 2017 when social DRM emerged as an alternative to hard DRM. We developed a separate document detailing the succession of events as well as a description of each to define ‘who did what and when’. Alongside the narrative summary of the regulatory struggles following the introduction of a disruptive technology, we also followed the changes in affordances for both consumers and producers distinguishing between technological and regulated affordances (see Table 5).

In a second step of analysis, we generated a list of frames from the juxtaposition of archival data and interviews. The aim of this stage was to demonstrate evidence of the competing views of the technology of these two groups of actors (see Tables 6 and 7). This was comprised of quotes offered by producers – authors, publishers and distributors, as well as consumers. Such descriptions revolved around how these actors framed the different regulations of the e-book according to the different phases of the institutional process. Then, we grouped the resulting quotes in categories consisting of key themes of debate around the competing framing regulations of intellectual property rights, for instance, interpretation of consequences of DRM-free books or interpretation of free circulation of books amongst peers. Table 7 shows exemplary quotes of the two different frames – economic frame (represented by producers and distributors) and social frame (represented by the activists, consumers as well as the SDRM producers and distributors).

Drawing on all the data sources as well as the narrative of events and competing frames, in the third stage of data analysis, we produced a grounded model of the struggles over the response to a disruptive technology in an institutional field (Figure 2).

## **FINDINGS**

This section presents our findings drawing on all data sources. We interspersed the narrative with quotes intended to illustrate our interpretations, and we display additional

quotes in separate tables to illustrate and document the robustness of our claims (see Tables 4, 5, 6 and 7).

In the remainder of this section, we first describe the settled institutional arrangements in the field before the entrance of technology with disruptive potential as well as how the affordances of such technology compromise and disrupt these arrangements. Second, we present a detailed narrative of the three phases in which the events following the arrival of the e-book unfolded. This division, however, is analytical as at the time of the study the three phases coexisted in this field in flux.

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### **Settled Institutional Arrangements: The Printing Press**

*Before the printing press: IPR regulated the affordances of the physical book.* IPR is a constituent part of book publishing in the UK: a 300-year-old institution whose origins can be traced back to the invention of Gutenberg’s printing press in 1440. Before the printing press, book reproduction was only possible by handwriting – historically centralised in monasteries. Copying technologies were, therefore, limited to one person reading and copying at the same time; copying original work was centralised. The ‘Gutenberg revolution’ caused a proliferation of books across Europe and the emergence of the possibility of commercialisation. By 1500, printing presses in Western Europe had already produced more than 20 million volumes (Febvre and Martin, 1976). Within 50 years, the number of books available in Europe went from a few thousand to tens of millions and created the opportunity to monetise the content generated by authors. As a consequence, authors needed to protect their right to benefit from the economic exploitation of content. It was at the point of the invention of the printing press that greater emphasis was placed on the notion of protecting work, as a number of people (publishers) began using, printing and selling copies of other

people's work (authors) in large amounts and selling them for profit.

The modern concept of IPR originated in England in 1710 to protect author rights, with the statute of Anne: 'An Act for the Encouragement of Learning, by vesting the Copies of Printed Books in the Authors or purchasers of such Copies, during the Times therein mentioned'. The origin of copyright law in the UK, therefore, lies in efforts by the government to control and regulate the output of printers.

IPR includes two kinds of rights: author rights and rights of exploitation – copyright. The Anglo-Saxon common-law tradition classifies copyright as a property right, which can be sold, assigned, licensed and given away. Relevant actors in book publishing have regarded IPR as 'a pillar of the field in book publishing' because they regulate how to capture value from a difficult-to-assess value: content. Indeed, IPR sets a clear distinction of the roles in the field. It sets that authors produce content, that publishers commercialise it, and that physical distributors distribute it. The institution of IPR also embeds the three institutional pillars suggested by Scott (1995) (see Table 1).

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Insert Table 1 About here  
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The statute determined that the 'copy' was the 'sole liberty of printing and re-printing', and this liberty could be infringed by any person who printed, reprinted or imported the book without consent. Whilst the UK focused on the right to copy 'copy-right', other countries such as Germany or France regarded the process of creating as a human right. And as legal statutes referred to it as 'author rights', an understanding emerged that copyright originated from author rights to the product of his labour. The original purpose of IPR in book publishing was to regulate the property of content - an intangible asset in which immaterial properties do not define per se the limits of property. The regulation allowed content owners



to restrict availability to other users. Publishers and authors justified the need of IPR as an ‘incentive of creativity’. For example, an author argued:

The publishing industry – and by association the trade in publishing rights – is inextricably linked to the existence and recognition of copyright [part of IPR]. Without copyright, it is doubtful whether many authors would have the incentive to create (Archival, Publishing/Author).

*The affordances of the physical book made the regulation of IPR noncontroversial.* The affordances of the physical book allowed consumers to use the book in the way that physical possession of an object grants. Thus, consumers fully disposed of the book and could lend, copy and resell it (see Table 5).

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Insert Table 5 About here  
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In fact, the uses of the book, related to possession by consumers of the physical object, were associated with historically embedded practices of consumption in the field. For instance, Wright (2005) referred to the practices of sharing and lending books as part of a ‘social infrastructure that connects reading with processes of socialization’. In fact, data shows that the practice of book lending was embedded in book publishing from as early as 1714–1830:

With book lending becoming something of a social imperative in the polite culture of late Georgian Britain, private libraries often served as a practical resource for the wider community. The practice of book sharing had far reaching consequences for community cohesion, shared reading habits and intellectual culture (Towsey, 2013: 210).

The regulation of content ownership through IPR raised controversies. For instance, activist groups and scholars posited that IPR benefits content owners at the expense of consumers’ access to knowledge. However, before the introduction of the e-book in the UK, IPR regulation facilitated a balance in book publishing. On the one hand, IPR allowed producers – authors, publishers and distributors – to safeguard economic benefit. On the other hand, consumers traded away rights of copy that they could not use anyways, as they did not

own the copy technology:

The system was designed to provide benefits to the general public. As a result, it was mostly uncontroversial, easy to enforce and arguably beneficial for society. It was mostly uncontroversial because it didn't restrict the readers, it restricted the publishers. If you were not a publisher, you didn't have much to object, so, people didn't object much (Archival, Author, Activist).

### **The Entrance of a Technology with Disruptive Potential: The Electronic Book**

Although the origins of the e-book - a book publication in digital form consisting of text, images, or both, readable on computers or other electronic devices (Gardiner, Eileen and Musto, 2010) - can be traced back to as early as 1949, the sales of e-books for all the major trade publishers remained low until 2007 (Figure 1). Sony launched the first commercial e-book with the Sony Librie in 2004, and in 2012, Nook from Barnes & Noble announced partnership with retailers in the UK. However, experts in the book publishing field consider Amazon as responsible for the boost in sales of e-books. From 2007 to 2014, e-book sales in the UK went from £100m to £523m, showing a growth of 305%. In 2007, the introduction of Amazon's Kindle contributed in raising e-book sales.

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Insert Figure 1 About Here  
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The dematerialisation of support of the e-book – from physical to digital – together with the increasing popularity of the Internet, caused the threat to disrupt the institution of IPR by generating affordances that allowed consumers to rapidly copy and share the book at no cost (see Table 5). Thus, whilst the physical book centralised the possibility of mass copy to publishers, the e-book decentralised the possibility of copying to an unlimited number of users. The advent of the e-book, thereafter, compromised the publishers' capacity to generate revenue by equipping consumers with copy technology.

As a consequence of the affordance of casual sharing, electronic devices risked turning the book into a public good that is both nonexcludable and nonrivalrous in that individuals

cannot be effectively excluded from use and where usage by one individual does not reduce availability to others (Gravelle and Rees, 1992; Mas-Colell and Whinston, 1995).

Because of the difficulty of setting ownership, public goods are contested resources. Hence, the rules of who owns the content – previously regulated by IPR and facilitated by the affordances of the physical book, for the affordances of the book to the consumers in the sense that it did not offer them the copy technology – of a book distributed in an electronic device became disputable. Ultimately, the e-book threatened to upset the balance achieved by the institutional arrangements governed by IPR.

Thereafter, the change in copy technology caused publishers and authors to reflect on their fear of the e-book to turn book publishing into an ungovernable field by referring to the field as ‘an apocalyptic scenario’, ‘going through a change of paradigm’, ‘suffering clash between the old and the new’, ‘entering the digital world which is a dangerous world’ or by acknowledging the ‘delicate balance between copyright protection and user access’. Therefore, whilst the affordances of the physical book together with IPR preserved the balance between usage of content and the possibility for producers to capture value, the affordances of the e-book, on the contrary, threatened publishers to undo this balance.

### **Phase 1: Regulation in Response to a Threat of Disruption to Intellectual Property Rights.**

Historically, book publishers have regarded piracy – the activity of reproducing unauthorised copies of protected material for mass-scale distribution – as a threat ‘engrained culturally’. For example, in the mid-19th century, pirates reprinted Charles Dickens’s work in the United States. With the physical book, “piracy took the form of full-scale commercial piracy, printers running on extra copies of authorized printings, large-scale photocopying of whole books” (Owen, 2010: 3).

The e-book, however, through the affordance of unlimited copying amongst peers, blurred

the division between casual sharing and piracy. Any consumer with an electronic file of a book could become a potential pirate by sharing the file with peers, and IPR determines any form of reproduction as an infringement. The decentralisation of copy to the final consumers, thereafter, made IPR difficult to enforce.

Book publishers responded to the increasing threat of massive piracy that could result in upsetting the possibility of IPR regulating illegitimate copies by reconciling the affordances of the e-book with hard digital rights management (HDRM) – a software to control the use and distribution of digital files containing video, audio, photo, or text with the purpose of extending copyright restrictions to digital products by redesigning the technology to prevent sharing among users. Thereafter, fighting the disruptive threat of the technology with the technology itself.

***The electronic book: HDRM-born.***

As a developer of HDRM states:

Digital works would come with tags on them. The tags – put there by the creators, publishers, and distributors – would describe the usage rights for the digital work: what can be done with it and what it costs. They are written in a machine-readable language and give the repository the rules for using the work; they are an electronic contract enforced by the repository and not removable (Archival, HDRM Developer).

The origins of HDRM can be traced back to the late '80s and early '90s in the software industry – one of the first industries that confronted piracy by including HDRM. Later on, encryption techniques further evolved with the expansion of sharing technologies based on physical media (e.g., floppy disks and CD-ROMS) and the commercialisation of the Internet. For example, in 1996, HDRM was applied to DVDs in the film industry. In 1999, Microsoft released Windows Media HDRM. And in 2005, Apple commercialised HDRM'ed music with Apple Fairplay.

HDRM became the object of the legal battle to extend analogue IPR techniques to the 'digital world'. The clash started in the mid-'90s in the United States. Media companies

threatened that unless the United States Congress made the Internet safe for content via stronger IPR protection, copyright holders would not make content available online. In 1995, Bruce Lehman, a copyright lawyer, wrote a white paper suggesting a new regulatory framework for the Internet. Lehman brought his proposal to the U.S. Congress and passed a law – the Digital Millennium Copyright Act (DMCA). The U.S. Congress approved the DMCA in 1996 and became the first law to prohibit the circumvention of hard DRM as well as ban the tools of circumvention. Following the example of the DCMA in the United States, in 1999, the UK implemented the European Copyright Directive, which prohibited circumvention of HDRM. With the passing of this law, the same technology that allowed piracy – namely, the tools that enabled digitalisation and its sharing in the network environment of the Internet – became part of a system of control oriented towards making content owners trust commercialising content on the Internet. Such is in the field of book publishing in the UK where the electronic book was born with HDRM.

In 2000, the author Stephen King sold the first ever mass-market e-book in the UK – already with HDRM. As a publisher stated, “People wanted digital files to behave like print books from day one” (Publisher/Author, Interview). Following Stephen King, several major publishers in the UK sold e-books protected by HDRM – Penguin Random House, Hachette Livre, HarperCollins, Pan Macmillan, Pearson Education, Oxford University Press, Bloomsbury, Simon and Schuster, John Wiley and Sons, and Faber and Faber – representing a total of 70.7% of book sales in the UK. The spread of software for copy protection indicates that the initial fear of the extension of piracy on a massive scale caused a response oriented towards repairing the disequilibrium of the field that the e-book challenged.

***HDRM-ed electronic book: new affordances.*** Although publishers’ goal of implementing HDRM was to restrict the affordance of copying between consumers and their peers, the implementation of HDRM entailed additional changes in affordances (see Table 5). The fact

that online distributors implemented HDRM in digital files at the point of sale gave them the capacity to restrict further affordances.

With the exception of Kobo – ‘the open-source bookstore’ – the rest of the HDRM distributors limited the ease of access to consumers by restricting interoperability between devices. Thus, although publishers usually offered e-books in different platforms available (see Table 2), distributors made it impossible for consumers to navigate between devices through HDRM. For example, if a consumer wanted to change from Barnes & Noble to Amazon, it would require setting aside B&N’s device (the Nook) and purchase Amazon’s (the Kindle).

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Insert Table 2 About Here  
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In addition to locking the consumer – and the publisher – in a platform-specific device, distributors further restricted affordances to consumers by offering a license of the e-book instead of ownership of it. For example, Amazon’s terms of conditions state, ‘Kindle Content is licensed, not sold, to you by the Content provider’. Similarly, Google Play’s terms of service explains that if it ‘discontinues a service’, it may ‘remove from your device or cease providing you with access to certain products that you have purchased’.

This shift in ownership – from consumers owning the physical support of the book to consumers licensing the digital file of the e-book – allowed distributors to further expand the control of IPR. Several events exemplify how the distributors controlled the usage of the digital file. For example, in 2004, Adobe’s licensing terms stipulated that ‘users could not read a book aloud’. In 2009, Amazon disabled the account of a consumer who bought the Kindle in the UK and bought e-books from Norway, taking away her access to an electronic library of 40 books. In the same year, Amazon remotely deleted George Orwell books arguing a rights issue with the publisher. In 2016, Nook shut down the Nook app store

leaving the hosting of the digital books unclear.

*Framing of the regulation of intellectual property rights in the digital domain: economic frame.* As a result of e-book regulation by both publishers and distributors, an e-book with HDRM offered the same affordances to publishers as the one without HDRM (see Table 5). However, an e-book with HDRM changed what consumers could do with it. Thus, with the ultimate purpose of safeguarding economic incentives for producers, publishers' reactions to the e-book involved an attempt to restore its affordances to resemble those of the physical book:

Paper is a form of HDRM. If you buy a book you can lend it out to a few of your friends. Can you send it to all of them? No. You are inherently limited in the spread of that book. We don't assume that it would be ever be possible to distribute that book to everyone we know, only that we can do with it what we want. This is both sensible and sustainable (Publisher, Archival).

Another of the reasons behind implementing HDRM was related to the 'duty of care of copyrighted work' or to 'acting under a logic of care' referring to the need to protect authors from 'loss of catastrophic sales' in the context of the e-book within a networked scenario:

The authors have an expectation that the publisher takes reasonable steps to protect their content. So, they might also have an expectation that their file types are well protected. And that can include HDRM (Publisher, Interview).

Publishers also interpreted consumers' casual sharing as opportunistic behaviour which led publishers to aim to coerce it:

I'm a very big fan of HDRM on electronic books. HDRM functions in the same way as the speed bump outside my daughters' school. The speed bump does not stop me driving 40 miles an hour, it's going to be slightly uncomfortable and it's going to be a reminder to me that I should not do that [referring to sharing] (Publisher, Interview).

The goal is to remind consumers about their opportunistic behaviour 'when someone removes DRM, I'm reminding them that what they are doing is technically illegal. And, if this changes the behaviour is actually a good thing (Publisher, Interview).

Publishers were aware that HDRM does not stop a professional pirate from removing digital files but rather stops the final consumer from copying. "HDRM does not allow us to stop pirates because it takes 20 seconds to find on Google how to remove it" (Publisher,

Interview). However, most of the publishers in the field used ‘casual sharing’ and ‘piracy’ interchangeably to refer to free circulation of digital files:

There is the distinction between piracy of consumers and commercial piracy. Some consumers don’t know that they are infringing the law. Other pirates monetise the uploading of books. We don’t focus more on one or the other. It’s quite difficult to distinguish. If we see our work online, we do something to have it removed (Publisher, Interview).

As a consequence, the majority of publishers used HDRM as a way to signal to consumers that removing it was opportunistic behaviour. Although there is no evidence that publishers prosecuted those who removed a piece of software, as stated by the UK implementation of the European Copyright Directive, circumventing DRM is illegal. Therefore, the legislation converted the final consumer into a potential criminal.

The role of distributors also played an important part in publishers’ behaviour of the need for implementing HDR. When we asked publishers in the field about the reasons for implementing HDRM, a few of them referred to it as a ‘default option’ to fight against piracy. For example, one publisher argued the following:

Publishers are so ‘locked in’ that they don’t think about leaving anymore so the question of HDRM becomes redundant (Publisher, Interview).

The quote above points out that publishers were ‘locked in’ to refer to the fact that HDRM locked them in a closed system managed by the distributors. Although other actors joined the market – B&N and Apple in 2009 – in 2015 Amazon was still the most popular e-book distributor with a market share of 76% (Bookseller, 2016). Some publishers referred to the degree of centralisation of Amazon as a ‘walled garden’, a ‘gilded cage’ or ‘a perfect monopoly’ to regard the brand as a closed platform with control over the final destiny of the e-book:

If you want to get out of this garden, or, even if you are outside and want to get into the garden, there’s a barrier that stops this from happening. So, it’s a kind of like a gilded cage (Publisher, Interview).



## **Phase 2: Resistance to HDRM**

As a consequence of the restrictions that publishers brought to consumers through HDRM, the issue of extending IPR in the digital domain became controversial. In response, a social movement emerged in the '90s to fight the threat to freedom and privacy that HDRM represented for users.

Grassroots activists' platforms emerged around the globe and provided an important infrastructural element to raise awareness about HDRM. For example, the Electronic Frontier Foundation was born in San Francisco in 1990 with the aim to protect Internet civil liberties, which included opposing DRM. Another group, Defective by Design started in 2006 in the United States with the specific purpose of "eliminating HDRM as a threat to innovation in media, the privacy of readers, and freedom for computer users" (Activist, Archival). Its actions included identifying DRM'ed e-books in Amazon and the creation of an international day against DRM on May 3. Other groups such as the Student Unions for the Free Internet or the Librarians Against DRM also formed to increase awareness about a critical examination of digital rights management and how it affects lending of e-books in libraries.

In the UK, one of the first anti-DRM campaigns was the 'right to read campaign' in 2002, which emphasised the shortage of books available to visually impaired people and campaigned for an exception to remove DRM in these particular circumstances. The Open Rights Group started in 2005 to protect the rights to online privacy and free speech and championed legislative reform to prevent ill-informed use of DRM. In 2006, the British Library issued the 'Intellectual Property Manifesto' to warn that HDRM was a threat to the loss of cultural heritage. Anti-DRM activists in the UK also campaigned with international organisations. For example, the UK-based Open Rights Group participated at the international day against DRM with the American group Defective by Design.

*Framing of the regulation of intellectual property rights in the digital domain: social frame.*

*Protecting freedom and privacy of users.* Whilst producers conceived the regulation of IPR in the digital domain as necessary to safeguard their economic incentives, users perceived the regulated affordances of the technology (by HDRM) as a threat to their freedom and privacy (see Table 7). Most activists referred to HDRM as ‘anti-consumer’ and as a ‘controlling technology’ that ‘producers use to control how consumers use the technology’. As an illustration, for instance, an activist recalled:

This malicious device designed to attack the traditional freedoms of readers: there's the freedom to acquire a book anonymously, paying cash – impossible with the Kindle for all well-known recent books. There's the freedom to give, lend, or sell a book to anyone you wish – blocked by HDRM and unjust licenses. Then there's the freedom to keep a book – denied by a back door for remote deletion of books (Activist, Archival).

When we asked activists to detail the reasons why they found HDRM as a challenge to the freedom of users, the majority emphasised the events related to the remote deletion of the e-book as concrete reasons for tension. These events gathered wide media attention. For example, in reference to the remote deletion of a George Orwell book in 2009, an activist mentioned:

One day Amazon deleted *1984* of George Orwell in an Orwellian act. The book that gave us the phrase ‘Big brother is watching you’ (Activist/Author, Archival).

In addition to remote deletion, activists pointed to ‘IPR de facto’ as a controversial issue – referring to the fact that producers extended IPR to the digital environment through affordances instead of through legislation. Thus, whilst the physical book offered consumers the possibility of casual sharing and ownership, the e-book with HDRM restricted these affordances. Activists referred to the violation of the exceptions of IPR as a specific concern:

Rather than companies having to demonstrate illegal activity – which will usually require some legal deliberation – technical restrictions (through HDRM) prevent all activities that previously courts have accepted legitimate under ‘fair dealing exceptions of copyright law’ (Activist, Interview).

Thus, whilst the ‘fair dealing’ clause of copyright allowed criticism, parody, news reporting, research and scholarship, distributors locked the digital files into a specific device and restricted their uses:

HDRM stops you from quoting or copying a text, this restriction doesn’t exist in law, it is created ‘de facto’ by DRM (Activist, Interview).

In addition to the violation of the ‘fair dealing’ clause, the right to remove HDRM to access information by visually impaired people – which the Marrakesh Treaty recognises – also caused concern to consumers and activists: “Publishers over scores a human right” (Activist, Interview).

***Restricting access to books as collective property and/or use of books as personal property.*** The change of the property status of the book from ‘ownership’ to ‘license’ became an issue for activists. As an informant explained, “What you don’t own, you don’t control” (Author/Activist, Interview).

According to activists, the restriction in the property status of the book goes beyond protecting IPR to ‘further restricting what physical property allows consumers to do’. As an activist explained, “Licensing as opposed to owning challenges the very notion of property. It goes beyond intellectual property rights, it reinforces property itself of the device” (Activist, Interview).

Therefore, activists framed the removal of ‘personal property’ as a ‘step back’ on reader rights:

If you buy a book, it belongs to me. It’s my property. Not my ‘intellectual property’ but real, no-fooling, actual tangible property. The kind that courts have been managing through property law for centuries. Ownership implies some basic rights – like the right to change, destroy, lend, or resell a book you’ve bought (Activist, Archival).

In addition to reversing reader rights, activists explained that removing the ownership status of the book granted further power to online distributors:

Distributors expropriate your interest in your physical property in their favour

(Author/Activist, Interview).

Amazon does not respect private property. Amazon's idea of private property is, 'everything belongs to us' (Activist, Archival).

Besides regarding further power to the distributors as problematic, activists frequently mentioned that removing ownership of the e-book would cause changes to how consumers use the book. The uses of the book as an object, they argued, were highly embedded in consumers' practices in the field. Activists reasoned, for instance, that 'ownership is linked to specific uses of the book' and regarded ownership of the book as an object as 'a legacy thing'. An industry expert, for example, related ownership of the physical book with its symbolic dimension:

Challenging ownership is tricky because a book is a symbol of distinction and if you remove ownership you remove a part of what the book means. I think that this is against the values of the reading culture. Buying books is a class signifier (Industry expert, Interview).

***Free circulation as 'casual sharing' that enhances the visibility of an author's work.***

Contrary to the proponents of regulating e-books through HDRM, who advocated for the need to restrict casual sharing, activists emphasised sharing in the digital context as more relevant than in the physical one. Activists argued that copy does not imply 'theft' because in the digital context, copying does not imply a tangible extraction of someone else's property. As one activist explained, restricting sharing is embedded in conceiving the e-book as a physical object:

On the one hand, copyright in the digital world gets very complicated, in some cases you are making copies all the time. On the other hand, the regulation of digital copyrights says 'we don't want to consider that every single copy is actually a copy, but rather, theft' (Activist, Interview).

Activists also insisted on the relevance of casual sharing as a highly embedded practice in the field:

Casual sharing of printed books has been going on from time immemorial. Even leaving aside public libraries, friends like to turn to friends and say, 'Here, you should read this' (Activist, Archival).

A few authors acknowledged the relevance of casual sharing to the field and, instead of seeing it as a ‘threat to creativity’, regarded casual sharing as an opportunity to ‘increase visibility’ that could serve as ‘an introduction to an artist’s work’ by ‘word of mouth’. The best-selling author Paulo Coelho, for instance, argued the following:

Piracy is not bad for sales. The more visibility a novel has, the more sales it has the potential to achieve (Author, Archival).

Other best-selling authors such as Cory Doctorow or Neil Gaiman also advocated for DRM-free books by selling DRM-free books in their own webpages. In addition to central authors, some peripheral authors were in favour of visibility and acknowledged HDRM as a restriction to the promotion of their book. “Most authors that I know, including myself, struggle to make a living, taking control of their work would be a good thing” (Author/Activist, Interview).

***Removing HDRM as civil disobedience.*** In addition to the effects of the regulated affordances in the usage of the e-book, the legislative regulation around HDRM – which criminalises its removal by final users – was one of the great concerns for activists. As one author acknowledged, the criminalisation of removing HDRM granted further power to the producers to extend IPR:

The concern is not as much as what HDRM does, but, about anti-circumvention laws. The problem is that the laws allows publishers and distributors to extend copyright in their favour (Author/Activist, Interview).

As a response to the ‘excessive’ legislation of HDRM, some activists understood promoting HDRM-stripping as an act of ‘civil disobedience’:

They [consumers] are basically treated like criminals, with the sellers of media expecting them to steal. As such, they have become exactly that. And, the conscious consumer has no shame in doing so. They are being treated like shit after all (Activist, Archival).

They turn technology against us. Into our enemy, into our prison guard. So, we have to reject digital handcuffs and know how to break them (Activist, Archival).

Removing HDRM was an extended practice amongst consumers in the field. Also, instructions on stripping HDRM were easily accessible online as different webpages offered guidance. Moreover, particular events such as the remote deletion of books by Amazon heated up the debate about ripping off HDRM as a legitimate option. For instance, in response to the remote deletion of a user, an article by the magazine *Ars Technica* titled ‘DRM be damned: How to protect your Amazon e-books from being deleted’, exposed the following:

If you buy e-books from Amazon you can engage in a bit of digital civil disobedience by stripping the files with HDRM, and, make sure that Amazon can’t deny you access (Author/Activist, Archival).

The majority of consumers were unaware of the presence of HDRM on their devices. Activists frequently referred to HDRM’s invisibility as a major threat to privacy that is ‘insidious’ and ‘intrusive’. Thereafter, regarded HDRM as collecting information as surveillance and violation of privacy:

For us, we have a general problem with HDRM – a fundamental problem with trying to bring in technological tools to control media, because on a really basic fundamental level, HDRM involves bringing to your computer things that are outside of your control (Activist, Interview).

Another concern was related with the fact that Amazon kept a track of the list of books that consumers read:

Amazon requires the users to identify themselves. So, Amazon identifies a giant list of all the books each user has read. The existence of such a list threatens human rights. In a country like Britain, where you can be prosecuted for possessing a forbidden book, this is more than hypothetically Orwellian (Activist, Archival).

### **Phase 3: Social DRM.**

The anti-HDRM debate led some publishers in the field to consider an alternative. This alternative was social DRM (SDRM). Similar to hard DRM, SDRM is a software intended to counteract piracy. However, instead of locking the digital file into a specific device, SDRM identifies the purchaser of the e-book with a watermark in every page so that publishers can

trace the file in case of piracy. Therefore, through SDRM, publishers brought back to consumers the e-book's affordance of casual sharing and interoperability between devices.

Contrary to HDRM – where the online distributors made decisions on the restrictions of the e-book – the distributors of SDRM were simply technical providers. Thus, with SDRM, externalising the distribution of e-books was not necessary. Whilst for the case of HDRM publishers needed to externalise the distribution to providers such as Amazon, with SDRM, publishers could implement SDRM at the point of sale. This was because SDRM providers simply offered a technical solution. In 2013, BooXtream, the first SDRM provider, took off in the UK. In 2014, the UK-based Firsty Group partnered with BooXtream to provide SDRM solutions to publishers in the UK.

Two cases, in particular, ignited a wider debate within the field about the emergence of SDRM to counteract file-sharing. In 2012, the imprint Pottermore and the publisher Tor were the first publishers – linked to the five big publishers – to adopt SDRM. Pottermore took off in 2012 as an online portal that included an electronic bookstore for the seven Harry Potter fantasy novels. At the time of SDRM implementation, Pottermore occupied a central position within UK publishing. Harry Potter was the best selling book series in history (Guinness World Records, 2012). In addition, in the UK, J. K. Rowling's publisher was Bloomsbury, one of the big five publishers. Rowling's relationship with her publisher was somewhat unique in that she retained the digital rights to the seven Harry Potter novels. Moreover, Amazon redirected customers to Pottermore's site, which distributes the book with SDRM.

Tor, part of the Macmillan Group, publishes science fiction and fantasy titles including award winners and bestsellers. Tor initially implemented HDRM for its sales of e-books. However, in 2012, Tor decided to abandon HDRM for SDRM. As with the case of Pottermore, Tor's decision to implement SDRM also involved a central actor in the field: John Sargent, CEO of Macmillan. Following these two actors associated with the big five

publishers, medium-sized publishers also implemented SDRM. For example, Verso and Profile Books, independent publishers, further contributed to ignite the debate on DRM by applying SDRM on their books.

In relation to the expansion of SDRM, BooXtream explained that they had 26 publishers using their services in the UK. In addition, Hub Van de Pool, BooXtream's founder and CEO, argued, "There is no "hard" data available, but, I guess that many hundreds of thousands (if not millions) of electronic books are sold with Social DRM in the UK each year" (SDRM Distributor, Interview). Apart from the publishers that implemented SDRM with BooXtream in the UK, BooXtream's partner in the UK, Firsty Group, also served publishers that implemented SDRM in their e-books. However, the number of publishers using SDRM is difficult to gauge, as some distributors also implement SDRM themselves. For example, a founder of a digital platform that distributes e-books argued, "We let publishers choose which DRM they wish to apply, we have our own digital watermarking (SDRM) as we are a technology company. We want to limit how much we rely on other companies as much as possible" (Publisher, Interview).

***SDRM-ed electronic book: new affordances.*** Contrary to HDRM, SDRM allowed casual sharing. The degree of flexibility related to casual sharing, however, depended on the publisher. Thus, SDRM permitted publishers to decide on the degree of restriction of the e-book. Pottermore, for instance, implemented SDRM but restricted the number of times a Harry Potter book could be downloaded into multiple formats to eight.

A similar event occurred with the ownership status of the e-book. Whilst SDRM allowed users to own the book, as opposed to merely purchase a license, the final decision was in the hands of the publisher. As the manager of a SDRM provider argued, "With Social DRM, ownership depends on the publisher. E-Books cannot be deleted remotely. However, some publishers prefer to license the e-Book instead of offering ownership" (SDRM distributor,



Interview).

***Framing of the regulation of intellectual property rights in the digital domain: economic frame.***

SDRM's main purpose is to protect the digital file from piracy and thus safeguard economic incentives for producers. SDRM exists to ensure producers (publishers and authors) are rewarded for intellectual work by regulating, rather than restricting, casual sharing. To find pirated copies, publishers had the possibility to scan the web to monitor transactions and limit any user whose account downloaded more than a fixed number of titles in a given month (typically 100 titles).

However, not all publishers searched the web for pirated copies. On the contrary, when we asked publishers about the effectiveness of SDRM against piracy, some informants referred to its normative – rather than regulative – aspect:

The implication of SDRM is that is making a normative threat to the 'would be pirate' (Author, Interview).

As a publisher argued, "Social DRM is a piece of expectation in the market to respect the material" (Publisher, Interview). Another industry expert illustrated the 'moral' component of SDRM by stating, "Social DRM is a new approach to Hard DRM based on Digital Rights Morality. So, it is about trusting the good guys and, yet, discouraging them from sharing the digital files in the Bit Torrents" (Publisher, Interview).

***Framing of the regulation of intellectual property rights in the digital domain: social frame.***

Contrary to HDRM, publishers who adopted SDRM explicitly related their decision with user freedom. The tensions from the anti-DRM movement played a crucial role in the emergence of SDRM as an alternative to HDRM. The following quotes highlighted that publishers deemed 'listening to the demands of the community of readers' as one of the primary drivers of the implementation of SDRM:

We're all out here together, and you can't put up barriers or turn a deaf ear to the community that keeps you exploring. We need to listen to the community that these arguments exist within: a publishing community that consists of all levels of participation from the bookseller, the author, the reader, and the semi-pro (Publisher, Archival).

Another win has been related with the fact that the digital community reacted to that. Many people were like "seriously guys!" here we have finally a company that has done what we have been asking for years (Publisher, Archival).

Whilst producers interpreted the consequences of HDRM-free books as enabling opportunistic behaviour, adopters of SDRM mentioned that not using HDRM could instead encourage trustworthy behaviour in consumers. Tor's CEO, for instance, explicitly referred to SDRM as a 'signal of trust to consumers': "Ultimately SDRM comes down to the desire to play fair with them [the community] in the assumption that they will play fair with us" (Publisher, Archival).

In a similar fashion, a publisher that implemented SDRM stated that the decision was about "making content available to consumers on a platform they want to purchase it on, and at a price they are willing to pay" (Publisher, Archival). The same publisher added that the "customer-oriented approach was one of the best ways of fighting piracy". In fact, they argued, "Piracy on our books is 20% lower than when we started with [hard] DRM. I don't think that publishing without [hard] DRM produces piracy. We also haven't seen any evidence of loss of sales since we implemented Social DRM".

***Framing of the regulation of intellectual property rights in the digital domain. Free circulation as 'casual sharing' that enhances the visibility of an author's work.*** Proponents of SDRM embrace the notion of 'casual sharing' as a highly embedded practice of consumption at the field. For instance, J. K. Rowling emphasised that "using social DRM 'enhances Harry Potter's digital legacy by allowing readers to discover the series of books across a variety of platforms" (Author, Archival). Referring to the use of SDRM to facilitate casual sharing, one of the publishers stated, "Monsoon encourages readers to lend an eBook

to a friend or family member as they would a paperback, and their name, email address and transaction details are in the eBook to discourage piracy” (Publisher, Archival).

The majority of publishers that adopted SDRM also acknowledged ‘publishing as a community’ in which the practice of sharing is important:

Publishing has always been a community of support and conversation, driven and refreshed by the excitement generated by the authors and their stories. SDRM allows us to enable the connections that occur naturally within the community (Publisher, Archival).

Tor’s CEO also recognised that hard DRM hindered the ‘connections’ that ‘occurred naturally’ within the community. He further suggested that “‘initiatives such as Social DRM should be seen as the first step towards replication dynamics related with interaction occurring in physical spaces” (Publisher, Archival).

Tor’s CEO also emphasised the importance of “having a DRM-free digital space for the sci-fi/fantasy community that allows for experimentation with format, such as the TV-season-esque serialisation of *The Human Division*, the latest novel in John Scalzi’s Old Man’s War universe” (Publisher, Archival). Therefore, for Tor, Social DRM could be a tool to “keep a reader or a bookseller or an author or a semi-pro excited about a story by publishing an easily accessible novella in between novels. Then, you can more easily build a more diverse publishing program, and you can do it without locking those stories into devices that may become obsolete” (Publisher, Archival).

As the previous quotes suggest, publishers acknowledge that, in addition to offering a beneficial affordance to the consumers, casual sharing also expands the visibility of the books. In a more explicit way, for instance, the rights manager of an independent publisher stated:

We do not trace who pirated our books, we understand that a certain presence of our books in peer to peer platforms can benefit us by enhancing its visibility (Publisher, Interview).

Although activists and some publishers in the field considered allowing casual sharing as a

‘step forward’ for users, SDRM raised concerns amongst activists because of issues related to surveillance and violation of privacy. SDRM distributors and publishers regarded the watermark in SDRM as an opportunity to ‘personalise the electronic book’ that offered further ‘opportunities for book enhancement’; activists, however, exposed ‘personalisation’ as a concern for privacy. An activist, for instance, argued, “You can have your book upload there with your name and maybe it’s a book about *Fifty Shades of Grey*, and, who wants it?” (Author/Activist, Interview). The same author/activist also emphasised, “Although people know intellectually that Amazon keeps a record of the books you have read about “how to overcome depression”, SDRM’s watermark “actually reminds readers that they are being surveyed”. Therefore, at the time of the study, SDRM did not represent a definitive solution for the regulation of intellectual property rights in the digital domain. Rather, it represented a state of the field in which the final settlements of the field were ‘in flux’.

### **A GROUNDED MODEL OF THE STRUGGLES OVER THE RESPONSE TO A DISRUPTIVE TECHNOLOGY IN AN INSTITUTIONAL FIELD**

Before discussing the theoretical implications of our observations, let us recapitulate the field-level responses to the introduction of a new technology not as a linear, one-stage institutional change process but as a dialectical one, driven by the search for a new equilibrium amongst the interests of the various actors (represented by frames) as they attempt to design new arrangements (represented by the regulation of affordances) that will be compatible with deeper and broader cultural assumptions. In this case, related to the institution of intellectual property and more general rights associated with the ownership of an object.

As illustrated in Figure 2, our findings show that when a new disruptive technology becomes available and threatens to unbalance the settlements of an institution that have taken centuries to stabilise, actor’s interests (represented by frames) together with power, urgency

and legitimacy (Mitchell, Agle and Wood, 1997; see Table 8) reveal the distributed agency of multiple actors that affect the timing of mobilisation and the likelihood of influencing regulations.

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Insert Table 8 About Here  
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Together, generate a discourse and socio-political struggle over resources, represented by frames. The struggle leads to three different phases of exploration of new technological design according to field-specific affordances that lead to the dialectical process of the three phases (*thesis*, *antithesis* and *synthesis*). Each phase defines different forms of rules/technology bundle. Actors' initial attempts to extend their discretion and access to resources frame an attempt of institutional change as maintenance through a process of restoration (*thesis*). This attempt of institutional maintenance (driven by the 'economic frame') involved the modification of affordances of the new technology in a way that seeks not only to maintain the previous equilibrium that the disruptive technology could threaten but also to catch the opportunity to expand the way powerful actors control the resources (in our case, by further enhancing property rules of the new technology in their favour). In this stage, producers modified the regulation of the affordances of the technology (implemented by modifications in the rule-affordance bundle) which offered a coercive component to the way in which actors in the field expanded current control over the distribution of resources.

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Insert Figure 2 About Here  
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As the new regulation of the affordances displayed its effects, activists and some consumers perceived a sharp contradiction between the possibilities of the technology with unregulated affordances and technology with regulated affordances. As a result, consumers opposed the new regulation and highlighted a new one drawing on a social frame whose main

purpose would be protecting the freedom and privacy of users (*antithesis*).

The search for balance between the ‘economic’ and ‘social’ frames occurred as some of the publishers connected elements of the social frame to opportunities for community-oriented organisational identity building (Albert and Whetten, 1985), namely, protecting the freedom and privacy of users, encouraging trustworthy behaviour and allowing a certain degree of free circulation as casual sharing.

The construction of the community-oriented organisational identity largely took place as some publishers responded to the demands of consumers/activists driven by the social frame to build an organisational identity that their audiences would find appealing. Drawing on these elements of the social frame, therefore, some publishers justified the implementation of a further regulatory proposal (SDRM) to prevent the disruption of the IPR institution consisting of regulating the affordances of the new technology that might appear as more controversial for those actors following the social frame. In this phase (*synthesis*) some publishers attempted to reconcile the two opposing frames: the ‘economic frame’ (*thesis*) and the ‘social frame’ (*antithesis*). Even at this stage, however, the regulation of the new technology driven by the elements of the social frame was intertwined with keeping some elements motivated by the economic frame: the primary purpose of the regulation was still on safeguarding economic incentives for producers by offering a new mechanism to prevent digital piracy. The result of this dialectical process of change was the emergence of a new settlement that revealed a state of ‘flux’ of the institutional arrangements: what will ultimately settle the deeper and broader cultural assumptions in this field was unknown at the time of the study.

## **DISCUSSION AND CONCLUSIONS**

Our study on the responses to a disruptive technology in an institutional field helped us produce a fine-grained account of the struggle to regulate new possibilities of action offered

by Internet technologies and the digitalisation of books in the publishing industry. In the remainder of this section, we deepen the discussion of the theoretical contributions of our emerging framework and the implications of our observations for theories of technology and institutional change.

### **Extending Theories on Institutional Change**

Early research on institutional fields analysed the development and establishment of fields, focusing on how stability is created and maintained (e.g., Meyer and Rowan, 1977; DiMaggio, 1991). According to this perspective, convergence in organisations focused on homogeneity and persistence and gave less attention to the role of interest and agency in shaping action. In contrast to these accounts, later research in institutional theory questioned the notion of isomorphism and drew attention to how actors can contribute to changing institutions over time or creating new ones. As a result, the notion of change emerged as a central focus for researchers in institutional theory (e.g., Hardy and Phillips, 2002; Maguire and Hardy, 2009).

Most studies on institutional theory focus on transformation of institutions and tend to omit those processes in which turning points are not linear (e.g., Greenwood, Suddaby and Hinings, 2002; Lounsbury and Crumley, 2007; Rao, Monin, and Duran, 2003). However, as Van de Ven and Poole (1995) suggested, linear models are just one type of change process available. Yet only a few exceptions (e.g., Seo and Creed, 2002; Farjoun, 2002; Swan, Brensen, Roberston, Newell and Dopston, 2010) account for a dialectical framework of institutional change and consider the struggle amongst incompatible institutional arrangements enacted by different actors as a driver of change.

Our study enriches our understanding of how different institutional arrangements sediment and coexist in formal rules and informal conventions and assumptions and may be differently interested by the disruptions brought about by novel technologies. Our grounded model,

therefore, portrays a dialectical process of institutional change in which different bundles of affordances and regulations which are provisionally implemented try to find a new equilibrium. In our case, linear replacements are less likely to take place, as we can reasonably expect the process to be contested by the distributed agency of multiple actors struggling over the regulation of new affordances influencing the process.

As a consequence of theorising this process, our study expands understanding on the dialectical model of change, one that, contrary to current models, pays attention to turning points in which fields are not in equilibrium. Our study extends this line of inquiry by, rather than describing what follows the introduction of a new technology as a straightforward case of institutional change (e.g., Suddaby and Greenwood, 2005; Kraatz and Moore, 2002), highlighting the interaction between opposed frames as driven by the dual forces of material interests and social positioning, namely, the economic frame oriented to maintaining the IPR institution that keeps the field ‘in flux’, as these institutional arrangements still coexist in practice with the social frame. More importantly, the opposition between frames suggests how the very distinction between change and maintenance work may not always be straightforward, as new technologies offer opportunities to bring about changes in institutional equilibria under the pretence of maintaining these very equilibria.

### **The Institution-Technology Bundle: The Role of Affordances in Organisational Responses to Institutional Struggles**

This study acknowledges how, as a consequence of dematerialisation led by a new technology, powerful actors regulate the disposability of such content by embedding a specific set of affordances in its material device.

Traditional reliance on how institutional entrepreneurs legitimate novel technologies through political action (e.g., Garud, Jain and Kumaraswamy, 2002) or discursive strategies (e.g., Munir and Phillips, 2005) has limited the capacity of researchers in institutional theory



to capture how the affordances of technology themselves affect institutions. Whereas discursive strategies or political skills have received significant attention in the literature on technology and institutional theory, the affordances (Volkoff and Strong, 2013) of the technology have remained largely invisible and often implicit, apart from a few exceptions (e.g., Pinch, 2008). As a consequence, extant literature is unclear about how actors respond to disruptive technologies, such as the e-book, with affordances that can disrupt the equilibria of fields. Our case focused in particular on whether and how to enforce the application of intellectual property rights (IPR) on digital products.

Our findings, therefore, suggest that technologies can be disruptive – from an institutional standpoint – to the extent that they offer new affordances that expand the discretion of some actors and/or their access to and control over resources in ways that are detrimental to other actors. More concretely, our study shows that the affordances of these technologies upset consolidated equilibria underpinned by the institutional arrangements that regulate the use of technologies and the appropriation of resources produced in the field.

The relationship between technologies and its normative effect has been acknowledged by researchers in law and technology (e.g., Lessig, Dommerning and Asscher, 2006; Yeung, 2008; Hildebrandt, 2008). Lessig (1999), in his seminal work *Code and Other Laws of Cyberspace*, articulated a theory of information and communication technology (ICT) regulation in which he understood computer programming as a normative practice which can resemble the effects of market, society and law. Further research on the regulation of ICTs has advanced the concept of ‘techno-regulation’, first suggested by Brownsword (2004) as the intentional influencing of human behaviour through the implementation of norms and rules in technological devices, for a framework for challenges in technology regulation. These include achieving normative legitimacy as the moral acceptability of techno-regulation (e.g., Brownsword, 2004; Koops, 2008; Leenes, 2011; Yeung, 2011). Leenes (2011), for

instance, stated that for techno-regulation as ‘de facto’ (defined as regulating behaviour by means of technology) to be legitimate, state-authored techno-regulation has to supplement it because legitimacy requires the norms to be transparent and the regulator be accountable for the norms. Existing research has also pointed to the challenges of regulating with many centres of power in a global context (Mestdagh and Rijgersberg, 2015) or on how organisations can benefit from the potential of new technologies as a regulatory instrument to ensure effectiveness and legal certainty in the face of rapid technological change (e.g., Leenes, Palmerini, Koops, Bertolini, Salvini and Luciver, 2017).

Collectively, these studies have shed light on the mechanisms at work in the mutual shaping of regulation, technology, and normative notions. However, despite the relevance for institutional fields of these mechanisms that can challenge their regulations and disrupt them, only a few exceptions have paid attention to this issue. For example, Murray (2006) revealed how actors managed to align their interests (scientific logic) with the regulation of a new technology that had threatened to disrupt the balance of the arrangements in the institutional field despite the increasing relevance of the challenges of ICTs. Overlooking the fact that technologies with disruptive potential can challenge institutional fields is problematic because it disregards the extent to which ICTs can be disruptive.

By explaining how actors repair disruptions generated by the affordances of new technologies, our observations enrich our understanding of how technological changes influence institutional equilibria and draw attention to the bundle represented by field-specific technology design and regulation as the subject of contention and embodiment of (provisional) resolution. The ensuing arrangements result from the implicit or explicit negotiation amongst actors and embody the settlement of their potential diverging interests. To the extent that novel technologies afford new, unregulated behaviours, actors that feel threatened by these actual or potential behaviours will mobilise to affect the design and

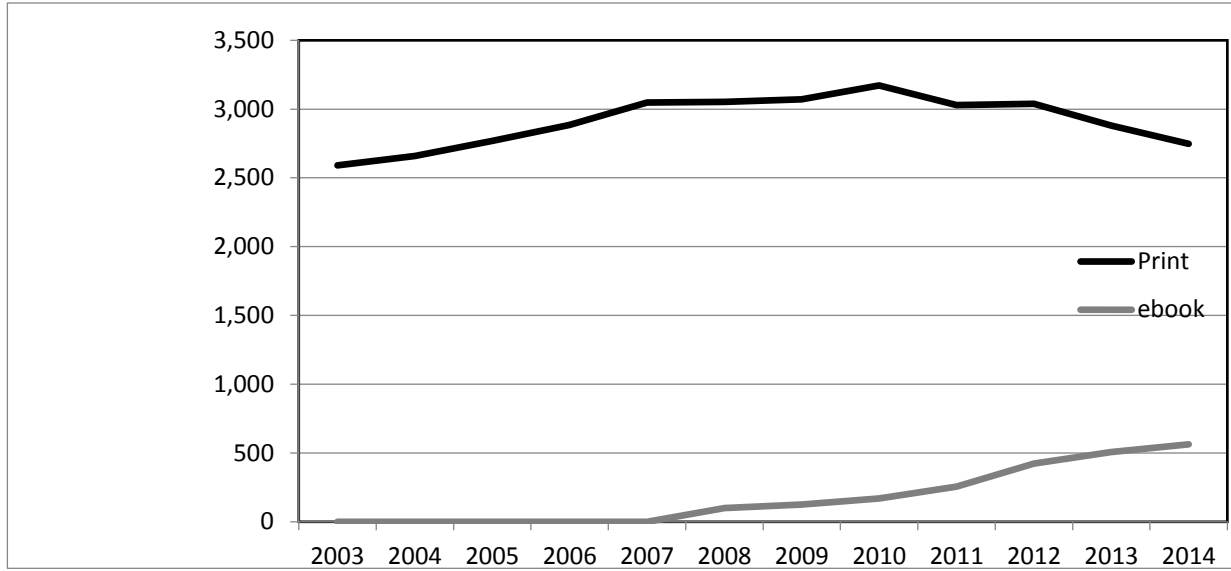
regulation of the new technology. They further show how actors frame new affordances differently to support their position as they struggle to modify the regulation of the new technology in their favour (see Table 5).

Therefore, contrary to previous studies on technologies from an institutional perspective focusing solely on the discursive or political strategies of institutional entrepreneurs, our findings highlight the ‘institution-technology bundle’ in which the affordances of the technology embody general principles and thus represent carriers of the institutional process by which actors respond to a technology that can disrupt an institutional field.

## APPENDIX

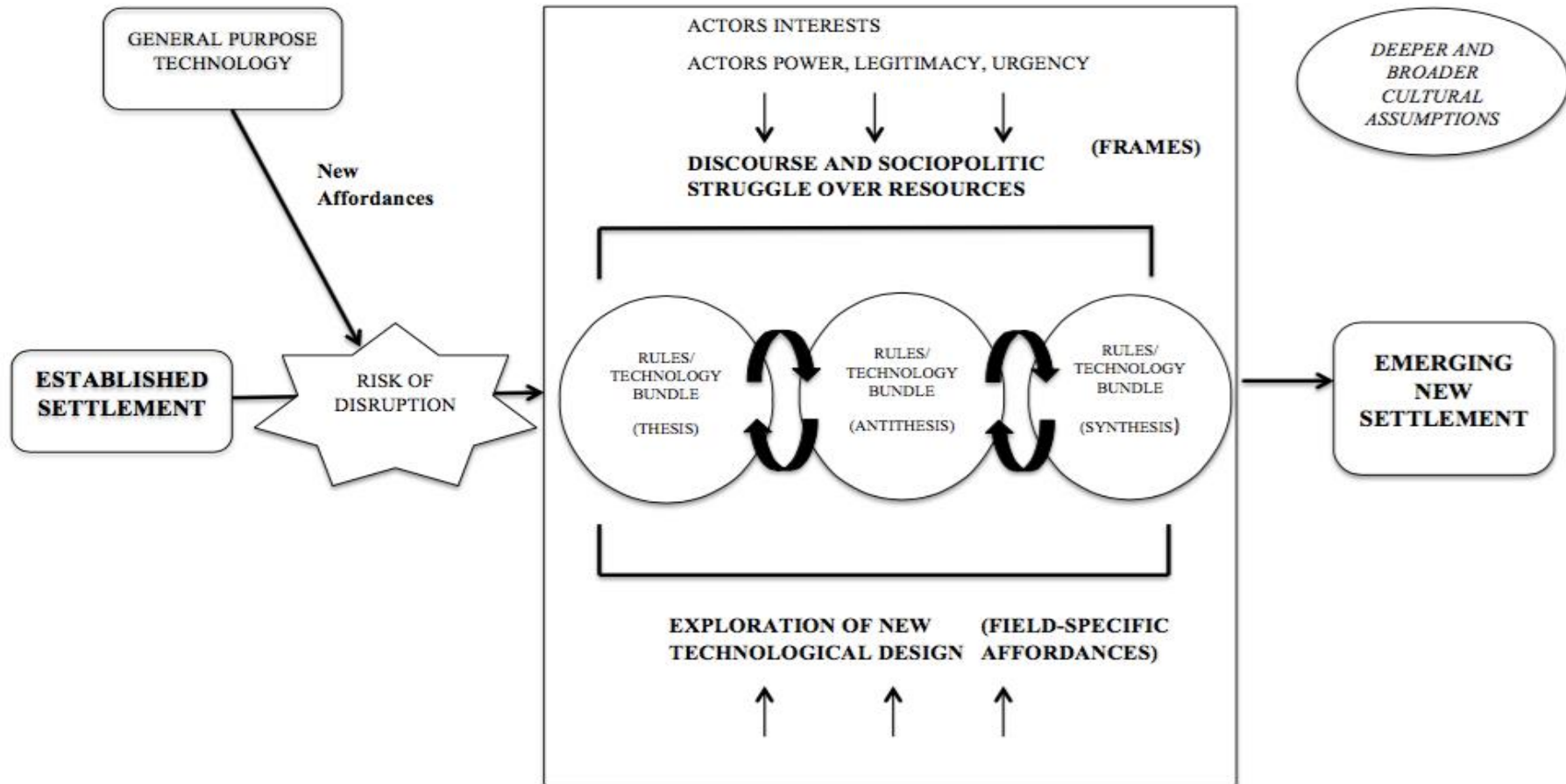
### FIGURE 1

Evolution of sales (in m £) in electronic book in the UK



Source: British Publishers Association (2015).

**FIGURE 2**  
**A Grounded Model of the Struggles over the Response to a Disruptive Technology in an Institutional Field**



**TABLE 1**  
**Pillars of the Institution of Intellectual Property Rights**

	<b>Regulative</b>	<b>Normative</b>	<b>Cultural-cognitive</b>
<b>Basis of compliance</b>	Expedience: Intellectual property rights are regulated by law and its transgression prosecuted	Social obligation: publishers grant Illegal copy (piracy) as stealing	Taken for granted: shared understanding that the content belongs to the author
<b>Mechanisms</b>	Coercive	Normative	Mimetic
<b>Indicators</b>	Rules, law, sanctions	Certification, accreditation	Prevalence, isomorphism
<b>Basis of legitimacy</b>	Legally sanctioned	Morally governed	Culturally supported

*Adapted from: Scott, W. R. (1995). Institutions and Organizations. Thousand Oaks, CA, Sage*

**TABLE 2**  
**Hard DRM systems in the UK**

<b>Provider</b>	<b>Market Share</b>	<b>DRM</b>	<b>Compatible Reading Devices</b>
<b>Amazon</b>	<b>78%</b>	Amazon	Kindle; tablets or smartphones through Amazon's application
<b>Apple</b>	<b>12%</b>	Fairplay	iPad, iPhone, iPod
<b>Barnes Noble</b>	<b>2%</b>	Proprietary DRM, variation of Adobe	Nook, tablets or smartphones through Barnes & Noble's application
<b>Google</b>	<b>5%</b>	Adobe	Sony Reader, Nook, Kobo, tablets or smartphones through applications
<b>Kobo</b>	<b>2%</b>	Adobe	Sony Reader, Nook, Kobo, tablets or smartphones through applications

Source: Investor presentation Hachette, 2014.

**TABLE 3**  
**Data Sources**

<b>Data Source</b>	<b>Type of Data</b>	<b>Use in the Analysis</b>
<i>Semi-structured Interviews (27)</i>	(27 in total): anti-DRM activists (7), employees within the book publishing industry (12), authors (5), SDRM provider (3).	Support, integrate, and crosscheck accounts with archival data to reconstruct the narrative of events following the regulatory struggles of the introduction of a disruptive technology between 1999 and 2016 (Table 4).
		Investigate the changes in affordances in the electronic book related to the different regulations of the technology via DRM (Tables 5).
		Investigate the competing framing of the regulations of intellectual property rights in the digital domain (Tables 6 and 7).
		Support, integrate, and crosscheck accounts from semi-structured interviews for the grounded model (Figure 2).
<i>Archival data(2205)</i>	National popular press, 1999-2016.	Gather information on “who” contributed to the debate around DRM and “when” for the narrative of events (Table 4).
	Videos, downloaded from the Internet and transcribed.	Support, integrate, and crosscheck accounts from semi-structured interviews for the grounded model (Figure 2).
	Reports and other documentation from Digital Piracy legal cases.	
	Transcriptions from field specific conferences in situ, or, from videos from the internet.	
	Blogs written by legitimated experts in the field.	
	Organisation webpages.	
	Online forums by consumers.	



**TABLE 4**  
**Regulatory Struggles following the Introduction of a Disruptive Technology: A Narrative Summary**

	<b>Traditional technology (printed book)</b>	<b>Disruptive technology (digital book)</b>		
<i>Affordances (potential uses of general purpose technology)</i>	Efficient large-scale reproduction and distribution of written content (subject to the limitation of the physical support)	Dematerialization of support (from physical to digital) enables unlimited reproduction and immediate real-time distribution across the globe at no additional cost. Reproduction and distribution no longer require investment in expensive equipment and facilities, making it affordable for individual users (and not only producers). The new technology may effectively transform books into pure public goods (no rivalry in consumption, easy to circumvent exclusion).		
<i>Regulation of affordances  (local implementation of general purpose technology and allocation and enforcement of rights of use of technology)</i>	<p>Copyright law grants authors exclusive rights to prevent large-scale commercial exploitation of their intellectual work by other actors equipped with the appropriate technology (publishers).</p> <p>Sharing among peers is tolerated because the technology does not afford this activity to be conducted on a large-scale and seriously threaten the economic interests of authors and producers.</p> <p>Exceptions allow limited use and/or adaptation of written content without permission of the owner for social or artistic purposes (e.g. fair dealing, making accessible copies for disabled people).</p>	<p><b>Hard DRM.</b> Extension of copyright restrictions to digital products and redesign of the technology to prevent sharing among users (encryption); the new technology negates most exceptions to copyright law.</p> <p>Legal prohibition to modify the technology to remove restrictions is intended to enable the enforcement of copyright in the digital domain.</p> <p>Digital books are not sold, but licensed to users, who no longer enjoy full property rights.</p>	<p><b>No DRM.</b> Copyright law should be applied only to printed books or to prevent the commercial exploitation of digital books.</p> <p>Digital books should be considered property of the user, with full property rights (lending, re-selling, etc.)</p> <p>“Casual sharing” among peers, with no commercial purposes, should be allowed regardless of the scale.</p>	<p><b>Social DRM.</b> Extension of copyright restrictions to digital products and redesign of the technology to track and regulate sharing among users, rather than preventing it entirely (watermark); casual, small-scale sharing is tolerated as of no economic consequence.</p> <p>Publishers can select the degree to which they want to enable exceptions to</p>

*Impact on the distribution of discretion and economic benefits among actors*

Negotiated distribution of the economic added value of a book among the author and the owners of the assets required to manufacture (publishers) and distribute (retailers) the book.

Separation of moral rights and rights of commercial exploitation restricts publishers' discretion to modify the content of a book.

Dematerialization no longer requires physical assets to manufacture and distribute books; performance of these activities no longer entitles to a share of added value.

Owner of the encryption technology (distributor) controls critical uncertainty: users are locked in exclusive relation with distributor (switching distributor requires new device); producers are locked in relation with the two dominant distributors that secure enforcement of property rights.

Users trade off full property rights for convenience and reduced price; re-selling books is no longer possible (no second-hand market for digital books).

Dematerialization expands the benefits for users, who can now more easily carry, share, and use written content at a lower or no cost. Digital format with no DRM allows user to access commercial products freely.

Reduced economic benefits for publishers, distributors, and authors. Digital distributors are particularly threatened by the free availability of the same product they sell.

Opportunity for authors to directly distribute their work (at the risk of large scale infringement of copyright)

copyright law (e.g. limiting the number of times a copy can be made).

Preservation of most affordances of physical books and the related user rights (e.g. lending, sharing, interoperability among devices), at the expense of anonymity.

Authors and publishers retain discretion over the regulation of the use of digital books, and they are not constrained by dominant distribution channels.

Digital distributors become potentially redundant, and have to explore additional ways to add value.

*Resistance of actors penalized by the (actual or anticipated) regulation of affordances*

The enforcement of copyright is not controversial because it respects the public good by giving incentives to the authors to create. Also, by granting exceptions to copyright.

Activists oppose HDRM because it restricts the exercise of rights traditionally associated with property.

Limited awareness among users of the full impact of HDRM on their rights.

Public condemnation by the media of enforcement of new rules that violate traditional understandings of user's rights (e.g. remote deletion of library)

Authors, publishers, and distributors oppose DRM-free electronic books because of the difficulty to enforce copyright (fear of piracy) and the related potential economic damages.

Publishers are concerned with distribution of the same books in different countries under different formants (HDRM vs. SDRM).

Activists lament the increased surveillance on users enabled by a watermark.

No concern expressed by authors or distributors.

**TABLE 5**  
**Affordances**

		Technological affordances		Regulated affordances	
		Physical book	Electronic book (Without DRM)	Electronic book (HDRM)	Electronic book (SDRM)
<b>Production &amp; Distribution</b>	<b>Marginal cost of production</b>	Marginal cost of production related to the cost of paper, printing, binding, and shipping.	No marginal cost of production associated with the replication and download of digital copy.	No marginal cost of production associated with the replication and download of digital copy.	No marginal cost of production associated with the replication and download of digital copy.
	<b>Synchrony between production and distribution</b>	Storage cost and risk of unsold goods associated with lack of synchrony between production and distribution.	Negligible costs of storage and no risk of unsold goods as production of additional copy is synchronized with purchase.	Negligible costs of storage and no risk of unsold goods as production of additional copy is synchronized with purchase.	Negligible costs of storage and no risk of unsold goods as production of additional copy is synchronized with purchase.
	<b>Role of distribution</b>	Requires physical access to books (or information about them). Distributors facilitate local access by spreading fixed costs and commercial risk across multiple publishers and authors.	No need of decentralized physical facilities to distribute books (or information about them). Potential direct link between authors, publishers, and consumers.	No need of decentralized physical facilities to distribute books (or information about them). Distributors control encryption of books and the decoding device.	No need of decentralized physical facilities to distribute books (or information about them). Direct link between authors, publishers and consumers.

<b>Consumption</b>	<b>Ease of access</b>	Access restricted by the geographical proximity of distribution points.	Global access (anywhere anytime) conditional to access to the internet (lower cost of search); not conditioned by reading device.	Global access (anywhere anytime) conditional to access to the internet (search centralized by distributor associated with device; no interoperability).	Global access (anywhere anytime) conditional to access to the internet (search enabled by specialized distributors and/or Internet browsers; not conditioned by reading device).
	<b>Sharability</b>	Physicality limits sharing (if a user lends book to another user, s/he no longer possesses the book). Full copying requires specialized equipment and has a cost.	Digital support enables users to rapidly copying and sharing a book on a large scale and at no cost, without losing possession of the book.	Encryption makes copying and sharing a digital book impossible.	Limited possibility of casual file-sharing across users, devices and platforms.
	<b>Disposability</b>	Possession of a physical book enables owners to fully dispose of it (lending it, copying it, re-selling it, etc.)	Possession of the digital copy of a book enables owners to fully dispose of it (storing it, circulating it, copying it, etc.)	Users do not own digital books and cannot dispose of them. Books are licensed and the distributors keep the right to withdraw the license.	Publishers are free to decide about the “ownership” or “licensing” status of the electronic file, and the specific restrictions to its use.
	<b>Portability</b>	Transportation has costs, but it is otherwise free from geographical restrictions.	Negligible transportation costs; no geographical restrictions.	Territorial licenses restricts the portability of digital books across borders.	Territorial licenses restricts the portability of digital books across borders.
	<b>Anonymity</b>	Anonymous possession.	Anonymous purchasing and possession.	Loss of anonymity. Information about user available only to online distributor.	Loss of anonymity. Information about owner inscribed in the digital file (watermark).

**TABLE 6**

**Competing Framing of the Regulation of Intellectual Property Rights in the Digital Domain**

	<b>Economic Frame</b>	<b>Social Frame</b>
<b>Primary interests</b>	Producers (authors, publishers and distributors)	Users
<b>Primary purpose of regulation</b>	Safeguarding economic incentives for producers	Protecting freedom and privacy of users
<b>Implications of digital rights management</b>	Ensuring reward for intellectual work (and support activities)	Restricting access to books as collective property and/or use of book as personal property
<b>Interpretation of consequences of DRM-free book</b>	No DRM as enabling opportunistic behavior	No DRM as encouraging trustworthy behavior
<b>Interpretation of free circulation of books among peers</b>	Free circulation as “piracy” that deprives author from fair reward of their labor	Free circulation as “casual sharing” that enhances the visibility of an author’s work
<b>Interpretation of removal of DRM from book</b>	Removing DRM as a crime	Removing DRM as “civil disobedience”
<b>Interpretation of collection of information about user</b>	Collecting information as monitoring enforcement of intellectual rights	Collecting information as surveillance and violation of privacy

**TABLE 7**  
**Competing Framing of the Regulation of Intellectual Property Rights in the Digital Domain**

	<b>Economic Frame</b>	<b>Social Frame</b>
<b>Primary interests</b>	<i>Producers (authors, publishers and distributors)</i>	<i>Users</i>
<b>Primary purpose of regulation</b>	<i>Safeguarding economic incentives for producers</i>	<i>Protecting freedom and privacy of users</i>
<b>Implications of digital rights management</b>	<p><i>Ensuring reward for intellectual work (and support activities)</i>            “We need to show to our authors ... that we wish to protect their work. And, that we look after their income so that they can keep on creating” (Publisher, Interview)</p> <p>“The idea of using a watermark shows that this is the product of someone’s labour. It’s all about putting out a piece of expectation into the market place of respect of the material” (Publishing professional, Interview)</p>	<p><i>Restricting access to books as collective property and/or use of book as personal property</i></p> <p>“Rather than companies having to demonstrate illegal activity (which will usually require some legal deliberation), technical restrictions prevent all activities that companies wish to prevent, even when these are activities that previously courts have accepted as legitimate under ‘fair dealing’ exceptions to copyright law” (Consumer, Archival)</p> <p>“[Copyright law] is no longer beneficial because the part of our natural rights which in the past we didn’t mind trading away - or the government was trading away for us because we couldn’t use it anyways – now we can’t exercise those natural rights. I want the government to bring back the rights of ours that we naturally deserve” (Activist, Archival).</p> <p>“Anticircumvention laws let rights holders invent new and exciting copyrights for themselves - to write private laws without accountability or deliberation - that expropriate your interest in your physical property to their favour. (Activist, Archival).</p>

<b>Interpretation of consequences of DRM-free book</b>	<i>No DRM as enabling opportunistic behavior</i>	<i>No DRM as encouraging trustworthy behaviour</i>
	“We are in favor of [Hard] DRM because it inhibits file-sharing between the mainstream readers who are so valuable to us and our authors”. (Archival, Interview).	“The crucial parallel between Radiohead and Rowling is the fact that they both put their faith in the fans rather than any intermediary. For Rowling it means keeping the e-books DRM-free [SDRM] and trusting her fans not to pirate her works rather than assuming that they will. (Archival, Publisher).”
<b>Interpretation of free circulation of books among peers</b>	<i>Free circulation as “piracy” that deprives author from fair reward of their labor</i>	<i>Free circulation as “casual sharing” that enhances the visibility of an author’s work</i>
	“HDRM prevents “casual sharing” and I believe – based on faith, not on data – that enabling casual sharing would do real damage to eBook sales with the greatest damage to the biggest books” (Publishing professional, Archival).	“Why is sharing stealing? What are we stealing? Stealing is when someone takes something away from someone else and then this person does not have that thing anymore. If I buy a book and I share it, I still have the book with me”. (Activist, Archival).
	“What do you mean by casual sharing? If you share a book with your entire classroom, this is not casual sharing. I think that in the era of digital people are starting to think that everything should be free” (Author, Interview).	“By offering my readers the possibility to read the book in different devices, I could increase the digital legacy of my books”. (Author, Archival).
		“I wish I could make my book visible online on my webpage –as many authors I’m not making money out of it- but I can’t under the contract that I agreed on”. (Author, Interview).
<b>Interpretation of removal of DRM from book</b>	<i>Removing DRM as a crime</i>	<i>Removing DRM as “civil disobedience”</i>
	“[The WIPO Copyright Treaty] was passed into laws, such as the Digital Millennium Copyright Act in the US and the European Community Copyright Directive [ECCD] in Europe, which say that removing DRM is always a crime –unless you’re the company that put it there. (Author, Archival).	“If you buy eBooks from Amazon and want to engage in a bit of digital civil disobedience—by stripping the files’ [Hard] DRM and making sure that Amazon can’t deny you access—we’re about to show you how”. (Activist, Interview).



**Interpretation of collection of information about user**

*Collecting information as monitoring enforcement of intellectual rights*

*Collecting information as surveillance and violation of privacy*

“[The watermark] freaks people out. It reminds people that they are being surveyed. People know that Amazon knows that you are keeping records about reading ‘Fifty shades of grey’ or about a book to deal with depression. But, they are not constantly reminded about it. Social DRM reminds you that you are being surveyed. This creates public health problems. When you make a public disclosure, the consequences come a lot later. Usually in a different place than when you made it”. (Activist, Interview).

**TABLE 8**  
**Stakeholders: Power, Legitimacy and Urgency**

	<b>Power</b>	<b>Legitimacy</b>	<b>Urgency</b>
<b>Publishers</b>	- Decreasing power as a consequence of the emerging power of the digital distributors over them (in particular, Amazon).	+ Publisher’s legitimacy decreases as a consequence of the anti-DRM movement. However, publishers are legitimated within the rest of the actors of the field.	-- Modifying the current regulation of the institution of IPR is not urgent.
<b>Authors</b>	- Decreasing power as a consequence of the emerging power of digital distributors and the complexity of the contracts.  Besides the “celebrity” authors, not many authors make a living out of publishing. Thus, do not have power to negotiate over contracts.	++ Authors have legitimacy as the other actors in the field value their ‘creative’ labor.	-- (Pro-Hard DRM) Some authors understand Hard DRM as necessary, thus, there is no urgency to change the current situation.  ++ (Anti-Hard DRM) Some authors are interested in finding a new solution for the new regulation.
<b>Distributors</b>	++ (Hard DRM distributors) Emerging power (in particular, Amazon due to centralisation).	- (Hard DRM distributors) In particular, Amazon, holds low legitimacy as a consequence of its monopolistic practices.	-- (Hard DRM distributors) In particular, Amazon, does not have urgency as they have a “walled warden” of which Hard DRM is a crucial part.
<b>Distributors</b>	+ (Social DRM distributors) Offer a technological solution but do not make decisions on the regulation of the affordances of the electronic book.	+ (Social DRM distributors) Offer a technological solution but do not make decisions on the regulation of the affordances of the electronic book.	++ (Social DRM distributors) Their goal is to influence the acceptance of the alternative solution.

<b>Consumers</b>	-- Decreasing power as a consequence of the restrictions of use.	- Decreasing legitimacy since publishers see them as potential pirates.	- The majority of the consumers are not aware of the consequences of Hard DRM.
<b>Activists</b>	- Their position is peripheral versus the powerful actors in the field (publishers and Hard DRM distributors).	- Low legitimacy since publishers see them as advocates of piracy.	++ Fighting against the regulation of the electronic book through Hard DRM is their main goal.
<b>Regulators</b>	++ Increasing power, supported by the media industries lobby (not just publishing but other industries such as Music, Film, 3D printers).	++ Increasing legitimacy, supported by the media industries lobby (not just publishing but other industries such as Music, Film, 3D printers).	- The debate is settled and there is no reason of urgency at the moment.

*[Legend: ++, relevant; +, modest; -, irrelevant ; - - poor ]*

## **PAPER 2**

### **EVERYTHING MUST CHANGE SO THAT EVERYTHING CAN STAY THE SAME: OPEN ACCESS IN UK ACADEMIC PUBLISHING.**

#### **Abstract**

In this paper, I explore the question of how incumbents can effectively address threats to undermine their privileged positions and interests, when they are not in a position to oppose a reconfiguration of current institutional arrangements. I draw on the case of the transition towards Open Access in the field of academic publishing in the UK. The findings of this study reveal that in spite of the change - from academic production and distribution as 'closed access' to 'Open Access' - incumbents respond to the threat of disruption by using symbolic action. Thus, incumbents seek to convey subjective social meanings beyond its intrinsic content or obvious functional use - as a means of creating legitimacy in order to keep the resources that allow them to capture value. My findings contribute to current theories on institutional processes by refining the notion of 'institutional change', unpacking how incumbents act as 'institutional entrepreneurs' by strategically adopting some elements of the institutional change that fit with arrangements favourable to their subject positions.

## INTRODUCTION

An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the Internet. The public good they make possible is the world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds (Budapest Open Access Initiative, 2002).

Since the end of World War II, commercial academic publishers have always generated their revenues through the same subscription-based business model, which restricts access to academic research to those individuals part of an organisation that pays a regular fee to the publishers. However, as the quote above shows, the advent of the Internet enabled for the first time the free and fast dissemination of research on a global scale. In consequence, challengers (represented by the scholars part of the Open Access movement) threatened to upset the commercial publishers' established subscription-based business model by posing the contradictions between the possibilities for Open Access that the Internet allowed, and the commercial publishers' model based on academic research behind paywalls. In spite of the threat of disruption that could potentially weaken their positions, the commercial publishers successfully preserved their central position.

Research on institutional change refers to the term 'institutional entrepreneurship' to define the "activities of actors who have an interest in particular institutional arrangements and who leverage resources to create new institutions or to transform existing ones" (Maguire, Hardy and Lawrence, 2004: 657). The term is most closely associated with DiMaggio (1988: 14), who argued that "new institutions arise when organized actors with sufficient resources see in them an opportunity to realize interests that they value highly".

Current theory on institutional entrepreneurship has mostly focused on how peripheral actors in a field, who are less embedded in existing institutions, initiate and implement

institutional change (e.g. Leblebici, Salancik and Copay, 1991; see Battilana, Leca and Boxenbaum, 2009 for review). In fact, existing research investigating incumbents as ‘agents’ mostly focuses on the ‘maintenance work’ carried out by these actors, either in the form of socialisation, rule monitoring or enforcement activities (e.g. Lok and De Rond, 2013; Micelotta and Washington, 2013). There are only few studies that have questioned this key premise. Greenwood and Suddaby (2006), for instance, is one of the few exceptions that show how resource-rich, central players that are embedded in their institutional contexts envision the possibility of changing institutions and initiate a process of institutional change.

Less attention, however, has been devoted to the question of how incumbents can effectively address threats to undermine their privileged positions and interests, when they are not in a position to oppose reconfiguration of current arrangements. The field of academic publishing in the UK, which is currently undergoing a technology-induced transformation – indicates that incumbents can symbolically contribute to the legitimization of new institutional arrangements, potentially weakening their central position, while simultaneously steering the implementation of the values introduced by the challengers. Informing the change in a way that defends, if not reinforces their position and access to resources. In the case of academic publishing in the UK, the incumbent’s central position is threatened by the contradictions between the possibilities of the new technology (digital peer to peer content production) and the incumbent’s strategies of capturing value (the subscription-based, closed access business model).

The incumbents - commercial publishers - are clearly identified as central, delineated by their market share, revenues and reputation. By 2012, the five largest publishing houses combined - Reed Elsevier, Springer, Wiley-Blackwell, Taylor and Francis, and Sage - controlled 50% of the global market in academic publishing, with profit margins that ranged from 28% to 38% (Taylor, 2012). In addition to the privileged position in terms of market

share and profit margins, the commercial publishers enjoyed high reputation due to the high impact factors of their journals.

The case of academic publishing in the UK is theoretically interesting precisely because it illustrates how current theories on the role of central actors in institutional processes fail to explain how incumbents can effectively address threats to undermine their privileged positions and interests, when they are not in a position to oppose a reconfiguration of current arrangements. To explore this phenomenon, I investigate the transition towards Open Access by commercial publishers in the field of academic publishing in the UK between 2000 and 2017. Open Access (OA) is a system of distributing academic content in a digital format where the publisher makes a journal available and free to access online for any individual. My findings indicate that the incumbents – the commercial publishers – responded strategically to the disruptive technology by discursively promoting Open Access as ‘change evangelists’. Yet, in spite of the pro-active discursive promotion of Open Access, the commercial publishers implemented business models that allowed them to maintain their central position. As a consequence, while symbolically and, to some degree, practically incumbents yielded institutional change, the field of academic publishing did not experience significant change in its underlying central positions. The commercial publishers – continued to dominate the field through the implementation of new practices embodied in new business models, which ensured them continued access to the resources generated in the field. Thereafter, whilst current studies on institutional entrepreneurship show how agents can bring institutional change, my findings show a response to coerced change. The pressure of social movements induced policy makers to intervene and push for a change, yet publishers managed to symbolically and substantially conform while at the same time protecting their position.

My study highlights the need to refine current theories of institutional change in two ways. First, my findings challenge the core notion that incumbents act primarily as agents of institutional maintenance (e.g. Lok and De Rond, 2013; Micelotta and Washington, 2013). I show how incumbents can steer change in an institutional field by strategically contributing to changes at a symbolic level – in my case, changing the collective understanding of academic distribution as ‘closed access’ to a view of it as ‘Open Access’ – while, at the same time, implementing practices that allowed them to maintain their central position in the field and their corresponding subject position (i.e. their legitimated identity in the field including their formal role; see Maguire, Hardy and Lawrence, 2004).

Second, by describing a process in which institutional change (from academic publications as closed access to academic publications as Open Access) co-exists with stability (the maintenance of central positions), my findings contribute to current theories of institutional change. Current research tends to focus on one aspect of change in isolation. For instance, changes in practices (e.g. Leblebici, Salancik and Copay, 1991; Lounsbury and Crumley, 2007; Furnari, 2014), regulations (e.g. Maguire and Hardy, 2009), organisational forms (e.g. Greenwood and Suddaby, 2006), or institutional logics (e.g. Rao, Monin and Duran, 2001). Differently from existing theories which focus on one change element in isolation, my study shows how institutional change can be disruptive at the symbolic level while simultaneously further entrenching practices that serve the position of dominant actors. Thus, my case reveals the inherently contradictory and complex nature of institutional change processes.

## **THEORETICAL BACKGROUND**

Early research on institutional theory focused on explaining how isomorphic pressures within organisational fields lead to convergent change (e.g. DiMaggio and Powell, 1983; Meyer and Rowan, 1977; Scott, 1987; Tolbert and Zucker, 1983; Zucker, 1977; 1983). Contrary to previous theories based on rational-actors models, institutional theory explained



organizational action in terms of conformity to the rules and beliefs systems prevailing in the environment (Scott, 1995).

By emphasising the effects of the social environment on organizations, however, early research on institutional theory overlooked how organizations can shape their environment and cause divergent change. In response to the lack of explanation regarding how actors embedded in institutional environments shape institutions, DiMaggio (1988:14) coined the notion of “institutional entrepreneurship” to theorise that “new institutions arise when organized actors - the institutional entrepreneurs - with sufficient resources see in them an opportunity to realise interests that they value highly”.

Early research on institutional entrepreneurship mostly focused on how peripheral actors in a field, who are less embedded in existing institutions, initiate and implement institutional change (e.g. Elsbach and Sutton, 1992; Greenwood and Hinings, 1996; Kraatz and Zajac, 1996; Leblebici, Salancik and Copay, 1991; Rao, Morrill and Zald, 2000). These theories rest on the assumption that peripheral actors either do not benefit from the prevailing institutional arrangements in place, or are less affected by them. Leblebici, Salancik and Copay (1991), for instance, identified the endogenous mechanisms through which fringe players in the broadcasting industry introduce new practices that, later on, central players adopted.

In addition to studying fringe players, early research on institutional entrepreneurship focused on emerging fields that shows how institutional entrepreneurs act strategically to secure a central position in the new institutional field (e.g. Fligstein and Mara-Drita, 1996; Garud, Jain and Kumaraswamy, 2002; Hargadon and Douglas, 2001; Maguire, Hardy and Lawrence, 2004). They do so by employing social and political skills to address the challenges that arise from technological standards (Garud, Jain and Kumaraswamy, 2002), or, by designing a new technology with elements of the old one to contribute to its legitimacy in front of users (Hargadon and Douglas, 2001). Due to the re-focus of institutional theory on

the process by which actors can change institutions or create new ones, research on institutional entrepreneurship advanced our understanding of the relevance of agency in institutional processes, in contrast to previous research on institutional theory that portrayed change as a consequence of an exogenous shock.

In response to the need to further improve our understanding on how actors embedded in institutions can use their agency to change them, later research shifted attention to institutional entrepreneurs occupying central locations in mature fields (e.g. Furnari, 2014; Jarzabkowski, Matthiesen and Van de Ven, 2009; Kraatz and Block, 2008). This line of research showed how organisations at the intersection of different institutional arrangements are more able to initiate change. Furnari (2014), for instance, posited that the features of interstitial spaces (e.g. their institutional diversity and their occasional and informal nature), allow individuals to temporarily break free from existing institutions that actors can later constitute into new practices. This line of research expanded our understanding on how actors can ‘disembed’ themselves from established institutional arrangements. In this research, however, actors are still relatively disembedded from the institutions they change as they are both marginal (to the new field) and central (to their field of origin).

The concept of institutional entrepreneurship, thereafter, has predominantly been developed from cases of strong agency but weak embeddedness: peripheral actors who are less embedded in the institutions (e.g. Leblebici, Salancik and Copay, 1991; Rao, Morrill and Zald, 2000), actors in emerging fields where embeddedness is less defined (e.g. Garud, Jain and Kumaraswamy, 2002; Hargadon and Douglas, 2001) or actors with relative embeddedness in institutional fields (e.g. Furnari, 2014; Jarzabkowski, Matthiesen and Van de Ven, 2009). In fact, existing research investigating incumbents as ‘agents’ mostly focuses on the ‘maintenance work’ carried out by these actors, either in the form of socialisation, rule monitoring or enforcement activities. The ‘maintenance work’ perspective assumes that

actors deeply embedded in and advantaged by existing institutions do not take them for granted in an unconscious manner but actively fight for the maintenance of the institutions of their interest (e.g. Dacin, Murrey and Tracey, 2006; Zilbe, 2009; Lok and De Rond, 2012; Micelotta and Washington, 2013).

Current research on institutional theory, then, has portrayed the role of central actors as more likely to conform to strong isomorphic pressures (or contribute to reinforce them) than to be part of processes of institutional change. Only a few exceptions focused explicitly on the agency of central actors in processes of institutional change (e.g. Greenwood and Suddaby, 2006; Rao, Monin and Durand, 2003; and Sherer and Lee, 2002). Greenwood and Suddaby (2006), for instance, identify the two main mechanisms by which central actors initiate change. First, by being more likely to bridge organisational fields and coming into contact with contradictory institutional arrangements. Second, by becoming immune to coercive and normative processes because their market activities expand beyond the jurisdiction of field-level regulations. Studies on how incumbents can enact change, expands our understanding of previous research on institutional change by challenging the notion that centrality of actors embeds them within prevailing institutions and dulls them to possibilities of change. However, current studies on how incumbents can enact change miss important aspects of how central actors contribute to institutional change that threatened to weaken their central positions. In order to address this theoretical puzzle I address the question of, *how incumbents can effectively address threats to undermine their privileged positions and interests, when they are not in a position to oppose a reconfiguration of current arrangements?*

## METHODS

### Research Setting

To address the research question, I studied the genesis of Open Access, a system for distributing academic content where the publisher makes a journal freely available for all on the web, in the institutional field of academic publishing in the United Kingdom between 1994 and 2017. I can pinpoint the beginning of commercialised academic publishing - where the core products are books and journals authored by academics in the course of their research - in the 1960s when commercial publishers started acquiring highly rated journals from non-profit academic societies. In 2017, there were over 2000 academic journals, with five commercial publishers combined publishing more than half of the annual peer-reviewed academic articles overall (Taylor, 2012). These five corporations are Reed Elsevier, Springer, Wiley-Blackwell, Taylor & Francis and Sage.

To answer my research question, I focus on the commercial publishers' publication of articles on scientific journals, i.e. periodical publications that contain recent research intended to further the progress of science, by these five commercial publishers (incumbents). The concentration of publication by commercial publishers varies across disciplines, with the highest level of concentration in the social sciences, where 70% of the journals are published by the top five publishers (Larivière, Haustein, Mongeon, 2015).

The field of commercial scholarly publishing in the United Kingdom has two important characteristics for the purposes of my study. First, although commercial academic publishing is international, in the United Kingdom policy-driven demands of the policy for Open Access state that certain outputs of which scholarly journals are part should be made Open Access to be eligible for submission to the Research Excellence Framework by 2021. This demand by the regulator – the UK higher education funding bodies have introduced Open Access system as a requirement (by 2021) – made the responses of publishers to the threat to institutional

change particularly salient in the field. Second, the debate around Open Access began in 1994, within 23 years of the beginning of the study, and was still on-going during the time of the study (in 2017), which ensures that actors would remember the events that led to the genesis of this practice within the field and would be available to comment on them as informants.

### **Data Collection and Analysis**

My study begins in 2016, and is based on multiple sources of data (see Table 1). Data collection combined 28 in depth interviews with various key actors in the field, archival data from relevant field-configuring events, and texts created by policy-makers around the debate on OA in scholarly publishing.

In a preliminary phase, I conducted a comprehensive search of scholarly articles on OA. I used different sets of keywords covering the most common combinations of terms associated with OA. My search produced a total of 212 articles. In addition, the texts allowed me to identify key actors in the field (scholars and publishers) as potential informants. I subsequently conducted interviews with 28 key informants from the field between October 2016 and November 2017. The interviews lasted between 30 minutes and one hour and were tape-recorded. They followed a semi-structured protocol but had an open-ended format allowing me to capture a rich description of the events associated with the genesis of OA. In each interview I asked the informants to describe in detail their activities and relationships with respect to their role in OA in academic publishing in the UK, and to describe the history of transition towards OA in the field. I used the interviews and archival data to reconstruct an account of the theorisation of OA by different actors as well as responses of different actors to the disruptive technology (See Tables 2 and 3). I also crosschecked archival data with interviews to produce a table to illustrate the characteristics of the different business models that academic publishers used over the course of the study (See Table 4).

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Insert Table 1 About Here  
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In addition to this traditional case study, I also collected data on the main texts produced by policy-makers in the UK around the implementation of OA. I consulted texts that were created and disseminated by policy actors and focused on the production of those that were highly influential in shaping the conceptualisation of OA. To investigate systematically how these texts socially constructed ideas that constituted institutional change - from Closed to Open Access to academic knowledge - I explored the links to other texts as well as the way in which different actors (scholars, funders and publishers) frame differently similar issues (e.g. scholar's and publishers' differences in understanding the "Green Open Access" business model). I draw on the premise that technological innovation is a source of non-isomorphic change where various 'events' come to be theorised (Greenwood, Suddaby and Hinings, 2002; Munir and Phillips, 2005). In order to uncover the process of institutional change, I complemented archival data on academic publishing with interviews.

## **FINDINGS**

In the light of the new opportunities for peer-to-peer content production and distribution brought by the diffusion of the Internet in the early eighties, a group of scholars introduced the notion of Open Access. In 2014, after two decades of some scholars' demands for making publications available in Open Access, the HEFCE (Higher Education Funding Council for England), introduced a new mandate that required authors to make their research available Open Access by 2021.

The mandate stated that to be eligible for submission to the Research Excellence Framework (REF) - a system for assessing the quality of research in UK higher education institutions - authors must make their peer reviewed academic articles available in Open Access. The mandate, however, did not specify how publishers or authors should implement

Open Access. In spite of the existence of different alternatives for making research Open Access, the commercial publishers responded to the mandate by implementing OA through a specific business model: ‘Gold Open Access’. This model allowed commercial publishers to keep their position as ‘gatekeepers of knowledge’, in spite of the disruptive potential of the institutional change challenged the publishers’ mechanisms for capturing value.

In order to shed light on how incumbents’ (the commercial publishers) responded to the process of institutional change, from academic distribution as ‘closed access’ to ‘Open Access’, I organise the following section in two parts. First, I describe how commercial publishers contributed to making academic publishing a profitable business through the ‘subscription based business model’. Second, I depict how the three groups of actors – challengers, regulators and incumbents – respond to the process of institutional change (from closed access to Open Access). For each actor, I first describe the timeline of events and, after, I elaborate on how they theorise the need for institutional change as well as the field-level material implications (i.e. mandates or business models).

### **The Emergence of Commercial Academic Publishing: the Subscription-Based Business Model**

*The emergence of academic journals.* The *Journal des Savants*, first published in 1665, was the earliest academic journal published in Europe, by the Royal Society of London in the UK. It established a now 350 year old institutional field, the field of ‘academic publishing’. The institutionalisation of scientific journals enabled researchers to share their work with their peers. It fundamentally changed the process of scholarly communication of theoretical and empirical findings; from infrequent correspondence letters to regular and structured dissemination of scientific advancements.

OA has precedents in the history of production of scientific knowledge. Most pre-modern civilisations, such as ancient Greece, did not regard knowledge as an ‘own-able’ commodity.

However, by the beginning of the 19<sup>th</sup> century, closed access journal articles had become the fastest and most convenient way of disseminating research. The majority of periodical journals emerged from ‘learned societies’, i.e. not-for-profit organisations oriented towards promoting scholarship and research. The British Royal Society, for instance, was founded in 1660 with the mission to “recognise, promote and support excellence in science and to support the development and use of science for the benefit of humanity” (Gov.UK, 2017). This society continues to be active today. Scholarly journals also contributed to the professionalisation of scientific activities by increasing the level of specialisation of research and the formation of disciplines (Larivière et al., 2005: 2).

*The institutionalisation of the commercial publishers.* Although commercial publishers acquired journals from learned societies as early as the Victorian era, after the Second World War, the emergence of commercial publishers, coupled with increasing government funding for academic research, drove the commercialisation of the field of scholarly research. Between the 1950s and 1970s, commercial publishers started developing sales and marketing strategies to promote a subscription-based business model (See Table 4).

Contrary to the ‘learned societies’, which either distributed copies of journals free of charge or sold copies to individuals, commercial publishers established a ‘subscription-based business model’ in order to maximise the quantity of sales. Under this model, commercial publishers charged university libraries a fee for standing access to academic journals (see Table 4). In the subscription-based business model, even though scholars were the final users of research (as well as the producers), the university libraries paid a fee to have access to a specific journal. As a result, only those affiliated with an institution subscribed to a journal - or those paying a fee for an individual article - could have access to academic publications. Access was generally purchased ‘in bulk’, i.e. the university paid for access to a series of



journal issues. It did not pay on the basis of how many researchers accessed the journal issue or the academic articles contained.

Therefore, the subscription-based business model was a model of ‘closed access’ where the commercial publishers managed the editing process and enclosed the final product (the article) behind a paywall. In this model, while scholars would be identified as the authors of their work, under the intellectual property rights in which the incumbents were the right holders, scholars did not have any rights to the commercialisation of their work. Neither did they receive royalties from publishers when these monetised their scholarly work, nor did they (or the institution that employed them) had free access to their own work when it was published. The subscription-based model contributed to the profitability of academic publishers. By the mid 1990s, commercial publishers already accounted for 40% of the total journal output generated in the UK (Tenopir and King, 2012).

At the time of the study, in the UK there were over 2000 academic publishers (including non-profit academic societies and for-profit commercial publishers) with subscription-based business models that enclosed access to scientific publications behind the paywalls of a commercial system. In light of the digital technologies that allowed instant access to research, a few scholars, however, challenged the closed access based subscription business model.

### **From Closed Access to Open Access Research: Challengers, Regulators and Incumbents.**

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Insert Table 3 About Here  
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#### **The Challengers: Open Access as a Social Movement.**

*Interpretation of the need of change: the new technology challenges the subscription-based model.* Before the arrival of the Internet, producing an academic article involved proofreading, copy editing, printing, and distribution. In consequence, commercial publishers

could justify the subscription-based business model on the grounds of the materiality of the economic arrangements that regulated the economic exchanges in the process of production of academic journals. Following the de-materialisation of the support of academic journals (from physical to digital), the advent of the Internet in the early 1990s led to new possibilities of production and consumption. The transition from physical to digital technologies created opportunities to produce academic journals and made them accessible to anyone with a computer, anywhere and anytime with an Internet connection.

However, in spite of the possibilities of production and dissemination of scientific knowledge that the Internet afforded, contrary to physical academic articles, digitally distributed academic articles made printing unnecessary, massive-scale copying free, and worldwide distribution instantaneous. Despite these new possibilities, commercial publishers maintained access barriers to the research published in academic journals via subscription-based business models. In light of the contradiction between the opportunity of free access to digital academic journals that the Internet afforded and the barriers to access of the traditional subscription-based business model, some actors in the field - scholars involved in the Open Access social movement - started questioning the latter. Scholars in the field started arguing that, instead of offering new ways of facilitating access to science, the major commercial publishers kept on consistently generating profit that exceeded a third of their revenue. At the beginning of the 1990s, a loose collection of academics and civil society groups set the foundation of the 'OA movement', to which they referred as 'The academic journal publishing reform'. The primary purpose of the movement was to challenge the barriers to access of the traditional subscription-based model in the advent of electronic publishing.

Two key events marked the genesis of the 'OA movement'. In 1991, Professor of Physics Paul Ginsparg founded the Internet's first scientific preprint service which allowed scientists to share ideas before publication. In 1993, Professor of Cognitive Science Steven Harnard

launched a proposal which other scholars regarded as ‘subversive’, asking researchers to self-archive their academic articles, i.e. to deposit research papers in a publicly accessible Internet-based archive. Later on, in 2004, Harnard coined the term ‘Green Open Access’ to refer both to non-commercial open archiving as well as to Open Access by commercial publishers. The OA movement aimed at promoting self-archiving ‘Green Open Access’ as a way to maximise the exposure of scientific articles by eliminating the barriers of access of the subscription-based model. Early advocates of OA encouraged the ‘Green Open Access’ model, i.e. self-archiving on an author’s institutional website or repository.

During the 1990s, the ‘academic journal publishing reform’ moved forward with various initiatives for making scientific publications available to the wider public. That same year, the Stanford academic council committee on libraries released ‘the manifesto for responsible academic publishers’. In response to the growing demand to break the barriers of access to research in the digital sphere, in the beginning of the 2000s, Professor of Philosophy Peter Suber - a leading voice in the OA movement and faculty fellow of the Berkman Centre for Internet & Society at Harvard University - defined what is known today as ‘OA’ as ‘free online scholarship’. Following Suber’s definition, three declarations developed the term ‘Open Access’ and issued recommendations to establish OA as the ‘default method’ for distributing peer-reviewed scientific research. These declarations were “The Budapest Open Access Initiative“ (BOAI) from 2002, “The Bethesda Statement on Open Access Publishing” and “The Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities”, both from 2003. The BOAI statement, signed by leaders of the OA movement, for the first time used the term ‘OA’ in a public policy setting. The statement defined OA as ‘free availability and use of academic publications’.

The 2003 Berlin Declaration on Open Access was an influential event in the establishment of the OA movement. It acknowledged the importance of researchers to deposit an online

copy of their work in an Open Access repository. Following the growth of self-archiving initiatives, in 2009 a group of scholars founded ‘Sherpa Romeo’, an online resource for authors that provides summaries of self-archiving permissions and conditions of rights on a journal-by-journal basis. In 2012, another key event further compromised the legitimacy of commercial publishers’ subscription-based business model, namely a call among scholars to boycott publisher Elsevier’s journals, which became known as the so-called ‘Academic Spring’. The boycott of Elsevier started with a *blogspot* post written by University of Cambridge mathematician Tim Gowers, who called for coordinated action among academics to refuse to subscribe to Elsevier journals. In the blogspot, Gowers expressed his disillusionment with a system under which “work produced by scholars and funded by taxpayers” was enclosed within the walls of private publishing houses that charged UK universities for the “privilege of accessing science”. As a result of this intervention, some 5000 academics staged a boycott to Elsevier, vowing not to peer-review or submit papers for any of its scientific journals. Following this episode, advocates of the OA movement had reached critical mass to raise legitimacy issues around the subscription-based business model. The OA movement’s critique primarily focused on the barriers to access to science based on the notion that these were ‘unfair’ and ‘undemocratic’ (Scholar, Interview).

***Interpretation of the need of change: digital academic research as a public good.***

Scholars criticised the closed-access subscription-based model within the digital context because it turned digital objects that support public goods into rivalrous goods. Advocates of the OA movement argued that academic research in a digital format is a ‘public good’ (Scholar, Archival). (i.e. a good that is both non-excludable and non-rivalrous in that individuals cannot be effectively excluded from use and where use by one individual does not reduce availability of others, Gravelle and Rees, 2004). Although scholarly publications in a physical support had a rivalrous and excludable component, scholarly publications in a digital

support were a public good because anyone with a connection to the Internet could make copies of a research paper without depleting their resources:

Open access to information is a horse of a much different color than Open Access to land or water. In the latter case, Open Access can mean a free-for-all, as in Hardin's grazing lands, leading to overconsumption and depletion. With distributed knowledge and information the resource is usually non-rivalrous. In this instance, instead of having negative effects, Open Access of information provides a universal public good: the more quality information, the greater the public good" (Scholar, Suber, 2009: 2).

As part of making academic research part of the public domain, OA advocates not only demanded for the removal of paywalls. In addition to it, OA advocates claimed for the elimination of copyright related restrictions. The justifications of the removal of restrictions in terms of copyright were on the grounds that researchers publish their findings without compensation, in the interest of advancing human knowledge:

The resulting commercialization of both the research process and output, however, collides with the idea that freely shared information - made available in the public domain instead of privatized by industry - in turn creates new knowledge that helps everyone (Scholar, Archival).

As an alternative to copyright, OA advocates suggested Creative Commons licenses to allow users of research copy and distribute the research in any medium or format as well as to adapt the research for any purpose.

***Interpretation of the need of change: to rethink the role of the powerful gatekeepers of production.*** Scholars part of the Open Access movement not only conceived Open Access as a way for the public to obtain access to research. In addition, the scholars challenged publishers' role in a digitized context in which restricting access could not be justified by the restrictions of material arrangements, rather, on the grounds of the commercial interests of central actors:

Open Access is not an end in itself; it is merely a symptom of deeper processes linked to the growing role of digitization in our civilization. It is digitization that brings about opportunities for profound shifts in power. Open Access simply defines a battle front that refers to the challenges being thrown at the architectures of control

supported by publishers. Like a litmus test, the quest for Open Access reveals an architecture of control on the wane (Scholar, Create, 2014).

Following the OA rationale that academic research is a public good, advocates of the OA movement linked the opportunities that the Internet brought with new ways of working online, such as blogs or wikis, for collective discussions of academic research. One of the leaders of the OA movement, Professor of Humanities Sarah Kember, stated that OA should be understood as part of a bigger conversation that would revise current practices of the subscription-based model, such as ‘peer review’, ‘citation practices’ or ‘free labour’; i.e. commercial publishers monetising an author’s work without providing remuneration. OA advocates were particularly critical with the production process of academic publishing on the grounds of ‘free labour’:

Academics provide their scientific papers to publishers free of charge. They review other scientific papers for publishers free of charge, and they pay exorbitant prices for electronic access to their own published volumes. What other business receives the goods that it sells to the customers from those same customers, the quality control mechanisms provided by its customers from those same customers, and a tremendous fee from those same customers? (Scholar, Archival).

One of the terms that OA advocates commonly used to refer to the subscription-based business model was ‘walled gardens’, in relation to permission barriers that restrict access to paid subscribers and lock universities into buying their products:

‘Walled garden’ promotes a process of online enclosure that poses an increasing threat to democratic principles of informed citizens and academic principles of building on the shoulders of giants (Scholar, Archival).

Access enclosure, however, was not the only concern for OA advocates regarding the subscription-based business model of commercial academic publishing. In a pricing crisis in which librarians as well as scholars referred to as ‘serial crisis’, commercial publishers increased prices of academic journals at a faster rate than inflation - beyond library budgets. In response to the increase in subscription prices for academic journals, scholars and librarians began to describe publishers’ practices in evocative terms, such as “corporate

scam” or “knowledge monopoly racketeers’ (Scholar, Archival). An advocate of the OA movement stated: “Academic publishers make Murdoch look like a socialist” and referred to them as “the most ruthless capitalists in the western world” (Scholar, Archival). Other scholars regarded the commercial publishers’ revenues as “astronomical”. In fact, Elsevier, for instance, recorded an operating profit margin of 37% in 2016 (Relx Group, 2017).

*Interpretation of the need for change: to implement alternatives to the model of commercial academic publishing.* Scholars part of the social movement for Open Access suggested a model of production and distribution of research that challenged the commercial publishers’ subscription-based business models in place. Their proposal reflected an understanding of science as a ‘public good’, and problematized the subscription-based model in which science was not only enclosed behind paywalls but also produced by commercial actors who privatized the diffusion of a ‘public good’ through copyright laws. Scholars as advocates for Open Access, suggested ‘Green Open Access’ as an alternative to the subscription-based model in a digital context. In 1991, Professor Paul Ginsparg launched the first free scientific online archive subject-based central repository ‘Arxiv.org’, the precedents of an alternative to the subscription-based business model ‘Green Open Access’. ‘Green Open Access’ enabled the authors to make their own research available free of charge at institutional repositories and licensed with Creative Commons, by which users could share and re-use the research content, contrary to the subscription-based model in which the right holders (the publishers) did not grant permissions to the authors of research to share or re-use their own work. The ‘Green Model’ made available in Open Access the pre-print version of their paper to anyone with an Internet connection. In this way, both Universities and authors (by making their journals available at their personal sites) could control the distribution of their publications. At the same time, the final version would be available behind ‘paywalls’ with the publishers’ subscription-based model.

***Opposition: the commercial publishers.*** At the early stages of OA advocacy, the big five commercial publishers either opposed the movement or ignored it, not providing any public comment thereon. In spite of the opportunities that the Internet afforded, the commercial publishers justified the subscription-based model on the grounds that scholarly research does not target the general public. In addition, commercial publishers emphasised their role in editorial quality and advocacy of the existing system of measuring impact. Commercial publishers argued that the users of research were scholars who already had access to research via the subscription-based model. Regarding the general public, commercial publishers were sceptical about the need for Open Access on the grounds that non-academics would not understand scholarly research:

You don't want patients going to see their doctors. Doctors know best and you should not let people get hold on the research (Elsevier, House of Commons Report, 2004).

Beyond disagreeing with the need for the general public to access academic research, commercial publishers criticised the model that the OA advocates suggested for making research available: 'Green Open Access'. Commercial publishers conceived the 'Green Model' as parasitic because of its potential to diminish subscriptions to journals. Ultimately, commercial publishers argued, the quality of the papers could diminish as a consequence of a reduction in publishers' resources:

Finally, like it or not, journals have an established role in the assessment of research impact and productivity. But it is more than simple metrics: researchers and their employers want their high-quality efforts to rub shoulders with other quality work, with a stamp of approval from accredited experts. Publishers and societies have spent decades building the quality of their journals, establishing their reputations and brands (Commercial publisher; Robinson, 2006: 1454–1460).

Commercial publishers defended their position as 'quality gatekeepers' of the system of scholarly publications in media as well as with their contributions to policy-related debates such as the 'Debate at the House of Commons' in 2003, or at the debate at the 'British Library in 2003'.



## **Phase 2: Open Access as a Regulator's Policy.**

Although the OA movement is an international one, UK research regulators played a significant role in it. While the OA movement started on the fringe of the field of academic publishing - via academics - the debate permeated to central actors - the incumbents - due to the role of the political discourse. The social movement around Open Access set the ground for the debate being heard on the side of the regulators of research 'UK Research Councils' and 'Higher education funding bodies'. In 2003, the Budapest Open Access Initiative (BOAI) - a coalition of different leaders of the OA movement - published two guides for OA publishing, one for launching OA journals and another one for converting traditional journals to OA. The BOAI paved the way for further top-down investigations related to Open Access. In 2004, the House of Commons dedicated a session to Open Access that drew on the BOAI to examine the provisions of scientific journals to the academic community and wider public.

Following the increasing debate on Open Access, in 2012 the Finch Report represented a core piece in furthering the implementation of Open Access in the UK. After the Finch Report, further discussions around Open Access contributed to raise increasing awareness about the debate. For instance, 'The Budapest OA initiative after 10 years' in 2012. Or, 'Science as open enterprise' in 2013, debating Open Access at the British Academy. In 2014, the RCUK OA mandate drew on the Finch Report to demand authors to make their research journals Open Access by 2021.

Like the academics advocating for Open Access, the regulators (and funders of research) interpreted a change from 'closed access' to 'Open Access' as necessary in light of the new opportunities the Internet brought. The Finch Report - one of the foundational policy pieces of Open Access - acknowledged the need for researchers to further embrace the opportunities of the digital environment in reference to removing the barriers of access:

The Internet has brought profound change across all sectors of society and the economy, transforming interactions and relationships, reducing costs, sparking

innovation, and overturning established modes of business. Researchers and journal publishers were quick to embrace the digital and online revolutions. But there is a widespread perception, in the UK and across the world, that the full benefits of advances in technologies and services in the online environment have yet to be realised (The Finch Report, 2012).

In addition to acknowledging the need for Open Access in academic research, regulators acknowledged the need for research to be Open because it was publicly funded.

*Interpretation of the need for change: to stimulate incumbents to adapt to the change.* A top-down ‘policy-driven’ process incorporated established commercial publishers as key actors in the OA model. At this stage, the notion of ‘business model’ came to the fore as a frame to legitimate alternative models of OA academic distribution. Although in the early stages of the OA movement the debate surrounded the opportunities of Open Access in relation to the democratisation of the entire production process, the policy-driven discourse, however, re-focused the debate towards how commercial publishers re-shape their business model in order to make OA commercially viable:

In order to meet this criterion (OA), arrangements must be in place to enable publishers (whether they are in the commercial or the not - for - profit sector) to meet the legitimate costs of peer review, production, and marketing, as well as high standards of presentation, discoverability and navigation, together with the kinds of linking and enrichment of texts (‘semantic publishing’) that researchers and other readers increasingly expect (The Finch Report, 2012).

In 2012, the UK government asked Professor Janet Finch, a sociologist at the University of Manchester, to consult academics and publishers on how the UK could make scientific research available free of charge without undermining the UK’s successful publishing industry. This led to a foundational policy paper, ‘The Finch Report’, which examined how to expand access to the peer reviewed publications that arise from research undertaken both in the UK and internationally. The Finch report was funded by the Department of Business, Innovation and Skills, the Higher Education Funding Council for England, Research Councils UK, and the Publishers Association. The Finch report operated independently from all sponsors, and had its own secretariat. Representatives of Universities, research funders,

learned societies, publishers, and libraries led the investigation to examine how to expand access to the peer-reviewed research publications, with a particular focus on articles published in scholarly journals. The goal was to propose a programme of action to make research available Open Access:

Our concern, therefore, is not just to ensure that the UK's research is accessible across the world, but much more broadly that the world's research is accessible across the UK. This important factor has significantly influenced our recommendations (Finch Report, 2012).

The Finch Report moved the awareness of the contradictions in the arrangements of the subscription-based model from a 'social movement issue' to a systematic set of recommendations. The report, tackled the question of how to expand and improve access to research 'for the benefit of all who have a stake or an interest in research and its results'. It acknowledged the barriers to access in the digital era as problematic. The Finch Report advocated for Open Access to journal articles in the expectation to expand overall use and access of existing research. This recommendation, however, recognised that OA does not mean 'free of cost' and legitimated the 'Gold Model' where the article is made immediately available on a publisher's website upon author's payment of a fee. This foundational report offered a model for expanding access to the published findings of research. The Finch Report favored the UK scholarly field moving towards the 'Gold Model' i.e. an alternative to the 'Green model of Open Access' created by the publisher Biomed a natural sciences publisher founded in 1999. The 'Gold Model' suggested by Biomed followed a model of Open Access research where the authors pay a fee to publish 'Author Processing Fees' (APCs). In the 'Gold Model' authors retain rights of their work through a Creative Commons attribution license.

The Finch Report's recommendation of the 'Gold route' business model based on APCs shifted attention towards how the established commercial publishers could be part of the process of moving towards OA through innovation in their business models:

What we propose implies cultural change: a fundamental shift in how research is published and disseminated. That in turn implies a need to provide incentives [referring to the publishers] but also to explain why change is necessary. The Open Access movement has had some success in raising awareness; but most members of the research community pay relatively little attention to the issues we highlight in this report, or the possible impacts on them and their work. Greater efforts are needed to increase awareness and understanding [referring to the need of making the process towards Open Access sustainable for the publishers] (The Finch Report, 2012).

Although OA started as a grassroots scholar-led movement that conceived 'science as an intellectual commons' and positioned itself as 'inherently democratising, radical, egalitarian and critical of powerful gatekeepers of learning (in reference to the commercial academic publishers)', the regulators of research portrayed OA from the perspective of regulating the distribution of academic journals, at the expense of changes towards the democratisation of the process of production. As a consequence, funder's advocacy for a change from 'closed access' to 'Open Access' involved commercial publishers' maintenance of their traditional business model based on capitalising on authors' and reviewers' free labour.

***Interpretation of the need for change: to adapt existing business models to the new practices of distribution.*** The funding bodies did not mandate the models of implementation of Open Access (only mandated that research should be make available Open Access upon a specific date). The funding bodies, through the Finch Report, worked along with the commercial publishers to suggest ways of implementing Open Access. Publishers lobbied against 'Green Open' access during their involvement at the Finch report on the basis of two premises. First, that 'Green OA' was inadequate for user's needs because it would lead to an uncontrollable and 'unindexed' pool of research. Second, that 'Green OA' was parasitic because authors would offer self-archived research, hence, there would be no need for

subscriptions of the final version of the paper. As a consequence, the important role of the publishers would be compromised. Advocates of Open Access from the social movements supported the 'Green OA Model' in which authors would self-archive their papers. The funders, however, through the Finch Report dismissed Green OA in favour of Gold OA:

Gold Open Access, funded by article charges, should be seen as the main vehicle for the publication of research. Public funders should establish more effective and flexible arrangements to pay Gold Open Access article charges. During the transition to Gold Open Access, funding should be found to extend licences for non-open-access content to the whole UK higher education and health sectors (The Finch report, 2012).

The Finch report recommended abandoning 'Green Open Access' and, dedicating extra funds (£50-60 million yearly) for paying author processing fees to fund the commercial publishers' 'Gold model'. Two years after publication of the Finch Report, in 2014, the Higher Education Funding Council for England (HEFCE) translated the recommendations of the report into the 'Policy for Open Access in Research Excellence Framework'. The policy required all journal articles and conference proceedings accepted for publication after 1 April 2016 to be available in Open Access (although it did not specify the model through which either authors or publishers should make research available Open Access). The UK was the first country where all the research funding councils mandated Open Access. These mandates required authors to make their journals available in OA in order to be part of the Research Excellence Framework (REF). The REF is a shared policy of five funding bodies - Research England, the Scottish Funding Council, the Higher Education Council for Wales, and the Department for the Economy in Northern Ireland - oriented towards measuring the impact of the academic research. Thereafter, the mandates coerced all the scholars to comply with Open Access ways of publishing. At the same time, the mandates made authors dependent on the commercial publishers who could rank research according to Impact Factors.

### **Phase 3: Open Access as a Business Models**

As a consequence of the mandates for implementing OA, the commercial publishers became key actors in the diffusion of Open Access. Scholars needed to publish research in journals with Impact Factors accountable for the REF. As a consequence, although the mandates for Open Access did not specify how authors should make research publicly available, scholars were subject to commercial publishers with journals with higher ‘Impact Factors’. As mentioned in ‘Phase 1’, in early stages of the Open Access movement commercial publishers opposed Open Access. However, as a consequence of the mandate for Open Access together with the legitimization of the APC-based ‘Gold Open Access’ commercial publishers became supporters of Open Access:

Open Access is a viable business model, as business, we wanted to be part of that (Commercial Publisher, Interview).

Enabling Research Councils UK and Wellcome Trust funded researchers to continue publishing in the journals of their choice is very important to us. Wiley is a strong supporter of sustainable Open Access and is committed to meeting the needs of authors and their research funders (Vice President and Director Open Access, Wiley, Archival).

#### *Interpretation of the need for change: publications as a resource to monetise.*

Commercial publishers started implementing OA as a core business model, choosing from 3 different options. The ‘Green Model’ (a self-repository of the pre-print version of the paper), the ‘Gold Model’ (the authors pay a fee to publish - APCs), and, the ‘Hybrid Model’ (authors could make a paper available in OA paying APCs, or, keep it behind paywalls with the subscription system). In spite of the existence of other alternatives, and legitimated by the recommendations of the Finch Report, at the time of the study, the big five commercial publishers Reed-Elsevier, Wiley-Blackwell, Springer, Taylor & Francis and Sage advocated for the ‘Gold Model’, the business model in which authors - through their funding institutions - pay for the processing fees. For instance, as the Senior Vice President of Global Strategic

Networks at Elsevier stated, “Gold OA is more pure than Green OA; everybody gets the version right away” (Commercial publisher, Interview). Scholars, however, disregarded this specific model because it would imply rather a backlash than a step forward in the implementation of Open Access: “Gold Open Access back by at least a decade” (Scholar, Archival).

The ‘Gold Model’, however, was not the only model for making research available in OA. Commercial publishers, for instance, could also chose to offer research through a modified version of the ‘Green Model’ offered by scholars advocates of Open Access. Commercial publishers introduced the ‘embargo period’, a mechanism to monetise research under the subscription-based model for a specific period of time (usually 2-3 years). During this time, research is not available to the general public. Scholars advocates of OA did not consider ‘Green OA’ with an embargo period as Open Access:

Open Access is Barrier Free Access and embargo periods are barriers to access (Scholar, Archival).

The ‘Hybrid Model’ was also contested by the scholars as it involved ‘double dipping’. On the one hand the publisher sold the services to the author (author-pays open access) while simultaneously selling the end product to libraries (subscription) without lowering the cost of subscriptions.

*Interpretation of the need for change: to position themselves as advocates.* The modifications in the existing ways of removing barriers of access to research allowed the commercial publishers to maintain their position as ‘gatekeepers of academic knowledge’. In spite of its initial resistance as shown in Phase 1, commercial publishers became advocates for Open Access. In order to foster the transition of journals towards OA (in particular to the ‘Gold Model’), commercial publishers created specific departments and roles in their organisations. Taylor & Francis, for instance, established a department exclusively focused

on OA, and set specific OA-related strategies following which they refer to themselves as leaders of OA:

On OA, after Springer, there's us [Taylor & Francis] because we make a lot of original agreements. Last year, Taylor & Francis decided to build an OA team. There's a growth of revenue. The objective was to offer a service. We don't sell a product. I should be called OA consultant. What I do is actually to try to sell this service. Which is basically an OA 'prepayment'. OA prepayment is a deposit of money that the university takes upfront, from £600 to £5000. The librarians pay when they are ready to set it up. This is a prepaid fund (Commercial Publisher, Interview).

Commercial publishers not only offered authors the option to make the research available in OA, but also became advocates of the transition of scientific publications from 'Closed Access' to 'Open Access'. Commercial publishers started creating internal roles to advocate for Open Access with the academic community. Springer was the first commercial publisher to launch OA journals via the Gold route. In Springer's white paper on OA, for instance, the organisation regards itself as 'being at the forefront of OA':

Over the last few years, leading academic publishers have taken a forward-looking view and started embracing developments such as the OA movement. Springer has been at the forefront of OA publishing for many years and was the first major commercial publisher that took a constructive approach to the business model, preferring to experiment with it, rather than dismiss it. Springer was also the first major publisher to wholly embrace it. This stance contributed to the growth of the model, reinforcing its credibility and broadening its appeal (Commercial Publisher, Archival).

Similarly, Taylor & Francis explicitly pride themselves for being 'forward thinking' and on 'believing in sharing knowledge' in relation to their role in transitioning towards the OA models:

OA is affecting us positively because it's growing all over the world. Taylor & Francis is recognised as the most forward thinking publisher (Commercial Publisher, Interview).

Commercial publishers not only implemented business models that allowed them to keep on capturing value from the content that the authors produced but also started emphasising the adoption of OA as a symbol of their publishing house being forward thinking:



During this year we've been quite intensely focused [on OA]. We have been working on an entire vision statement on what does Open Access mean and trying to embed that within the wider company culture. We are getting to a point now – I had a meeting last week – where we were talking about external messages about ‘how do we want T&F to be associated in terms of OA’ (Commercial Publisher, Interview).

One of the big publishers, Taylor & Francis, for instance, acknowledged in relation to OA “As a knowledge company, we believe in sharing knowledge” (Commercial Publisher, Interview); specifically, by focusing on the ‘Gold Model’, and by drawing on strategies that would allow them to monetise the production of authors’ work.

## **DISCUSSION**

To improve our understanding of how incumbents can effectively address threats to undermine their privileged positions and interests, when they are not in a position to oppose a reconfiguration of current arrangements, I explored the transition towards Open Access in commercial academic publishing in the United Kingdom between 1994 and 2017. As Figure 1 portrays, my findings show how the entrance of a disruptive technology (the Internet) triggered mobilisation regarding the current institutional arrangements in peripheral actors (the scholars). The mobilisations revealed the inappropriateness of institutional arrangements (the barriers of access to academic knowledge as well as the production processes based on scholars’ free labour). In the later stages of the institutional process, incumbents (the commercial publishers) symbolically adopted certain aspects of the mobilisations about the institutional arrangements (became advocates of Open Access research). At the same time, incumbents modified elements of the institutional field - structures in terms of business models - to keep their privileged position in line with how they capture value in the field.

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Insert Figure 1 About Here  
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## **Contribution to Theories on Institutional Entrepreneurship**

First, my study increases our understanding of the relationship between central positions of institutional field members and their strategic responses to a disruptive technology. Some studies suggest that central members, as resource-rich players embedded within their institutional contexts, are more likely to attempt to maintain than to change institutional arrangements in the light of a threat of institutional change (e.g. Lok and De Rond, 2013; Micelotta and Washington, 2013). My findings suggest that central actors, however, can act as institutional entrepreneurs. In spite of being embedded within institutional forces that reward conformity, incumbents can also shape institutions and bring about change steering coerced change in ways that deflects threats to current positions.

Although, in a very early phase, impelled by the potential threat to the business models in place, incumbents resist the arguments of the challengers that favour the possibilities of disruption facilitated by the opportunities of the new technology. Incumbents, however, end up embracing the possibilities that the new technology afforded and symbolically adopted the arguments posited by the challengers. Once both challengers and regulators legitimated the institution of 'academic production as OA' in the field, incumbents responded to the theorisation of the new institution generated by the disruptive technology by steering the debate towards advocacy of the institutional change.

Incumbents, therefore, ended up responding to the mobilisations consequence of the disruptive technology by using the veil of legitimacy of OA theorised by the challengers (scholars) and legitimated by the regulators. Incumbents used symbolic action - behaviour that seeks to convey subjective social meanings beyond its intrinsic content or obvious functional use - as a means of creating legitimacy in order to keep the resources that allow them to capture value. The incumbents symbolically favour institutional change (become advocates) while the structure that allows them to keep their subject position remains in place

(formal position, as well as the socially constructed and legitimated identities available in a field; c.f. Maguire, Hardy and Lawrence, 2004).

My findings expand our understanding of how incumbents strategically choose some elements of the process of institutional change while maintaining others. Current research has portrayed peripheral actors or actors in emerging fields - characterised by lower network centrality - as more likely to be interested in creating new institutions or transforming existing ones (e.g. Leblebici, Salancik and Copay, 1991; Rao, Morill and Zald, 2000) than incumbents who are associated with the existing institutional order. My findings, however, show that central actors contribute to the transformation of existing institutions by borrowing a legitimated 'clean rhetoric' to justify strategies of value capture in their favor. By doing so, incumbents constitute themselves as 'advocates' of the new institution in order to improve the legitimacy of their business models in an institutional field.

*The complex dimensions of institutional change.* Some studies on institutional entrepreneurship have explored the relevance of the symbolic component of change strategies. For instance, Hargadon and Douglas (2001), when studying Thomas Edison's introduction of the electric lighting system, suggested that entrepreneurs design and present their innovations to mediate between the novel features of their offerings, and expectations, norms, and rules of their institutional environments. However, current research on institutional entrepreneurship tells us very little about the way symbolic strategies interact with the structures in place in an institutional field, such as changes in organisational forms or practices. As a consequence, we know little about how institutional entrepreneurs interact between the symbolic strategies and the intrinsic structures. By unpacking the symbolic dimension of institutional change from the structural maintenance, this study contributes to current theories on institutional change.

By describing a process in which institutional change co-exists with stability, my findings contribute to current theories of institutional change. Current research tends to focus on one aspect of change at time, including changes in practices (e.g. Lounsbury and Crumley, 2007; Furnari, 2014), regulations (e.g. Maguire and Hardy, 2009), organisational forms (e.g. Suddaby and Greenwood, 2006), organisational fields (e.g. Leblebici, Salancik and Copay, 1991) and institutional logics (e.g. Rao, Monin and Duran, 2001). Departing from existing theories which focus on one change element in isolation, my study shows how institutional change can be disruptive at the symbolic level while simultaneously further entrenching practices that serve the position of dominant actors (in this case, the ‘Gold Model’ and the adapted version of the ‘Green Model’). Thus, my case reveals the inherently contradictory and complex nature of institutional change processes.

## APPENDIX

**TABLE 1**  
**Data Sources**

Data Source	Type of Data	Use in the Analysis
<i>Semi-structured Interviews (28)</i>	Academics (20), professionals in the publishing industry (8).	Identify relevant texts for discourse analysis (Table 3).
		Support, integrate, and crosscheck accounts with archival data to reconstruct the elements of the business models following the debate on OA.
<i>Archival data (212 texts)</i>	Annual reports, Industry reports, Trade journals, Newspapers, Published articles in other sources, Books on open access.	Support, integrate, and crosscheck accounts with archival data as well as the narrative of events of the responses of incumbents to the different technologies in the institutional field (Table 4).
		To reconstruct how academics theorized OA (Table 2)
		To identify key actors to interview.
<i>Policy-based texts (253 pages)</i>	Texts generated by government actors with the goal to influence the adoption of Open Access in the UK.	To identify relevant policy-based texts (Table 3).
		To analyse the debate on OA generated by policy actors.

**TABLE 2**  
**Incumbents' responses to the different technologies**

	<b>Physical model</b>	<b>Closed Access model: subscription-based</b>	<b>Open Access model</b>		
<i>Models of production</i>	Reproduction and distribution of written content subject to the limitation of the physical support.	Dematerialization of the support (from physical to digital) enables quick processes of production and unlimited digital distribution at no additional cost. The new technology facilitates a business model that maximizes producers' profit.	The interactive possibilities of the new technology (the Internet) enable unlimited access to written content to anyone with access to the technology.		
<i>Institutional Settlement</i>	Non-for profit producers distribute the articles.	Commercial producers control the production in an oligopolistic manner.	Drawing on the possibilities for Open Access of the new technology, the challengers delegitimise discursively the established business model (based in Closed Access). Incumbents' initial response is to resist change. However, when regulators acknowledge discursively the need for Open Access and portray a discourse that facilitates business models favourable to the producers and adapted to the new technology, producers become advocates of Open Access.		
<i>Mechanisms of value capture</i>	Public organisations (learned societies) funded by public funds.	Producers own the rights of exploitation of the articles (copyright).  Producers charge the consumers for either a bundle to access the academic articles (by journals), or, with individual pay per view.	<b>Green</b>  Copyleft (anyone can distribute freely the articles its modifications).  Producers capture value through the subscription-based model during an established period of time (embargo period).	<b>Hybrid</b>  Copyleft.  Authors can decide to pay a fee (Author Processing Charges) to make their article available in OA. The producers enclose behind pay walls the rest of the articles of the journal.	<b>Gold</b>  Copyleft.  Producers charge a fee to authors to publish their articles in journals where all the articles are made available in OA.

**TABLE 3**

**Responses of different actors to the disruptive technology**

	<b>Open Access as a social movement</b>	<b>Open Access as a politic discourse</b>	<b>Open Access as a business model</b>
<b>Advocates</b>	<b>Grass-roots actors</b>	<b>Regulators (funders)</b>	<b>Incumbents (the commercial publishers)</b>
<b>Interpretation of the need of change</b>	<p><i>The new technology challenges the subscription-based model</i></p> <p>Text on papers are rivalrous material objects. All texts were rivalrous before the digital age. But digital texts are non-rivalrous. With the right equipment we can all have copies of the same digital text without having to take turns, block one another, multiply our costs, or deplete our resources. This may be the deepest transformation wrought by the digital revolution (Suber, 2009).</p> <p>The new technologies enabling text mining and data mining have a real difficulty in being used when they have to negotiate access for a particular paper or journal. So, the literature should be openly available (Scholar, Interview).</p>	<p><i>The new technology brings opportunities</i></p> <p>Mobile access anywhere and at any time to content of all kinds, tagged with metadata, fully searchable, and interwoven with a rich array of other multimedia, is becoming a general expectation; and interactivity and interrelationships with social media are developing fast. All these developments bring the need to reconceptualise working patterns and practices (The Finch Report, 2012).</p> <p>Barriers to access - particularly when the research is publicly-funded - are increasingly unacceptable in an online world; for such barriers restrict the innovation, growth and other benefits which can flow from research (The Finch Report, 2012).</p>	<p><i>The need to follow the regulations</i></p> <p>Research Councils UK, Wellcome Trust and partners of the Charity Open Access Fund all require journal articles that result from their funded research to be made Open Access. The Higher Education Funding Bodies of the UK also require that journal articles meet accessibility requirements in order to be eligible for submission to the Research Excellence Framework (REF). To comply with funder mandates, Elsevier offers researchers two options: green and gold Open Access (Elsevier, 2009).</p> <p>In the UK, the Finch report, and subsequent decisions and actions by the UK government, Research Councils UK and the Higher Education Funding Council for England, have created a specific challenge around the implementation of article-processing charges on a massive scale, generating new issues for both universities and publishers (President, SAGE International, Archival).</p>

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*Digital academic research as a public good*

An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the Internet. The public good they make possible is the world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds (Budapest Open Access Initiative, 2002).

Roads are public goods which we generally succeed in treating as public goods. By contrast, knowledge is a public good whose most important embodiments and manifestations we treat as private commodities, despite the ease of taking a different course and despite the palpable harm our present course inflicts on research, health care, the environment, public safety, and every aspect of life which depends on research. How did we avoid this problem with roads? What can we learn from roads? (Scholar; MIT Press, 2016).

*Academic research as a publicly funded good*

Free and open access to publicly-funded research offers significant social and economic benefits. The Government, in line with its overarching commitment to transparency and open data, is committed to ensuring that such research should be freely accessible. As major bodies charged with investing public money in research, the Research Councils take very seriously their responsibilities in making the outputs from this research publicly available – not just to other researchers, but also to potential users in business, charitable and public sectors, and to the general public (Research Councils UK, Archival, 2014).

The four UK higher education funding bodies believe that research arising from our funding should be as widely and freely accessible as the available channels for dissemination allow. Open Access to research enables the prompt and widespread dissemination of research findings. It benefits the efficiency of the research process and allows publicly funded research to drive economic growth. It delivers social benefits through increased public understanding of research (Higher Education Funding Council for England, policy, Archival, 2016).

*Academic research as a resource to monetise*

Having all that work going into launching and developing those journals, they [the publishers] want to see them succeed. Now Open Access offers new opportunities to do that. So when we are approached to launch new journals now our default position is to say - can this work be open access? Do the authors have the access to funding that they need to have this journal launched and published as an OA journal? I think that people have started to see the OA business model as an opportunity (Commercial publisher, Interview).

Open Access is a viable business model, as business, we wanted to be part of that (Commercial Publisher, Interview).

Over the last few years, leading academic publishers have taken a forward-looking view and started embracing developments such as the OA movement. Springer has been at the forefront of OA publishing for many years and was the first major commercial publisher that took a constructive approach to the business model, preferring to experiment with it, rather than dismiss it. Springer was also the first major publisher to wholly embrace it. This stance contributed to the growth of the model, reinforcing its credibility and broadening its appeal



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***To rethink the role of the powerful gatekeepers of production***

We are being held into account by this actually very inaccurate measure which is the impact factor. Actually we can see a much better and more ethical way of publishing that doesn't result in money going into corporate shareholder pockets (Scholar, Interview).

It is utterly absurd that we still have publishers - we write for free (because we want our work read or known), we edit or referee for free and then pay large amounts of money to buy the work back. With the advent of the Web, authors should have eliminated publishers (Scholar, Interview).

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***To stimulate incumbents to adapt to the change***

Our recommendations and the establishment of systematic and flexible arrangements for the payment of Author Processing Charges will stimulate publishers to provide an Open Access option in more journals (The Finch Report, 2012).

Publishers also need to generate surpluses for investment in innovation and new services; for distribution as profits to shareholders; and for learned societies in particular to support scholarly (and a wide range of related) activities for the benefit of their members and the wider communities that they serve (The Finch Report, 2012).

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***To position themselves as advocates***

In the last two years, our position has changed, we are seeking to drive Open Access. Both within our company and also in the Industry and academia more widely. So, we moved from a position of saying, 'here is the option in case you wanted' to encouraging authors to take an Open Access option. Explaining the benefits of Open Access, working with learned societies to explore the options for OA, new OA journals or converting the journals to OA or making sure that the subscription journals participate in a hybrid program. So that we can not only facilitate Open Access but drive it (Commercial Publisher, Interview).

Springer Nature is on a journey, from traditional publishing methods to open access, open research, and beyond. But we can't succeed alone. We're calling for the research community, from funders to institutions, authors and editors to join us in making that happen (Commercial Publisher, Archival).

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***To implement alternatives to the model of commercial academic publishing***

Open Access is really something that is worth reflecting on to consider changes in the current and shifting relationship between publishing, politics, and cultural

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***To adapt the new practices of distribution to the existing business models***

We recommend that a clear policy direction should be set towards support for publication in Open Access or hybrid journals, funded by Author Processing Charges, as the main vehicle for the

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***To adapt the new practices of distribution to the existing value capturing strategies***

Open Access is pay to publish, not pay to read. It's amazing because this is what Open Access would be

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labour more generally (Scholar, Archival).

Open Access would mean for academics to take the means of production, revealing some of the hidden mechanisms around that action of knowledge (Scholar, Interview).

publication of research, especially when it is publicly funded (The Finch Report, 2012).

The research communications system is in a period of transition towards Open Access. We believe that, at its simplest, this is a shift from a 'reader pays' to an 'author pays' system, which in turn requires a shift in publications processes and business models (The Finch Report, 2012).

(Commercial publisher, Interview).

Investments in those sorts of developments and in Open Access model where the author pays, the author is our customer. We are ever more motivated to make things as easy as possible for authors. And that's benefited the whole company by driving services improvement at the author end. I think that benefits the publishing process in a way that benefits everybody (Commercial publisher, Interview).

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*The commercial publishers*

The scholarly communication system is not designed for communication between researchers and the public. Better channels already exist to do that, including television, radio and newspapers (Commercial Publisher; Robinson, 2006).

With a single cut, there is a real risk that scientific research will leak in an uncontrolled fashion that would be impossible to stem. The end result will be an undifferentiated pool of unreviewed research, which will, because of its lack of structure, not only halt the diffusion of innovation to the same vital research organs, but also challenge the viability of the whole body by affecting other systems, such as peer review and societies like the International Society on Thrombosis and Haemostasis (Commercial publisher, Archival).

*The grass-root actors*

The UK's universities and research funders have been leading the rest of the world in the movement toward Open Access to research with 'Green' Open Access mandates requiring researchers to self-archive their journal articles on the web, free for all. A report has emerged from the Finch committee that looks superficially as if it were supporting Open Access, but is strongly biased in favour of the interests of the publishing industry over the interests of UK research. Instead of recommending building on the UK's lead in cost-free Green Open Access, the committee has recommended spending a great deal of extra money to pay publishers for "Gold" Open Access publishing. If the Finch committee were heeded, the UK would lose both its lead in Open Access and a great deal of public money - and worldwide Open Access would be set back at least a decade (Scholar, Archival).

The Finch Report is a successful case of lobbying by publishers to protect the interests of publishing at the expense of the interests of research and the public that funds research (Scholar, Archival, 2012).

A unilateral adoption of gold open access would come at the cost of UK competitiveness. It is a central irony of the Finch report that in seeking to maximise the accessibility of scholarly knowledge and evidence - and thereby encourage openness and transparency - its authors have failed either to consider fully the facts before them or to substantiate some of their assertion (UCL's pro-vice chancellor for research, Archival).

*The grass-root actors*

Some publishers are deeply wedded in a very historic conception of what is a journal to the extent that think in terms of journal issues, they think in terms of a certain number of pages so they're still thinking in a print era even though they may only publish on line (Scholar, Interview).

**TABLE 4**

**Commercial publishers' business models**

<b>Business Model constitutive elements</b>	<b>Subscription-based model</b>	<b>Hybrid journals (OA as an exception)</b>	<b>Green Open Access</b>	<b>Gold open access</b>
<i>Key activities</i>	<p>To administer the peer-review process (finding peer reviewers, evaluating assessments and checking manuscripts for plagiarism).</p> <p>To filter and select those papers that do not meet editorial requirements.</p> <p>To edit the articles (proofread, typesetting, turning the file into standard formats).</p> <p>To publish the articles after the peer review.</p> <p>To publish the articles after the peer review.</p>	<p>To administer the peer-review process (finding peer reviewers, evaluating assessments and checking manuscripts for plagiarism).</p> <p>To filter and select those papers that do not meet editorial requirements.</p> <p>To edit the articles (proofread, typesetting, turning the file into standard formats).</p> <p>To publish the articles after the peer review.</p>	<p>To administer the peer-review process (finding peer reviewers, evaluating assessments and checking manuscripts for plagiarism).</p> <p>To filter and select those papers that do not meet editorial requirements.</p> <p>To edit the articles (proofread, typesetting, turning the file into standard formats).</p> <p>To manage the embargo periods (a period during which access to</p>	<p>To administer the peer-review process (finding peer reviewers, evaluating assessments and checking manuscripts for plagiarism).</p> <p>To filter and select those papers that do not meet editorial requirements.</p> <p>To edit the articles (proofread, typesetting, turning the file into standard formats).</p> <p>To publish those articles after the peer review.</p>

academic journals is not allowed to users who have not paid for access).

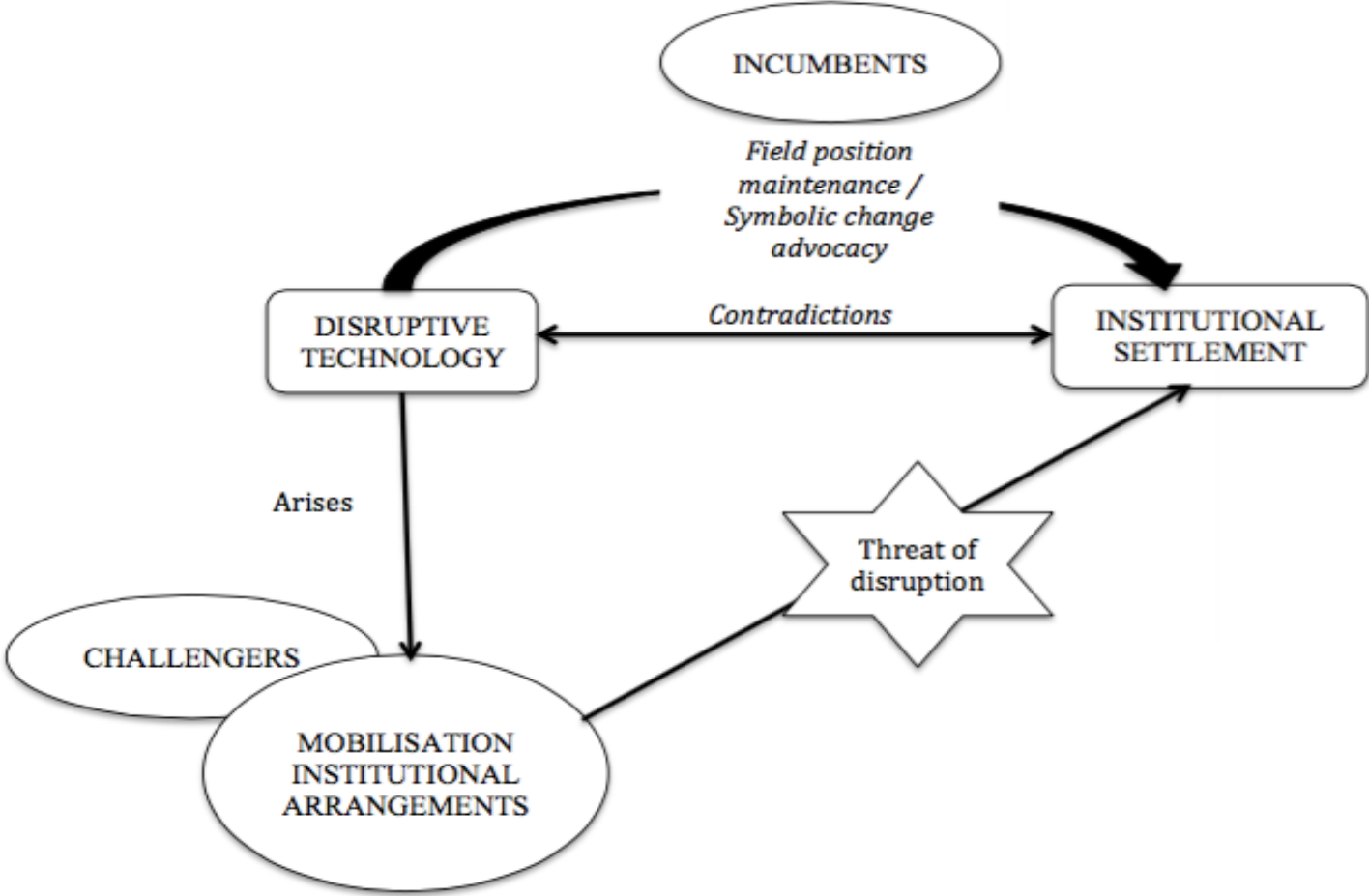
To publish the articles in OA in repositories with institutions.

<i>Key resources</i>	Free-labour based Peer Review Process.	Free-labour based peer-review process.	Free-labour based Peer Review Process.	Free-labour based Peer Review Process.
	The tenure track system is linked to the reputation of the journals.	The tenure track system is linked to the reputation of the journals.	The tenure track system is linked to the reputation of the journals.	The tenure track system is linked to the reputation of the journals.
<i>Customers</i>	Payers: The Universities who are the users of the research.  Potential Users: researchers with access to scholarly subscriptions.	Payers: The Universities who are the users of the research.  Payers: The author (funded by public funds administered by the University)  Potential Users: researchers with access to scholarly subscriptions.  Potential Users: anyone equipped with internet connection.	Payers: The Universities who are the users of the research.  Potential Users: anyone equipped with internet connection.	Payers: The author (funded by public funds administered by the University)

<i>Channels</i>	To distribute either hard or digital copies via libraries.	Archiving and digital distribution.	Archiving and digital distribution.	Archiving and digital distribution.
<i>Revenue streams</i>	Payment for access subscription (bundle).  'Pay - per view' (PPV) fee for single journal article.	<p>“Double dipping”: Payment for access subscription (bundle).</p> <p>Payment for publication, individual article via Article processing charges (APCs) by those articles that are made available free of charge</p>	Paid access, subscription during the embargo period	<p>Payment for publication, individual article via Article processing charges (APCs).</p> <p>Publishing cost paid by the author (after the review, yes, as soon as it's published)</p>

*\*Adapted from 'The Business Model Canvas' (Osterwalder, Pigneur, 2010).*

Figure 1: A Grounded Model of the Incumbent's Responses to an Institutional Threat of Disruption.



### **PAPER 3**

## **FROM ILLEGITIMATE PRACTICES OF CONSUMPTION TO LEGITIMATE PRACTICES OF DISTRIBUTION: THE CASE OF NAPSTER AND THE DIGITALISATION OF THE MUSIC INDUSTRY.**

### **Abstract**

Theories on institutional change have advanced our understanding of the ways in which actors create, modify, or transform institutions. This body of research has focused on the role of institutional entrepreneurs and other strategic actors. However, it has paid relatively less attention to how unorganised and non-strategic actors - such as consumers - can catalyse institutional change. The fact that current theories on institutional change have overlooked the role of consumers is surprising given the increasing capacity of the digital technologies for shifting possibilities of production and distribution from producers to consumers. In order to expand our understanding of how consumers can contribute to changes in an institutional field, I draw on the case of the field of music publishing where consumers contributed to changes in the materiality of the practices of consumption, from physical to digital. By showing how institutional change emerges from consumers, this paper contributes to the understanding of the role of consumers as key catalysers of field-level change in light of a disruptive technology. As well as to the processes of field-level accommodation between consumers' and producers' conflicting interests.



## INTRODUCTION

Media analysts now broadly use the term ‘Napsterisation’ to refer to a massive shift in a given industry where networked consumers armed with technology and high-speed connectivity disrupt traditional institutions, hierarchies and distribution systems. And, in many cases, those consumers have come to expect that a digitised version of a product should be available online for free (Industry Expert; Madden, 2009:2).

Today’s 4 million piracy community members are likely to become legitimate consumers, as businesses catch up to meet the demands of these communities (The Economist Newspaper, 2005).

Napster - the first peer-to-peer file-sharing Internet service - allowed consumers to copy and distribute music files online at a massive scale without the consent of the copyright holder (i.e. piracy). In February 2001, Napster achieved a critical mass of 60 million users worldwide (International Federation of the Phonographic Industries, 2005) who downloaded music for free, in the process violating legal requirements and preventing the music industry from making a profit on the associated copyrights. In spite of the illegitimacy of the practice of digital consumption of music, Napster users contributed to its diffusion. In later stages, organised actors legitimated the practice of digital consumption of music, thus bringing relevant field-level changes.

The role of consumers in changing practices of production and distribution that might, in turn, have effects on field-level institutional change is increasingly relevant. Since the diffusion of the Internet, digital technologies have allowed users to circumvent various forms of authority. For instance, the 3D printer allows final users to print objects outside legal regulations or established property rights. In light of this new wave of decentralised possibilities of agency for consumers brought by the Internet related technologies, a few

studies within the wider field of management studies explored how users change technologies in context (e.g. Orlikowski, 2014).

In spite of its importance, as well as of the fact that consumers are a crucial part of institutional fields, research on institutional theory has surprisingly overlooked consumers. A few studies have incorporated the role of consumers through the lenses of how they enact new meanings and symbols that producers purposefully create (e.g. Hargadon and Douglas, 2001; Munir and Phillips, 2005). However, these studies view consumers through the lens of how they incorporate meanings in processes of institutional change, not in terms of how they change them. Only a few exceptions (see Ansari and Phillips, 2011; Scaraboto and Fisher, 2013) have theorised the conditions and strategies under which consumers contribute to field-level change. These exceptions show how these unorganised groups of individuals without a ‘grand institutional plan’ trigger change that ‘falls under the radar’ of incumbents. Thus, overall, current studies on institutional theory fail to explain how consumers bring changes with the potential to disrupt the established arrangements in an organisational field.

The lack of research on consumers’ potential to disrupt established arrangements in an organisational field is surprising in light of digital technologies. For instance, ‘Social Media Influencers’, final users who “shape audience attitudes through blogs, tweets, and the use of other social media” (Freberg, Graham, McGaughey, Freberg, 2011:90) have the potential to disrupt the way brands connect with consumers. For instance, in the fashion industry (Petrick and Simpson, 2015). Or, the 3D printer, which has the potential to disrupt the manufacturing industry by allowing end users to produce their own objects. In order to expand our knowledge of the role of consumers in institutional change with

disruptive potential, I ask the question – *how do consumers introduce changes in an institutional field in light of a disruptive technology?*

To answer this question, I study how the practice of digital consumption in the case of Napster became not just a widely diffused practice, but also an institutionalised one that changed, in part, the dynamics of music distribution at the field level - from store-based album distribution to fast, cheap, easy-to-access and on-demand digital music by the song via streaming platforms. Through an in-depth examination on the evolution of the field of music publishing, I provide an account of how practices generated by consumers can lead to field level change. I find that consumers are essential at an early stage to bring innovation to a field because they reveal social and symbolic gains (expressive value). Although the utilitarian value (practical solutions) disrupts the existing ways of capturing value by the incumbents (in this case, through copyright); newcomers accommodate the changes in value tastes that consumers revealed by offering legitimate ways to consumers' utilitarian value. As a result, field positions and institutional arrangements are not radically changed - the process disrupts but does not displace the incumbents.

By theorising the role of consumers in creating and diffusing new practices as a consequence of the disruptive effects of a new technology, this study advances understanding of a type of actor that, in spite of being part of institutional fields, has been either neglected by current theories, or, portrayed as 'falling under the radar' (e.g. Ansari and Phillips, 2011). In addition, this study shows a model of field-level accommodation that is "revolutionary in pace and developmental in scope" (Micelotta, 2017: 1902) and further enhances our understanding on how organised actors accommodate changes in value tastes that the consumers initially revealed.

## THEORETICAL BACKGROUND

### Alternatives to ‘Heroic Actors’ in Processes of Institutional Change

Early research on institutional theory conceptualised institutional processes as driven by conformity and stability underpinned by “durable socio-cultural structures” (Scott, 2008: 48). From the 1990s onwards, a call to incorporate agency in institutional analysis turned attention towards actors’ purposeful strategies to achieve institutional change (e.g. DiMaggio, 1988; Hirsch and Lounsbury, 1997). DiMaggio (1988: 14) suggested that institutional changes “arise when organized actors with sufficient resources (*institutional entrepreneurs*) see in them an opportunity to realize an interest that they value highly despite pressures towards stasis”. Following DiMaggio’s notion of “institutional entrepreneurship”, efforts to understand institutional change have expanded our understanding of how change occurs, why it occurs and what the consequences of change are (e.g. Seo and Creed, 2002; Greenwood and Suddaby, 2006; Hargadon and Douglas, 1991).

Studies on institutional entrepreneurship have expanded our understanding of how resourceful actors who are embedded in fields can change them, in spite of institutions’ power and inertia. Research from this perspective posits purposeful agency from resourceful actors as a necessary and sufficient condition for institutional change - at the expense of accounting for the constraining effect of institutions (e.g. Greenwood and Suddaby, 2006; Garud, Jain and Kumaraswamy, 2000; Maguire and Hardy, 2006). Research on institutional entrepreneurship, however, has been criticised for being overtly ‘heroic’ and ‘voluntaristic’ (i.e. institutional entrepreneurs as overtly rational and disembedded from the institutions in place; see Meyer, 2006).

Later studies made an effort to move away from the ‘heroic and voluntaristic perspective’ of the institutional entrepreneur, for instance, by focusing on ‘non-core’, or, ‘non purposeful actors’. Studies on ‘non-core’ actors argue that change arises from the ‘periphery’ of a field from actors who are less privileged and less embedded by the institutional arrangements in place (e.g. Schneiber and Lounsbury, 2008; Wik, Stam, Elfring, Zietsma and Hong, 2013; Rao, Morrill and Zald, 2000). For instance, research on social movements deflected attention from the ‘hero’ imagery of institutional entrepreneurship to explain how actors with varying kinds of resources can lead to institutional change. Maguire and Hardy (2008), for example, acknowledge the collective, distributed and contested nature of change. These studies advanced our understanding on how relatively disadvantaged groups of actors, ‘poorly resourced’ in comparison to ‘heroic actors’ with sufficient resources (i.e. a core field actor such as Edison in Hargadon and Douglas, 2001) bring big-scale innovations into an institutional field.

Also in response to the ‘voluntaristic approach’ of ‘heroic entrepreneurs’ as purposeful actors with strategically motivated intentions, studies on ‘non purposeful actors’ challenged the assumption that actors must be willing to change institutions in order to be regarded as institutional entrepreneurs. These studies posited that change may be inadvertently triggered by the “mundane activities of practitioners struggling to accomplish their work” (Smets, Morris and Greenwood, 2012: 877). Unorganised groups of individuals without a ‘grand plan’ for changing institutions inadvertently trigger change in an organisational field through their everyday activities that fall ‘under the radar’ of incumbents, and, their actions bring about change incrementally (e.g. Smets,

Morris and Greenwood, 2012; Lounsbury and Crumley, 2007). Lounsbury and Crumley (2007), for instance, shown how unintentional modifications in the performativity of mutual funds led to variations in institutionalised practices that led to field-level structuring in beliefs to accommodate the new practices.

Acknowledging how a different range of actors with different resources, or, strategic approaches to change provide alternative accounts to the simplistic accounts on ‘heroic entrepreneurs’. These studies moved away from a ‘heroic account’ of institutional entrepreneurship and helped to capture empirically the nuanced focus of institutions. These theories, however, overlooked the role of a group of an important field-constituent actor ‘non-core’ actor: the consumers.

### **Consumers and Processes of Field-Level Change**

The lack of research on consumers in institutional change is surprising given that in light of digital technologies that have created organisations, such as Napster, based on user-generated content, including social networking Internet sites (e.g. Facebook and Twitter), or, online rating systems (e.g. TripAdvisor), consumers have increasing agency in organizational fields. In addition, a seminal definition of organisational fields has included consumers as an integral part of fields. DiMaggio and Powell defined organisational fields as “those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and, other organizations that produce similar services”, develop “mutual awareness”, and see themselves as part of the same community and “involved in a common enterprise” (1983: 143-148).

Previous research in organisational studies has acknowledged that consumers can

innovate in use, due to their familiarity with use contexts (i.e. “comparative advantage over manufacturers as a source of innovations in use”) (Faulkner and Runde, 2009: 456). Other literatures, such as technology studies (e.g. Orlikowski and Scott, 2014), the social construction of technology (e.g. Bijker and Law, 1997) or user communities (e.g. von Hippel, 2005), have explored the role of consumers in showing how they can use technologies in different ways and shape the implications of technologies through their daily activities. Studies from this perspective have advanced our understanding on how consumers can enact agency in organisations. For instance, Orlikowski and Scott (2014) explain how user-generated content can have effects in the performativity of organisations (the consumer-generated valuation system TripAdvisor has an effect on micro-managing hotel managers according to the consumer’s valuations). However, these theories tend to direct their attention to lower levels of analysis, away from studying the increasing role of consumers in the process of changes in beliefs and behaviors that can have an impact on other field participants.

In spite of its importance, institutional studies have surprisingly overlooked the role of consumers. A few studies on institutional theory have paid some attention to the role of consumers, showing how organisations that innovate on a new product posit strategies to involve consumers in the cognitive legitimacy of the product, acknowledging the role of consumers as adopters (e.g. Hargadon and Douglas, 2001; Munir and Phillips, 2005). For instance, in Hargadon and Douglas (2001), designers ground details of old institutions in an innovation’s design so that consumers can recognise, and, legitimise the innovation as a consequence. In these studies, however, consumers do not act as agentic actors to

change institutions. Instead, consumers contribute to incorporate new meanings that the institutional entrepreneurs created.

A very few exceptions posit the role of consumers as agentic actors with the capacity for changes at the field level (e.g. Ansari and Phillips, 2011; Scaraboto and Fisher, 2013). These studies were very important in acknowledging that consumers can play a central role as field constituents by creating, diffusing and legitimising micro-practices that implicate organised actors, creating opportunities for change at the field level. Likewise other studies on alternative accounts to ‘heroic entrepreneurs’ (e.g. Smets, Morris and Greenwood, 2012; Lounsbury and Crumley, 2007), existing research on consumers in institutional theory assumes that consumers’ actions initially fall ‘under radar’. Thereafter, do not have a disruptive effect in the established institutional arrangements. For instance, in Ansari and Phillips (2011) the practice of texting that consumers developed did not disrupt the previous practice (phone-based voice communication). Similarly Scaraboto and Fisher (2013) explain how a peripheral group of consumers “the *fatshionistas*, plus-sized consumers who want more options for mainstream fashion marketers” (Scaraboto and Fisher, 2013: 1234) introduce changes that although are relevant for a specific niche (plus-sized consumers) do not have a disruptive effect in the field of fashion industry. Therefore, current accounts on non-heroic and non-organised actors on “institutional entrepreneurship”, including those accounts on how consumers are involved in processes of field-level change, do not explain how consumers bring changes with the potential to disrupt the current arrangements in the field.



In order to expand our understanding on the role of consumers in processes of field-level change with disruptive potential, I ask the following question: *how do consumers introduce changes in an institutional field in light of a disruptive technology?*

## **METHODS**

### **Research Setting**

To address the question outlined above, I studied the diffusion of the practice of digital consumption in the music industry between 1999 when Napster appeared until the mid late 2000's. In the mid late 2000's the field level changes related of the practice of digital consumption had materialised into institutionalised practices of distribution around the practice of digital consumption.

The music industry was the first within the media industries in suffering the effects of digital piracy - the practice of consumption of unauthorised copying of content protected by intellectual property without paying royalties to the creators of content. Napster, founded in 1999, was at the heart of this disruptive effect of piracy on sales in the music industry. Napster enabled a community of consumers to “free access to and download of up to 100 million copyrighted songs archived on the private hard drives of 100 million subscribers worldwide” (Giesler and Pohlmann, 2003: 4).

In 2002, the Recording Industry Association of America (RIAA) reported that CD sales in the US had fallen by 8.9 percent, from 882 to 803 million units, with revenues falling by 6.7 percent. Thus, Napster represents a case in which consumers threatened the practices of distribution in place - from being based in the established music industry to being based in P2P forms of online distribution for free.

The case of Napster's practice of online consumption in the music industry represents an interesting case to explore how consumers can contribute to changes in practices of production in an organisational field. First, although users did not develop the system that enabled P2P file sharing, they contributed to the legitimation and diffusion of the practice of consumption of digital music developed by Napster. In later stages, as a few studies have shown (e.g. Cohn and Vaccaro, 2002; Freedman, 2003; Hughes and Lang, 2003) new entrants contributed to institutionalise the practice of consumption of online music in the organisational field of music. Second, although Napster's case had a profoundly disruptive effect on the music industry, the case unfolded over a short period of time. Napster's P2P sharing services lasted from 1999 until 2001- when Napster shut down as a consequence of a legal battle enacted by the music industry. By 2001, new entrants offered legitimate options to consume music online. That year, Apple launched its online music store iTunes to cover the demand for online access to music created by Napster's piracy community. The short period of time allowed me to document the full sequence of institutional evolution from the arrival of Napster, the disruption of the practices in place by consumers, and the arrival of the organised actors (distributors) who offered consumers legitimate ways of enacting the practice of digital consumption. Third, the case of Napster received widespread media attention at the time and is still today referenced as a seminal moment in the history of the web. Napster's technological, cultural and legal significance including its implications for the music industry and consumers is well documented (e.g. Alderman, 2001; Ayers, 2006; Burkart and McCourt, 2006; Hensmans, 2003; Michel, 2005; Michel, 2006, Tschmuck, 2006).

## Data Sources and Analysis

I used archival documents to trace the changes in the practice of digital consumption of music to inform how consumers played a fundamental role in them (See Table 1). Through interpretative data analysis I produced a case analysis, an in-depth single case study to address conceptual issues that were not transparent in existing theory (Yin, 1984).

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Insert Table 1 About Here  
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I acquired data from archival research from both music press coverage (e.g. Rock's Backpages, Mojo, The Wire, NME), mainstream press (e.g. The Economist, Guardian, ABC news), and industry reports. I used research criteria that included keywords such as Napster, music piracy, online file-sharing in music, or streaming services (i.e. Spotify or iTunes). I then refined the compilation of texts by focusing on those accounts that dealt with how consumers engaged with the illegitimate practice of online consumption, how the music industry portrayed Napster and its users as illegitimate, and, how new entrants offered a legitimate option for consuming music.

In order to account for how consumers interpreted the changes in characteristics around the practice of digital consumption, I also collected data from books, published academic papers on the case of Napster and media material (e.g. online interviews, TV shows, or documentaries) documenting the case of Napster. I began the analysis by constructing a chronology of key events and activities around the emergence of Napster as well as subsequent events of the disruption from 2002 until mid late 2000's, using historical narrative analysis to clarify the event sequences that occurred as consumers

established a new practice in the field of music consumption (Nasra and Dacin, 2010). After the historical analysis, my approach to data analysis involved two main stages. The first stage focused on consumers' accounts of Napster during the time the platform was operating. In this stage, I identified (1) the characteristics of the changed practice, and (2) the utilitarian and experiential value of these practices for the users. The second stage, focused on data at the industry level covering the impact of Napster in the music industry, the incumbents' responses as well as the newcomers' responses. In this stage, the analysis of the texts allowed me to unpack how key actors from the music industry de-legitimated the practice of consumption of music. Finally, in the third stage, I describe how new organised actors arrive to the field to offer possibilities for legitimate practices of consuming music online.

## **FINDINGS**

Following DiMaggio and Powell's definition of organisational fields (1983), the field of the modern music industry consists of songwriters and composers, performers (e.g. singers and musicians), the producers who create and sell recorded music (e.g. record labels, online music stores and performance rights organisations), live music services (e.g. music venues or road crew) as well as the music users. Historically, new technological developments had benefited both consumers and producers in the field of music industry. For instance, the diffusion of the phonograph (invented in 1877 but commercialised in 1948) allowed consumers to listen, and, reproduce songs on their own devices. The phonograph improved users' accessibility to music in comparison to the previous support 'sheet music' – when consumers could only consume music at live concerts. The phonograph also benefited the field of Music Industry when the Columbia

Corporation acknowledged its potential in 1948 and marked the emergence of the commercial music publishing field. Years later, in 1999, the diffusion of CDs benefited both consumers - allowing to store larger amounts of high quality music - and music publishers - as the profits of the music industry peaked (See Figure 1).

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Insert Figure 1 About Here  
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The entrance of the Internet-related technologies in the field of Music through Napster in 1999, benefited consumers by allowing them making perfect copies of the originals, and sharing these with their peers online at a massive scale. As a consequence, consumers could circumvent the established channels of music distribution, shifting the power to distribute music files from producers to consumers. Contrary to previous technological developments that benefited both consumers and the music industry, the Internet-based technologies - through Napster - benefited consumers but disrupted the Music Industry.

I unpack changes in the practice of online consumption according to the most salient characteristics of the new practice as ‘utilitarian value’ and ‘expressive value’. The utilitarian value of the practices of consumption refers to the value a consumer receives based on task-related and rational consumption behaviour (Babin, Dardin and Griffin, 1994). The expressive value, on the other hand, refers to expressing individual identity, and enlarging cultural meaning and understanding (Thorsby, 2001). More concretely, I classify Napster’s expressive value according to Thorsby’s (2001) categories of ‘social value’ and ‘symbolic value’. Social value refers to the capacity of artistic work or cultural content to forge ties among otherwise separated individuals. Following Thorsby’s definition of expressive value, symbolic value refers to cultural objects’ capacity for

carrying meaning in which relationships and identities can thrive. Changes in utilitarian as well as in expressive value defined the changes in the characteristics of the practice of consumption as a consequence of Napster (See Table 3).

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Insert Table 3 About Here  
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### **Music Consumption before the ‘Digital Revolution’**

In the Western world, the first examples in which users could enjoy music recorded on a physical device was ‘music notation’ - a system to visually represent music - used by European monasteries in the mid 9<sup>th</sup> century for Gregorian chants. However, the genesis of the field of music publishing started in 1948 with the commercialisation of the phonograph, a device that allows recording and reproducing sound simultaneously. It ushered in the first music publishers, “intermediaries transforming the initial creative work into a marketable service by seeing the musical composition through the stages of production from manuscript to performance, recording and subsequent uses” (Towse, 2015:2). Consumption changed from home production and attending live public performances to listening to recorded and broadcast music (Peacock and Weir, 1975; Ehrlich, 1985). In consequence, the industry changed its business model from selling a product (the sheet music) to managing rights of a symbolic good protected by copyright. In 1956, the US Copyright Act introduced rights for broadcasters and makers of sound recordings. Consumption shifted from buying a product - either sheet music to reproduce at home, or, a performance where live musicians would have purchased sheet music from the publisher - to buying a reproduction of a licensed copied file supported by a physical device.

Subsequent developments in the devices supporting the copied file further benefited the music industry in increasing profitability. In 1983, cassettes outsole vinyl records for the first time, largely thanks to the spread of the Walkman and similar portable devices from other manufacturers. By the late 1980s, CDs had achieved widespread popularity, with the unit cost of CD players falling to levels that allowed mass adoption. In 1999, just before Napster entered the market, CD sales peaked in the US according to the RIAA Year-End industry Report (2000), the field made profits of 14.500\$. By 1999, four music labels (Warner music Group, EMI Group, Universal music Group and Sony BMG) controlled approximately 70 percent of the distribution of recorded music in the global market, and more than 40 percent of the industry's market share of music production (Towse, 2015).

### **Napster: the Disruptive Potential of the Digital Technology**

Napster pushed the edge until it defined where the lines would be drawn on some of the most important political and economic issues of the day, including digital piracy, consumer rights, freedom of speech, and the future shape of the Net itself (Menn, 2002:2).

While copy technologies historically benefited the field of music publishing, the diffusion of the MP3 format - an audio data compression algorithm - made it feasible for users to buy a CD legally, use computer software to code it into an MP3 format, and, upload the file available for others to download. In light of these new copying and sharing possibilities that the Internet and compression formats allowed, file-sharing sites started to emerge in the late 90's, such IRC, MP3.com, Lycos and Scourn.ne. These pre-Napster file-sharing sites, however, had substantial reliability problems as links to songs would often not work as users would upload them infrequently:

Getting music off the Internet before Napster was tricky, unreliable – as someone remarks in *Downloaded* [a documentary on Napster], ‘a colossal pain in the ass’. I had ‘friends who would spend 14 hours trying to pull a Butthole Surfers song offline’. And it would fail. And they would try again. And it would fail (Napster User, Archival)

North American University students Sean Parker and Shawn Fanning aimed to address these problems of reliability when, in 1999, they released Napster, a non-profit online music sharing program. Napster’s software base combined two functions of a search engine: file-sharing, and, Internet Relay Chat (IRC). File sharing allowed users to trade MP3 files directly without the need of a centralised server for storage. IRC permitted users to find and chat with other users in real time. Napster’s file sharing software represented a revolutionary change for the practice of music consumption in the field:

There was no ramp up. There was no transition. It was like that famous shot from 2001: A Space Odyssey, when the prehistoric monkey throws a bone in the air and it turns into a spaceship. Napster was a ridiculous leap forward (Napster User, Archival).

In fact, although the MP3 technology was a crucial development for the Internet, Napster’s architecture represented the first time where users had ‘a social life’ online. Napster’s IRC-based dynamics of interactivity represented a revolution in terms of how general users interacted in an online context:

I’d say the invention of the MP3 was more revolutionary, but, Napster is the poster child of the traditional music industry’s transformation into what it is now. I think it caused enough debate, reflection, and innovation to create the current state of accessibility, which I love (Freelance journalist, former editor of AOL music’s Spinner, Archival)

A few users in the early stages of the Internet, such as ‘Hacker communities’, followed the Internet’s underlying principles. For instance, developing open software. Napster, however, represented the first time in mainstream history in which general users



interacted on the Internet. In fact, a few studies have acknowledged the relevance of Napster's-led cultural change in the music industry (see Giesler and Pohlmann, 2003; Merriden, 2001; Spitz and Hunter, 2004).

**Phase 1: Napster's File-Sharing: Consumers as Distributors (1999 – 2001).**

For the first time, the audience has got into the technology before the industry (Chuck D., musician, Archival).

In the quote above, a musician refers to user-led digital music consumption in the context of Napster before new producers in the music industry offered them the possibility to do so. Napster's core mechanism of music distribution was based on the principle of 'peer-to-peer' (P2P) file-sharing. P2P allowed users to access media files using software that searched for other connected computers on a network. Napster's idea of file-sharing drew on the Internet Relay Chat's (IRC) principle of inter-connectivity: a mass instant-messaging hangout in which users could see who was connected simultaneously. As one of the founders of Napster stated, the principle of inter-connectivity was embedded in Napster's main mission of creating a community:

Shawn and I met through IRC which is like a chat-based community that's a huge part of what we created as well, we wanted to create a way to meet people through music. What we were providing was a way for people to share their personal material. Meet people with similar interests and communicate with them. That's exactly how people discover music. You find music from your friends who listen to something similar to what you listen to. They try something completely new. That's how people experience music and that's a big part of it (Sean Parker, Founder of Napster, Archival)

Drawing on the principle of sharing, Shawn Fanning, the other founder of Napster, states in the quote below Napster's underlying intention of allowing an interactive approach to music consumption:

We were basically trying to create a platform that would allow music to be shared more widely. That would re-energise the conversation about music. And,

ultimately lead to a golden age of music (Shawn Fanning, Founder of Napster, Archival)

Napster's users embraced the principle of share-alike, and implemented it in practice by either uploading new material from outside Napster's system, or by leaving their PC's open to allow other users accessing or downloading files:

Staying true to the old IRC adage of share and share-alike (as in don't download something unless you are going to upload something else), Napster's open structure means that there are no 'lurkers'. Finding one Napster user with similar tastes often leads to a treasure trove of new and interesting music you'll like; everyone who uses Napster, it is predetermined, is willing to share (Napster User, Archival).

By allowing consumers to share peer-to-peer, Napster allowed (for the first time in the history of music publishing) users to function as distributors. Before Napster, only the distributors (not the final users) could make quality copies of music files and distribute them at a massive scale. Previously, consumers purchased music supported on a physical device: vinyl, cassettes or CDs. By acting as distributors through Napster's platform, however, control of who access music shifted from organised actors - the music publishing houses who produced and distributed music - to the users.

***Changes in the utilitarian value of the practice of music consumption.*** File-sharing music with Napster had a marginal cost of 0. As a consequence, the cost of consuming music dropped from \$15 per CD to \$0. 'Music for free' represented one of the most relevant changes in the characteristics of the practice of consumption of music. In the early 2000s, when Napster became popular, a user needed a home computer with a high-speed processor, a hard drive, a CD-RW drive for 'burning' CDs, blank CDs with storage capacity and Internet access. In addition, most of Napster's traffic took place at college

campuses where users would have access to the equipment free of charge. As a user acknowledged “Napster is about ‘free love’, free music”.

Apart from offering free music consumption, the digital files were instantly available from the user’s computer. As Napster’s users expressed, while consuming music offline involved geographical boundaries (i.e. going to physical stores), Napster allowed users instant access without geographical restrictions:

Music was something you bought after debate with friends in the aisles of ‘Our Price’, and then, suddenly, songs were accessible from home (Napster User, Archival).

Users also expressed that instant access represented a fundamental difference in comparison to consuming music offline:

Napster is a giant computer network. I can download the same song from different people at the same time. That’s, I mean, wow! That really makes a huge difference because suddenly music is not only incredibly cheap but also instantly available (Napster User; Giesler, 2006: 286).

A further improvement in the utilitarian value of the practice of music consumption via Napster, related to Napster’s possibility of offering users access to music ‘by the song’. Music publishers mostly distributed music ‘by the album’ - a collection of audio recordings issued as a single item on CD, record, audiotape or other medium. Music publishers curated albums around specific topics. For instance, Pink Floyd’s ‘The Wall’ detailed the life of a specific character. Bruce Springsteen’s ‘The River’ reflected on stories of different characters around similar life-based stories.

Therefore, consumers needed to purchase an entire package - ‘the album’ - even if they only listened to a few songs. Consumers’ value placed on albums decreased across time, Choi and Perez (2004: 4) argued, “at the time that Napster was released, there was a general market perception that the artistic and creative quality of new albums had

decreased. Many people felt that albums contained only one or two good songs, along with many low-quality ‘filler’ songs”. Napster, however, enabled users to obtain ‘hit songs’ without having to acquire an entire album, allowing consumers to ‘cherry-pick’ the ‘hits’ they were interested in:

If the advent of Napster infused one idea into public consciousness, it was that we no longer had to buy the album. If you liked that snappy, up-beat, fraternity-friendly hit single by Sugar Ray but were appalled to discover the rest of the album was actually a collection of *hardcore* nu-metal, all was not lost. You could simply bypass the album and acquire the individual track (Napster User, Archival).

A further change in Napster’s utilitarian value in comparison to offline consumption of music, was related to the variety of music Napster offered:

As a music fan, it was very exciting to finally have access to something close to a celestial jukebox - all music, instantly (Napster User, Archival).

Napster hugely expanded my musical horizons. I felt like one of those mantis shrimps with trinocular vision (Napster User, Archival).

Napster not only offered users a wide variety of music, it also offered them the possibility to upload and to distribute music files from outside the commercial production of the music labels. As users expressed, Napster allowed to find music that was no longer available in commercial circuits, unreleased recordings or live recordings:

With Napster you can find a lot of music that was just not available anymore or that has never been published. I found life cuts of Root Boy Slim and a rare odd flipside of a 45. Root Boy was never released on CD and it is nice to find high quality recordings available. I was listening to John Lennon’s last interview two hours before he was shot, which I found on Napster and I also put the music of my band online and hope someone will download it (Napster User; Giesler 2003: 275).

As the following quote represents, accessing music files from outside the commercial circuits signified a significant change in comparison with offline practices of consumption where users needed to spend time to find specific music files:

I don't remember my first Napster download per se, but I do remember my first 'Oh, wow' download. And it was within the first couple of weeks I was using Napster. It's not a hip song at all, but it was oddly rare: the extended 'Special' mix of Peter Gabriel's 'In your eyes'. For years, I'd been scouring record bins looking for the full-length studio (not live) recording of the song, about eight minutes in length, that contains a whole extra intro/verse that Gabriel commonly performs live but which didn't make the album or any of his greatest-hits albums (Napster User, Archival).

Napster offered users instant-access and a wide variety of free music by the song. In consequence, it offered users higher utilitarian value in comparison to the practice of offline music consumption in which consumers encountered geographical boundaries for purchasing music, where options were limited by what the commercial circuits distributed, and where they had to pay high prices for its consumption.

***Changes in the expressive value of the practice of music consumption.*** In addition to improving utilitarian value of the practice of music consumption, Napster also allowed improving social value - through the characteristics of the 'gift system' - as well as symbolic value - through the possibility of constructing identities around musical tastes with a critical mass of peers.

Napster's distribution of music files involved sharing music as a 'gift' with 'insiders of the system' (peer-to-peer). When consuming music offline, consumers bought and owned a physical object that supported the music file - i.e. vinyl, cassette or CD. With Napster, consumers accessed the music files via 'gift transaction', "a mode of exchange where valuables are not traded or sold, but rather given without an explicit agreement for immediate or future rewards" (Cheal, 1988: 1-19). In Napster's gift system, donors were not reciprocal (which made the nature of the transactions flexible and voluntary). Users acted as donors in two ways: by uploading music from outside the system, and by making music from inside the system available to other users. Napster's gift system generated an

enclosed and self-referential social system that allowed users the possibility of having a 'life online' (i.e. to interact with other users on an ongoing basis).

In addition, the possibility of exchanging digital files within the gift system, Napster's infrastructure of 'gift giving' facilitated users to share musical tastes. Napster operated the server and registered names of music files, stored in a shared folder and made available on a global list. Other users could locate this global list, contact each other through the server and recognise the users by genres. In chat rooms divided according to different music styles (e.g. 'Classic' or 'Alternative') users exchanged instant messages about musical tastes. Napster's interactive component about musical tastes contributed to the development of the concept of sharing music as a 'collective identity' - "an interactive and shared definition produced by several individuals and concerned with the orientation of action of opportunities and constraints in which the field takes place" (Merlucci, 1989: 45). Ultimately, thanks to Napster's collective identity, users could place each other in particular social groups. Napster's gift system brought a social component to sharing music beyond the exchange of data files: it involved curating lists of files according to musical tastes as well as managing communities.

In order to be recognised by Napster's collective identity, users developed usernames and online personas (social identities used in online communities). As Giesler (2006) acknowledges in his study on consumers as gift systems, "The user Daniel alias 'sgtpepper71' was widely recognised as an expert source for Beatles songs. Another user, Martin alias 'violator101' was a download authority for the music of Depeche Mode" (Giesler, 2006: 288). Thus, users effectively operated as file-sharing experts as Napster's

symbolic component afforded them constructing their own identity in relation to taste making:

It feels good to be part of such a powerful movement. Isn't it strange that people all over the world have somehow the same feelings? Napster is seen as a movement to which you wish to add yourself in order to add value to yourself (Napster User; Giesler, 2003: 275).

Related to Napster's capacity to allow consumers to construct their own identity, exchanging music files brought an emotional component to the practice of digital consumption of music:

Music is a very emotional thing. You find somebody else sharing it, it's on their hard drive, you start downloading it, you play it. There's a 'wow!' experience there. I was ready to jump on-board (Napster User, Archival).

With Napster I realised that the computer was going to be the place where we would store our music. Then you started looking for tools to get the music into the computer, tools to play it back, tools to manage it. I remember the first mp3 I ever downloaded, I remember the first time I basically ever played a track from the Internet. I remember just thinking, even though it's just 'information', there's such a crazy amount of emotion, that you can share emotion over the Internet. It was really wild to think that something so important to you, you can just trade so freely. It's hard to quantify how hard it was (Napster User, Archival).

In relation to internal dynamics of identity construction, Napster's users also expressed symbolic value through 'outsider status' - users positioned themselves in clash with the 'mainstream' norms and values of consuming music (Hedbige, 1979). Napster's users widely criticised the mainstream and mass culture component of the music industry:

Most of this music, I never listened to. I actually hated Abba, and although I owned four ZZ Top albums, I couldn't tell you the name of one. What was really driving me? Now, years later, I can see that what I really wanted was to belong to an elite and rarefied group. This was not a conscious impulse, and had you suggested it to me, I would have denied it. But that was the perverse lure of the 'piracy underground'. It wasn't just a way to get the music - it was its own subculture (Napster User; Witt, 2015:1).

The music industry has eaten those art species (in reference to indie music) that are not accepted by the masses (Napster User, Archival).

The emancipated aspect of the practice of online consumption of music allowed users to develop a sense of collective identity. Napster users reflected on how they consumed music and which music they consumed, autonomously and apart from the music industry:

Whenever you switch on the TV today they just poison you with this army of Britney Spears girls and tomorrow you may dress up like her. A day later you are hanging over the toilet and puking yourself to the shape of Britney and so on. So what has Napster go to do with it? It just gives me a way to boycott this whole mass media dictatorship for the rest of my life! (Napster User; Giesler 2003: 275).

The symbolic state of ‘otherness’ is linked to tastes but also to expressing distance from the dynamics of production of the music industry:

Boycotting the business is an issue for any real music fan! It’s not fellow traveling some crazy fashion, it’s for yourself (Napster User; Giesler 2003: 276).

Napster users engaged in discourse disregarding elements of the music industry and expressing distance between the peer-to-peer ways of music distribution and the corporative ways of distribution. For instance, “The ‘Napster Manifesto’, an anonymous call for ‘net communism’ used Marx and Engel’s Communist Manifesto while substituting the terms ‘music industry’ and ‘capitalism’ for terms like ‘bourgeoisie’, ‘bourgeoisie class’ or ‘agriculture and manufacturing industry’. In a similar fashion a few Napster users distributed an ‘Internet meme’ stating “Napster la revolución” subtitled the portrait of ‘Che Guevara’ on the background of rebellious labour class workers as well as a ‘fake’ reminder of the Recording Industry Association of America” (Ayers, 2006: 41). Consumers acquired the digital files free of charge. Neither the copyright holders (the music labels) nor the creators (the musicians) received a compensation for the content they produced. The fact that consumers could be distributors re-balanced the control of material resources between the music industry and the consumers.



Although Napster brought both utilitarian and expressive value to the practice of online music consumption, the practice also led to copyright infringement, which raised controversies at the field-level. As John Perry Barlow, a scholar and cyberlibertarian activist (a political perspective focused on minimising government regulation in the world wide web), acknowledged, actions of resistance against Napster were proportional to the value brought to its users:

I thought this was one of the best moments in human history, and I still do, but, of course, great moments in human history also have an opposition and this is exactly proportional to their greatness (John Perry Barlow, Activist, Archival).

## **Phase 2. Responses from the Music Industry: the Practice of Online Music Consumption as Illegitimate.**

I've never seen the industry under siege like this. For thirty years I've been in this business (David Munns, Chairman & CEO, Emi Recorded music, Archival).

If we fail to protect and preserve our intellectual property system, the culture will atrophy. Worst-case scenario: the country will end up in a sort of cultural Dark Ages (Richard Parson, Timer Warner, Archival).

With offline consumption, music publishers could track every unit consumed and capture value in form of royalties. Illegal file-sharing was possible - for instance, users could copy tapes or CDs and share them with their peers. However, the copies were not perfect copies of the original. In addition, copying involved a marginal cost corresponding to the support of the physical device. With Napster, however, every consumer could share an unlimited number of copies of copyrighted content at 0 marginal cost, making intellectual property difficult to control. Napster was the first major file-sharing programme that brought digital piracy to a massive scale. As Spitz and Hunter state in relation to Napster's piracy potential, "in light of the Internet, Napster was an entirely different beast" (Spitz and Hunter, 2005: 173).

Revenues in the music industry started to fall as a consequence of Napster's digital piracy. Between 1997 and 2000, while CD sales in North America rose by 18%, sales near college campuses, where file-sharing accounted for upwards of 61% of external network traffic, dropped by 12% (RIAA, 2006). According to the Recording Industry Association of America (RIAA), CD sales peaked at \$14.6 billion in 1999. During 2001 - when Napster reached its maximum number of consumers - North American revenue decreased by 75% and European revenue decreased by 70%.

The disruption of Napster based digital consumption to the music industry's capacity for capturing value in form of royalties popularised the notion of 'digital piracy' to refer to the turn from 'commercial' consumption to 'peer-to-peer file sharing networks'. The music industry was concerned that users would internalise that music should be for free:

An increasing number of young people don't buy albums, they are growing up with a notion that music is free and ought to be free (Richard Parson, Co-Chief Operating officer, Time Warner, Archival).

You have a generation of people now who expect their music for free. It's very difficult to change (Greg Hammer, managing director of Red Bull Records, Archival).

In an attempt to regain control of capturing revenue derived from music distribution, the music industry responded to the Napster based practice of digital consumption with a campaign of litigation against copyright infringement.

*The illegitimacy of the practice of digital consumption.* Not all the actors of the music industry were against the practice of online consumption facilitated by Napster. The singer Prince, for instance, portrayed Napster as an alternative away of controlling what music the public gets to listen to:

What record companies don't really understand is that Napster is just one illustration of the growing frustration over how much the record companies

control what music people get to hear, over how the air waves, record labels and record stores, which are now all part of this 'system' that recording companies have pretty much succeeded in establishing, are becoming increasingly dominated by musical "products" to the detriment of real music (Prince, musician; Ayers 2006: 39).

Alanis Morissette and Don Henley from the music group The Eagles testified during US Senate hearings in favour of the visibility that Napster allows artists by giving them a direct link to their audiences. Other musicians, however, also opposed Napster. For instance, Metallica or the rap artist Dr Dre sued Napster for leaking records before they went 'on sale'. In December 1999, The Recording Industry Association of America (RIAA) sued Napster for copyright infringement on behalf of five record companies - Warner Brothers, Sony Music, Seagram's Universal, BMG, Bertelsmann AG and EMI. The RIAA sued Napster for contributory copyright violations for providing the programme that enabled users to commit copyright infringement:

Napster seeks to profit by encouraging and facilitating the distribution and reproduction of millions of infringing MP3 files. Moreover, by deliberately refusing to maintain any information about its users in order to make copyright enforcement next to impossible, Napster has created a virtual sanctuary where music piracy can and does flourish on a monumental scale (A&M Records, Archival).

Napster responded by arguing that they did not infringe copyright themselves. In fact, Napster's software allowed users to connect their computers without a central server. Napster did not host the copyrighted material or had control over the shared material through a central server. Napster referenced Xerox's court case - the American corporation that sells print and digital document solutions - as an analogy to defend their positions as 'technology providers' as opposed to 'copyright infringers'.

Xerox is not responsible for anyone illegally using its photocopiers to duplicate copyrighted material, so Napster should not be liable for people using its software to illegally exchange music files (Sean Parker, Napster Founder, Archival).

The music industry, however, argued in response that while the use was “not paradigmatic commercial activity”, the vast scale of file sharing could not be considered personal use because Napster users obtained for free something that otherwise they should have paid for:

This is a company that is building a business. This isn't, you know, just a sweet young guy that's looking for some fun in his college dorm room. They are building a business by facilitating the stealing of artists' music (Hillary Rosen, RIAA president and CEO, Archival).

In July 2000, the judge ordered Napster to regulate file-sharing by removing 100% of the tracks hosted on the platform whose copyright belonged to any of the five labels represented by the RIAA within two days of the ruling:

Napster wrote the software, it's up to them to write software that will remove, from users, the ability to copy copyrighted material. They created a monster (US District Judge, Marilyn Hall Patel, Archival).

Napster, however, stated that it would be impossible to filter out 100% of millions of files affected every day. As a consequence, in July 2001, Napster decided to shut down the platform. Despite Napster's closure, users moved to other options to keep on consuming digital music in a way that infringed copyright – e.g. BitTorrent, Limewire, Gnutella, Audiogalaxy, KaZaA and others. The RIAA continued to prosecute digital piracy by both suing the file-sharing providers and the consumers themselves. For instance, in 2003, the RIAA started an educational campaign against digital piracy that included suing 12,000 users for sharing copyrighted mp3 files:

We've been telling people for a long time that file-sharing copyrighted music is illegal, that you are not anonymous when you do it, and that engaging in it can have real consequences. When your product is being regularly stolen, there comes a time when you have to take appropriate action (RIAA's president Sherman, Archival).

The practice of consuming music online diffused among consumers of digital files and lasted beyond Napster's closure. The persistence of the practice of online consumption of music has been acknowledged in the field as a 'cultural paradigm shift':

The advent of Napster represented a cultural paradigm shift, and to the extent that it paved the way for legal download services like iTunes (which started the same year that Napster crashed), it was disruptive in a salutary way (Carl Wilson, music Critic, Archival).

In response to the paradigm shift that the illegal practice of digital consumption represented, organised actors new to the field developed legitimate business models around the practice of digital consumption of music.

### **Phase 3: Core Actors Join and the Legitimation of the Practice of Online Consumption of Music Accelerates.**

Napster was really just an inevitable and necessary step forward getting us where we are today with online stores and streaming services. It forced everyone to take the new century seriously. It wasn't a sustainable model, but it opened Pandora's box (Kurt Loder, MTV News, Archival).

Apple's iTunes music Store exists for one major reason: Napster (Rolling Stone Magazine, Archival).

In spite of the music industry's victory in shutting down Napster, Napster's legacy exceeded its closure. As the quotes above express Napster's legacy was the reason for the emergence of new organised actors to the field of music. The incumbents - the music publishers - initially tried to respond to Napster's cultural paradigm shift with new models of distribution that offered legitimate options for consuming music digitally. For instance, in 2001, Sony music Entertainment - the American music label - and Universal Music Group - the American global music corporation subsidiary of the French media conglomerate Vivendi - launched the online music store PressPlay.com. AOL Time Warner - an American multinational mass media and entertainment conglomerate, EMI,

and Bertelsmann - the latter a German media giant - launched MusicNet. Because the music industry was concerned about cannibalising their CD sales, these services of digital music distribution restricted the copy options to consumers. These services allowed users to download a limited number of encrypted songs that consumers could not share with other users - for \$15 a month. These solutions, however, did not offer utilitarian value that improved piracy options - consumers were not willing to pay a subscription fee for a restricted digital file - which led them to their closure two years after their launch. New organised actors from outside the music industry (technology companies such as Apple or Google Play music) offered services based on selling access to a digital music pool. The services offered by 'the new comers' presented legitimated options for consuming music in addition to either maintaining or improving the utilitarian and expressive value of Napster's piracy practices.

***Key actors in the development of digital music consumption.*** While alternatives from the music industry to illegal ways of consuming music did not offer better utilitarian or expressive value than piracy, newcomers were less committed to existing institutional arrangements and were quicker to innovate in more radical ways (cf. Leblebici, 1991). Apple launched iTunes in 2001, the first most successful actor in bringing legitimate options to digital consumption in the music industry. In the subsequent years different services of digital distribution entered the music field (See Table 2). These services for consuming music online became very popular. "In the first half of 2014, consumers listened to 70 billion songs via digital, an increase of 42% from the same period in the previous year" (Audiokorner, 2014).

Apple was the first successful actor in entering the field of distribution of music. In 2001, Apple launched the iTunes online music service with a library of more than 200,000 songs from a wide range of artists and labels. In 2001, iTunes offered consumers an easy interface to purchase songs: the Marketplace, an online platform that resembled a physical store and charged cheaper prices than the physical shops (one could buy songs for 99 cents). In addition, in 2003, Apple launched the iPod: a portable device to reproduce iTunes music files. The iPod was not a cheap option (the launching price was \$300), plus 99 cents to purchase songs that users did not actually own (consumers bought access rather than the product). However, a simple interface and a mass advertisement campaign turned the iPod into a ‘cultural icon’:

The iPod suddenly had incredible power, and its white earbuds looked perfect in the ‘Silhouettes’ ads Apple spent millions putting on TV and billboards. This was the moment digital music was no longer for thieves and miscreants - it was for cool people (Rolling Stone Magazine, Archival).

The iPod is the first cultural icon of the 21<sup>st</sup> century. There is nothing else like it in terms of the mix of style, functionality and consumer desire. The technology is appealing because it can be programmed very quickly and easily (Professor in Media Studies at the University of Sussex Michael Bull, Archival).

iTunes was the first successful attempt in digital distribution of music. In its first week it sold 1 million downloads. By the end of 2001, Apple had sold 125,000 iPods, by 2010 the figure reached 225 million (Apple.com, 2017). iTunes not only convinced consumers to pay a fee to access music online, but offered a viable solution to the music industry to manage the legal digital distribution of music by licensing their catalogues for online use. iTunes convinced the major record labels, such Warner, of offering consumers options that would be better than piracy:

The attraction of Napster was not just that it was free, but, more importantly, it gave people a way to connect with pretty much any piece of music. What Steve

[Jobs] was doing with iTunes was to replicate that type of experience - a vast catalogue, available on a singles basis, with a convenient interface. It had to be easier than Napster.” (Paul Vidich, Warner music Vice President, Archival)

Steve Jobs, Apple’s CEO at the time iTunes was created, presented iTunes to music labels as an improvement to the latter’s failed attempts of distributing music online (e.g. PressPlay and MusicNet). The industry’s response to Job’s offer was favourable. For instance, Paul Vidich - an executive at Warner Music Group - stated in an interview for Rolling Stone Magazine, “That’s exactly what we need. He [Jobs] pushed us in ways we needed to be pushed” (Rolling Stone Magazine, Archival). Roger Faxon, CEO of EMI Group, stated “[Jobs] showed me this application and I said, that's a great bit of software. It does everything I need, it organises my music, works very efficiently, has an efficient mechanism around a credit card”. Similarly, Warner’s chief, acknowledged iTunes’ potential for convincing musicians of its viability: “My view was this was exactly what we needed. Jobs was also able to speak rock stars’ language, appealing directly to major artists like Bono and power players like the Eagles”. The fact that Jobs convinced record labels as well as artists of getting licences, allowed consumers a combination of an elegant user interface at an accessible price, and a library of 200,000 songs. In 2006, within five years of its launch, iTunes had sold 4 billion songs. Apple, thereafter, signified the convincing to consumers of paying for consuming music online by giving them expressive value ‘consuming music was cool’.

A few years later, in 2008, Spotify entered the field. It branded itself as an alternative to music piracy:

Spotify is a new way of enjoying music. We believe Spotify provides a viable alternative to music piracy. We think the way forward is to create a service better than piracy, thereby converting users into a legal, sustainable alternative which



also enriches the total music experience (Andres Sehr, Spotify's global community manager, Archival).

Spotify defied Apple's model by offering access to a wide selection of music (30 million different songs) as well as to a range of specifically curated playlists. Whilst other streaming services were in the market at the time Spotify launched (e.g. Deezer, Pandora and Tidal), Spotify contributed to the diffusion of digital music via streaming. With streaming, consumers did not need to download and own the digital files. Although Spotify also offered the option of downloading, it did not require hosting the music files in the users' devices. Spotify negotiated contracts with the major record labels such as Sony, Universal Music Group and Warner Music to whom Spotify paid 70% of the revenues generated with the distribution of music (via subscriptions or advertisements).

***Changes in the practice of digital consumption with streaming.*** The main change from Napster's based practice of digital consumption was that consumers no longer acted as distributors. Napster's 'gift system' allowed consumers to distribute music files peer-to-peer. Streaming services allowed consumers to share music files with their peers, for instance, via playlists; however, they did not allow consumers to upload files onto a music pool to share with other consumers. As a consequence, organisations regained control over consumers' practices, and both the utilitarian and expressive characteristics of the consumer-led practices facilitated by Napster further changed.

***Changes in the utilitarian value of the practice of music consumption.*** With Napster, consuming music online was for free because consumers shared the files among themselves without paying royalties to the music industry. Digital services, however, either offered pay options with superior utilitarian value in comparison to both physical consumption and piracy, or so-called 'Freemium' options. Spotify, for instance, offered

consumers the possibility to listen to music free of charge with advertisements playing every 3 to 4 songs. The service also offered a subscription-based advertisement free service for \$9.99 per month. In addition to affordable prices, the newcomers offered better utilitarian characteristics by improving some of the characteristics of the digital consumption practices popularised by Napster. Online music consumption through Napster changed ways of consuming music - from album to music by the song:

The days spent thumbing through vinyls at the record store have passed; this cultural practice is dead (Stephan Baumann, German Research Institute for Artificial Intelligence, Archival).

The traditional concept of the album - an object that you hold in your hand as you get lost in its universe - has faded into the background in the battle for how we engage with music (Rodhy Sheiden, musician, Archival).

Like Napster, digital services offered the possibility of consuming music by the song as well as digital folders or playlists to organise the songs. Apple's iPod (via iTunes) allowed purchasing individual songs, organise them in folders, and shuffle them. The rest of the digital services offered consumers the possibility to organise the individual songs by playlists and group tracks, save, and consume at any time. In addition to offering easier access to songs by making it possible to organise them, streaming services also allowed consumers quick and easy access to the digital files. As 3G and 4G mobile technologies developed, mobile phones supported streaming services that provided faster information rates as well as portability (with Napster, digital files needed to be downloaded to the personal computers).

Streaming services thus offered better utilitarian value in relation to access to music by the song, improving the possibilities that piracy originally offered through downloading. However, these services did not offer as much variety as piracy options for two main

reasons. First, not all the musicians agreed to commercialise rights. For instance, the representatives of the music band ‘the Beatles’ declined to commercialise their music on Spotify. Second, whereas Napster offered to upload files of content from outside the commercial circuits such as unreleased recordings, digital services only offered music from the established commercial circuits. However, the new organised actors still offered better utilitarian value in terms of variety than the incumbents via old media technologies and physical consumption. With old media technologies, distribution via physical stores limited the availability of the songs on offer. Streaming services, however, could offer a wide variety of songs ‘in stock’ at no marginal cost for the distributors. In consequence, streaming services offered older songs, or indie songs intended for a niche audience.

***Changes in the expressive value of the practice of music consumption.***

A cultural shift seems well underway, with more and more consumers sensing they no longer need to possess certain physical items, like CDs (Audiokorner, 2014)

Napster represented the first time in history in which mainstream users had a social life online. However, services of digital distribution of music also offered consumers sharing opportunities. With regard to digital services, the platforms (and not the consumers) distributed the files, yet this still offered possibilities for consumers to share what they listened to. Spotify and Tidal allowed users sharing or co-creating playlists as well as connecting with people from their peer groups through social media platforms such as Facebook.

Streaming services incorporated the opportunities the Internet offered in terms of quick and easy file-sharing. The platforms allowed consumers to make what they consume visible to other consumers users of the service, thus offering the opportunity to

interact socially. However, consumers could not upload or own the digital files. In consequence, constructing symbolic value around the practice of digital consumption through streaming services was more difficult than with the peer-to-peer file sharing system of Napster.

Napster's 'gift giving' infrastructure of peer-to-peer file sharing, enabled users to upload files around their musical tastes, and to position themselves in particular social groups around tastes. Uploading musical files, hence, contributed to expand Napster's community and allowed users to actively shape, reflect on and monitor their identities around the practice of music consumption; thus rendering these practices an 'identitarian project' (cf. Giddens, 1991).

Platforms of digital distribution replaced consumers in the role of curating and sharing lists. With digital services, a 'symbiosis' between algorithms and curators selected and filtered recommendations to consumers according to their tastes. In consequence, streaming services co-opted the sociability and taste-making processes and acted as cultural intermediaries through algorithms and data-mining techniques.

Algorithms analyse users' tastes based on the selections made of previous tracks, and present a new song that fits that taste. As a consequence of the algorithm-based system, digital services became key agents involved in defining the characteristics of music as a cultural good. In the sense of how streaming services offered symbolic value, they fit within Bourdieu's (1984) notion of 'cultural intermediaries' as being involved in the production and circulation of symbolic goods. The generation of symbolic value shifted from being created by consumers to being created by the digital platforms.

Consumers thus shaped the industry at the field-level by conventions they created - the new characteristics of the practise of digital consumption. The field-level changes disrupted the incumbents (the music Publishers) by threatening the established ways in which the right holders captured value from music sales. However, thanks to the new comers who offered new ways of distributing music digitally, incumbents could capture value from copyright, and were not displaced from the field of music. As the British Minister for Intellectual Property, Baroness Neville Rolfe, acknowledged “consumers appear to be turning towards legitimate streaming en masse” (Gov.uk, 2017). Indeed, the diffusion of digital music distribution, led to a recovery of the incumbents of the global music industry.

According to a report by industry trade group IFPI (an organisation that represents the interests of 1300 record companies from across the globe), platforms for music consumption allowed to both cater for a new generation of consumers used to free music and also for enabling to reach new regions in the world. For instance, according to Statista (2013) the South Korean streaming platform MelOn accounted for 3% or the Chinese streaming platform QQ music accounted for 5% of the total of the global market of digital music distribution with 700 million users in 2018 accounted for a 3% and 4% respectively of the total sales (Statista, 2013). As a consequence of the new platforms that offered legitimated ways of consuming music that consumers valued, revenues of the music incumbents started to grow from 2015 after loosing 40% in revenues from 1999 to 2014 due to pirate practices of digital consumption (See Figure 2).

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Insert Figure 2 About Here  
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## DISCUSSION AND CONCLUSIONS

Studies on field-level change traditionally relied on accounts of ‘heroic actors’ as institutional entrepreneurs. Studies on ‘heroic actors’ advanced our understanding of how resourceful actors who are embedded in fields can change them, in spite of institutions’ power and inertia. Although later research offered alternative explanations to ‘heroic accounts’ (e.g. Smets, Morris and Greenwood, 2012; Lounsbury and Crumley, 2007), we still have a limited understanding on how a particular type of ‘non heroic institutional actor’, the consumer, can contribute to field-level change. More concretely, current research does not explain how can such a non-organised and peripheral actor have disruptive effects on an institutional field.

To improve our understanding of the role of consumer-led processes in field-level change, I explored the emergence and diffusion of the practice of digital consumption of music between 1999 and 2008. I show that consumers, whilst being non-intentional and peripheral actors, have the capacity to bring changes to the field-level with a disruptive capacity - to profoundly reconfigure the redistribution of material resources -that later on incumbents accommodate resulting to revisions of dominant institutional arrangements that are relatively incremental. By beginning to unpack the process of accommodation in which organised actors co-opt the field-level changes the consumers originated, this study contributes to expanding our understanding on alternative accounts to ‘heroic entrepreneurs’ by explaining a processes of institutional change that is revolutionary in pace and developmental in scope.

### **Extending Theories of Non-heroic Accounts of Institutional Change**

*Consumers as agents of disruptive change.* Alternatives to ‘heroic-centred’ approaches to institutional change advanced our understanding on how ‘less resourceful’

actors contribute to processes of field-level change. These theories, however, are quite different from the present study in which specific types of ‘non heroic actors’, the consumers, have the potential to disrupt settled institutional arrangements in an organisational field. Current theories on ‘non-heroic actors’, including the exceptions that focused on consumers (Ansari and Phillips, 2011; Scaraboto, 2013), explain how actors innovate in practices that are not disruptive and ‘fall under the radar’ of incumbents during the process of diffusion (e.g. Leung, Zietsma and Peredo, 2013; Sauder, 2008; Vaccaro and Palazzo, 2015). My study, however, explains how consumers, in spite of not being part of an institutional plan, not being organised and being less resourceful, have a disruptive effect at the field-level.

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Insert Figure 3 About Here  
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As shown in Figure 3, my study shows that consumer’s exposure to a disruptive technology enabled by a platform (Napster) is essential at an early stage to bring innovation to a field. Thanks to the new possibilities of the technology, consumers use a product in ways that reveal broader expressive and utilitarian value in comparison to the incumbent’s offers. Driven by these motives and thanks to the possibilities of the new technology, consumers innovated in practices through user-to-user relations, contrasting mainstream relations of consumption in the field, and generating a sub-culture of consumption. The creation of the sub-culture of consumption in this case fits with Thornton’s (1995) definition of ‘club culture’ as taste cultures brought together by media, and transformed into self-conscious ‘subcultures’ by niche media. The utilitarian value of the new practice, however, disrupted the institutional settlement and created resistance by

the side of incumbents. By explaining how a group of non-intentional and non-organised actors such as consumers contribute to the disruption of a field, this study challenges the assumption that these actors inadvertently triggered change by the “mundane activities of practitioners struggling to accomplish their work” (Smets, Morris and Greenwood, 2012: 877), and contributes to current theories on ‘non-heroic actors’

*Consumer-led field-level change as a process of ‘accommodation’.* My study further refines current accounts of consumers in institutional theory by explaining how organised actors accommodate the practises the consumers generated in the first place. Previous studies on consumers and institutional theory acknowledge that consumers impact a field by affecting other field constituents. Ansari and Phillips (2011) state that if incompatibility between consumer-generated practices and institutional projects receives support from organised actors in the field, consumer-generated practices would be more likely to catalyse change. Scaraboto and Fisher (2013) acknowledge the relevance of fringe actors in the field to act as institutional entrepreneurs to support their actions. However, these studies do not unpack the processes by which organised actors co-opt the practices that consumers generated in the first place.

The present case expands these theories by unpacking the crucial role played by organised actors that accommodate the changes in value tastes that the consumers revealed. In spite of the utilitarian part not having an acceptable form, and in spite of consumers by themselves not being sufficiently resourced or organised to significantly impact the field on their own, consumers disseminated innovative practices relatively quickly. The collective influence of these practices opened up new opportunities for organised actors. In this case, while consumers start the process of institutional change by



socially constructing the new practices of consumption, only when organised actors enter the field is the practice elevated to the 'legitimate' level. The present study suggests that by linking the utilitarian dimension of the practice of distribution, and by using a softened approach to the experiential dimension of the practice, the organised actors co-opt what the consumers started and re-balance the field of opposing parts (consumers and incumbents).

As a result, organised actors articulated possibilities that resonated with culturally opposing parties (incumbents and consumers) by offering the incumbents a way of contending utilitarian damage of the new practice, and by co-opting the expressive value of the new practice by bringing it to a marketable form. This marketable form still offered consumers better overall value than the practice that the consumers contributed to generate and diffuse. The result is that in spite of the degree of disruption of the new technology, the field positions and institutional arrangements were not radically changed - the incumbents were disrupted but not displaced. The outcome of this process of institutional change is a settlement between the consumers' intentions to explore the new possibilities of the technology and the utilitarian and expressive value of the practises that the new comers bring. By unpacking the process by which new organised actors co-opt the practices generated by the consumers by embracing their value at the same time as offering the necessary social and technical support to legitimate consumer practices at the field level, my findings describe an institutional process of accommodation "a process of institutional change that is revolutionary in pace and developmental in scope" (Micelotta, 2017: 1902).

## APPENDIX

**Table 1: Methods**

Type of Data	Detail of source	Use in the analysis
<p><b>Archival - general press, specialised press, and special reports and websites.</b></p>	<p>The Guardian, the Economist, the Wire, music-specific magazines such as ‘the Rolling Stones’, dedicated Napster and digital music websites, the Recording industry of America, and think tanks such as IFPI (‘the voice of recording music worldwide’). (250 articles, 1400 pages).</p>	<p>Familiarize myself with the organisational field.</p> <p>Chronologically analysed the key facts related to the practice of consumption to examine the diffusion of the practice of digital consumption over time, and understand how organised actors responded to the changes in the field.</p> <p>Document changes in the characteristics of the practice across the theoretically specified dimensions.</p>
<p><b>Archival interviews on consumers</b></p>	<p>Studies by DeVoss, Porter (2006), Menn (2003), Giesler and Pohlmann (2003), Giesler (2006), Saroiu, Gimmadi, and Gribble (2003), Shih Ray Ku (2002), on <i>netnographies</i> on Napster, based on direct interviews with Napster’s users. Transcriptions of Napster-related media such as the documentary ‘Downloaded’ or news special reports on Napster.</p>	<p>Integrate accounts on consumers with archival accounts to improve the understanding on how users interact with the technological platform Napster to introduce new practices in the field.</p> <p>Gather accounts on how users value the characteristics of the new practice of consumption.</p>

**Table 2: Timeline of key events related to the practise of consumption in the music industry**

Date	Key Events
1557	The first time copyright infringers are referred to as ‘pirates’. In response, in 1710, the statue of Anne provides a regulative framework - the precedents of copyright.
1877	Thomas Edison invents the phonograph, the first device to produce recorded sound.
<i>Early 1980s</i>	Genesis of the MP3, an audio coding format for digital audio. The revenues of the music industry peak thanks to the sales of CD’s. Shawn Fannin and Sean Parker launch the file sharing service Napster.
1999	Copyright holders start describing the appropriation of private property in the form of copyright infringement, particularly in relation to peer-to-peer file sharing networks as ‘piracy’”(whilst before Napster, actors in the field of music industry used the term ‘piracy’ to refer to commercial piracy).
2000	The America’s Recording industry Association (RIAA) sued Napster in order to prevent further damage to the music industry. Other companies such as Gnutella, Freenet, Kazaa, BearShare, LimeWire, Scour, Grokster, Madster, eDonkey2000 followed Napster’s example of P2P file sharing.
2001	The arrival of Konrad Hilbers as CEO in Napster, Napster began a campaign to relaunch as a legitimate paid service. Napster, however, couldn’t persuade the major record labels to agree to a deal that would put Napster on more solid financial footing.
2002	Apple launches the iTunes online music service with a library of more than 200,000 songs from a wide range of artists and labels. Roxio acquired Napster by bankruptcy auction. Roxio used Napster’s brand and logos to re-brand the Pressplay music service as Napster 2.0. Napster’s brand survived after the company’s assets were liquidated and purchased by other companies through bankruptcy proceedings.
2003	Brand Cohen launches BitTorrent, a file-sharing platform that supported bigger data sharing. Within a year of launching, it made up more than a third of the traffic of the Internet. BitTorrent facilitated the emergence of streaming services. Apple launches the iTunes store, an online music Library to be used in conjunction with their MP3 player.
2008	Pandora launched with the goal of using algorithms and a songs sorting programme to create optimised personalised radio stations. Spotify launches.
<i>Late 2000’s</i>	The development of 3G and 4G phones technologies add value to the practice of digital consumption.

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<i>2011</i>	Spotify launches in the US.
<i>2013</i>	Skype's founders launch the streaming service Rdio.
<i>2014</i>	The artist 'Jay Z' launch the streaming service Tidal.
<i>2015</i>	The revenues of the music industry start to grow for the first time after the entrance of Napster.
<i>2016</i>	Paid subscription streaming reaches a 'tipping point' with 112 millions 97 of which are paid subscription accounts.
<i>2018</i>	Google launches a new subscription model: YouTube Remix, with advanced recommendations algorithms.

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**Table 3: Changes in the utilitarian and expressive value of the practice of consumption**

Type of value	Characteristic	Technology supporting the practice		
		Physical	Napster	Legal digital platforms
<b>Utilitarian</b>	<b>Cost</b>	Consumers purchase the music files on a physical support for which they pay in concept of an 'album' (group of songs, 15\$).	Consumers purchase equipment and Internet connection. The marginal cost of consuming music is 0.	Possibility to consume music at 0 marginal cost (in exchange for listening to advertisement, once purchased equipment and Internet connection). Also possibility of paying per song (99\$). Or, paying for a subscription fee for unlimited music (price from 4\$ to 10\$ per month).
	<b>Units of Distribution</b>	By the album (group of songs).	By the song.	By the song.
	<b>Access</b>	Limited by the physical support of the music file. Browsing requires upfront cost.	Unlimited and instant. Browsing does not require upfront cost.	Semi-limited and instant. Browsing does not require upfront cost.
	<b>Ownership</b>	Consumers own the physical support.	Consumers download and can store the music files in their physical devices (PC), or, physical support (e.g. CD's)	Consumers do not own the digital files (the pay/ consume advertisement to gain access to it).

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(illegally).

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**Expressive: social**

**Access**

Organised actors have power over what music consumers have access to.

Access to music is limited to physical stores and social interaction over music tastes is limited to reduced peer groups.

Peer to peer file-sharing gives users the power to distribute music files as well to interact socially at a massive scale.

Sharing playlists allows sharing music at a massive scale. However, consumers do not have the power to distribute music files.

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**Expressive: symbolic**

**Construction of taste-based Identity**

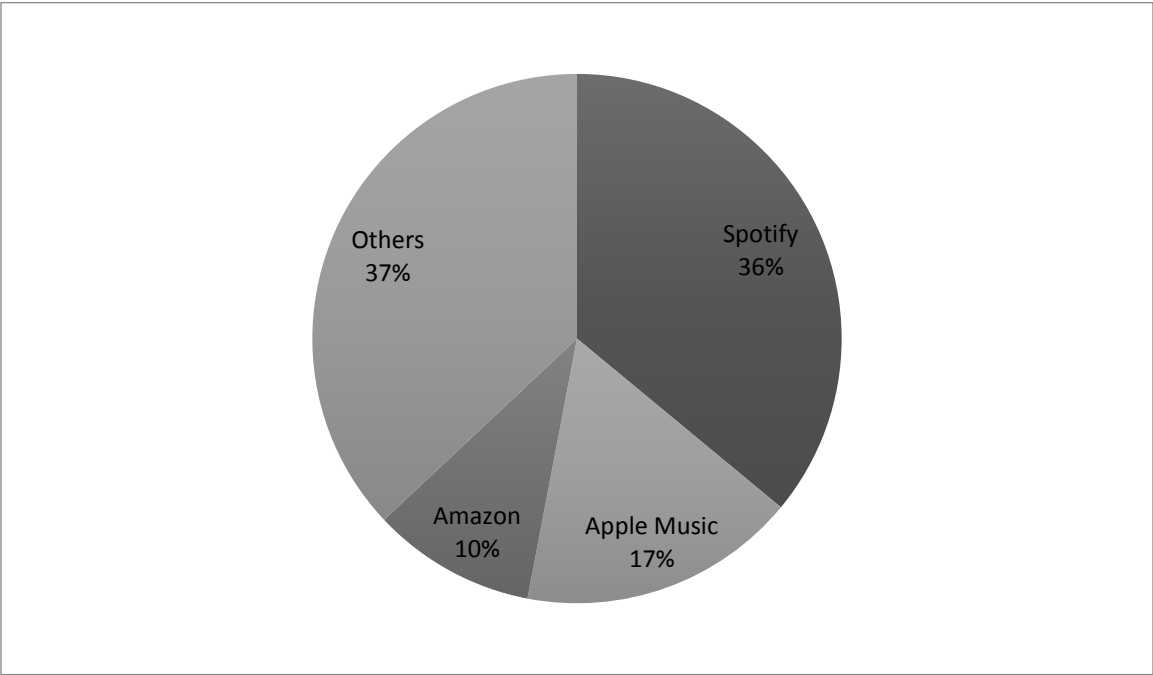
Organised actors are the primary tastemakers.

Users can co-construct their tastes beyond the influence of the organised actors.

Organised actors aided by algorithms are the primary tastemakers.

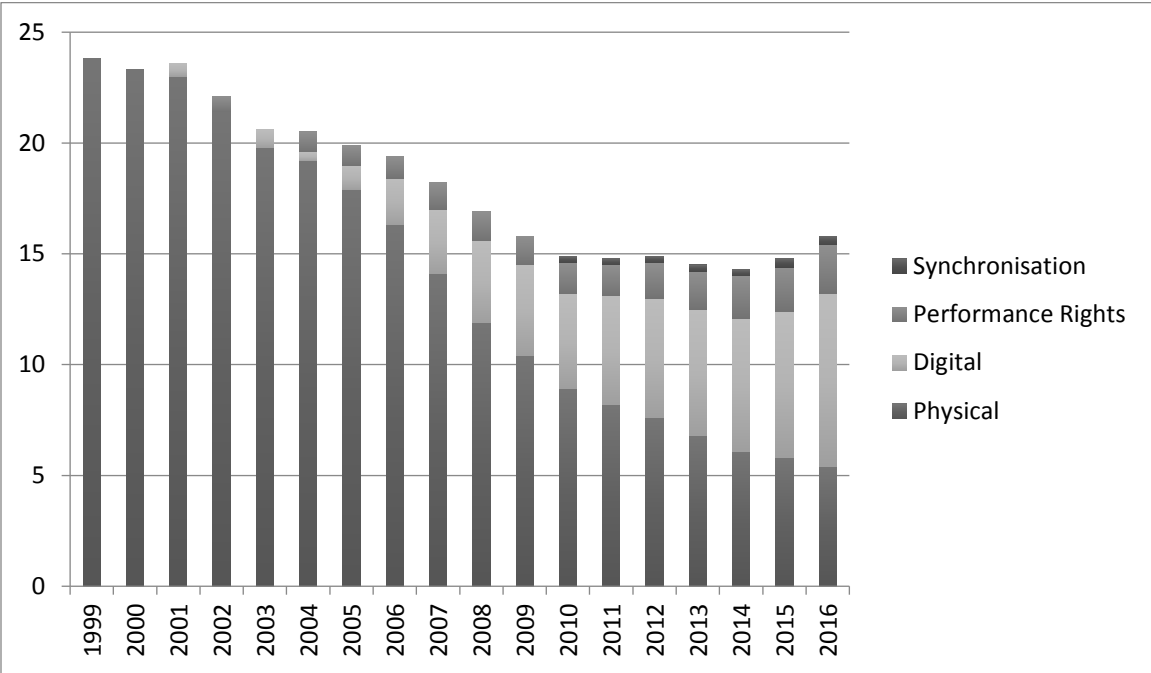
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**Figure 1: Music subscription revenue by service (Global music industry).**



*Source: Statista (2017)*

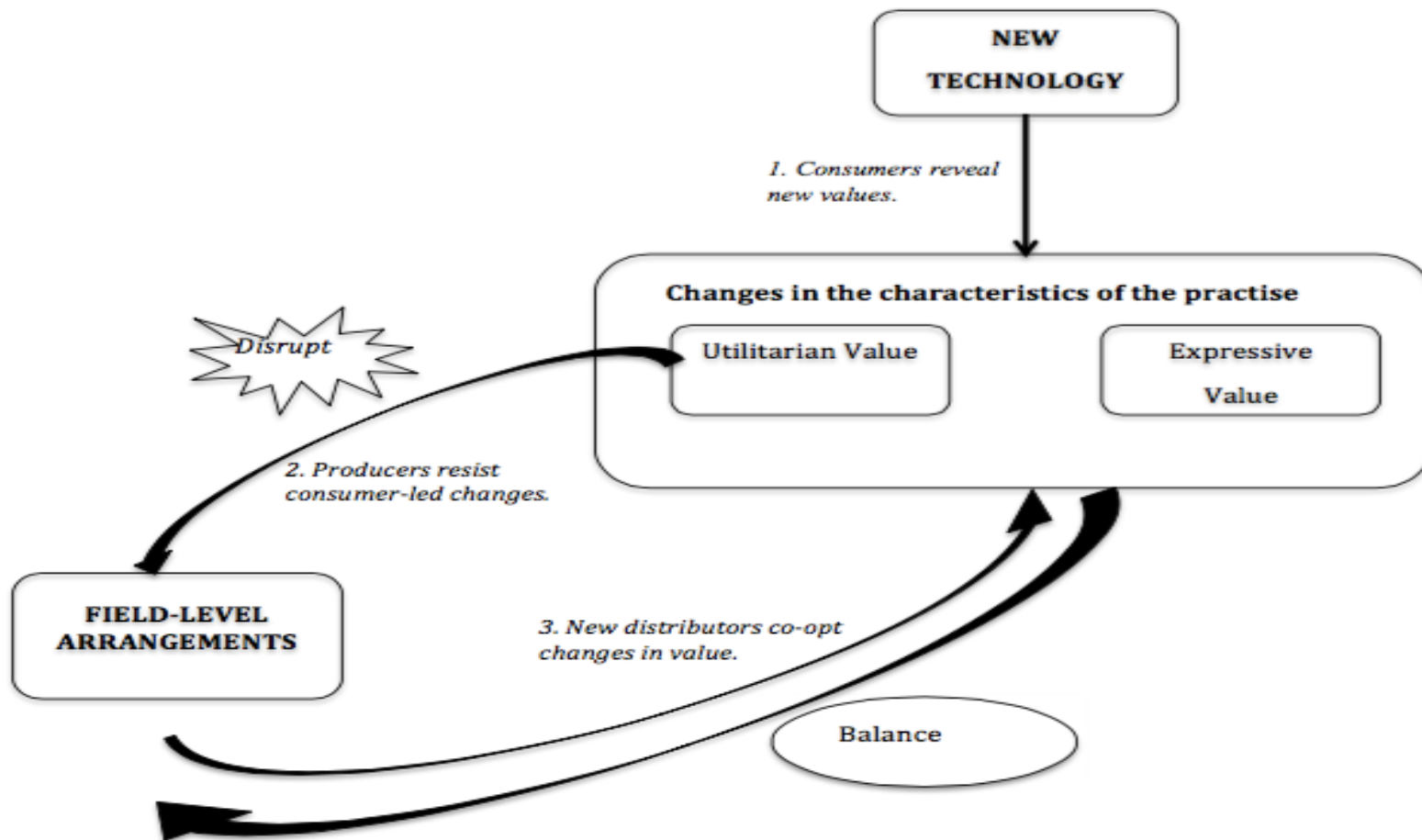
**Figure 2: Global recorded music industry revenues 1999-2016 (in US\$ millions)**



Source: Statista (2017)



Figure 3: A grounded model of the field-level change as a consequence to the consumer's and new organised actors responses to a disruptive technology.



## REFERENCES

- Abrahamson, E., & Rosenkopf, L. 1993. Institutional and competitive bandwagons: Using mathematical modelling as a tool to explore innovation diffusion. *The Academy of Management Review*, 18(3): 487-517.
- Alaimo, C., & Kallinikos, J. 2016. Encoding the everyday: The infrastructural apparatus of social data. *Big data is not a monolith: Policies, practices, and problems*, 77-90.
- Albert, S., & Whetten, D. A. 1985. Organizational identity. *Research in organizational behaviour*, 7: 263-295.
- Alderman, J., & Schwartz, E. I. 2001. *Napster, MP3 and the new pioneers of music*.
- Anchordoguy, M. 1999. Japan's software industry: A failure of institutions? *Research Policy*, 29: 391-408.
- Ang, S., & Cummings, L. L. 1997. Strategic response to institutional influences on information systems outsourcing. *Organization Science*, 8(3): 235-256.
- Ansari, S., & Phillips, N. 2011. Text me! New consumer practices and change in organizational fields. *Organization Science*, 22(6): 1579-1599.
- Audiokorner. 2014. Grappling with the 'Culture of Free' in Napster's aftermath. <https://audiokorner.com/2014/12/grappling-with-the-culture-of-free-in-napsters-aftermath/>. Last accessed 18/07/2018.
- Avent, R. 2014. 'The third great wave'. *The Economist*, 3 October, special report. [Online]. Available at: <http://www.economist.com/news/special-report/21621156-first-two-industrial-revolutions-inflicted-plenty-pain-ultimately-benefited> (Accessed: 28 February 2017).
- Ayers, M. D. 2006. *Cybersounds: Essays on virtual music culture*. New York: Peter Lang.
- Babin, B. J., Darden, W. R., & Griffin, M. 1994. Work and/or fun: measuring hedonic and utilitarian shopping value. *Journal of consumer research*, 20(4): 644-656.
- Baralou & Tsoukas, 2015. How is new organizational knowledge created in a virtual context? A dialogical approach. *Organization Studies*, 36(5), 593-620.
- Barley, S. 1990. The alignment of technology and structure through roles and networks. *Administrative Science Quarterly*, 35(1): 61-103.
- Battilana, J., Leca, B., & Boxenbaum, E. 2009. How actors change institutions: Towards a theory of institutional entrepreneurship. *Academy of Management annals*, 3(1): 65-107.
- Benner, M. J., & Ranganathan, R. 2012. Offsetting illegitimacy? How pressures from securities analysts influence incumbents in the face of new technologies. *Academy of Management Journal*, 55(1): 213-233.
- Bijker, W. E. 1997. *Of bicycles, bakelites, and bulbs: Toward a theory of sociotechnical change*. London: MIT Press.

- Blaskovich, J., & Mintchik, N. 2011. Information technology outsourcing: A taxonomy of prior studies and directions for future research. *Journal of Information Systems*, 25(1): 1-36.
- Bourdieu, P. 1984. *Distinction: A social critique of the judgment of taste*. Cambridge, MASS: Harvard University Press.
- Bresnahan, T. F., & Trajtenberg, M. 1995. General purpose technologies 'Engines of growth'. *Journal of econometrics*, 65(1): 83-108.
- Brownsword, R. 2004. What the world needs now: Techno-regulation, human rights and human dignity. In R. Brownsword (Ed.), *Global governance and the quest for justice*: 203-234. Oxford: Hart Publishing.
- Burkart, P., & McCourt, T. 2006. *Digital music wars: Ownership and control of the celestial jukebox*. Laham, MD: Rowman & Littlefield.
- Casper, S. 2000. Institutional adaptiveness, technology policy, and the diffusion of new business models: The case of German biotechnology. *Organization Studies*, 21(5): 887-914.
- Casper, S., & Whitley, R. 2004. Managing competences in entrepreneurial technology firms: A comparative institutional analysis of Germany, Sweden and the UK. *Research Policy*, 33(1): 89-106.
- Chatterjee, D., Rajdeep G., & Sambamurthy, V. 2002. Shaping Up for E-Commerce: Institutional Enablers of the Organizational Assimilation of Web Technologies. *MIS Quarterly*, 65-89.
- Cheal, D. 1988. *The gift economy*. New York: Routledge.
- Choi, D. Y., & Perez, A. 2007. Online piracy, innovation, and legitimate business models. *Technovation*, 27(4): 168-178.
- Cohn, D. Y., & Vaccaro, V. 2002. Diffusion of innovation theory and peer-to-peer music file exchange on the Internet. *Proceedings of the American Society of Business and Behavioral Sciences*, 9(1): 234-244.
- Costello, S. 2000. Webnoize reports Napster downloads drop 36 percent in April. InfoWorld. <http://iwsun4.infoworld.com/articles/hn/xml/01/05/01/010501hnapster.xml?p=br&s=8>. Last accessed 05/10/2014.
- Currie, W. L., & Guah, M. W. 2007. Conflicting institutional logics: A national program for information technology in the organizational field of healthcare. *Journal of Information Technology*, 22(3): 235-247.
- Dacin, M. T., Munir, K., & Tracey, P. 2010. Formal dining at Cambridge colleges: Linking ritual performance and institutional maintenance. *Academy of Management Journal*, 53(6): 1393-1418.
- Davidson, E., & William, C. 2007. The interaction of institutionally triggered and technology-triggered social structure and change: An investigation of computerized physician order entry. *MIS Quarterly*, 31(4): 739-758.

- DeVoss, D. N., & Porter, J. E. 2006. Why Napster matters to writing: Filesharing as a new ethic of digital delivery. *Computers and Composition*, 23(2): 178-210.
- DiMaggio, P. 1988. Interest and agency in institutional theory. *Institutional patterns and organizations culture and environment*, (3-21).
- DiMaggio, P. J. 1988. Interest and agency in institutional theory. In L. Zucker (Ed.), *Institutional patterns and culture*: 3-22. Cambridge, MA: Ballinger Publishing Company.
- DiMaggio, P. J., & Powell, W. W. 1983. The iron cage revisited: Institutional isomorphism collective rationality in organizational fields. *American Sociological Review*, 48 (2): 147-160.
- DiMaggio, P. J., & Powell, W. W. 1991. Introduction. In P. J. DiMaggio & W. Powell (Eds.), *The new institutionalism and organizational analysis*: 1-38. Chicago: University of Chicago Press.
- Dommering, E., & Asscher, L. (Eds.). 2006. *Coding regulation: Essays on the normative role of information technology* (Vol. 12). Cambridge: Cambridge University Press.
- Dorado, S. 2005. Institutional entrepreneurship, partaking, and convening. *Organization studies*, 26(3): 385-414.
- Duckworth, W. 2005. *Virtual music: How the web got wired for sound*. New York: Routledge.
- Dunford, R. 1987. The suppression of technology as a strategy for controlling resource dependence. *Administrative Science Quarterly*, 32(4): 512-525.
- Ehrlich, C. 1985. *The music profession in Britain since the eighteenth century: a social history*. Oxford: Oxford University Press.
- Eisenhardt, K. M. 1989. Agency theory: An assessment and review. *Academy of management review*, 14(1): 57-74.
- Eisenhardt, K., & Graebner, M. 2007. Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1): 25-32.
- Elsbach, K. D., & Sutton, R. I. 1992. Acquiring organizational legitimacy through illegitimate actions: A marriage of institutional and impression management theories. *Academy of management Journal*, 35(4): 699-738.
- Farjoun, M. 2002. The dialectics of institutional development in emerging and turbulent fields: The history of pricing conventions in the on-line database industry. *Academy of Management Journal*, 45(5): 848-874.
- Faulkner, P., & Runde, J. 2009. On the identity of technological objects and user innovations in function. *Academy of Management Review*, 34(3): 442-462.
- Federici, S., 2012. Revolution at point Zero. PM Press. Brooklyn, New York.

- Fligstein, N., & Mara-Drita, I. 1996. How to make a market: Reflections on the attempt to create a single market in the European Union. *American journal of sociology*, 102(1): 1-33.
- Freberg, K., Graham, K., McGaughey, K., & Freberg, L. A. 2011. Who are the social media influencers? A study of public perceptions of personality. *Public Relations Review*, 37(1), 90-92.
- Freedman, D. 2003. Managing pirate culture: Corporate responses to peer- to- peer networking. *International Journal on Media Management*, 5(3): 173-179.
- Furnari, S. 2014. Interstitial spaces: Microinteraction settings and the genesis of new practices between institutional fields. *Academy of management review*, 39(4): 439-462.
- Gardiner, E., & Ronald G. M. 2010. The Electronic Book. In M. F. Suarez & H. R. Woudhuysen, *The Oxford Companion to the book*: 164 - 179. Oxford: Oxford University Press.
- Garud, R., & Kumaraswamy, A. 1995. Technological and organizational designs for realizing economies of substitution. *Strategic Management Journal*, 16: 93-109.
- Garud, R., Jain, S., & Kumaraswamy, A. 2002. Institutional entrepreneurship in the sponsorship of common technological standards: The case of Sun Microsystems and Java. *Academy of management journal*, 45(1): 196-214.
- Gibson, J. J. 1977. The theory of affordances. In R. Shaw & L. Bransford (Eds.), *Perceiving, acting and knowing: Toward an ecological psychology*: 127-143. Hillsdale, NJ: Lawrence Erlbaum.
- Giddens, A. 1984. **The constitution of society: Outline of the theory of structuration**. Cambridge: Polity Press.
- Giddens, A. 1991. *Modernity and self-identity: Self and society in the late modern age*. Stanford: Stanford University Press.
- Giesler, M. 2006. Consumer gift systems. *Journal of consumer research*, 33(2): 283- 290.
- Giesler, M., & Pohlmann, M. 2003. The social form of Napster: Cultivating the paradox of consumer emancipation. *ACR North American Advances*, 30: 94-100.
- Ginsberg, A., & Vekatraman, N. 1995. Institutional Initiatives for Technological Change: From issue interpretation to strategic choice. *Organization Studies*, 16(3): 425-448.
- Glenday, C. (Ed.). 2012. *Mass Market Paperback*. London: Guinness World Records.
- Gov.Uk 'Government Science and Engineering'. <https://governmentscienceandengineering.blog.gov.uk/2017/07/14/royal-society-pairing-scheme-applications-open/>. Last accessed 06/08/2018
- Gravelle, H., & Rees, R. 1992. *Microeconomics*. Edinburgh: Prentice Hall Financial Times.

Greenwood, R., & Hinings, C. R. 1996. Understanding radical organizational change: Bringing together the old and the new institutionalism. *Academy of management review*, 21(4): 1022-1054.

Greenwood, R., & Suddaby, R. 2006; Institutional entrepreneurship in mature fields: The Big Five Accounting Firms. *Academy of Management Journal*, 49: 27-48.

Greenwood, R., Suddaby, R., & Hinings, C. R. 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of management journal*, 45(1): 58-80.

Hardy, C., & Maguire, S. 2008. Institutional entrepreneurship. *The Sage handbook of organizational institutionalism*, 1: 198-217.

Hargadon, A. B., & Douglas, Y. 2001. When innovations meet institutions: Edison and the design of the electric light. *Administrative science quarterly*, 46(3): 476-501

Hebdige, D. 1995. Subculture: The meaning of style. *Critical Quarterly*, 37(2): 120-124.

Hensmans, M. 2003. Social movement organizations: A metaphor for strategic actors in institutional fields. *Organization studies*, 24(3): 355-381.

Hirsch, P. M., & Lounsbury, M. 1997. Ending the family quarrel: Toward a reconciliation of “old” and “new” institutionalisms. *American behavioral scientist*, 40(4): 406-418.

Hughes, J., & Lang, K. R. 2003. If I had a song: The culture of digital community networks and its impact on the music industry. *International Journal on Media Management*, 5(3): 180-189.

IFPI music publishing Report, 2017. Connecting with music, music Consumer Insight Report. <http://www.ifpi.org/downloads/music-Consumer-Insight-Report-2017.pdf>. Last accessed 18/07/2018.

Jarzabkowski, P., Matthiesen, J., & Van de Ven, A. H., 2009. Doing which work? A practice approach to institutional pluralism. *Institutional work: Actors and agency in institutional studies of organizations*, 284-316.

King, B. G., & Pearce, N. A. 2010. The contentiousness of markets: Politics, social movements, and institutional change in markets. *Annual review of sociology*, 36: 249- 267.

Koops, B. J. 2011. The (in) flexibility of techno-regulation and the case of purpose-binding. *Legisprudence*, 5(2): 171-194.

Kozinets, R. V. 1998. On netnography: Initial reflections on consumer research investigations of cyberculture. *ACR North American Advances*. 25: 366-371.

Kraatz, M. S., & Block, E. S. 2008. Organizational implications of institutional pluralism. *The Sage handbook of organizational institutionalism*, 840: 243-275.

Kraatz, M. S., & Zajac, E. J. 1996. Exploring the limits of the new institutionalism: The causes and consequences of illegitimate organizational change. *American sociological review*, 61(5): 812-836.

- Kraatz, M., & Moore, J. 2002. Executive migration and institutional change. *Academy of Management Journal*, 45: 120-143.
- Ku, R. S. R. 2002. The creative destruction of copyright: Napster and the new economics of digital technology. *The University of Chicago Law Review*, (263-324).
- Lampel, J., & Meyer, A. 2008. Field-configuring events as structuring mechanisms: How conferences, ceremonies, and trade shows constitute new technologies, industries and markets. *Journal of Management Studies*, 45(6): 1025-1035.
- Langley, A., 1999. Strategies for theorizing from process data. *The Academy of Management Review*, 24(4): 691-710.
- Larivière, V., Haustein, S., & Mongeon, P. 2015. The oligopoly of academic publishers in the digital era. *PloS one*, 10(6): e0127502.
- Leblebici, H., Salancik, G. R., Copay, A., & King, T. 1991. Institutional change and the transformation of interorganizational fields: An organizational history of the US radio broadcasting industry. *Administrative science quarterly*, 36(3): 333-363.
- Leenes, R. 2011. Framing techno-regulation: An exploration of state and non-state regulation by technology. *Legisprudence*, 5(2): 143-169.
- Leenes, R., Palmerini, E., Koops, B. J., Bertolini, A., Salvini, P., & Lucivero, F. 2017. Regulatory challenges of robotics: Some guidelines for addressing legal and ethical issues. *Law, Innovation and Technology*, 9(1): 1-44.
- Leonardi, P. M. 2011. When flexible routines meet flexible technologies: Affordance, constraint, and the imbrication of human and material agencies. *MIS quarterly*, 35(1): 147-167.
- Leung, A., Zietsma, C., & Peredo, A. M. 2014. Emergent identity work and institutional change: The 'quiet' revolution of Japanese middle-class housewives. *Organization studies*, 35(3): 423-450.
- Lieberman, M. B., & Montgomery, D. B. 1988. First- mover advantages. *Strategic management journal*, 9(S1): 41-58.
- Lok, J., & De Rond, M. 2013. On the plasticity of institutions: Containing and restoring practice breakdowns at the Cambridge University Boat Club. *Academy of Management Journal*, 56(1): 185-207.
- Lounsbury, M., & Crumley, E. 2007. New practice creation: An institutional perspective on innovation. *Organization Studies*, 28(07): 993-1012.
- Madden, M. 2009. *The state of music online: Ten years after Napster*. Washington, DC: Pew Internet & American Life Project.
- Maguire, S., & Hardy, C. 2009. Discourse and deinstitutionalization: The decline of DDT. *Academy of management journal*, 52(1): 148-178.
- Maguire, S., Hardy, C., & Lawrence, T. 2004. Institutional entrepreneurship in emerging

fields: HIV/AIDS treatment advocacy in Canada. *Academy of Management Journal*, 47(5): 657-679.

Markus, M. L., & Silver, M. S. 2008. A foundation for the study of IT effects: A new look at DeSanctis and Poole's concepts of structural features and spirit. *Journal of the Association for Information systems*, 9(10/11): 609.

Mas-Colell, A., & Whinston, M. 1995. *Microeconomic Theory*. Oxford: Oxford University Press.

McFarlane, F. W. 1984. *Information technology changes the way you compete*. **Harvard Business Review, Reprint Service**, 62(3): 98-109.

Melucci, A. 1995. The process of collective identity. *Social movements and culture*, 4: 41-63.

Menn, J. 2003. *All the rave: The rise and fall of Shawn Fanning's Napster*. London: Crown Business.

Merriden, T. 2001. *Irresistible forces: The business legacy of Napster & the growth of the underground Internet*. Oxford: Capstone.

Mestdagh, C. N. J., & Rijgersberg, R. W. 2010. Internet governance and global self regulation: Building blocks for a general theory of self regulation. *Legisprudence: International Journal for the Study of Legislation*, 4(3): 385-404.

Meyer, J. W., & Rowan, B. 1977. Institutionalized organizations: Formal structure as myth and ceremony. *American journal of sociology*, 83(2): 340-363.

Micelotta, E. R., & Washington, M. 2013. Institutions and maintenance: The repair work of Italian professions. *Organization Studies*, 34(8): 1137-1170.

Micelotta, E., Lounsbury, M., & Greenwood, R. 2017. Pathways of institutional change: An integrative review and research agenda. *Journal of Management*, 43(6): 1885-1910.

Michel, N. 2005. *Digital File Sharing and the Music Industry: Was there a substitution effect?*. Review of Economic Research on Copyright Issues. 2 (2): 41-52.

Suber, P. (2016). *Knowledge Unbound: Selected Writings on Open Access, 2002–2011*. MIT Press.

Mitchell, R. K., Agle, B. R., & Wood, D. J. 1997. Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of management review*, 22(4): 853-886.

Morton, S. (Ed.). 1991. *The corporation of the 1990s: Information technology and organizational transformation*. Oxford: Oxford University Press on Demand.

Munir, K. A., & Phillips, N. 2005. The birth of the 'Kodak Moment': Institutional entrepreneurship and the adoption of new technologies. *Organization Studies*, 26(11): 1665-1687.



- Murray, F. 2006. The oncomouse that roared: Hybrid exchange strategies as a source of distinction at the boundary of overlapping institutions. *American Journal of Sociology*, 116(2): 341-88.
- Nasra, R., & Dacin, M. T. 2010. Institutional arrangements and international entrepreneurship: the state as institutional entrepreneur. *Entrepreneurship Theory and Practice*, 34(3): 583-609.
- Orlikowski, W. J., & Barley, S. R. 2001. Technology and institutions: What can research on information technology and research on organizations learn from each other?. *MIS quarterly*, 25(2): 145-165.
- Orlikowski, W. J., & Scott, S. V. 2013. What happens when evaluation goes online? Exploring apparatuses of valuation in the travel sector. *Organization Science*, 25(3): 868-891.
- Orlikowski, W., & Scott, S. V. 2015. The algorithm and the crowd: Considering the materiality of service innovation. University of Minnesota.
- Osterwalder, A., & Pigneur, Y. 2010. *Business model generation: a handbook for visionaries, game changers, and challengers*. London: John Wiley & Sons.
- Owen, L. 2010. *Selling Rights* (6 ed.). London: Routledge.
- Peacock, A. T., & Weir, R. 1975. *The composer in the market place*. London: Faber.
- Petrick, I. J., & Simpson, T. W. (2013). 3D printing disrupts manufacturing: how economies of one create new rules of competition. *Research-Technology Management*, 56(6), 12-16.
- Pinch, T. 2008. Technology and institutions: living in a material world. *Theory Sociology*, 37: 461-483.
- Rao, H., Monin, P., & Duran, R. 2005. Bricolage and the erosion of categorical boundaries in french gastronomy. *American Sociological Review*, 70(6): 968-991.
- Rao, H., Monin, P., & Durand, R. 2003. Institutional change in Toque Ville: Nouvelle cuisine as an identity movement in french gastronomy. *American journal of sociology*, 108(4): 795-843.
- Rao, H., Morrill, C., & Zald, M. N. 2000. Power plays: How social movements and collective action create new organizational forms. *Research in organizational behaviour*, 22: 237-281.
- Raviola, E., & Norback, M. 2013. Bringing technology and meaning into institutional work: Making news at an Italian business newspaper. *Organization Studies*, 34(8): 1171–1194.
- Relx Group Annual Report. 2017. Relx Group Company Reports. [<https://www.relx.com/~media/Files/R/RELX-Group/documents/reports/annual-reports/relx2016-annual-report.pdf>] Last retrieved (09-01-2018).
- RIAA. 2004. Art the impact of digital file sharing on the music industry. <https://www.riaa.com/wp-content/uploads/2004/01/art-the-impact-of-digital-file-sharing->

on-the-music-industry-michel-2006.pdf. Last accessed 18/07/2018.

Saroiu, S., Gummadi, K. P., & Gribble, S. D. 2003. Measuring and analyzing the characteristics of Napster and Gnutella hosts. *Multimedia systems*, 9(2): 170-184.

Sauder, M. (2008). Interlopers and field change: The entry of US News into the field of legal education. *Administrative Science Quarterly*, 53(2): 209-234.

Scaraboto, D., & Fischer, E. 2012. Frustrated fatshionistas: An institutional theory perspective on consumer quests for greater choice in mainstream markets. *Journal of Consumer Research*, 39(6): 1234-1257.

Scott, W. R. 1987. The adolescence of institutional theory. *Administrative science quarterly*, 32(4): 493-511.

Scott, W. R. 1995. *Institutions and organizations. Foundations for organizational science*. London: A Sage Publication Series.

Scott, W. R. 2008. *Institutions and organizations: Ideas and interests*. Thousand Oaks, CA: SAGE.

Seo, M. G., & Creed, W. D. 2002. Institutional contradictions, praxis, and institutional change: A dialectical perspective. *Academy of management review*, 27(2): 222-247.

Sherer, P. D., & Lee, K. 2002. Institutional change in large law firms: A resource dependency and institutional perspective. *Academy of Management journal*, 45(1): 102-119.

Sine, W. D., & Lee, B. H. 2009. Tilting at windmills? The environmental movement and the emergence of the US wind energy sector. *Administrative Science Quarterly*, 54(1): 123-155.

Smets, M., Morris, T. I. M., & Greenwood, R. 2012. From practice to field: A multilevel model of practice-driven institutional change. *Academy of Management Journal*, 55(4): 877-904.

Snow, D., & Benford, R. 2000. Framing processes and social movements. *Annual Review Sociology*, 26: 611-639.

Sosa, R. 2016. *Computational modelling of teamwork in design*. In P. Cash, T. Stanković and M. Storga (Eds.) *Experimental Design Research; Approaches, Perspectives, Applications*. Springer International Publishing Switzerland, 173-186.

Spitz, D., & Hunter, S. 2004. *The social construction of Napster*. DSpace@MIT. <https://dspace.mit.edu/handle/1721.1/5049>. Last Accessed 18/05/2018.

Statista 'Statistics portal for market data'. <https://www.statista.com>. Last accessed 18/07/2018.

Sturm, M., Bertsch, A., Gröpl, C., Hildebrandt, A., Hussong, R., Lange, E., & Kohlbacher, O. 2008. OpenMS—an open-source software framework for mass spectrometry. *BMC bioinformatics*, 9(1): 163.

Suddaby, R., & Greenwood, R. 2005. Rhetorical strategies of legitimacy. *Administrative*

*Science Quarterly*, 50: 35-67.

Swan, J., Bresnen, M., Roberston, M., Newell, S., & Dopson, S. 2010. When policy meets practice: Colliding logics and the challenges of 'Mode 2' initiatives in the translation of academic knowledge. *Organization Studies*, 31: 1311-1340.

Taylor, M. 2012. It's Not Academic: How Publishers Are Squelching Science Communication. [[http://blogs.discovermagazine.com/crux/2012/02/21/its-not-academic-how-publishers-are-squelching-science-communication/#.WdtAcn1c\\_FQ](http://blogs.discovermagazine.com/crux/2012/02/21/its-not-academic-how-publishers-are-squelching-science-communication/#.WdtAcn1c_FQ)] (Retrieved October, 2017).

Tenopir C., & King D. W. 1997. Trends in Scientific Scholarly Journal Publishing in the U.S. *Journal of Scholarly Publishing*, 28(3): 135-170.

Thompson, J. B. 2013. *Merchants of culture: The publishing business in the twenty-first century*. London: John Wiley & Sons.

Thornton, S. 1995. *Club Cultures: music, Media and Subcultural Capital*. Cambridge: Polity Press.

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

Tolbert, P. S., & Zucker, L. G. 1983. Institutional sources of change in the formal structure of organizations: The diffusion of civil service reform, 1880-1935. *Administrative science quarterly*, 28: 22-39.

Towse, R. 2015. Copyright and Business Models in UK music publishing. CREATE Working Paper. <https://www.create.ac.uk/publications/copyright-and-business-models-in-uk-music-publishing/>. Last Accessed 18/05/2018.

Towsey, M. 2013. I can't resist sending you the book: Private libraries, elite women, and shared reading practices in Georgian Britain. *Library & Information History*, 29(3): 210-222.

Tschmuck, P. 2013. *Technological change and cultural production. Handbook on the Digital Creative Economy*. Edward Elgar Publishing. Northampton. USA.

Vaccaro, A., & Palazzo, G. 2015. Values against violence: Institutional change in societies dominated by organized crime. *Academy of Management Journal*, 58(4): 1075-1101.

Vaccaro, V. L., & Cohn, D. Y. 2004. The evolution of business models and marketing strategies in the music industry. *International Journal on Media Management*, 6(1-2): 46-58.

Van de Ven, A., & Poole, M. 1995. Explaining development and change in organisations. *Academy of Management Review*, 20(3): 510-540.

Van Wijk, J., Stam, W., Elfring, T., Zietsma, C., & Den Hond, F. 2013. Activists and incumbents structuring change: The interplay of agency, culture, and networks in field evolution. *Academy of Management Journal*, 56(2): 358-386.

- Volkoff, O., & Strong, D. M. 2013. Critical realism and affordances: Theorizing IT-associated organizational change processes. *Mis Quarterly*, 37(3): 819-834.
- Von Hippel, E. 2005. *Democratizing innovation*. London: MIT Press.
- Wiedmann, K. P., Hennigs, N., & Langner, S. 2010. Spreading the word of fashion: Identifying social influencers in fashion marketing. *Journal of Global Fashion Marketing*, 1(3): 142-153.
- Witt, S., 2015. *How music good free, the inventor, the mogul, and the thief*. Penguin Random House: UK.
- Wright, D., 2005. Book Review of 'Book clubs: Women and the uses of reading in everyday life' by Elizabeth Long. *Sociology*, 39(3): 561–562.
- Yeung, R. W. 2008. *Information theory and network coding*. Berlin: Springer Science & Business Media.
- Yin, R. 2003. *Case study research: Design and methods*. Thousand Oaks, CA: Sage.
- Zammuto, R. F., Griffith, T. L., Majchrzak, A., Dougherty, D. J., & Faraj, S. 2007. Information technology and the changing fabric of organization. *Organization science*, 18(5): 749-762.
- Zilber, T. B. 2009. Institutional maintenance as narrative acts. *Institutional work: Actors and agency in institutional studies of organizations*, 205-235.
- Zucker, L. G. 1977. The role of institutionalization in cultural persistence. *American sociological review*, 42(5): 726-743.