

The sites and practices of business models

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ABSTRACT

This paper examines the concept of business models. Drawing on the business model literature, we first identify technology, market offering and network architecture as the three core elements of business models. The theoretical routes of each element are then examined through the associated literatures: technology and innovation studies, industrial marketing, operations strategy, and evolutionary economics. Multiple dimensions of each element are identified and the resultant framework is used to explore developments within the recorded music market across three centuries.

Through changes in the recorded music market since the 1870s, we explore how business models emerged, took on multiple sites and evolved through their practice over time. We look at how interlinking business models become spread out across the business network as different network actors play their part. The recorded music market generates important insights into how business models are created, developed and practiced. We suggest that firms, business networks and markets form embedded systems within which multiple overlapping business models can be considered as constituent parts. In this way, the business model is understood as having agency to shape action; but in turn actions (of others in the business network as well as within the firms themselves) also shape the business model.

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1. Introduction

Until 2000, the notion of business models was largely the preserve of internet-based businesses. In early internet-based manifestations, business models were only meaningful at a network level. Often the business model notion was invoked to explain how novel types of business (like e-marketplaces, aggregators or online content providers) would actually make money. This was vital in an industry unfamiliar to would-be investors. Writers at that time saw business models as the descriptions of the roles of various network actors (Timmers, 1999: 63) and the flows between the actors of product, service, information and revenue (Weill & Vitale, 2001). In other words, firms were being understood *from the outset* in terms of their position and role in business networks (Axelsson & Easton, 1992; Håkansson, 1982).

As the idea of the business model became more widely adopted, it has come increasingly to be applied only at the firm level: the business model is seen as a property of the firm. Consequently, and regrettably, some of the flexibility and creative ambiguity of the business model notion has been lost. Once it had seemed simultaneously to be useful both at firm level and network level; both as a broad organising concept and as a rather specific statement of revenue, product and service flows. Now, in many cases, it has become reduced to a rather

static concept, often difficult to distinguish from Porter-esque competitive strategy and increasingly only applied at the level of the firm. It is perhaps understandable that consultants and their like (Casadesus-Masanell & Ricart, 2010; Magretta, 2002) should be mainly interested in working at firm level; likewise, for different reasons, strategic management scholars (Zott & Amit, 2008). However, we suggest, that maintaining a more open mind about the business model concept and, in particular, about the relevant level of analysis – firm, network, industry or market – generates new insights for academics and managers alike. Taking a network perspective, our question is ‘how are business models created and practiced?’

In order to say how business models are created and practiced, we first need to say what they are. The paper begins with a review of some prominent contributions to the business model literature and discusses some of its shortcomings. We present a business model framework that emerges from this literature and examine the underlying theoretical ideas behind it.

Our approach then is to take a cue from an archetypal contemporary instance of business model change. The recorded music industry has recently been disrupted and transformed by the advent of downloaded MP3 files and the rise of Apple iTunes. We suggest that, although this is a recent phenomenon, and was widely discussed as an instance of business model innovation, the early efforts to make money out of sound recording in the late 19th century were just as much about the development of novel business models as the innovations of the 21st century. We present episodes in the 120-year-long evolution of sound recording and recorded music business

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models as a way to illustrate and explore the framework. Using aspects of practice theory, we examine the multiple and changing sites of the business models, and the various combinations of practices through which this happens. We argue that a multi-level, multi-site approach to business models is useful in helping managers understand how to frame and co-ordinate collective action.

2. The business model literature

The value of business models lies in their ability to capture important elements of organisational strategy and make them form a coherent and compelling whole (Timmers, 1999). To date, the vast majority of research on business models has treated them as descriptions of how business is done (Chesbrough & Rosenbloom, 2002; Magretta, 2002), identifying the underlying elements or components that detail what the business model is at the level of the firm (Osterwalder, Pigneur, & Tucci, 2005; Zott & Amit, 2007). The three key elements consistently identified as the cornerstones of business models can be summarised as 1) technology (or the technologies that make up the product/service offering, its delivery and management), 2) market offering (what is actually offered to the customer and how) and 3) network architecture (the configuration of buyers and suppliers that make the market offering possible). The extant research understands a business model as an objective representation of the reality of the firm and its markets. In this way the business model is understood to represent a truth, describing the way a particular business works. But we know from the industrial marketing literature that any change in a firm's business network can have implications for the firm itself (Håkansson & Snehota, 1995). In this sense an important limitation of the business model literature is that it only creates a description of the firm at a single point in time and in so doing, fails to take account of the influence of the business network on the business model and vice versa. Taking a network perspective on business models and their creation and practice suggests that the business models of networked firms, must in some way be overlapping or complementary. Similarly, business models must have multiple sites.

If business models are to exist in multiple sites, where are they to be found? The concept of business models has been applied at three levels: by Doganova and Eyquem-Renault (2009) to understand how individuals (entrepreneurs) interact to develop their business model; by Chesbrough and Rosenbloom (2002) at the firm level; and by Mahadevan (2000) to understand e-commerce at an industrial or market level. What is consistent across the business model literature is the recognition that business models evolve through the interactions of individuals in social groups, both within the firm and within the wider business network. Schatzki (2005) argues that as individuals are embedded in the social lives of both firms and markets, we need multiple sites of analysis when trying to understand organisations and what they do. Similarly, Nicolini (2010: 1391) discusses the connectedness of these levels recognising the need for “*zooming in and zooming out*” in order to generate insights into such phenomena. Yet despite these valuable observations, we know little about the way business models are created and evolve at multiple levels and perhaps in multiple forms in these embedded systems. Understanding something about the sites of business models seems relevant and pertinent to generating deeper insights into their creation and practice.

How then do managers *practice* business models; how do they make them happen? If business models are to be understood not as descriptions of reality, but rather as frames for action, then we can see how the network perspective and the firm perspective might be linked in a system of firms, networks and markets. We need to understand more about how managers conceptualise, theorise and enact the modelled changes in organisations and markets. Birkinshaw, Hamel, and Mol's (2008: 825) work represents one of the first

attempts to systematically examine “*the invention and implementation of management practice, process and structure... intended to further organizational goals*”. By focusing on the specific actions individuals take in order to lead to the emergence of management innovation, Birkinshaw et al.'s (2008) research makes two important contributions. First, it suggests that both internal and external actors have a significant influence on the emergent management practices of a firm; and second, it suggests that the process of management innovation does not always proceed as a linear sequence of activities from motivation through to theorization and labelling (also see, Pfeffer & Sutton, 2000). This is consistent with the descriptions of how business models are developed, presented and divulged to different stakeholders for different purposes (Doganova & Eyquem-Renault, 2009). In this way, the *business modelling* process can be understood to be both influencing and being influenced by not only internal actors within the firm developing the business model, but also by external actors within the business network – because of this complexity it seems unlikely that a linear sequence of activities could ever exist. Doganova and Eyquem-Renault (2009) show how the business model of an entrepreneur evolved and changed over time as the different stakeholders commented on, bought into and disengaged from their original business model. By divulging different parts of the business model to investors, suppliers and customers, the business model (or fractions of it) becomes sited in the business models of others. Thus, the sites of business models tell us something of how they happen. However, Doganova and Eyquem-Renault (2009) focus on the materiality of the business model; the form it takes in formal documentation, PowerPoint slides and targets. They pay far less attention to the management practices that perform, realise and evolve the business model as it happens (Schatzki, 2006). This has implications for the practice of business models, as it suggests that they are necessarily dynamic in nature (Mason & Leek, 2008) and that business models and their practices might interact in an iterative and evolutionary way. Business models are not first designed and then implemented, but are more usefully thought of as strategy-as-practice; incrementally emergent and ever-changing.

We take recorded music as a business context (see Dowd, 2002), within which to explore the creation and practice of business models in times of change. We draw on three business model elements consistently identified in the business model literature; (i) technologies, (ii) market offering and (iii) network architecture to explore this historical account; tracking how new business models emerged and old ones changed as new actors entered the network and did new things. We study business models in action (Latour, 1987). By ‘zooming in’ we explore business models as frames for action; allowing front-line workers to translate, adapt and act in contextually appropriate ways. By ‘zooming out’ we explore the *practice of business models*; how these frames are created and transformed by enrolling actors in the business network, and shaping and making the markets within which they act.

3. The theory behind business models

The business model literature as such came out of empirical settings in e-business and entrepreneurship, and has found its most stable home in the strategy literature (Amit & Zott, 2001; Zott & Amit, 2008). This means that the unit of analysis is driven toward the firm, and the business model's multi-level implications can become lost. Some strands of business model literature has, however, concentrated more on technology (Chesbrough & Rosenbloom, 2002) and has maintained an inter-firm perspective (Chesbrough & Schwartz, 2007). This section explores the theory behind the business model elements and, where applicable, draws attention to the management practices that are discussed in the extant literature. We draw parallels between the theory and the examples from the sound recording market. The

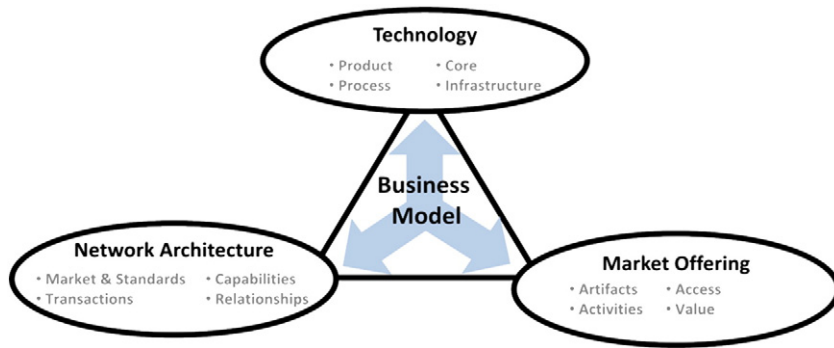


Fig. 1. Business model elements.

theory drawn on here forms the basis for the business model framework (Fig. 1).

3.1. Technology

Technology can be understood as the usage and knowledge of tools, techniques, systems, methods of organisations or material products (Kremer, 1993). Much of the innovation literature is concerned with product technologies (see, for example Christensen, 2000; O'Connor & Veryzer, 2001; Stump, Athaide, & Joshi, 2002). While acknowledging the importance of these, we suggest that a business model analysis needs to take account of three other classes of technology: process, core and infrastructure. Such an analysis needs to understand the interplay among these, and between them and other aspects of the business model, i.e. the market offering and network architecture.

Process technologies are those used to manufacture products or deliver services. A recurring concern of the technology literature has been the relationship between product and process technologies in firms' strategies. The seminal work of Utterback and Abernathy (1975) identifies a shift in technology innovation over time from product to process innovation. This has in turn been used to inform the basic theory of manufacturing strategy (Hayes & Wheelwright, 1979). Building on this logic in a new setting, Cusumano (2008) shows how after process innovation, software houses often innovate by adding services. He suggests that this might be a more general pattern; however, evidence from the music industry indicates that there is no particular sequence to these different types of technological innovation (John, Nightingale, & Syed, 2009), and we maintain a similarly agnostic view on this.

Core technologies (Twiss, 1992) are those that underlie particular product technologies. They often dominate managerial practices and have a significant influence on what innovations the organisation identifies (also see, Chesbrough & Schwartz, 2007; Teece, 1987). So, the iPod was not a single product technology innovation but rather

part of a family of alternative but similar products (see Fig. 2), based on the same core technologies, such as specialised chips, small, high-resolution screens and small, long-life batteries.

Infrastructural technologies are those that enable connexions. In general, these might include the internet, mobile telephone networks and systems for containerised shipping. It is clearly the internet that enables the iPod/iTunes market offering to work, and we increasingly think of it as akin to a utility (Rappa, 2004), but we do well to remember that it is not 'just there', but the product of investment in and development of international digital communications and storage infrastructure (Metters & Verma, 2008).

As such, the underlying theory of the technology element of business models suggests four distinct dimensions to technology: product, process, core, and infrastructure technology. Different firms in the network have differing degrees of direct control over these. Hence, to a greater or lesser extent and depending on the specific case, process, core and infrastructural technologies should not be treated simply as 'environmental variables' but as part of the network of internal and external actors that practice the business model (Birkinshaw et al., 2008; Birkinshaw, Bessant, & Delbridge, 2007).

3.2. Market offering

The apparent vulnerability to competition of established product-based business models e.g. (Lindberg & Nordin, 2008; Windahl & Lakemond, 2006) has led to a renewed questioning of the ways in which value can best be provided to customers. The notion of the market offering, which we adopt from Normann (2001), captures this open-mindedness about the respective roles of products and services in business models. Following Araujo and Spring (2006), we suggest that the market offering concerns the nature of the producer-user interaction, rather than any essential feature of a particular product or service. Callon (1991: 136) understands products as 'programs of action' aimed at coordinating a network of distributed roles (D'Adderio, 2001; Hagberg & Kjellberg, 2010), including those of



Fig. 2. The technologies of an iPod classic.

objects as well as human actors (Harrison & Kjellberg, 2010). The market offering is thus conceptualised as “not a physical product, but a way to reconfigure activities and stimulate and enable value creation” (Normann, 2001: 119). Drawing on concepts from marketing (Lovelock & Gummesson, 2004) and economic sociology (Gadrey, 2000), we therefore characterise the offering as consisting of the value-creation opportunity arising from alternative combinations of artefacts, access to suppliers' capabilities and capacities, and activities performed by the supplier(s) on the customer and/or its property.

Value can be defined as the benefits derived by a customer from an exchange. Anderson and Narus (1992) argue for the importance of understanding what customers value (or might value in future) and Narayandas (2005) points out that in industrial markets, different stakeholders within the purchasing organisations might derive different benefits or value from a single market offering. Thus in the ‘solutions’ literature (Windahl & Lakemond, 2006), for a variety of reasons, industrial customers increasingly see value in offerings based on outcomes achieved by suppliers rather than ownership of capital equipment. Similar issues arise in consumer markets, and this presents the challenge of designing new market offerings. Which parts of the offering are charged for – what Richard Normann (2001) terms the ‘price carrier’ – and how much is charged, is a critical question, and one closely entwined with customers' understanding of value.

Although ‘solutions’ might be of increasing importance in some settings, the transfer of ownership of artefacts is still central to many business models. Furthermore, the artefact may be implicated in related episodes of access or activity. For example, although consumers buy the iPod (artefact), the offering depends on its entanglement with access to iTunes and periodic upgrades of software (activity) by the supplier.

Access-based business models see the provider retaining ownership of the socio-technical capacities (Gadrey, 2000) that play a part in value-creation. Mobile telephone operators, for example, have large investments in masts, IT and maintenance staff, and charge users to access their network, according to various contracts or pay-as-you-go tariffs. Ownership confers control over residual rights (Hart, 1995) and shapes incentives (Snir, 2001). It also requires effort to stabilise and define access offerings to make them tradable (Callon, Meadel, & Rabeharisoa, 2002).

Activities are perhaps what we typically have in mind when we think about a ‘service’. They are concerned with what companies do for a customer as part of the market offering. Thus, as Gadrey (2000: 375) explains:

“a service activity is an operation intended to bring about a change in the state in a reality C that is owned by the consumer B effected by provider A at the request of B in many cases in collaboration with him or her, but without leading to the production of a good that can circulate independently of medium C.” (original emphasis)

Activities are seen as opportunities for differentiation and extra profit among firms used to an artefact-based offering (Matthyssens & Vandembemt, 2008), but also present potential problems due to supposed inherent variability in customer requirements (Bowen & Youngdahl, 1998) and difficulties in scaling.

3.3. Network architecture

Almost all of the business model literature recognises the architecture of the business network. Several authors discuss the relationships between a focal firm and the organisations with which it transacts (Amit & Zott, 2001; Mason & Leek, 2008). According to Zott and Amit (2008: 1) “the business model is a structural template that describes the organization of a focal firm's transactions with all of its external constituents in factor and product markets.” Similarly, the business model concept is often defined

in terms of transactions. For example, Amit and Zott (2001: 511) define business models as: “the structure, content and governance of transactions”. Here we attempt briefly to explore the causes and consequences of network architecture, using four important dimensions: capabilities, transactions, markets and standards, and relationships.

Capabilities can be understood as the know-how that is retained, maintained and developed by an organisation over time. Clearly this has been examined in considerable depth, and from various perspectives, over the past 20 or 30 years. But we feel it is important to draw attention to the importance of capabilities in business model analysis, not least because an increasing focus on capabilities by firms has given rise to less vertically-integrated and more networked approaches that, in turn, make ‘business model thinking’ more useful. Most obviously, understanding the ‘zero-level’ (Winter, 2003) or direct capabilities of the focal firm and various network actors is a basis (although not the only one) for deciding who does what, or who could do what, in the network. This, it should be remembered, includes the customer (Langlois & Cosgel, 1998): whether a ‘total solution’ market offering is valuable to the customer will depend in part on their ability (or otherwise) to provide the solution for themselves. Less widely recognised are what Loasby (1998) terms ‘indirect capabilities’, those that relate to how a firm can access and utilise the capabilities of others within the wider business network (Araujo, Dubois, & Gadde, 2003; Araujo & Novello, 2004; D'Adderio, 2001; Mason & Leek, 2008; Teece, 2007).

Afuah (2003: 3) suggests rather baldly that “Most firms are in business to make money, and business models are about making money”. More subtly, Seely Brown (2006: 63) suggests that business model innovation involves building the ‘architecture of the revenues’. In other words, business models necessarily involve transactions to take place between firms. According to Williamson (1985: 1), a “transaction occurs when a good or service is transferred across a technologically separable interface. One stage of activity terminates and another begins”. If only it were that simple. Working out where and how to effect transactions can be a challenge in its own right, all the more so as we develop more complex performance-based or access-oriented market offerings (see Section 3.2). The effort involved in making transactions possible has been examined by Baldwin (Baldwin, 2008; Baldwin & Clark, 2002), who suggests that transactions are likely to occur where ‘mundane transaction costs’ are lowest. This is complemented by Langlois (1999, 2002, 2006) work, which suggests that these mundane transactions costs are changed by institutional and technological innovation: hence, the ‘thin interface’, where a transaction can be made, shifts over time. Transaction-making technologies (Azimont & Araujo, 2007; Callon & Muniesa, 2005; Zipkin, 2006), then, can shape the development of business models.

The ease with which firms can access network counterparts' capabilities is also shaped by the existence and development of markets and standards. As markets are made and evolve, standards emerge with them. As Langlois (2004: 372) puts it:

“A Chandlerian firm starting up today can plug into modern financial markets, modern banking, containerized shipping, Federal Express, personal computers, and the Internet without having to reinvent those stages of production itself.”

Such standards come about through lobbying and through power plays between key firms identifying and targeting specific markets. This has two important implications for the practice of business models. First, the standards recognised by firms frame the way managers identify and pursue market opportunities. They are indicative of what might be traded and how, within any business network. Second, the notion of markets and standards might also help managers frame practices for market-making as they seek to influence and shape standards in a strategic move to influence which are adopted (Arthur, 1989). Such market standards offer opportunities for firm to specialise.

Of course, network connexions are not all about market transactions. Without counterposing transactions and relationships as in some simplistic way ‘polar opposites’, it is clear that, where firms try to do new and innovative things, (developing product, process and infrastructure technologies for example), the relationships that support such innovations can cause the boundaries of the firm to appear less clear. Araujo et al. (2003) draw on the work of Penrose (1959), Richardson (1972) and Loasby (1998) to explore the blurring of the boundaries between firms, claiming that when firms are able to develop close (sometimes embedded) working relationships with other firms in their business network, the nature of what the firm is may change; and what the firm might offer to the market might change too. Coase (1937: 388) uses the example of the Lancashire cotton industry to make his point,

“A weaver can rent power and shop-room and can obtain looms and yarn on credit. This co-ordination of various factors of production is, however, normally carried out without the intervention of the price mechanism.”

Thus, even if transactions are established between network counterparts, they are often complemented and indeed, enabled, by non-financial exchange and interaction. (This has, of course, been a predominant theme of the IMP literature over almost 40 years).

In all this discussion of network architecture, the dynamic and evolutionary nature of business models becomes clear. Similarly, Doganova and Eyquem-Renault (2009) claim the need to study business models in action (Latour, 1987; Schatzki, 2006) and that relationships influence how a firm’s business model evolves.

4. Business models in action: the recorded sound industry

We now explore episodes in the early development of recorded sound and the business models deriving from it. The account is largely based on Dowd’s discussion (Dowd, 2002).

Thomas Edison patented the phonograph in 1877. For the first time, this enabled the recording and playback of short passages of sound. The phonograph recorded sound onto a fragile, tinfoil cylinder, so recording quality was poor and the durability of the recordings was such that the sound could only be played back a few times before the cylinder wore out. At that stage Edison identified a wide range of possible applications, of which music recording was only one. Others included recording the last words of dying relatives and recording telephone conversations (the telephone having recently been invented by Alexander Graham Bell).

The first commercial use of the phonograph was through demonstration by travelling entertainers, principally for its novelty value. Edison sold the phonographs to a network of entertainers who in turn charged for attendance at demonstrations. For a short period, the entertainers made large sums of money, as did Edison through royalties and a percentage of the exhibition fees. But the novelty soon wore off with the customer.

To overcome the fragility of the tinfoil cylinder technology, wax cylinders were introduced and the next commercial use of the phonograph was as a business dictation machine. Being short of capital, Edison sold the patent for the phonograph to an entrepreneur called Jesse Lippincott, while retaining the rights to manufacture. Lippincott set up a network of regional licensees who leased the machines for \$40 per annum – a business model explicitly imitating that of the American Bell Telephone Company. However, it turned out that the machines were cumbersome and inconvenient to use and didn’t deliver the anticipated benefits. Consequently, commercial success was limited. In desperation, some agents who had leased machines and were now losing money, created a new market offering by starting to use the phonographs to play recorded music. They set up ‘phonograph parlours’, where customers could

pay a nickel to listen to a tune. This quickly became the major revenue earner and, with the development of more easily duplicated, moulded wax cylinders, the sale of pre-recorded music took on much greater significance. Then, as phonograph technology improved, production costs and therefore prices declined, and consumers became used to the machines, it became possible for consumers to operate phonographs themselves, at home. Sales of machines and cylinders to private households then became the more significant market. At this stage, the production of media and playback equipment became separated as industry standards pertaining to playing speeds, and cylinder and then disc size became established. This was the business model for the next eighty or ninety years, albeit that phonographs were replaced by gramophones, and cylinders were replaced by discs.

Jumping to the 21st century, the recorded music industry finds itself, once again, searching for new ways to generate revenues. The most important business model innovation, of course, is the development of downloadable MP3 files. We have a standardised format, but one that is only useful given the existence of the infrastructural technology of the internet. This gave the basic potential for a shift from an artefact-based offering (CDs and other media) to one based on access (to files on servers). The pre-eminent business model development is the one based around Apple’s iTunes, which provides low-cost transactions, search, and many other facilities. Apple, paradoxically, drives this business model through artefacts – by designing and supplying aesthetically desirable, ‘cool’ MP3 players (iPods). With the arrival of iPads, Apple is now challenging established models of publishing. This demonstrates the difficulty of analysing this setting as a ‘market’ or an ‘industry’ and shows the benefits deriving from the flexibility of the business model approach.

An interesting (if less significant) episode in this setting occurred in 2008. Threatened by declining CD sales and the increasingly prevalent assumption among younger music enthusiasts that music should be free and that illegal downloads are acceptable (Anonymous, 2008), Nokia released their ‘Comes With Music’ range of mobile phones. Subscribers pay a significant price for the handset and, in return, have an ‘all you can eat’ entitlement to download unlimited music from the Nokia online music store for the period of their initial contract (12 or 18 months). Nokia’s handsets did not have the appeal of Apple’s iPhone. What seems critical here was the novelty of the ‘Comes With Music’ market offering. This was made possible by collaboration between Nokia and the four major music labels. Crucially, this market offering bears many of the hallmarks of an innovation observed in the business model literature (Chesbrough & Rosenbloom, 2002; Cusumano, 2008; Pohle & Chapman, 2006). The ‘Comes With Music’ offering is *inter-organisational*, being dependent upon the deal between Nokia and the major music labels; involves a shift in the *price-carrier* (Normann, 2001) from the ‘tune’ (as was the case in Apple’s iTunes business model), to the purchase of the phone itself. Nokia’s market offering was a response to what is in essence a technological *product* innovation presented by Apple’s iPhone in 2007.

The history of the recorded music market generates three important insights for understanding the creation and practice of business models. First it shows that each of the three business model elements has different aspects (see Fig. 1). Take for example, the technology element. For Edison, creating a frame of action around technologies meant taking into account product technology (how the phonograph worked and could be improved). Edison kept the manufacturing rights to the phonograph after he’d sold the patent because he wanted to make both process and product technology improvements. But there were many things Edison couldn’t do because of the product technology and because of the lack of infrastructure technology. Apple could do things that Edison couldn’t because they had different infrastructure technology and different product technology to work with.

Second, the recorded music market vignette illustrates the complex interplay between innovations in business model technologies, market offerings, and the network architectures. Edison developed a rudimentary product technology. This initially had no saleable form as an artefact – was not translated into an offering – and no business model existed, notably because no link had been forged between the product technology and a market that would value it and pay for it. Interestingly, recent developments in the industrial marketing literature have shown how managers use network pictures to identify actors and their connexions as they go about working out how inter-functional and inter-firm work might be performed (Leek & Mason, 2010). Such a practice would represent the translation process that managers work through as they go from knowing the technical solution they want to deliver (in Edison's case, a machine to play back recorded sound), to creating a market offering that the consumer is willing to pay for and is packaged and delivered to the market.

How then might network pictures work as part of the practice of business modelling? Network pictures have been understood as the representations of “*views of the network held by participants in that network*” and it has been argued that inevitably, “*different companies and individuals within them will each have different pictures of the extent, content and characteristics of the network.*” (Ford, Gadde, Håkansson, & Snehota, 2002: 176). Similarly, Ramos, Ford, and Naude (2005) understand network pictures as a representational technique that illustrates the views of the actors. Two interesting observations are made here. One is that the network picture is a representation and as such, is a static ‘*picture*’ of an understanding held by an individual at a single point in time. Henneberg, Mouzas, and Naude (2006) argue that managers draw on and assimilate multiple network pictures into their own network pictures. These mega network pictures then shape managers' decision making. In other words, they are performative; they don't just *reflect* reality but *intervene* in it (Callon, 1998b). Thus observation that network pictures are a ‘*technique*’ is an important one. It means that the way managers produce and use network pictures matters to the way they develop and perform their business models.

By taking this interpretation seriously we are forced to rethink what the technique of *network picturing* might be. As a procedure to accomplish a specific task, what might network pictures accomplish and how? The practice of producing network pictures is a process of diagramming, a working out of not only ‘*what is*’, but ‘*what needs to be*’ in order to achieve a specified intent. In this sense, the process of drawing a network picture is a form of knowing-in-practice. The knowing becomes apparent only through the act of drawing it and it is only when it can't be drawn that the artist knows what he/she doesn't know. Thus network pictures may be thought of as a diagramming technique that both maps and constructs the complex interactions between individuals working to entangle technologies and markets as they develop and perform the network architecture.

Leek and Mason (2010) give some insights into how through the process of diagramming, network pictures were produced. Employees began to know where organisational boundaries presented bottle necks, where work flows were being stopped and where the system was not working and had broken down. The practice of diagramming network pictures (from different perspectives of actors with different roles) revealed different types of problems and challenges. Edison was famous for his ‘*back of the envelope*’ drawings and diagrams (though these were mostly of his inventions and machines). He understood the value of diagramming and of networking to bring his ideas to life. He invested heavily in developing his network architecture, iteratively exploring new connexions and possibilities to make his ideas work both technically and commercially.

Birkinshaw et al.'s (2008) observations on management innovation more generally, make the point that there is no particular sequence to the innovation of business model elements. Management

practices that constitute business models require a different emphasis on technologies, market offerings and network architecture – one that shifts from element to element over time, varies by market, and is affected by the interactions of the practices associated with other components within the business model framework (Miller, Olleros, & Molinie, 2008).

Third, Edison develops his business model through interactions with other businesses and institutions. His business model is co-created and changed by other actors as they enter the network and take actions of their own. The first offering that Edison delineated was the performance through his network connexion with a travelling showman. Here Edison's business model is created in conjunction with the entertainer's business model so that elements overlap in a complementary way. Edison attached the product technology to an existing distribution network (the entertainers) and market form (pay per performance). Edison worked with the entertainer to transfer capabilities, i.e. he taught the entertainer how to use the equipment. A revenue model involving machine sales, fees and royalties enabled Edison to make money for a while.

Incremental product and process innovation led to a more reliable machine. The largely unsuccessful business model of leasing machines for use in business dictation gave way to the innovation (recorded music) that came from within the distribution network proved profitable. Two offerings were developed and existed in parallel: (i) the service-based phonograph parlour and, (ii) the product-based phonograph-and-recording sales offering. Each had a different business model. The first depended on the development of transaction-making technology in the form of coin-operation mechanisms; the second made use of the emerging infrastructural technology of freight distribution. Thus the history begins with an emphasis on technology innovation, shifts to innovation in the market offering i.e. business dictation, then network architecture innovation – the adoption of a network architecture from elsewhere. From that network architecture came a subsequent innovation in the market offering – recorded music – that eventually made money. This, in turn, drove volume and the incremental product and process innovation that made full industrialisation possible. The business dictation market offering might be seen as ‘*transitional object*’ (de Geus, 1988) – one which, although eventually discarded, was an essential step on the way to the more successful outcome because it created the network from which the recorded music offering and business model emerged. In sum, the practice of business models is centred across three elements: each is broken down to explore the theoretical basis and the practices that relate and entangle them both within the firm and across the business network. We argue that an understanding of these elements and how they relate to one another is essential to an understanding of management innovation. We suggest that the management of business models is about shifting activity and emphasis from one element to another, and understanding how such shifts may be influenced by other network actors and become important competitive moves in themselves. Using the business model framework (Fig. 1) we are able to see how the different dimensions of each element help managers make practical judgements on when and where to focus their efforts at different points both within the firm and (sometimes simultaneously) by enrolling network actors in their activities and strategies.

5. The sites of business models: a networks perspective

The historical view of the recorded sound industry has allowed us to see change over time (Fig. 3). It allows us to claim the existence of ‘*a recorded sound market*’. When Edison set out, there was no recorded sound industry or market; and no recorded music market. What is of interest is the transformation of an individual's idea into the business model, whose elements mix and co-evolve

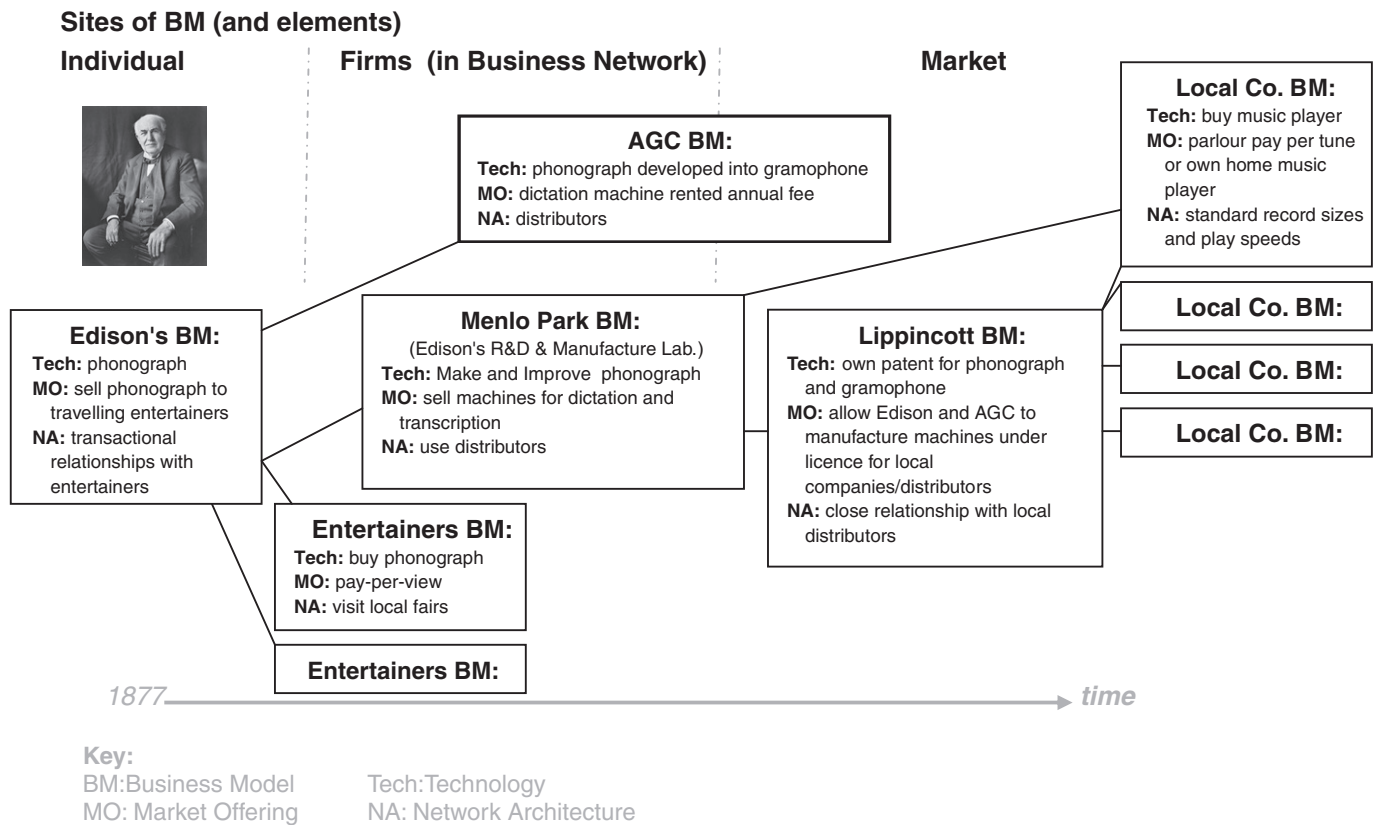


Fig. 3. The multiplying sites of business models in early 19th century recorded sound.

with the ideas of others in the business network and then take on multiple sites until a market forms.

Edison has a technology that he transforms into a market offering (pay-per-view). At first he uses 'entertainers' as distributors to create a network architecture. This is his business model. He may have articulated this in the form of a material plan, ideas on the back of an envelope (Edison was known as a prolific note-taker) or the business model may purely have been an idea in Edison's head. We don't know. But what is clear, is that as soon as external actors (distributors) became involved in the practices of the business, the business model took instantiations in other sites – in that of the distributors – in so far as sharing an understanding of what the market might be – the dictation/transcription market or the music market. In 1876 Edison opened a substantial research lab in Menlo Park, New Jersey. The Lab employed over a hundred people and this important resource allowed incremental technological development and production of his phonograph. When Edison started to run out of money he sold the Patent to Lippincott (who had also bought the gramophone patent from the AGC Company – a competing product). Lippincott bought all the patents for the competing technologies. His network architecture allowed him to act on the observations of the 'local companies' that the music market represented a bigger market opportunity than the dictation and transcription market. Lippincott and Edison between them had enough control of the network to introduce market standards.

What we see in Fig. 3 (albeit simply), is the way different actors make and shape the business model at different times; and as such, how some elements of the business model remain stable but move into different constellations; in different (and multiple) sites, to form markets. Thus, different actors have more or less influence on the business model and the market at different times. Through this observation it seems that business models (and their elements) have multiple (and multiplying) sites over time (Schatzki, 2005).

Though the linearity implied by Fig. 3 must be regarded with extreme caution, the historical analysis gives us some clues to as to the practices that make business models happen.

6. The practices that make business models happen

Business models can be understood as a framing device for influencing and shaping collective and individual action. Morris, Schindehutte, and Allen (2005) identify three distinct levels at which business models happen; (i) the strategic level – where individuals share ideas about what they think the firm should achieve, (ii) operational level – how the different actors might go about making the organisational goals happen, and (iii) the level of individual transactions or economic exchanges – what the business model means for the actions of individuals dealing with any specific exchange. The theory of social practices helps us understand the interconnectedness of these multiple levels. The connectivity between actors (with bodies that perform activities and minds that shape performances), agency (the power they have to shape action), knowledge and understanding (what actors think they should do) can be understood as the practices that form structures of action. We argue that business models might also usefully be understood as bundles of practices that become institutionalised in the performance of actors as individuals, in firms, in business networks and in markets; across multiple sites over time (Schatzki, 2005, 2006).

Practice theory is a purpose-oriented theory of action (Latour, 2005). Reckwitz (2002: 249) defines a practice as "a routinized type of behaviour which consists of several elements, interconnected to one another: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge." These practices are then translated into performances (what people actually do, with what, with whom, when and how). Thus, practices form structures of

action in the same way that elaborated business models do (Doganova & Eyquem-Renault, 2009). What is particularly insightful and helpful in building an understanding of the emergent business model literature through a practice theory lens, is the notion that not only do practices link what people think with the way they act, (and with what, whom and where) but also that practices are by nature routinized types of behaviour which consist of several interconnected elements. This helps us see how practices help managers understand and perform the business model process. Edison knew that he needed to work with entertainers as his route to a potential market. He translated this part of the model into practices that involved showing entertainers how to operate and maintain the phonographs. To train several entertainers systematically he would need to create a set of routines or instructions; this would also enable others to practice 'phonograph training' too. But as the entertainers experienced problems with the fragile foil cylinders, Edison was prompted to further develop this technology. Then, a different bundle of practices and routines (product testing, materials experimentation) were kicked into action. What Edison was particularly good at was creating connecting practices between the elements. Edison used his market knowledge from the entertainer to inform the product development practices. The business modelling process is not linear. It is precisely because the associated, boundary-spanning practices interconnect, that business models iteratively influence, shape and are shaped by the market as it happens (Schatzki, 2006).

If business models are more than just descriptions of what a business does, they must have some sort of performative power to shape and influence the actions of others. We argue that business models, embedded as rules-for-action in PowerPoint slides, reports, targets and strategy documents, act as framing devices. Such business model artefacts are the 'ostensive' aspects of the practices performed by individuals, in firms, between firms (in networks), and in markets (Feldman & Pentland, 2003).

Seen as a bundle of practices, business models can be understood as generative and continuously emerging systems, characterised by structure and dynamics. But equally important, they are performative in nature; they have agency by framing the way the business (and by implication the market) is developed and grown (Doganova & Eyquem-Renault, 2009). The performative nature of models and representations of markets are increasingly recognised in the marketing literature (see for example, Azimont & Araujo, 2010; Harrison & Kjellberg, 2010). The point then is that business models are important to the institutions within which they are embedded. Callon (1998a, 1998b) and MacKenzie's (2006) observations that models are an intrinsic part of markets (rather than being external to them), has implications for business model theory;

"in fact there is no real separation between 'market models' on one side and 'market practices' on the other: market models are performed in practice. Models form a crucial part of markets; they are not purely detached external representations or virtual abstractions (cf. Miller, 1998 in Holm, 2002) but engines that make the markets tick." (D'Adderio, 2008: 775).

Business models are not just a description of something that rests outside of the business but are a constituent part of it. Further, as the business itself is embedded in a market, business models need to be understood as constituent parts of markets too (Callon, 1998a; Callon, Millo, & Muniesa, 2007; MacKenzie, 2006; MacKenzie & Millo, 2003; Schatzki, 2005).

Business models can provide a shared understanding of routinized action as embedded in collective cognitive and symbolic structures of shared knowledge. Business models enable a socially shared way of ascribing meaning to the world. They explain the practices that constitute the activities of a business and its relationship to other actors in business networks and markets.

7. Conclusions and implications

This paper set out to explore the sites and practices of business models. We have argued that the value of business models lies in their ability to frame action and reveal connexions between those actions, across multiple levels of analysis. We seek here to connect micro to the macro level practices: from individual actions of front-line workers to the market level actions of networked organisations. We argue that it is through the practice of business models that the sites of business models proliferate and the dynamics of business models allow them to evolve. In so doing, the paper offers three key contributions. First, it presents a business model framework through theoretical synthesis that identifies what business models are. Drawing together concepts from technology and innovation studies, industrial marketing, operations and service strategy, and evolutionary economics, the paper provides a much deeper understanding of what business models are and how they are theorised. The key contribution of the business model framework lies in the examination of the underlying theory of the three business model elements. We use this theory to identify multiple dimensions of each element and the connexions between them. As Van Maanen, Sørensen, and Mitchell (2007) explain so compellingly, theory and method are deeply inter-connected. Hence, if we are to maintain the multi-level approach to business model analysis that makes it so effective, we must resist the temptation to fix it within any one established literature. Economists study industries, innovation scholars study technologies, strategy researchers study firms: all have their part to play in explaining the phenomena of interest here, but there is a risk that the adoption of any one theoretical grounding will unduly restrict the framing of a research programme. In this way, business model theory stands to contribute to management practice by offering a framework that, when populated by managers, may help frame purpose-oriented action (Latour, 2005). Business models may adopt multiple manifestations in the form of PowerPoint presentations, strategy documents or targets used for directing action of the business and even the businesses of their collaborative partners, within any given market context (Geiger & Finch, 2009).

Second, the business model framework presented here offers an analytical framework through which managers can seek to make sense of and share understanding between individuals, groups and organisations of what the situation is in order to 'work out' what is to be done. Such framing of action is consistent with understanding not only what business models are, but what they do. That is, how they become embedded in markets, becoming a constituent part of what the market and what the firm is and does. This recognises that the 'doing' of business models is dependent on interactions with others in the market-place (Håkansson, 1982) and that the types of practices and spaces that form markets (and the models that describe them) are likely to be contingent, and context specific (Araujo, 2007). We find considerable benefit in using the framework, to understand how managers 'do' business models in ways that balance change and stability; innovation and risk. The framework is flexible in the sense that, being non-sequential, analysis can begin in any element or elements, depending on current concerns or opportunities. It also seems that there is considerable path dependence in the susceptibility of the various elements to innovation, as well as unanticipated dynamic interconnections between elements. In this way, business models are understood to have multiplying sites over time (Schatzki, 2005).

Third, by understanding business models as a framing device for programmes of action, we explore the dynamic nature of business models as well as attributing agency to them; positioning them as a constituent part of any business that iteratively influences and is influenced by firm, inter-firm and market practices (Hagberg & Kjellberg, 2010). In this sense, business models might be understood as bundles of interconnecting practices that evolve with the context

within which they are practiced – but that in turn influence and shape the context. Thus, changes in technology practices are likely to lead to changes in network architecture and so on (see for example, Geiger & Finch, 2009). In this way, the business model framework identifies different types of management practices that drive the development of business models in manufacturing and service settings; technology practices; market offering practices and network architecture practices. But, in the process of business these practices interconnect and enable the business to operate as a whole, making and shaping markets.

In sum, the paper represents one of the first attempts to link a conceptualisation of what business models are with what they do, through an examination of the theory behind business models in parallel with an historical analysis of the recorded music industry. The paper suggests that what managers do with and to business models as they develop is a central part of management innovation practice (Birkinshaw et al., 2008). However, this is not a sustained empirical study. We need in-depth, longitudinal, ethnographic studies to help us understand how managers develop, represent, translate and transform business models through situated management practice. Such studies would shed light on the managerial tools used to represent and circulate knowledge within and between organisations, industries and across multiple geographies as managers zoom out and take the macro lens on their business and markets. Similarly, such studies stand to generate insights that might help international managers successfully translate a single business model from one geography to another while embracing (rather than ignoring) the heterogeneity of markets. This research would foreground managers zooming in to focus on the performance and practices of specific, individual markets (Nicolini, 2010). Future research might also focus on generating insights into the proliferation of business models across business networks as technologies, market offerings and network architectures become shared, overlapping and interlinked. For now, it seems that we are just beginning to understand the practices of business models and their agency in making markets, but there is much work to be done.

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