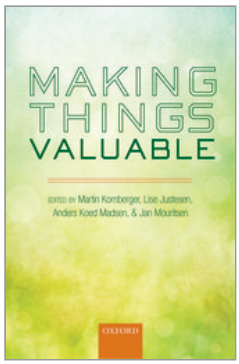

Making Things Valuable
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Capitalization Devices

Business Models and the Renewal of Markets

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Abstract and Keywords

Business models operate as valuation devices. They delineate projections of future value and stir the imagination of investors. It is through an examination of the performative capacities of business models that one can understand why and how considerable flows of money can be put in motion way before the existence of any proper business. This chapter aims at refining this understanding through a focus on the role of business models in the configuration of an encounter between the agents through the conjunction of which business is supposed to come into being: the investor and the entrepreneur. Through an analysis of two widely praised ‘success stories’—Genentech and Google—the chapter characterizes the singular form of valuation that springs in this encounter and captures it through the notion of

capitalization devices: i.e. valuation devices that value things through the process of transforming them in objects of investment.

Keywords: business models, valuation, capitalization, performativity, markets

(p.109) Introduction

Robert is an academic entrepreneur.[1] During his PhD at a French public research organization specialized in computer science, he took part in the development of a technology based upon an algorithm that allows processing data incoming from vehicles in order to compute predicted travel times. He would like now to bring this technology to the market. He has just founded a start-up company with a senior researcher from his research team. The technology seems to be working well. And the travel times that it produces can be put to many uses—a bit like the weather forecast, Robert explains. There are applications for individual drivers who wish to estimate their travel time, but also for business clients, such as truck fleet managers, who wish to optimize their logistics. But the entrepreneurs are having a hard time convincing venture capitalists to invest in their start-up: the whole problem, Robert laments, 'is about the business model of this thing'.[2]

What is this 'problem', and how does 'the business model' provide a solution to it? We could start by saying that the problem is to make the travel times computing technology *valuable*. But there are many ways in which something may be made valuable (Stark 2009; Aspers and Beckert 2011; Berthoin Antal et al. 2015). That may be the case, for example, when a technology is shown to have an application, or, to put it in marketing terms, to meet the unsatisfied needs of a set of users. In this respect, Robert's technology definitely is valuable, and all the more so as it has many applications. But the existence of applications is not enough to solve this 'problem' that the entrepreneurs seem to be struggling with. There is something else at (p.110) stake here, another form of valuation going on. To grasp it, we need to move beyond the entrepreneurs' viewpoint and look at the investors whom they are trying to convince.

Bernard is a venture capitalist. Meeting entrepreneurs like Robert and their technologies with numerous and certainly valuable applications is his daily routine. But applications are not what he is looking for. He recalls the case of one of his most successful investments. The start-up's founders contacted him, praising the merits of the software they had developed—a technology that large organizations, ranging from banks through insurance companies to hospitals, could use in order to search within their voluminous dispersed

databases. At first, the venture capitalists said no ‘because selling software tools to people is both difficult and of little ambition’, adding with a bit of dismay that ‘there are tons of people who invent software tools every morning’ and that ‘it does not mean that you can make a firm with that’. Their argument was also about the figures: ‘We may be able to sell it a first time for 100,000 euros, a second time for 50,000, a third time for 10,000, and then we will have a firm that will make a turnover of one million over twenty years’.

The advice Bernard gave to this start-up was to go for a ‘new business model’: use their technology to make a search engine that would allow internet users to find the best price for a product and hence allow online merchants to attract these willing-to-buy customers in exchange for a small contribution paid to the search engine for each relevant click. The start-up followed the advice, and Bernard’s venture capital firm made the investment. A few years later, the search engine proudly showed millions of clicking and buying users and was sold to an internet giant for no less than 475 million euros.

What we are interested in here is not a Google-like fabulous success story, but the kind of *problem* that the *new business model* allowed to solve. That problem, we argue, lies in transforming a technology into an *asset* that has the power to generate a steady stream of future cash flows, that is, into *capital*. What is at stake here is a peculiar way of making things valuable. The chapter discusses how the business model instruments such a mode of valuation, which we call *capitalization*. In order to do so, we characterize the particular kind of *encounter* that this mode of valuation requires between someone like Robert and someone like Bernard, that is, an entrepreneur and an investor.

The chapter proceeds as follows. We start by documenting the rise of business models, emphasizing their focus on the notion of value and the controversies that they have triggered among management scholars. The chapter then introduces recent approaches to business models, which shed light on the performative role that they can play, and explains the approach adopted here, which examines business models as *valuation devices* (Doganova 2011) and, more narrowly, as *capitalization devices*. An empirical section follows which investigates how business models work by focusing on two (p.111) moments of business model innovation related to the

birth of new industries (internet and biotechnology). The chapter concludes on capitalization as a singular mode of valuation instrumented by business models.

The Rise of Business Models

The business model is a recent invention. Ghaziani and Ventresca (2005) trace its first appearances back to the mid-1970s. The term then referred to computer-based models of business practices. Concomitantly to the advent of the 'Digital Economy', the mid-1990s marked a strong shift in the use of business models. In the ABI Inform database which the authors searched, the incidence of the term grew from less than ten articles per year until the early 1990s, to 600 articles in 2000. A more recent study using the EBSCO host database confirms this trend, with the number of publications reaching more than 1,000 per year in 2010 (Zott et al. 2011).

The rise in numbers, Ghaziani and Ventresca (2005) argue, goes hand in hand with a shift in the 'frames' to which the keyword 'business model' has been associated. Within its original frame (which the authors call 'computer/systems modelling'), the business model was a software model of an existing business, a simplified representation of an already functioning organization—similar to the scale model of a plane for example. Since the mid-1990s, the predominant frame of business models has been that of 'value creation', which the authors illustrate with the following excerpt from an article published in the *Journal of Business Strategy* in 2000: 'The key to reconfiguring business models for the knowledge economy lies in understanding the new currencies of value' (Ghaziani and Ventresca 2005, 538, citing abstract from Allee 2000). The change is blatant: business models no longer deal with depicting existing practices and organizations, but with finding new sources of 'value'. In a similar vein, Zott et al. (2011) observe the centrality of the notion of value in current conceptualizations of the business model, encompassing both the 'creation' and the 'capture' of value.

Ghaziani and Ventresca (2005) analyse the rise in numbers and the shift in frames as an instance of 'cultural change'. We argue that the change in question reaches beyond the domain of ideologies and beliefs, for the business model is not only a 'keyword' (or merely a 'buzzword', as some would say): it is a device that instruments new forms of valuation, to the advent

of which its expansion has contributed. A clear sign of the magnitude of change is the virulent reaction that the rise of business models triggered among strategy scholars. For example, Michael Porter—an eminent strategy scholar, who has also been an outspoken critic of business models—wrote: (p.112)

> Instead of talking in terms of strategy and competitive advantage, dot-coms and other Internet players talk about 'business models'. This seemingly innocuous shift in terminology speaks volumes. The definition of a business model is murky at best. Most often, it seems to refer to a loose conception of how a company does business and generates revenue. […] The business model approach to management becomes an invitation for faulty thinking and self-delusion.
>
> (Porter 2001, 72–3)

The quote from Porter captures quite well the main lines of criticism addressed to the business model in the management literature. They can be summed up into three key problems: the problem of definition, the problem of reference, and the problem of (in/dis)utility. First, scholars have pointed out, the business model is *untruthful to itself*, because it does not have a stable definition. It remains, as Porter puts it, 'murky at best', in spite of academics' and practitioners' continuous attempts to find the essence of the business model and fix it in a correct and clear definition. Second, the business model is *untruthful to its external reference*, that is, the enterprise that it is supposed to describe. It is no more than a 'loose conception of how a company does business'. It fails to fulfil its predictions—some have even denounced it as serving the purposive concealment of charlatan-entrepreneurs' real intentions. Third, the business model is not *useful*. Modelling, several studies have shown, does not help entrepreneurs in their planning endeavours, does not improve the performance of new ventures, and even harms it, by inducing managers into what Porter describes as 'faulty thinking and self-delusion'.

The harsh criticism that business models have received in the academic literature stands in sharp contrast to their widespread use by practitioners. Recent studies have suggested that this discrepancy may be due to the failure of prevalent theoretical approaches to account for what business

models are and what they do (Doganova and Eyquem-Renault 2009; Baden-Fuller and Morgan 2010; Perkmann and Spicer 2010), a failure due to the essentialist or functionalist perspectives that these approaches tend to adopt. An essentialist perspective searches for the essence of the business model, trying to provide a clear, precise, unambiguous definition of an object that seems to inevitably escape such attempts. A functionalist perspective assigns a presupposed function to the business model and tries to assess its efficiency accordingly. In so doing, prevalent theoretical approaches make two strong assumptions. The first is that the lack of a stable definition impedes the working of business models. The second is that the function of business models, known a priori, is to describe, faithfully represent, or accurately predict the characteristics of the external entity—a present or future enterprise—to which it refers.

However, as demonstrated elsewhere (Doganova and Eyquem-Renault 2009; Eyquem-Renault 2011), it is precisely the plasticity of the business (p.113) model—its ability to take on different shapes and meanings—which enables it to circulate among various actors (entrepreneurs, investors, customers, technology partners, and so forth), act as a boundary object (Star and Griesemer 1989), and instrument collective exploration activities (Doganova 2013). The narratives and numbers of which it is made do not merely depict an external entity; they are addressed to a public which they attempt to enrol. Rather than as a description, the business model thus functions as a *demonstration*—an exercise ‘situated on the crossroads of a probationary approach […] and of ostentatious conduct’ (Rosental 2007, 35). This suggests that the usefulness of business models does not lie in their ability to accurately represent the firm, but in their ability to circulate and enrol allies. Such an approach to business models shifts attention from their representational efficiency to the performative role that they might play in the construction of new businesses and markets.

Performativity and Valuation Devices

While there are different, and sometimes contradictory, dimensions of the idea of performativity (Muniesa 2014), three of them seem particularly relevant for business models. The first one has to do with *performance*. As the analogy with demonstrations suggests, the business model is not only a statement, but an act—an act of exhibiting something, presenting it to an audience, putting it on stage. The something in question may be a PowerPoint presentation projected at a start-up competition, a business plan submitted to investors, or the entrepreneur herself making her 'pitch' in front of someone to convince. In this respect, business models' most salient working mode is that of 'narratives that convince' (Perkmann and Spicer 2010).

Imagine Bill Gross, the founder of GoTo.com, speaking at a TED conference in 1998 about the idea of a web search engine that would rank results not according to their relevance but according to the price paid for them—an idea that gave rise to the 'sponsored search' or 'pay per click' business model which later made Google's commercial success (Battelle 2005; Levy 2011). Gross had to counter numerous objections coming from the audience, reminding his public about the Yellow Pages, where those who pay for the largest insert get the most calls, and underlining the transparency of the system he envisaged, which would display the prices that advertisers were willing to pay for each click. As noted by Stark and Paravel (2008) in their discussion of PowerPoint presentations, public demonstrations may be a perilous exercise, for they nurture counter-demonstrations. This is something that many entrepreneurs experience, as the publics whom they seek to enrol take hold of their model, and start criticizing and reshaping it.

(p.114) This brings us to a second dimension of business models' performativity, which has to do with them acting as 'scale models'—small representations of a future enterprise that can be played with, as children play with a train model for example, but also, and more importantly, experimented with, as when developers gather around the prototype of a new product to assess its technical and market feasibility (Wheelwright and Clark 1992), when economists manipulate the models they have built to inquire into them (Morgan 2012), or when architects scale models up and down to get to

know the buildings they are designing and gradually bring them into existence (Yaneva 2005). Comparing business models to the mathematical models used in economics and to the model organisms used in biology, Baden-Fuller and Morgan (2010) emphasize a central quality of models: they are objects that can be manipulated, experimented with. As such, business models can be used to produce knowledge about existing businesses (with exemplar cases like McDonald's or Dell being taught and discussed over and over again), change existing organizations (see, for example, Sosna et al. 2010), or build new ventures.

It is certainly in this latter case, when business models are used to build new ventures, that their performative role as scale models that can be manipulated and circulated is the most salient. The business model then describes a future enterprise—states what its activities will be, what customers it will serve and what alliances it will establish, etc.—and, in so doing, it helps bring this future enterprise into existence, because it helps enrol necessary partners, such as investors (Doganova and Eyquem-Renault, 2009). In other words, as a scale model, the business model is performative insofar it describes a set of relationships and, by circulating, it gradually builds the relationships it has postulated. The following quote from Steve Blank, a Silicon Valley entrepreneurship practitioner and author, illustrates the business model as a tool that draws links and makes links:

> A business model is actually a single slide. That's all it is. It's a single slide, a diagram, that shows all of the flows between your company and your customers. It's a single PowerPoint slide that you could put up and say: 'Here's our business model'. And in that one slide you have your material costs, you have your distribution channel, you have your customer acquisition cost. You have everything: your revenue, your expenses. And someone looking at that goes: 'I get it. I disagree with this line and with this line and with this line, but I get it.'
>
> (Transcribed from video footage of Cleantech Open 2009)[3]

Business models have the capacity to travel—not only within the entrepreneurial collective that emerges as a new venture is built, but also in the broader time and space of industries

and management science. Baden-Fuller and Morgan (2010) analyse business models as ‘role models’, maintained by management scholars’ labelling and classifying activities, and as ‘recipes’, (p.115) lying between general principles and exact templates. As such, business models lend themselves to replication, and this is where a third dimension of their performativity is to be found. Business models that have proved to ‘work’ in the past are reproduced in press articles, textbooks, and the practitioners’ and academic literature. They are working examples that entrepreneurs can copy and that investors can use as benchmarks to assess the propositions submitted to them. By associating themselves with a particular *type* and placing themselves in a particular category, firms gain legitimacy (Perkmann and Spicer 2010). They also spare modelling efforts.

Business models are thus performative in (at least) three ways: as performances, when the model is exhibited and put on stage; as scale models, which draw and build relationships, and hence help bring into existence that which they purport to describe; as role models, that are followed and imitated by new ventures. One question remains though: if business models are performative, what do they perform? That is, what worlds do they carry? And what do the new ventures that are built with them look like? We would like to address these questions by taking on board the observation of Ghaziani and Ventresca (2005) and Zott et al. (2011) that business models are intimately associated with the notion of value, and terms such as ‘value creation’ and ‘value capture’. The very notion of ‘value creation’ (i.e. the generation of revenue) appears indeed as a crucial marker of the investment imagination (Ortiz 2013, 2014) of the business model. So what kind of value is this valuation device meant to prompt, and what difference does this make?

Business Models for the Generation of New Markets

Google

It is no coincidence that the rise of business models was concomitant to that of the digital economy. A key challenge that the internet entrepreneurs of the 1990s were facing was how to generate revenues for their start-ups, given that services were expected to be provided for free. Take Google, for example (see Battelle 2005; Levy 2011). We often think of the PageRank algorithm as Google's greatest invention. Indeed, the technology that the start-up's founders developed in the late 1990s while studying at Stanford represented a dramatic improvement in comparison with existing search engines, e.g. AltaVista. The latter ordered webpages by reading their content and relying on keywords. Taking inspiration from the citation mechanism in the academic literature, the PageRank algorithm ordered webpages according to the number of links pointing at them, which greatly enhanced the relevance of search results. While Google's technology attracted users, investors, and public attention almost immediately, it took the start-up two years to find a business (p.116) model for its search engine. The invention of this business model—known as AdWords at Google, 'pay per click', or 'sponsored search'—was no less important for the development of the company than the PageRank algorithm.

The business model that made Google's success was invented in 1998 by a start-up called GoTo.com (later renamed Overture). At that time, the predominant business model in the industry followed classic advertising methods. Internet start-ups provided their users with free services and made money (if they did) by displaying ads on their websites—ads that visitors were faced with and on which they were likely to click if interested. The key metric here was that of traffic: the more traffic a website (e.g. Yahoo's portal) had, the higher price it could require from advertisers willing to display themselves on the website in the hope to redirect some of the traffic that it drew onto their own websites. The intuition of GoTo.com was the following: it was not only traffic—the numbers of visitors coming to a website—that had value, but the ways in which these visitors were behaving, and more precisely the words that they were typing. These words had potentially commercial

value, for they expressed the—potentially buying—intentions of the visitor. To put it in marketing terms, visitors with a ‘purchase intention’ had much greater value for the online merchants to which they could be matched, and a lower ‘cost of acquisition’ than that incurred by placing an ad in front of numerous but undifferentiated internet users who were most likely uninterested, and sometime even irritated, by the ads that they were forced to see.

How can value be put on the words typed by a visitor in a search engine? GoTo.com’s idea was to sell these words to online merchants. How can a price be put on them? GoTo.com made online merchants bid for the keywords they wanted to be associated with, and was paid for every click that led a visitor from its search engine to a merchant’s website—hence the name ‘pay per click’ for this business model. The idea was controversial: instead of ranking webpages according to their content, as search engines did at that time, or according to the links that pointed at them, as Google did, GoTo.com was ranking webpages according to the price that those who produced them were willing to pay. The most ‘relevant’ results were neither the most similar in terms of content, nor the most popular on the web, but the ones that led to the highest bidder. And yet, it worked: by 1999, GoTo.com had attracted thousands of merchants and millions of searches. Two years later, Google introduced AdWords, and started displaying the results of ‘sponsored’ search (i.e. results displayed because merchants had paid to be associated with a given keyword) next to those brought about by the ‘natural’ search instrumented by the PageRank algorithm. AdWords sold keywords through a combination of bidding and pay per click —an imitation for which it was sued by GoTo.com—while adding its own flavour in the ranking of results by taking (p.117) into account the popularity of commercial links (i.e. the numbers of times they had been clicked on) when ordering them.

In his reflections on the performativity of networks, Healy (2011) analyses Google’s PageRank algorithm as perfomative, insofar as it was built upon a network-based theory of relevance where citations indicate the relative importance of an object (be it an academic article or a webpage); assumed a certain network structure where some nodes are more important than others for they are more central, and at the same time helped reproduce this structure by reinforcing the

centrality of the webpages that it ranked highest; was adopted by many internet users in their practice and understanding of what web search is; and was manipulated by some internet websites that played on the algorithm's assumptions to improve their ranking (giving rise to a new industry called 'search engine optimization'). This line of analysis may be extended to the other major invention of Google. AdWords, and the sponsored search/pay per click business model that it copied and popularized, helped establish an internet market whose survival was still highly uncertain in the late 1990s and seriously threatened by the 2000 crash. It served as a 'role model' for new start-ups entering the market, and for the investors who funded them, both copying a template that had proved its economic viability. By allowing to target potential customers and hence to decrease their 'cost of acquisition', it also unleashed markets for many small online shops which could not afford to buy advertising space on central internet locations such as the Yahoo portal.

If the PageRank algorithm embeds citation-based definitions of relevance and network imageries, the AdWords business model carries a peculiar theory of valuation. Instead of lying in present size (e.g. the overall number of visitors that an online portal reports, as indicated by 'traffic' or 'audience' metrics), here value is derived from the *future flow* of singular transactions, each of which consists in a click that a particular user, driven by a 'purchase intention', makes to reach a certain product and, thereby, the merchant who happens to offer that product and rank well. In such a model, valuation both occurs in 'real time'—the time of users clicking on links and merchants bidding for keywords—and deploys in the future, as the search engine gets a grasp on the transactions to come and 'monetizes' them. The model thus enables both the creation of economic value, by turning the words that someone types in a search engine into a commodity that can be sold and bid for, and the capture of the value thus created, by means of a complex technology of tracing clicks and visualizing transactions.

Genentech

In his study of the ‘science business’ of biotech, Pisano (2006b) identifies the birth of the biotechnology industry with the founding of Genentech, the first (p.118) biotechnology start-up. Genentech was founded by scientist Herbert Boyer and venture capitalist Robert Swanson in 1976. Three years earlier, Boyer and colleagues had introduced a new technique of genetic engineering called recombinant DNA (rDNA). The technique was a breakthrough because it enabled producing therapeutic proteins, such as insulin (until then, proteins could not be synthesized through traditional chemical methods because of their large size; a few proteins could be obtained from natural sources, such as pig pancreases for insulin). Swanson, the story goes, heard about this and contacted several scientists, among whom Boyer, who agreed to talk to him for ten minutes. At the end of a three-hour meeting, the two decided to create a firm that would exploit the possibilities offered by recombinant DNA in view of developing new drugs, namely insulin.

Drug development is a very lengthy, costly, and uncertain process. While Google’s founders could put together the first demo of their search engine with materials at hand, Genentech would have needed years of time and millions of investment to master the rDNA technique and go through the phases of discovering, developing, and commercializing a new drug. As noted by Pisano, the pharmaceutical industry had huge barriers to entry, and had not seen any successful entries since 1944. As in the case of Google, the innovation that Genentech made was twofold: not only did it introduce a new technology for drug development, but it also invented a new business model that was then copied and adapted by the hundreds of biotech start-ups founded in its wake. It gave rise to an industry that, for thirty years, has attracted more than $300 billion in capital (Pisano 2006a). What was that business model?

The model proposed by Genentech relied on alliances drawn with universities, venture capital firms, and incumbent pharmaceutical companies. The biotech start-up would focus on research, in collaboration with universities. In the case of Genentech, Boyer retained his position at the university and only consulted for the company he had co-founded; the company began life as a ‘virtual enterprise’ with no labs and research conducted through contracts with universities. In the

absence of revenues, the start-up's research would be funded by venture capital for a few years. At a certain stage of the drug development process, the start-up would enter into an R&D (research and development) partnership with a large pharmaceutical company that would fund the remaining development of the drug in exchange of the rights to commercialize it. Thus, Genentech and Eli Lilly signed an agreement for recombinant insulin in 1978 (the resulting drug, Humulin, was the first approved biotechnology drug). For Pisano (2006b, 85–6), this agreement pioneered 'an entirely new business model for entrants into the pharmaceutical industry'; it was 'a critical business innovation' which 'created a template' and 'provided a proof of feasibility of R&D collaboration as a mode of funding'.

(p.119) The invention of this business model was critical for the emergence of the biotechnology market—a market in which promises of future drugs are being bought and sold. It enabled the transformation of scientific or technological entities—such as recombinant DNA in the case of Genentech, a new molecule, or knowledge about a biological mechanism of action—into economically valuable assets that have the capacity to generate streams of future cash flows. The profile of this stream is quite different from the one that we examined above: instead of the series of almost continuous but very small amounts of money generated by the pay per click model, only a few inflows, but of a high magnitude, occur here. Typically, a start-up would raise several rounds of venture capital investment; then, when establishing a partnership with a pharmaceutical company, receive research funding and milestone payments on different stages of drug development, as well as royalties if a drug reaches the market; finally, sell itself to the capital markets or to a larger company, with the money going back to the start-up's founders and investors. For example, Genentech was sold to Roche in 2009 for 43 billion dollars. This, of course, is quite an exceptional case in the history of the biotechnology market. Still, the amounts of money that flow between start-ups, investors, and pharmaceutical companies are often counted in millions of dollars. A significant portion of these flows end up sinking, as the probabilities that a development succeeds and a new drug reaches the market are very small, and the chances that a

start-up continues attracting the funding it needs until it finds a buyer for its products or for itself are not high.

While Genentech's business model was copied by many start-ups entering the biotechnology market that emerged from it, the development of the industry gave rise to new business models (Mangematin et al. 2003 ; DiVito 2012). Nevertheless, this model left an enduring imprint, serving not only as a template, but also as a foundational myth for the biotechnology community whose members still regularly evoke that 1976 meeting between a Nobel prize-winning scientist and a visionary venture capitalist (Pina Stranger 2011). It epitomizes the surprising capacity of business models to orchestrate encounters and, in so doing, to transform a priori non-economic entities (such as a genetic engineering technology) into assets that generate streams of future revenues, that is, into capital.

Business Models and the Crafts of Capitalization

The business model is a device that performs a singular mode of valuation through which a variety of things—keywords, online behaviour, a genetic engineering technology—are transformed into 'assets' that have the power to generate streams of future revenues. Valuation revolves around this (p.120) *asset-becoming* process: a process through which something becomes an object of investment and, therefore, an object that is considered primarily from the angle of capitalization, that is, as a vehicle for return on investment. In other words, the business model makes things valuable by capitalizing them. The device carries its own theory of valuation, so to say. And this embedded theory is that value does not come from just considering things as objects you can buy and sell in a market. It comes from considering the thing from the viewpoint of its 'earning power' (Muniesa 2011, 2014, 104 ; Doganova 2014), that is, in its capacity to ensure a stable stream of future revenues to the investor. It is in this very particular sense, we claim, that the object of a business model *becomes business*.

The cases of Google and Genentech stand as authoritative exemplars of the powers of business models to create new markets, new business opportunities, and new economic realities. They also illustrate two critical traits of the configuration a capitalization device sets in motion. Which are

those? We refer, first, to the orchestration of a scene in which an entrepreneur and an investor encounter and stimulate each other and, second, to the resolution of this encounter through the actualization of a future revenue in the form of discounted value.

Let us focus on the first trait: that of the role of the business model in propelling an *encounter* between an entrepreneurial venture and a capitalistic investment. The business model stands, primarily, as a proposition involving two *dramatis personae*: the entrepreneur, who delivers the 'value' proposition, and the investor, who receives and assesses it. It does not matter if those two anthropomorphic actors correspond in reality to employees in bureaucratic organizations (e.g. a firm, a bank). What counts is their impersonation in an actual physical encounter between two characters: two persons, or rather personalities, that in the case of Genentech, for example, achieve an almost legendary status. The choreography of the historical meeting between Boyer and Swanson has been told and remembered again and again. A quick net search for images of the encounter provides astonishing evidence of the iconic, near-mythical character of this event.[4] And this is not a detail of folklore. The actual event of the encounter is a crucial step in the valuation configuration. The business model is rehearsed and presented. It is a demonstration of value, an exercising of the valuating self in which the entrepreneur and the investor need to simulate each other in order to stimulate each other (Muniesa 2011, 28), the purpose being the attainment of a mutually beneficial state of capitalization.

We talk about 'orchestration' and 'choreography' because the configuration of these types of business model encounters does actually require the establishment of a whole industry of business *matching, pairing*, and *partnering* (Doganova 2012). In the biotech industry, consultant firms and dedicated (p.121) service providers specialize in the construction, maintenance, and commercialization of databases that operate as the informational ferment for the pairing of start-ups and venture capitalists. Other firms provide this industry with a suite of 'partnering conferences' that have become requisite hubs for the achievement of capitalization encounters.

Once this encounter has been set up and figured, there enters the second noteworthy trait of the business model considered as a capitalization device: that of shifting valuation from present products to future relationships. ‘Future’ is indeed the word that most evidently resonates in the proposition that the entrepreneur addresses to the investor, and in what the latter asks to hear. The investor, the motto goes, does not look at what the start-up is and has got in the present, but at what it can become in the future. The business model rarely goes very deep into the nitty-gritty of the underlying technology; making sense of the business model is less about assessing the technical verisimilitude of a technology than about envisioning the concatenation of prospective business links. In this respect, the operation instrumented by the business model consists in detaching value from objects in the present and attaching it to connections in the future. This observation resonates with McGrath’s (2010) analysis of business model thinking as a shift away from classic strategy paradigms, which place value in organizations’ present positions or resources—as in Porter’s five-forces model or in the resource-based view of the firm.

It is not surprising that business models gained prominence with the ‘internet revolution’, as a major concern then was to transform technologies that were obviously valuable to their users (e.g. a search algorithm) into technologies that were also valuable to investors, for they could be capitalized upon. Google ‘had value’ because words typed by users in search queries could be thought of as ‘having value’—value for users, but also for Google and for Google’s financiers. But, as this value becomes prospective, a number of precautions apply in order to protect and reward the investor in time. As a capitalization device, the business model is hence entwined with *discount* methodologies in capital investment (Doganova 2011, 2014). The enormous money flows that Google’s AdWords business narrative entailed were not a reflection of the actual price of keywords in a spot market, but the very outcome of this compound of capitalization.

Conclusion

It is emblematic that the study of business models in the management literature increasingly focuses on the issue of business model innovation (Chesbrough 2010), and the invention of ‘social business models’ in particular (p.122) (Thompson and MacMillan 2010; Yunus et al. 2010). Envisaging the business model as a device for capitalization—whose valuation principle consists in transforming things into future flows of revenue, by detaching value from present objects and attaching it to future relationships—helps us understand why it developed first within the contexts of the biotech and internet business ‘revolutions’, and how it managed to move beyond these particular settings to incorporate other valuation themes, such as social entrepreneurship.

This capacity of business models to *colonize* not only the future, but also spheres of activity which had hitherto remained out of the scope of capitalization reveals them as a particularly efficient instrument within the trend of what Leyshon and Thrift (2007) have called the ‘capitalization of almost everything’. Financial capitalism, they argue, ‘is dependent on the constant searching out, or construction of, new asset streams’ (Leyshon and Thrift 2007, 98). Such kinds of analyses usually concentrate on the financial arena proper, i.e. on processes of securitization, speculation, and financialization. But, as instances of the wider problem of the logic of *the investor*, they meet our observations on business models as performative instruments for the production of ‘asset streams’. The realities explored here thus fall within the scope of what Horacio Ortiz has aptly called ‘the limits of financial imagination’ (Ortiz 2011, 2014).

Should this be a source of concern? The performative capacities of business models, and the key role they play in the financing of innovation, can of course be praised for their contribution to the augmentation and improvement of economic reality (and of society at large)—although one can rightly ask whether this means the obliteration or not of other ways in which collective decisions about the improvement of economic reality could or should be taken (Ortiz 2014, 46). We do not explore this question further here. This chapter is, first and foremost, an attempt at signalling the remarkable features

of the business model considered as an instrument for ‘making things valuable’.

An instrument for ‘making things valuable’, the business model is also an instrument for ‘making things’. Recall Bernard’s story evoked in the introduction of this chapter: the venture capitalist shaped the business model of the start-up turning it from a software provider into a web search engine. The enrolment of investors, conditioned upon the application of business models that have the capacity to generate steady streams of future revenues, thus has consequences for the characteristics of the products and services that populate markets. Entrepreneurs profile their technologies for capitalization, in anticipation, or as a consequence, of the investor’s gaze. Venture capitalists, faced with a range of investment proposals from which they need to pick one or two, select the technologies that they will help move to the market. This is both complicated and consequential. It is complicated, but it becomes (p.123) simpler when technologies become comparable once they have been pushed through the mechanism of the business model and transformed into streams of cash flows which can then be capitalized and summed up to a unique number: e.g. the investment’s net present value or its rate of return. This (and here comes the consequentiality) inevitably gives priority to projects that score highest. As capitalization devices, thus, business models certainly propel innovation—although they do not do it in a very innovative way.

Notes

References

Bibliography references:

Allee, V. 2000. ‘Reconfiguring the Value Network’. *Journal of Business Strategy* 21(4): 36–9.

Aspers, P. and J. Beckert (eds.). 2011. *The Worth of Goods: Valuation and Pricing in Markets*. Oxford: Oxford University Press.

Baden-Fuller, C. and M. S. Morgan. 2010. ‘Business Models as Models’. *Long Range Planning* 43(2–3): 156–71.

Battelle, J. 2005. *The Search: How Google and Its Rivals Rewrote the Rules of Business and Transformed Our Culture*. New York: Penguin.

Berthoin Antal, A., M. Hutter, and D. Stark (eds.). 2015. *Moments of Valuation: Exploring Sites of Dissonance*. Oxford: Oxford University Press.

Chesbrough, H. 2010. 'Business Model Innovation: Opportunities and Barriers'. *Long Range Planning* 43(2–3): 354–63.

(p.124) DiVito, L. 2012. 'Institutional Entrepreneurship in Constructing Alternative Paths: A Comparison of Biotech Hybrids'. *Research Policy* 41(5): 884–96.

Doganova, L. 2011. 'Necessarily Untrue: On the Use of the Discounted Cash Flow Formula in Valuation of Exploratory Projects'. Paper presented at the 7th Critical Management Studies Conference, Naples, Italy.

Doganova, L. 2012. *Valoriser la science. Les partenariats des start-ups technologiques*. Paris: Presses des Mines.

Doganova, L. 2013. 'Transfer and Exploration: Two Models of Science–Industry Intermediation'. *Science and Public Policy* 40(4): 442–52.

Doganova, L. 2014. 'Décompter le futur. La formule des flux actualisés et le manager-investisseur'. *Sociétés Contemporaines* 93: 67–87.

Doganova, L. and M. Eyquem-Renault. 2009. 'What Do Business Models Do? Innovation Devices in Technology Entrepreneurship'. *Research Policy* 38(10): 1559–70.

Eyquem-Renault, M. 2011. 'Analyse pragmatique du business model et performations de marché dans l'entrepreneuriat technologique'. PhD, Ecole des Mines de Paris.

Ghaziani, A. and M. Ventresca. 2005. 'Keywords and Cultural Change: Frame Analysis of Business Model Public Talk, 1975–2000'. *Sociological Forum* 20(4): 523–59.

Healy, K. 2011. 'The Performativity of Networks'. Working paper.

Levy, S. 2011. *In The Plex: How Google Thinks, Works, and Shapes Our Lives*. New York: Simon & Schuster.

Leyshon, A. and N. Thrift. 2007. 'The Capitalization of Almost Everything: The Future of Finance and Capitalism'. *Theory, Culture & Society* 24(7–8): 97–115.

McGrath, R. G. 2010. 'Business Models: A Discovery Driven Approach'. *Long Range Planning* 43(2–3): 247–61.

Mangematin, V., S. Lemarié, J.-P. Boissin, D. Catherine, F. Corolleur, R. Coronini, and M. Trommetter. 2003. 'Development of SMEs and Heterogeneity of Trajectories: The Case of Biotechnology in France'. *Research Policy* 32(4): 621–38.

Morgan, M. S. 2012. *The World in the Model: How Economists Work and Think*. Cambridge: Cambridge University Press.

Muniesa, F. 2011. 'A Flank Movement in the Understanding of Valuation'. *Sociological Review* 59(special iss. 2): 24–38.

Muniesa, F. 2014. *The Provoked Economy: Economic Reality and the Performative Turn*. Abingdon: Routledge.

Ortiz, H. 2011. 'Marchés efficients, investisseurs libres et Etats garants. Trames du politique dans les pratiques financières professionnelles'. *Politix* 95: 155–80.

Ortiz, H. 2013. 'Financial Value: Economic, Moral, Political, Global'. *HAU: Journal of Ethnographic Theory* 3(1): 64–79.

Ortiz, H. 2014. 'The Limits of Financial Innovation: Free Investors, Efficient Markets, and Crisis'. *American Anthropologist* 116(1): 38–50.

Perkmann, M. and A. Spicer. 2010. 'What Are Business Models? Developing a Theory of Performative Representations'. In *Technology and Organization: Essays in Honour of Joan Woodward*, ed. N. Phillips, G. Sewell, and D. Griffiths. Bingley: Emerald Group, 265–75.

Pina Stranger, A. 2011. 'Apprentissage collectif à l'échelle inter-organisationnelle. Le cas des entrepreneurs en biotechnologie'. PhD, Université Paris-Dauphine.

(p.125) Pisano, G. 2006a. ‘Can Science be a Business? Lessons from Biotech’. *Harvard Business Review* 84(10): 114–25.

Pisano, G. 2006b. *Science Business: The Promise, the Reality, and the Future of Biotech*. Boston: Harvard Business School Press.

Porter, M. E. 2001. ‘Strategy and the Internet’. *Harvard Business Review* 79(3): 62–78.

Rosental, C. 2007. *Les capitalistes de la science. Enquête sur les démonstrateurs de la Silicon Valley et de la NASA*. Paris: CNRS Editions.

Sosna, M., R. N. Trevinyo-Rodríguez, and S. R. Velamuri. 2010. ‘Business Model Innovation through Trial-and-Error Learning: The Naturhouse Case’. *Long Range Planning* 43(2–3): 383–407.

Star, S. L. and J. R. Griesemer. 1989. ‘Institutional Ecology, “Translations” and Boundary Objects: Amateurs and Professionals in Berkeley’s Museum of Vertebrate Zoology, 1907–39’. *Social Studies of Science* 19(3): 387–420.

Stark, D. 2009. *The Sense of Dissonance: Accounts of Worth in Economic Life*. Princeton: Princeton University Press.

Stark, D. and V. Paravel. 2008. ‘PowerPoint in Public: Digital Technologies and the New Morphology of Demonstration’. *Theory, Culture & Society* 25(5): 30–55.

Thompson, J. D. and I. C. MacMillan. 2010. Business Models: Creating New Markets and Societal Wealth’. *Long Range Planning* 43(2–3): 291–307.

Wheelwright, S. and K. B. Clark. 1992. *Revolutionizing Product Development: Quantum Leaps in Speed, Efficiency, and Quality*. New York: Free Press.

Yaneva, A. 2005. ‘Scaling Up and Down: Extraction Trials in Architectural Design’. *Social Studies of Science* 35(6): 867–94.

Yunus, M., B. Moingeon, and L. Lehmann-Ortega. 2010. ‘Building Social Business Models: Lessons from the Grameen Experience’. *Long Range Planning* 43(2–3): 308–25.

Zott, C., R. Amit, and L. Massa. 2011. ‘The Business Model: Recent Developments and Future Research’. *Journal of Management* 37(4): 1019–42.

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(2.) The illustrations in the introduction are taken from Doganova (2012). The quotes are excerpts from the author’s interviews with Robert and Bernard (for confidentiality reasons, these are fictitious names).

(3.) Steve Blank’s presentation at the 2009 edition of the Cleantech Open (an important business fair) is available online from YouTube: <http://www.youtube.com/watch?v=CSDXxkSLBzw>, accessed 20 June 2014.

(4.) An iconic reportage is available from the website of the Life Science Foundation: <http://www.lifesciencesfoundation.org/events-Genentech_Inc.html>, accessed 20 June 2014.