

The assemblage of Digital Engagement Metrics as a market device: the case of independent film

Michael Franklin

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Whilst every effort has been taken to keep other connected parties anonymous, a number of factors mean that a reader could potentially discover the identity of connected businesses. The small size of the UK film industry and abundance of film data online means that the names of companies connected to the films studied could be discovered. It is important to that no reputational damage is risked for the case study company or associated parties. The company used emotive language in describing relations with partners and is also currently raising capital for a new business, thus any negative sentiment perceived by industry actors could have a detrimental impact on future activities. This further necessitates the embargo.

These points show that this research needs to be embargoed in order to avoid serious damage to the case study company, associated companies and the researcher. This mode of operation was agreed at the beginning of the research and formed part of the ethical basis for the study. Therefore the work must be placed under embargo.

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Dedication

For Nell and for my parents, with all my love and thanks.

Abstract

Digital technology has radically disrupted the established ways of organising the film industry. However, digital initiatives such as marketing and distribution strategies involving social media and online distribution have also provided means through which filmmakers manage this environment. I investigate the role of the digital data involved, which I term Digital Engagement Metrics (DEMs), in market reconfiguration. Through exploratory, longitudinal case study of market construction for independent films, the thesis articulates the interdependent combination of attributes that co-constitute DEMs' highly mobile, and multifaceted valuation capacities, and develops a conceptualisation of their role as a market device.

I engage with the literature of translation, calculation, and the performativity and materiality of markets. I then develop an approach for tracing market activity to understand the interaction of networked agencies that shape the arrangement of economic transactions. My analysis is delivered in three empirical chapters, which provide rare data on the emergent digital practice of a film production company. I chart the progressive establishment of DEMs' role in the hybridisation of established market attachment frameworks, and the instantiation of new modes of coordinating market actors. I conclude that the dynamic assembly, content and distributed architecture of market arrangements involving DEMs simultaneously shape the product and enable its calculation. In addition to extending the reach of market studies into a new empirical field, I make a number of contributions to the theoretical literature. My findings bring two coordinating kinds of performativity into focus. These are the creation of felicitous conditions required to mobilise DEMs as an organisational concept, and the digital materialisation of the audience both as the market, and as a qualified property of the market object. Reading DEMs through the market devices lens renders previously hidden modes of calculation visible, and this has implications for developing assemblage-oriented research in the creative industries.

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Glossary

Actor Network Theory (ANT)

Digital Cinema Package (DCP) - A digital replacement for film prints, for projection in cinemas.

Digital Engagement Metrics (DEMs)

Electronic Sell Through (EST) – A channel for selling download to own digital film copies.

Film Value Chain (FVC) – Traditional conceptualisation of the segmentation of risk and reward in the film industry across time and between different companies.

National Film Fund (NFF) – Film financier.

Public Television Broadcaster (PTVB)

Prints and Advertising (P&A) – A shorthand term for all marketing and distribution costs associated with a film's release.

Science and Technology Studies (STS)

Sociology of Scientific Knowledge (SSK)

Video-On-Demand (VOD) – A channel for selling digital film copies for purchase and rental, delivered via internet, cable and satellite.

Chapter. 1 Introduction

Introduction

Digital technology has radically disrupted the established ways of organising the film industry. The costs of production, systems of distribution and methods of marketing have all been greatly altered. These changes have exacerbated existing financial challenges for filmmakers, such as extreme uncertainty over revenue generation. However, digital tools have also provided means through which filmmakers manage this new economic environment, including the use of innovative marketing and distribution strategies. In this thesis I discuss the reconfiguration of the industry by examining the role of specific digital data, which I term Digital Engagement Metrics (DEMs). These metrics are produced by interactions involving technologies such as social media and Video On Demand (VOD) services. Through longitudinal case study, interrogating the composition of the market for different films, I find a variety of new and previously invisible, behind-the-scenes modes of valuation work influenced by DEMs. Their role in re-constituting multiple market arrangements is attributable to a deeply interdependent set of characteristics. I find our understanding of the dynamic and material market construction efforts of DEMs is developed by conceptualising their as role as that of a market device (Callon, Millo & Muniesa, 2007: 2).

I make a number of contributions to the theoretical literature as well as extending the reach of market studies into a new empirical field. I identify two complementary elements of market performativity involving digital materials, which serve to create felicitous conditions necessary for DEMs as a market device to emerge (Mason, Kjellberg & Hagberg, 2015), and make the audience present as the market. This articulation of the explanatory power of digital market devices has implications for further developing assemblage-oriented research in the cultural and creative industries (Entwistle & Slater, 2013). I set out the introductory chapter as follows. I first provide key background to my motivation for study and introduce the area of research. Then I summarise existing prior work on the topic of film metrics and management issues. Finally I lay out the topic and content of the thesis chapters, mapping the course for understanding this research.

Motivation for study

This research is inspired by my particular combination of personal education and professional experience. As an undergraduate and masters student I found philosophical accounts of the change from photographic film to digital technology in cinema deeply interesting. The construction of a film language from such different materials has complex implications for film as a creative medium. The interaction of formal arrangements, called *schemata*, and the aesthetic components of film is a core theme in film philosophy (Gaut, 2010a). Understanding a film's meaning as co-constructed implicates the distributed work of the film's physical or digital material, the viewer, the filmmakers and often a specific space, the cinema. The framing of these multiple elements to gain insight to the creative object is an established mechanism in the literature of film theory (Yacavone, 2009), and one that sparked my interest in agency and materiality within the film field.

Thinking about processes of framing is an important task in the business of filmmaking. Determining 'what counts' and how a company calculates such a perspective in terms of a film's value, is an area of research with increasing salience for digital aspects of the industry, for example in understanding digital marketing messages for movies (Henning-Thurau, Wiertz & Feldhaus, 2012). The connection between concepts in film theory and management, for example of *montage* in reading cinema (Gaut, 2010a) and *bricolage* in understanding markets (MacKenzie & Pardo-Guerra, 2014) is one that I find striking. Having witnessed emergent responses to digital disruption during my employment as a consultant to film investment funds, the UK Film Council and Film London during 2008-2010, I appreciate interpretations that recognise successful innovation involves ad-hoc resource use.

Working in film finance, marketing and distribution I have seen a shift from calculating a film's financial value according to traditional characteristics like script and cast, towards including greater concern for digital business data. Widespread adoption of digital film production tools (photography and editing) has been followed by radical disruption to all other interrelated industry areas, from international sales of rights to exploit intellectual property, to the audience's consumption of film. My

experience of working on digital business models for NESTA¹ made it clear to me that market reorganisation around the value of digital engagement would be a dominant theme for the orientation of the industry, and therefore an important area of examination in the study of markets.

I now explain the disruption caused to the independent film business by digital technology. I describe the dominant approaches to studying the film industry and related metrics. It is my argument that these approaches, either based on a linear construct, the Film Value Chain (FVC) (Bloore, 2009), or positivistic analyses of probabilistic correlations between financial returns and digital characteristics, do not fully capture the continual, active assembly of the film market.

Digital disruption and the independent film business

The British public has recognised the artform of film as “one of the most powerful cultural agents of the last 100 years” (Christie² et al., 2009: 5). The UK film industry is also significant economically, it contributes £1.6 billion per annum to national Gross Domestic Product and employs more people than fund management or pharmaceutical manufacturing (Oxford Economics, 2012: 6)³. Film has recently experienced an “unprecedented pace and scale of change – principally because of the impact of digital technology” (British Film Institute, 2012: 12). Dramatic transformations to creative business practices (Kinnally, Lacayo, McClung, & Sapolsky, 2008; Kretschmer, Klimmis & Wallis, 2001), engendered by the Internet, the web and related information and communication technologies (ICTs) (Dutton 2013, Fuchs 2013) have led film into a period of radical disruption following that felt by the music industry. For example, in the UK, increased competition for consumers’ time and money, along with the impacts of digital piracy have led to vast reductions in financial returns from film. Between 2002 and 2012, accounting for inflation, revenues from physical video rental and retail fell by £908m, but in the same period

¹ National Endowment for Science Technology and the Arts, a public body, now Nesta, an independent innovation charity.

² For the sake of space I depart from format protocol and list the report’s coauthors here: Clauss, Topp, Smith, Modot, Angrisani, Guenin, Dumont, Moullier, & Giles.

³ These figures relate to all film production activity in the UK, but only the distribution and exhibition activity related to UK films and so exclude the impact of foreign films released by UK companies.

VOD revenues increased by only £164m (British Film Institute, 2013). By 2013 the VOD market value was estimated to have increased 37% in one year (British Film Institute, 2013), both the scale of disruption to previous norms and the rate of growth in new areas are pressuring a reorganisation of economic and management practices.

The negligible costs of digital reproduction (Rayna, 2008), fluid circulation of digital files (Kallinikos & Mariátegui, 2011) and spreadable nature of their content (Jenkins, Ford & Green, 2013) have combined to challenge established ways of working in the film industry. New modes of organising are coming to the fore. Due to less industry capital for film production and for paying licensing fees to buy films, companies are motivated to find innovative ways to deliver films to audiences and more engaging ways to entice consumers to watch films legally. These interrelated strategies use digital assets and services: video, online games, transmedia (cross platform) storytelling, and dissemination tools including social networks, blogs, streaming and download services, in attempts to create greater overall consumer demand and thereby increase total revenues. Additionally, in order to obtain a greater proportion of such revenues than usual, production companies use digital technologies to circumvent market participants that previously held gatekeeping roles between them and the paying audience. For example, producers can cut out distributors by making their film available online via a self-run website. This practice is referred to as dis-intermediated distribution (Searle, 2011).

The use of online technology leaves traces. The viewing of a video, the sharing of a news item, the posting of a comment, and the *Liking* of a film's page on Facebook all produce interconnected quantitative data. I term such data Digital Engagement Metrics (DEMs). This thesis investigates and demonstrates the previously unexamined and important role that such data play in the construction of the independent film market. Despite many digital metrics being public, their agency in market construction is often hidden and has been neglected by research. For example, social media services and online VOD platforms connect films and people in new ways and at different times and in doing so they produce metrics of evaluation. that To understand the role of digital mediation in ways of arranging the film market, I concentrate on networks of material and human actors, processes and events that construct the market. This choice allows me to use DEMs and their multifaceted role

as a conceptual lens to both articulate the impact of digital engagement technology, and contribute to the study of how markets are assembled.

The Film Value Chain

The dominant manner in which practitioners and management scholars have examined the industry, and changes to its operation is through reference to the established conceptualisation of the independent film business, the FVC (Bloore, 2009; Natividad, 2013). This construct describes filmmaking as a chronological sequence of separate, specialised tasks. A film passes through development when the script is written, it is then financed including through ‘presales’, the selling of rights to distribute the film in future for an upfront fee. Then the film can be physically produced i.e. shot and edited with postproduction effects added. The finished film is licensed internationally, and then distributed via exhibitors (cinemas) and other channels or ‘windows’ of exploitation for consumption by the audience, including DVD, TV, and VOD.

Figure 1. The Film Value Chain model (adapted from Bloore, 2009)



The independent film industry is defined as independent from the major US studios, Disney, Fox, Universal, Paramount, Sony and Warner Brothers. Due to the majority of film’s large costs having to be sunk upfront without reliable predictors of returns (Vogel, 2007), only these few, large companies are able to undertake all of the above cross-FVC activity themselves. In contrast, the independent system, which works similarly across the world, involves a complex set of temporarily associated organisations, which Bloore (2009) calls ‘players’ and I refer to as ‘market actors’.

Responsibility for particular tasks, project ownership and the related potential financial losses and gains are understood to be passed down along the chain. For example, an international sales agent will sell on the rights of exploitation to distribution companies in different countries, benefiting from a commission but not typically from the Box Office directly. Therefore no single market actor bears all the

work, costs, or potential rewards. Companies develop different management strategies according to how directly they bear the weight of consumer demand uncertainty, the uncertainty over whether the public will buy the film. Producers work on one or two films at once. They avoid being fully accountable for the failure of such an expensive creative product by selling on majority of rights to future revenues to external financiers. Distribution companies market a portfolio of completed films directly to the audience and take a proportion of revenues from Box Office and home entertainment sources, in the belief that the hits will more than cover their losses.

Addressing the issue of managing uncertainty is a key occupation of the creative industries literature (Caves, 2000; Demptser, 2006; Townley & Beech 2010), a large proportion of film industry research has focused on the coordination of market action under ambiguous conditions (De Vany, 2004), characterising the FVC in these terms (DCMS, 2012; Finney, 2010; Hadida, 2009). The management of practitioner network relationships summarised by the FVC has been explored with specific regard to network structure (Cattani & Ferriani, 2008), and network agency (Blair, 2003). Research foregrounds the importance of the continued remaking of individual and company ties for the industry to operate (Faulkner & Anderson, 1987), and Ebbers & Wijnberg (2009) argue that the network of alliances in the film industry, may ultimately determine the success or otherwise of the enterprise and are influenced by reputational status.

The limited research adopting business process modelling for identifying uncertainty and assessing the adequacy of uncertainty measures in film, uses the FVC as a descriptive base (Seidel, Rosemann, Hofstede, Bradford, Shortland & Court, 2006). DeFillipi & Arthur (2002) examine the nature of independent film's project-based enterprise and the interaction of a community of workers. They conclude that management inquiry of the field should move away from a firm centric-view and attempt to account for the dynamism of multiple community involvement.

These studies read the organisation of filmmaking activity, whether explicitly labelled the FVC or not, in terms of managing through interpersonal and company relationships. The segments of a chain each deal with neat sequential parcels of risk and reward. Continued reference to the independent film industry in this language by

professionals and academics has contributed to the legitimisation and concretisation of the FVC construct. However, there are many market details that go unacknowledged when smooth transition between chain segments is assumed. It is in the contested space between distinct internal company processes that markets are assembled. Understanding the role that DEMs are beginning to perform in the under researched, crucial construction work at these boundaries is a core motivation for the thesis, one which enables typically invisible activity to be brought to light via the tracing of multiple components of market assembly.

Gaps in the chain

A significant contribution to film industry research can be made by considering what is going on to make the mutual attachments between companies in the FVC happen. This is as opposed to explaining the overarching logic of activity, or modelling a set of outcomes. The coordination of actors in the design, production, distribution, and consumption of film is difficult, not least because conflict arises between single film and portfolio operators. Key to mobilising the network of market actors are the changing elements of the film, and the frameworks for calculating its value that anchor network relationships. A film transforms over the course of its life, incorporating many more unseen materials and connections than is evident in its final physical or digital composition. These changes often involve the film being bought and sold, transactions which rely on the film being re-qualified and re-evaluated by specifically created techniques.

A film begins as an idea, perhaps based on a book, takes form as a short synopsis or ‘treatment’, and then becomes a full script. Next a ‘package’ is constructed as cast and crew are attached to the project, a budget is ‘locked’ (confirmed contractually), sales estimates (prices for international distribution rights) are drawn up, and the feature film is pitched with business plans and ‘look-books’ (images indicating the director’s vision for a project). Potential financiers evaluate all these features before determining whether to invest and at what level. These are dynamic and extended negotiations. For example, involvement of a particular star may unlock investment of a certain amount, with complex revenue estimates calculated to inform any decision.

Once the film is produced as a master version, it is copied and attached to marketing and distribution plans, budgets, and materials such as trailers, which leads to further evaluations. The financing, creation and realisation of such marketing tools mediate connections between the production company, distributors in different countries and finally the audience. These associations and operations have been established in settled practices over a stable historical period and have been ‘black-boxed’ (Couldry, 2008) as the clean and linear conceptual model of the FVC. As such, the fluid web of emails, meetings, phone calls and contractual wrangling that happens over extended, multiple, overlapping market interactions are typically unexamined. The dynamics of market organisation and a detailed, nuanced understanding of the concrete steps of market construction are thus missing from the literature. Disruption to the industry by digital technology is causing traditional arrangements of economic transactions between producers and distributors to break down. New coordinative arrangements of companies based on the anticipation and execution of digital distribution strategies are making the market in new ways. Such activities prominently feature DEMs-producing tools, those available and discussed publicly such as social media figures, and private website analytics. The importance of generally unseen and unacknowledged film evaluation practices to the organisation of the business motivates my attention to exploring the role of these new metrics.

Metrics as a focus of research

From the creation of fan-trailers to the spreading of links to ticket purchase websites, activity through social media networks and digital delivery services is geared to connecting films and audiences. All of these activities necessarily create DEMs due to the technology involved. The dominant manner by which film metrics have been explored is in terms of quantifiable relationships amongst digital audience activities and revenues. It is valuable to survey these findings here to establish the context that informs the viewpoints of market practitioners.

Studies have determined that online ratings add accuracy to revenue forecasts (Dellarocas, Awad & Zhang, 2005), noted social learning as an important determinant of movie sales, and that a large social multiplier exists as messages about films are repeated and this feeds back to influence sales (Moretti, 2011). Scholars have quantified the predictive power on Box Office of aggregated blog references

(Sadikov, Parameswaran & Venetis, 2009), Wikipedia editing (Mestyan, Yasseri, T., & Kertész, 2013), Tweet rates (Asur & Huberman, 2010), the spread of quality related Tweets (Hennig-Thurau *et al.*, 2012) and the overall social word of mouth activity (Ishii, Arakaki, Matsuda, Umemura, Urushidani, Yamagata, & Yoshida, 2011) with a feedback effect (Duan, Gu & Whinston, 2008).

Whilst the goal of such studies attending to digital film data is to understand and predict market results, the research is also presented in the context that its conclusions have practical implications for managers. Asur & Huberman (2010) use a linear regression model for predicting Box Office revenues via Twitter chatter, which outperforms market-based models in its correlation strength. Sentiment analysis tools determine whether digitally expressed valuations are positive or negative, and improve the power of social media to forecast movie revenues (Asur & Huberman, 2010). However, this promising research into indicators of success, digital word-of-mouth, only starts to become relevant a number of weeks prior to release and thus could only be useful to distributors as they fine tune a marketing campaign, as opposed to other market actors in the years of market construction beforehand. Innovations such as social search make Social Network Analysis more complex and important in film marketing strategies (Evans, Kairam & Pirolli, 2010). Identification of opinion drivers and the understanding of opinion formation dynamics are noted as significant needs for any businesses online (Wu & Huberman 2008; Huberman, Romero & Wu, 2009; Wu, Wilkinson & Huberman, 2009). Therefore it is unsurprising that the analysis of who transfers quality signals about a product, how they do so, and with what effect, is anticipated to become a vital industry skill (Godes & Mayzlin, 2004; Barash & Golder, 2010). Investigating how such skills are manifest in embedded practices and material tools is therefore important. Whilst digitally informed revenue predictions have not been proven to hold in advance of the majority of film costs being sunk, this has not stopped increasing adoption of digital data for coordinating action in the face of extreme uncertainty.

The recent prominence of digital metrics in research looking to inform film business management is been located in quantitative studies following a tradition of examining non-digital film properties. Work in marketing and economics typically seeks normative rules for best practice based on probabilistic inference. Historically, film

market researchers have looked for correlations between market results e.g. Box Office, and specific features of given market objects e.g. film genre as a variable. A wide variety of characteristics have been tested for their relationship with economic success. A snapshot of these includes: star power (De Vany & Walls, 1999; De Vany & Walls, 2004); narrative features (Eliashberg, Hui & Zhang, 2007); marketing spend (Hennig-Thurau and Houston, 2006); awards (Ravid, 1999; Simonton, 2009); critical and commercial quality signals (Elliott & Simmons 2008; Plucker & Kaufman, 2009; Hadida, 2010). Potential Box Office determinants have been tested across different time periods: the studio heyday (Sedgwick, 1998), the rise of studio interaction with American independents (Scott, 2002) and in various markets: the UK (Collins, Hand & Snell, 2002; Elliott & Simmons, 2008); Australia (McKenzie, 2012); German multi distribution channels (Hennig-Thurau *et al.*, 2007) and the major film markets globally (De Vany, 2004).

Interactivity between factors expected to manage uncertainty has also been assessed. Hennig-Thurau *et al.* (2007) investigate how season of release, reviews, production cost, advertising and other factors work together to impact Box Office and profitability. Gutierrez-Navratil, Fernandez-Blanco, Orea & Prieto-Rodriguez (2012) examine the effects of the release schedule of rival films on financial results. Success drivers have also been explored across non-theatrical distribution, i.e. home entertainment (Prasad, Bronnenberg & Mahajan, 2004). De Vany draws together the major themes and analytical models that cover film's "wild uncertainty" (2004, 3) to conclude that the predictability of returns are too weak and untimely to be relied upon for management decisions. They are "incomplete maps of the world" (Eliashberg, Weinberg & Hui, 2008: 462). Yet, despite the proven lack of rational, objective means by which to act in the sense of neo-classical economics, a whole industry continues to operate under this radical, pervasive uncertainty, and does so through reliance on heuristics (De Vany, 2004).

In this thesis I examine the role of DEMs and uncover the establishment of a new instance of such a management device. New market arrangements are created by the technological capacity for self-distribution and on-demand delivery of films by their producers (Tryon, 2013: 139) and the marketing frameworks "to communicate, share, participate and engage viewers" and "for formalizing hitherto informal market

exchanges, for instance by channeling word-of-mouth via platforms such as Twitter or Facebook” (Vonderau, 2013: 112). The research capitalises on a historically telling period of “contention and controversy” as new and old market organisation perspectives overlap (Braun, 2013: 433).

Research Aims, Objectives and Methods

The thesis proceeds in Chapter Two by discussing the literature on market devices, as developed from Actor Network Theory (ANT) and Science and Technology Studies (STS), new economic sociology, and works in market and valuation studies. I outline gaps in the literature with reference to the understudied nature of market assemblage in the film industry, and the lack of attention to digital metrics from a market performativity perspective in the creative industries field. In this chapter I give a detailed example of how the independent film industry can be understood through the theory of market devices, and argue why in particular it is important to explore DEMs from a perspective informed by this scholarship.

I set out the methodology of the research in Chapter Three. Motivated by the aim of a deeper understanding of how the organisation of film industry is reshaped by digital disruption, I pose the overarching research question: ‘What is the role of DEMs in reconfiguring the independent film business?’ To address this exploratory agenda I adopt an operational research question: ‘What are the specific arrangements involving the intervention of DEMs in configuring the diverse elements that constitute the market for independent films?’ To fully answer this question it is necessary to set supplementary research objectives. These are informed by the theoretical approach and help to identify how the network of organisations and materials that constitute the market for individual films are being materialised and conducted by DEMs. I pursue two detailed research questions: ‘What are the material characteristics of DEMs’ involvement in film valuation and market calculation?’ And, ‘What are the dynamics of action at play in DEMs’ role in the coordination of the multiple market actors which constitute the independent film business?’

Following the research questions, I explain the epistemological and ontological positions I have adopted. I take a middle ground constructivist approach that holds knowledge to be socially constructed (Schwandt, 2000). Although this standpoint

proposes there is no single truth to uncover and thus potentially more than one valid interpretation of a phenomenon, this does not mean that any interpretation is equally valid (Barad, 1997). I go on to provide a detailed account of the longitudinal, embedded case study approach, participant observation methods and the data produced and analysed, linking the research design to the intended theoretical and empirical contribution.

Empirical Findings and Contributions

Three empirical chapters then follow, each tracing the market construction activity of DEMs in a different market configuration. The resultant re-arrangements of the film market are charted over extended periods. The case study concerns the work of Sigma Films (Sigma), an internationally renowned, long established producer of independent cinema. Over an extended period, Sigma has used digital technology as part of self and joint-distribution ventures to deliver films to audiences. During this time the company has also adopted digital tools in the sales process of their intellectual property rights and in their film financing initiatives. Their configurations prove more or less successful in competition with other agents' proposals for arranging the market, and through the contested assemblage of market networks, I discover that DEMs become increasingly reified as a device. From the pilot testing of DEMs-based logic and activity, through multiple layers of materialised interaction, DEMs weave themselves into increasingly larger networks and ever more complex calculations, thereby embedding themselves in market construction. The individuals and companies involved see all of these endeavours as responses to their disrupted environment.

Several interrelated features of DEMs explain their achievement of a new and active role in market construction. DEMs' existence as a network and ability to create new networks of market actors is predicated on two different aspects of their materiality. The particular nature of digital communication allows for low cost, large-scale connection amongst individuals, organisations, and creative content. The encapsulation of these networks in quantitative data makes them mobile, manipulable and able to become integrated into, and then adapt, the calculative frameworks that facilitate and constitute economic action. The expression and expectation of these capacities in themselves, helps to bring them into being. DEMs become a performative organisational concept around which market actors coalesce.

Metrics act, but not alone. Digital metrics are created simply. They are recordings of the use of a particular digital technology. The “engagement” specification refers to the interactivity of film marketing and distribution tools such as social media and VOD services, and their orientation towards the potential audience⁴. For example, Facebook *Like* counts are a public version, website analytics a private version. Ultimately any such technology relies on digital code. At the most essential level, digital technology does not exist separate from the processing of binary information. Not all of this information about activity is recorded but in almost all cases can be measured and presented. However, DEMs are not simple integers and solely records of action. They have agency, and, a multifaceted role in market construction. This is most visible when DEMs are considered as a device in terms of their networked and material features.

It is because the use of digital engagement technologies and their metrics are indivisible from one another that DEMs are both a representation and a connected part of the technology. For instance, social media DEMs are often called up and manipulated on a computer screen. When one clicks through from an aggregated total, such as 100 Facebook profiles, an individual person and their relations, both with other people and with creative content can be directly accessed. Thus in some situations DEMs directly constitute the social networks they also represent. Latour (2011c: 802) considers this in terms of the digital re-materialising of action, underlining it and allowing a greater standpoint on networks. Due to there being no discontinuity between aggregates and individuals in digital databases, no separation between micro and macro levels, DEMs are able to illustrate so much more about market construction when traced in action, as opposed to film activity being reduced to correlations with financial performance.

Studying DEMs from the market studies perspective, foregrounding the concept of a market device offers a coherent, conceptual lens that is also a prism for the

⁴ The term “audience” is used by market actors not necessarily just to refer to members of the public who had bought a cinema ticket or DVD and were assumed to have watched the film, but also to those that may potentially do so in the future. The audience then is a performed construct in similar ways to the user or consumer in literature concerning the performativity of markets.

multifaceted activity involved in the reshaped construction of the film market. Whilst DEMs capture the new way in which social networks are involved in film markets by virtue of their connective materiality, DEMs can also be abstracted and disassociated from such connections and framed for use in both new and existing film industry practices. As quantitative datasets they are easily transferred into calculative associations that equate digital engagement activity to financial value. In taking part in established market devices and disrupting them, DEMs cause black-boxes of activity to be opened up (Braun, 2013). The economic transactions conducted as a result, constitute new market networks and a different configuration of the industry emerges. These changes are conducted partially on the basis of social, qualitative valuations of DEMs and the people attached to them. This indicates DEMs are detailed, compound arrangements. The role of DEMs in market making is both direct and indirect, both explicit and implicit, and is achieved through their myriad features and connections. In this thesis I demonstrate how DEMs become anchored over time, through layers of assemblage, in different guises and via increasing levels of network and calculative complexity.

In Chapter 4 I demonstrate how DEMs creep into established market arrangements through Sigma's test model of self-distribution with the film *Donkeys* (2010)⁵. The chapter sets out the role of DEMs in enrolling crucial market actors, investors, to configure the new type of film release. The role of DEMs as a calculative device to mobilise marketing and distribution activity comes to the fore through quite simple evaluative practices. This framing creates new notions of equivalence between DEMs and financial returns. The performative nature of DEMs as a market device is uncovered. Despite a lack of financial success for the first film's release, meaning the intended market assemblage was not fully realised, a pattern of agreement for constructing action based on DEMs was established. The instantiation of a new configuration of companies and resources was materialised through DEMs' intervention in financial agreements and industry practices. This network laid a path to be maintained and sedimented by repetition and deeper links across future films.

⁵ Dates refer to a film's theatrical release.

Chapter 5 shows an expansion of DEMs' market making role as multiple instances and types of enrolment are produced in the deal negotiation and an innovative joint-distribution of *You Instead* (2011). With a longer time to prepare the release, higher budget levels and more market actors, the framing role of DEMs becomes increasingly technically complex. Through suites of spreadsheets and analytics platforms, DEMs come to qualify a film as a product. The networks of potential audience members becoming attached as one of the properties singling a film out for purchase. The device is further embedded through hybridised versions of established practices like negotiations, contracts and live release practices. The agency of DEMs is examined in the reorganisation of typically unseen, or black-boxed calculations of legal and financial mechanisms. I show DEMs beginning to become nested within these compositions and how conflict amongst competing arrangements for the film highlight DEMs' infiltration of market activity.

In Chapter 6 I analyse the expansion of DEMs' role into more aspects of market construction over the chronology of a film's life, further concretising their influence. DEMs shape the market for an increased number of films overall, and move from effecting individual films to film companies as well. I chart the life of *Perfect Sense* (2011) and *Citadel* (2012), the incorporation of investment fund Film City Capital (FCC) (2012) and related lessons from Sigma's other films during the setup of FCC: *Under the Skin* (2014), *Starred Up* (2014) and *Swung* (2015). I show that DEMs perform tasks in the international sales of distribution rights for films before they are released. This type of market making involves the co-production of value between public, socially networked audiences and temporarily affiliated film companies in a different framework from earlier examples. The appropriation of public evaluations into private value through the aggregation, rearrangement and calculation of DEMs for company coordination occurs in a manner that foregrounds the qualitative importance of who creates DEMs, as opposed to purely quantitative measures. The conjoined agency of creative content and networked individuals emphasises the distributed and material features of DEMs. These aspects become embedded in, and normalised through, films' financial contracts and the operating principles of FCC.

In Chapter 7 I discuss how, through deeply interrelated elements of enrolment, calculation, performativity and agency, DEMs play a new role in configuring film

markets, and the insight developed from their conceptualisation as a market device. Over the course of the films and initiatives I follow, there is a great deal of overlap and repetition in market activity. For each empirical chapter I have chosen to focus on that which sets each example apart. So whilst enrolment of investors still occurs for *Citadel* (2012) as it did with *Donkeys* (2010), I concentrate on explaining the additive elements which further elucidate DEMs' role. The arrangements constructed by DEMs are not perfect, they are incomplete and temporary, and their assembly is not necessarily a smooth process of legitimisation. There are deviations and set backs, ebbs and flows, which point out interesting processes of how the market device is created. However, DEMs' reconfiguration of the film industry, is importantly, one that cannot be seen or explained through historically dominant theoretical approaches to the field. The concepts contained in the literature of market studies concerning calculation and performativity enable me to examine the contribution of digital materiality to the process and develop an account of how the myriad component parts of DEMs as a market device interact to bring the market to life.

Chapter 2. Literature Review

Introduction

The theoretical literature I engage with for my research concerns the study of market devices (Callon *et al.*, 2007). I begin my discussion by addressing market studies' antecedents in ANT and its offshoots. Next I work through streams of literature organised broadly by themes that co-compose the concept of the market device, including *enrolment*, *calculation*, *performativity*, *materiality* and *assemblage*. I follow this by locating my research with respect to the existing studies that recognise the explanatory value of elements of ANT and connected research agendas in examining cultural and creative fields (Entwistle & Slater, 2013). I pay particular attention to research drawing on market devices related concepts for application in the audio-visual industries (Braun, 2013; Vonderau, 2013), and the value of such theoretical insight in attending to the digital landscape (Gerlitz & Helmond, 2013; Latour, 2010; 2014; Latour, Jensen, Venturini & Boullier, 2012). The remainder of the chapter explains the applicability of market devices scholarship for understanding DEMs' role in the disrupted film industry. In making this argument I pay attention to themes from investigations of market construction processes e.g. attention to calculation (Caliskan & Callon, 2010), alongside the preoccupations of scholars examining digital technology. These issues include the social, technical and networked aspects of digital material that constitute the organisation of actors in a particular market (Leonardi, Nardi & Kallinikos, 2012). This theoretical lens enables light to be shed on the often hidden role of digital metrics in market construction (Baym, 2013).

Market Devices and Actor Network Theory (ANT)

Defined as “the material and discursive assemblages that intervene in the construction of markets” (Callon *et al.*, 2007: 2), market devices are both a theoretical lens and unit of analysis. They provide insight to develop fine-grained understandings of how market goods are calculated, the nature and role of market actors and processes, and how market activities are instantiated (MacKenzie, 2007; Callon *et al.*, 2007). Market making is seen as embodied in the dynamic work of complex, interpretive and calculative instruments, composed of the networked agency of market actors including individuals, materials, rules, organisations and routines (Callon, 1991; Beunza & Garud, 2007). The market devices approach offers a different perspective

to conceptions attributing market organisation to the rational actor of neo-classical economics, to institutional embeddedness (Granovetter, 1985; 1992), or to sociological accounts attributing agency to individuals only e.g. advertising as a manipulation device (McFall, 2009b). Instead of interpreting markets as based on convention, or stemming from intrinsic, essential conditions, the scholar of market devices looks to the specific arrangement of human and material elements that co-produce value (Muniesa, 2011).

The study of market devices has developed upon the conceptual tools of ANT (Callon, 1986a; 1986b) including notions of *enrolment* and *agencement*. These ideas have been elaborated and complemented through adoption and interaction with a variety of other research streams (Callon *et al.*, 2007). Contributions from Science and Technology Studies (STS) (Callon, 1987; Latour, 1987); social studies of finance (MacKenzie & Millo 2003; MacKenzie, 2006a) and marketing (Kjellberg & Helgesson, 2007) or ‘marketization’ studies (Callon & Caliskan, 2009) further develop the theoretical perspective. The market devices approach draws on these fields of literature to attend to areas of materiality, performativity and valuation in the construction and configuration of markets.

Research on market devices is pursued by empirically examining the detailed ways of “weaving market relationships” (Preda, 2008: 217). This weaving involves the complex and integrated role of artefacts and agency in explaining how markets are constructed, developed and sustained (Callon, 1998a; McFall, 2009a). Traditional approaches to understanding markets often strictly separate passive goods, and active, human calculative agents. A defining contribution of ANT is its allowance of the agential symmetry of humans and material artefacts. Both are labelled actors or actants. In this thesis I use the term market actors. In the daily practice of the film business and other creative industries, non-humans are regularly conceptualised as having an agential role as market actors. It is in the circulation of such actors and their relations that ANT invites us to seek material practices and discourses “which produce economically relevant activity” (Law, 2002: 21 in Pryke & Du Gay, 2007). These relationships are dynamic, they require work, and must be traced to be understood. Taken together, the negotiated network of actors and their relationships is an actor itself (Callon, 1991). Networks constitute, amongst other things, markets,

allowing action to be coordinated under radical uncertainty (Callon, 1999; Teurlings, 2013).

Studies of market devices are concerned with the particular configurations of material ‘fixtures and fittings’ (McFall, 2009a: 271), and individuals and organisations that are deemed to constitute “the conditions of possibility of economic action” (Hardie & MacKenzie, 2007: 75). This agenda is drawn from ANT’s preoccupation with socio-technical networks, which explain social order through the specific relations of humans and objects that enable certain ways of connecting, but cut off others (Latour, 1991). These arrangements, which are understood as lasting asymmetries (Callon & Latour, 1981) are investigated through tracing the processes by which they are put in place. Thus a phenomenon under research is explained through actor interactions that operate the network constituting it, without appeals to other levels of context into which the phenomenon would be understood as embedded. Focussing on assembly is a result of ANTs’ rejection of commonly conceived dualities, such as those: between society and nature (free association), the social and the technical, knowledge and the sites and conditions of knowledge production (Callon, 1986a; Latour, 1991, Latour & Woolgar 1979). The study of market devices adopts an explanatory emphasis on the establishment of arrangements, albeit within its narrower focus regarding assemblages put to work in service of economic transaction.

The charting of market arrangements is a complex task and one that benefits from a number of ANT’s conceptual tools. There are a variety of processes involved in the establishment and maintenance of network arrangements. The alignment of market actors required for future communication and transaction can be explored through the notion of *interessement* (Callon, 1986a; 1999). *Interessement* is the group of actions by which an actor attempts to stabilise the identity of others, and thereby also the structure of the actor-network. These actions fall under the broader heading of ‘*translation*’, which encompasses each element of the continuous process of alignment required for market action (Callon, 1991). This series of processes to propose and secure roles for other actors is dependent on the lead entity setting up their own role as indispensable to events, a process called *problematization* (Callon, 1986a). In Callon’s classic account of power in the development of a conservation strategy for a scallop population, a research team set up their programme as an

‘obligatory passage point’ so as to insert themselves in the set of actors involved (*problematisation*) (1986a). The researchers also attempted to specify and interrelate the roles they had assigned to other actors, a process labelled *enrolment*. *Enrolment* involves evolving negotiations between the actors involved, often including or mediated by some material tools and related to valuation procedures (Barrey, 2007; Dogananova & Karnoe, 2012; Hanspal, 2012).

In Callon’s (1986a) articulation of the concept of translation, enrolment is understood as activity which defines and coordinates other market actors in the network. Scholarship in the area of market studies and those concerned with the life of creative works and technology have expanded the definition or remit of the term to also imply other elements of translation (Braun, 2013; Munir & Jones 2004; Strandvad, 2011). Sometimes in the wider market devices related literature the notion of enrolment is taken to also include parts of problematisation (intervention and set up of obligatory passage points), interessement (stabilization and locking of network position) and mobilization of allies by assignment as a spokesperson. In engaging the work of Callon and related co-authors, I find it useful to recognise in this research setting that coordination implies mobilization, and defining a network implies stabilization and locking. I utilise enrolment as a term to focus on the specifics of attraction, attachment and organisation of allies, as appropriate at different points in time.

Calculation

Calculation is what enables market actors to evaluate courses of action and mobilise and engage with one another (D’Adderio, 2008). These relations are motivated by the need for market actors to calculate the likely outcomes of their choices where goods’ characteristics are uncertain, environmental conditions are ambiguous, and numerous conflicting agents make market organisation very difficult (Callon & Muniesa, 2005). The film business is an excellent example of such market characteristics. The work of calculation provides common languages, constructs equivalence and reduces heterogeneity via standardisation so market actions can occur. Calculation involves a variety of component processes including: framing, qualification, association, valuation, production of a result, and an attachment to a different actor, for example the buyer. I now explore these components.

Calculation is a process involving multiple agents, often reliant on material interventions, and is a crucial element in the establishment and maintenance of network relations (Callon, Méadel & Rabeharisoa, 2002; Callon & Law, 2005). It can be considered to form part of many moments of translation. Calculation matters highly in accounts of markets outside of specifically ANT research, such as in marketing and social studies of finance. MacKenzie & Pardo-Guerra highlight the importance of the process by stating that “markets are made of calculation” (2014: 156). Understanding the particular composition and dynamic interaction of distributed agencies that do productive, calculative work, is a core goal of the market devices literature.

Network coordination facilitated by calculation has drawn the attention of economic sociologists (Biggart & Beamish, 2003; Thévenot, 2001; 2002). Thévenot (2001) defines markets as valuation networks, and in studying the processes through which an object becomes an economic good, foregrounds the importance of interconnectivity. The literature illustrates the interdependence of the multiple elements of a market device. For example, a market device’s transactional role linking actors across networks depends on its calculative capacity. The constructive work of market devices relies on transformation processes involving communication between multiple network nodes. Indeed “markets are expected to be produced and diffused through the interactions of many actors” (Araujo, Finch & Kjellberg, 2010: 8). ANT helps to acknowledge agency and structure as co-produced and dependent on the establishment of specific interrelations.

Frames

Calculation relies to a large extent on the process of *framing*. This is because market actors must make up for their “partial knowledge of the world” (Beunza & Garud 2007: 35). Actors do so “by becoming active builders of interpretive devices that bracket, give meaning and (in the case of financial markets) make it possible to develop quantitative point estimations of value” (Beunza & Garud, 2007: 35). Framing is an ongoing process of mutual adjustment between objects and humans, attachment and detachment, making boundaries between what is relevant and non-relevant with respect to calculability (Callon & Muniesa, 2005; McFall, 2009a).

The starting point in the framing for calculation process is *detachment* or *disentanglement*. Any market object or actor exists in a rich network of connections to other elements. Some of these links must be separated out in order for those potentially involved in a market transaction to develop a sense of what is at stake (Caliskan & Callon, 2009; Fine, 2010). For market actors to make choices, the buyer and seller must be conceived as separate autonomous agencies and be able to deal with a reasonably stable tradable object. For example, buying a car requires the owner, seller, and car to be disentangled, decontextualized and alienated from all other kinds of relationships (Holm, 2007). The importance of disentangling some artefact to be made calculable, locating it in a formal space where equivalence and difference can be measured, and the subsequent detachment of calculative devices, are common amongst most notions of calculation. So for instance, the construction of minimum agreement over the specific property rights of an entity to be made calculable, is a crucial part of economic transaction, and various legal frameworks exist to take part in such a negotiation.

Notions of interior and exterior help define what is being calculated. Callon (1998a) offers a precise encapsulation of calculation as: access to minimum levels of information that enable preference holding, ranking, and negotiation of choice. This definition is criticised as not moving far enough away from the perceived limitations of neo-classicism, being too mechanistic and unsupported by empirical observation (McFall, 2009a). However, despite these perceived weaknesses, theories of calculation encompassing the recognition of boundaries in order to identify new associations between market actors are widespread and other authors offer a greater variety of views on calculation additional that particular regimen of Callon. Latour (2005) argues that for calculations to be performed, clear and precise boundaries must be constructed between the entities being taken into account. This process thereby also designates the multitude of relations that will be ignored (the externalities) (Latour, 2005). The delimitation of market spaces provides guidance and control, and enables individual agents and objects to be defined as separable from each other (Callon *et al.*, 2007; D'Adderio, 2008).

Qualifications

Processes of detachment and precise framing are theorised through concepts of *qualification*, *objectification* and *singularisation*. *Qualification* is deemed to be “at the heart of economic competition and the organisation of markets” (Callon *et al.*, 2002: 200) and involves “processes through which qualities are attributed, stabilized, objectified and arranged” (Callon *et al.*, 2002: 199). In *The Economy of Qualities* (2002) Callon *et al.*, propose the notion of singularisation in relation to the qualification of a ‘good’ as distinct from a ‘product’. ‘Products’ have careers, they are continually transforming throughout their lives in production, distribution and consumption. However when the object’s qualities or characteristics are stabilised, i.e. temporarily established or constructed, then a ‘good’ is singularised and identified which can meet a demand and be subject to transaction (Callon *et al.*, 2002).

Objectification means that to be calculable and subject to economic action, a good must hold itself together, it must be delimited and definable (Callon & Muniesa, 2005). Successful objectification is often attributable to the social connections in which the object is presented and positioned (Callon & Muniesa, 2005). For example, intangible outputs of service industries are transformed into defined packages through limitations by time or territory so that they can be valued as a market object (Caliskan & Callon, 2010). Another pertinent example is the bundling of intellectual property rights together, limited by legal specifications e.g. film distribution contracts are typically for 25 years.

Singularisation means that, to be a good, the object must be individualised and separable, distinct amongst many. This is most obviously achieved when its properties represent a value e.g. price, to the potential buyer (Callon & Muniesa, 2005). *Singularisation* can be a gradual process, but the result is that the object becomes evaluable by the buyer and then attached to that market actor. Establishing a price and a clear, commonly understood route to transaction are common parts of this process (Callon & Muniesa, 2005). Caliskan & Callon (2010) consider this process as *pacification*, which allows distinctions to be made between market objects and the agencies evaluating them. Market objects are reliant on connections with agencies such as marketeers and shops, but must at some point be made distinct in order to be chosen from amongst competitors. Disentanglement from existing connections

enables association and comparison of the object under consideration with respect to standardised forms. A buyer and seller come together in a specific manner with the tools needed for evaluation and exchange. Once in this space, the market artefact is manipulated to extract a result, generally this means an evaluation leading to a sale (Callon & Muniesa, 2005; McFall, 2009a).

Associations

Whether taken to be calculation in three steps (Callon & Muniesa, 2005) or qualification in five aspects of market framing (Caliskan & Callon, 2010), understandings of market evaluation encompass the temporary separation of an object from existing network connections and its definition. Once this is achieved the activity of marketization agencies can then occur (Caliskan & Callon, 2010: 5). Marketization accounts for instances of market encounters and price setting, which are supported by market design and maintenance. The detached entities are arranged in a single space e.g. a spreadsheet or computer memory and then associated with each other (Callon & Muniesa, 2005). For example in mergers and acquisitions, a professional will chart a company and its target on one computer screen (Beunza & Stark, 2004). On the basis of such associations the entities are somehow transformed to give a result e.g. a set of financial valuations, potentially leading to a shared evaluation and a transaction.

The calculable entity, the market object, having been transformed must then be able to leave the calculative space and circulate without taking the whole calculative apparatus along. For instance, an investment opportunity can be evaluated using analysts' reports (Beunza & Garud, 2007), formulae (MacKenzie & Millo, 2003), computers and software models (Hardie & MacKenzie, 2007). Once evaluated and traded, the investment vehicle is disentangled from these tools. The market object is detached from the seller's world and attached to that of the buyer. This active relationship proposition and identification process that Callon (1986a) sees as moments of translation, highlights the co-constituted, co-composed, collaborative nature of markets as networks. Rather than ascribing explanatory power to essential natural properties and motivations, or rigid socio-cultural institutions, the 'art' of interessement is a contingent and competitive endeavour (Callon, 1986a; Akrich, Callon & Latour, 2002).

Whilst recognising that markets are viewed as constructed, “skilful accomplishments”, the calculative perspective also contends that market arrangements are transient, markets are “fragile, partial and temporary” (Araujo, *et al.*, 2010: 6-7). They are subject to framing work which is never complete, or fully successful. Market detachments and attachments are never perfect, remnants or traces of the frame still exist once the market object has moved on. These legacies can be conceptualised as overflows or externalities. For example, a financial trader is affiliated with his or her instruments (Beunza & Stark, 2008). The market object may retain an additional value because of who valued it previously or what tools they used to do so. Following a transaction then, the parties, object, buyer and seller are “quits, but not aliens” (Callon & Muniesa, 2005: 1233).

Agreement across boundaries

Calculation and its many components are deemed crucial to market coordination. A key element in the calculation process, the mechanism or device facilitating shared evaluation and transactional relationship creation, has also been theorised as a boundary object (Bowker & Star, 1999). Such tools are built across boundaries between different communities of practice, (summarised as “sets of relations among people doing things together”) to enable continued, stable relations between different social worlds (Bowker & Star, 1999: 294). It is the facilitation of agreement on certain methods of categorisation that makes boundary objects useful in the market context. The buyer and seller need to agree on the qualities and worth of the object in question, and its helpful for ongoing business if the process for achieving this goal is repeatable. Boundary objects must be plastic enough to the localised constraints of the multiple parties employing them, but retain a common identity across sites or frames (Doganova & Eyquem-Renault, 2009).

The notion of localised, cross-boundary, common agreements to enable market action, particularly in conditions of uncertainty, is one also put forward by the economic sociology of conventions. Interpretations and actions are made with reference to specific, socially constructed frameworks, as opposed to some overarching concept such as probabilistic risk, the resulting process is labelled *inter-subjective rationality* (Biggart & Beamish, 2003: 457). Repetition is also considered vital in this approach.

The conventional use of social devices (Berkert, 1996) to make behaviour more predictable by transactional parties is a core element to many explanations of market activity (Keynes, 1973; Bibow, Lewis & Runde, 2005). The manner by which frameworks come into being is attended to in social studies of finance by examining the arrangement of people and technical systems that constitute economic actors (Hardie & Mackenzie, 2007: 5). This stream of research builds on Science and Technology Studies (STS) and Sociology of Scientific Knowledge (SSK) to utilise the conceptual tool of performativity in a market context.

Performativity

In market studies the calculative frameworks and the knowledge associated with them, which are so important in organising markets are not deemed to be solely observational, external models. Rather, they take a participatory role in performing and transforming the market (D'Adderio, 2008). The concept of performativity is extremely important in understanding how new markets and activities come into being and are anchored. It is a concept deeply interrelated with materiality and representation in market organisation, which is especially useful for researching new digital interventions (MacKenzie & Pardo-Guerra, 2014). There are a number of different types and applications of performativity in the literature that I will explore here.

The notion of 'bringing into being' at the heart of theories of performativity is typically introduced with reference to the Austinian concept of 'performative utterances' and the distinction between illocutionary and perlocutionary effects (Austin, 1962; Butler, 2010). An illocutionary effect immediately performs the reality it describes, for example "I pronounce you man and wife". Perlocutionary effects can only occur under 'felicitous conditions', they are more uncertain, develop over a longer period and are not uttered by a single subject, like for example a wedding officiant in the illocutionary case (Mason *et al.*, 2015). Recent theoretical discussions have highlighted the fundamental importance of perlocutionary aspects of performative agency. Callon (2010) argues illocution can be viewed as an extreme form of perlocution, one where the felicitous conditions (including necessary materials) are immediately present. In Butler's (2010) view, a condition of illocutionary performativity, the sovereign authority over speech acts, is overvalued.

The codification and ritualization of discourse that precedes any utterance is also what makes such immediate speech effects possible. These discussions push towards the considerations of multiple contributions to performative utterances and to performative effects over time, not solely the immediate ontological construction of illocution. This reading of performativity further indicates the importance of the surrounding arrangements of contributing agencies and materials, which Callon (2010) articulates through the active presence of socio-technical agencements.

The process of self-actualisation is embedded in the notion of agencement. For instance in the conceptualisation of markets as socio-technical arrangements or agencements, particular market configurations influence their own composition by enrolling the necessary resources and actors to bring them to fruition (Callon *et al.*, 2007). Analysis of this process draws on ANT's attention to the relationship between statements and their worlds (Callon, 2006) and in the course of the performativity programme highlights the variety of knowledge and skills developed and mobilized in the design, establishment and dynamics of agencements' realisation (Caliskan and Callon, 2010: 19).

The distributed and multiple contributions to market performativity included in the human-material co-constitution of action is characterised by MacKenzie (2005, 26) as performative utterances. These utterances can take the form of metrics or processes that form calculative mechanisms. So a market device and the action shaped by its performative statements are entangled together in an emerging, iterative web of engagement (Callon, 2006; Callon *et al.*, 2007; Sjogren & Helgesson 2007). Ideas spread through action and become templates, which can be self-fulfilling or self-defeating prophecies (Araujo *et al.*, 2010). Due to the need to trace the results of processes over time to determine market effects, researchers are motivated to adopt longitudinal case study approaches. A classic example charting particular performative effects is MacKenzie's (2006b) investigation of the Black-Scholes formula. MacKenzie considers the formula to exhibit Barnsian performativity, which describes how the use of an economic theory in practice, leads the practical processes becoming increasingly more like their representation in theory. The formula, an options pricing tool, is analysed as a device that did not describe market reality accurately until its wide scale adoption. Once taken up and used, the formula then

constituted the market in a specific way and instantiated its own accuracy. In this way, market devices contribute to, and help actualise, the world they describe. The Barnsian type, like the illocutionary act is an extreme or rare formulation, more prevalent are generic or effective types of performativity (MacKenzie, 2006b; 2007), considered to help guide, rather than force market actions, or bring reality into line with a theoretical model.

A number of studies show performative devices taking root in complex organisations operating under conditions of uncertainty. Preda (2007) shows how financial chartism gains legitimacy as a market device through a double feedback loop between producers and users of the charts. Brokers used technical analysis as a set of forecasting instruments not just because it aids price interpretation, but because its use instantiated an expectation that ‘good financial behaviour’ requires the use of such expert judgement, and therefore they then had to use the instruments (Preda, 2007: 57). D’Adderio (2008) demonstrates that Standard Operating Procedures become enacted through an iterative cycle of framing and reframing that brings convergence between procedures and performances. This shows that performativity can take an extended period to be displayed, it can also take the form of continuous action. Caliskan (2009) proposes that price realisation in the cotton exchange is performed by constant market intervention. This includes the setting of prosthetic prices using various calculative heuristics, such as supply demand curves. These devices take the form of institutionally authorised statements that engage traders, pushing them to consult certain evaluative frameworks and then set a market price (Caliskan, 2009).

Whilst Callon includes marketing as a type of economics in his attention to performativity, recent studies attending to performativity in marketing recognise the prescriptive expressed intent of marketing theories is to alter practice, as opposed to economic analyses that may seek purely to describe events (Mason *et al.*, 2015). Marketing theory pursues the production of particular social realities through various embodied forms: models, methods and material, technological instruments (Jacobi *et al.*, 2015). These are performed in practice by social networks, and such multiple, distributed utterances are thus considered perlocutionary effects, enabled by the set up of felicitous conditions (Mason *et al.*, 2015), which very often are incomplete (Callon, 2010). The descriptive accuracy of marketing models is often less important than the

promissory effects of expected outcomes which motivate organising processes, changing existing organisations or bringing about new organisational forms to help perform particular versions of markets (Mason *et al.*, 2015). It is in these particular elements of performativity that I am most interested.

Marketing performativity is conceptualised as a means to guide future action, based on consideration of what information is valuable, and stabilisation of realities to generate “partially shared understandings” that coordinate and materialise imagined markets (Mason *et al.*, 2015: 10). This understanding can have a particular bearing on understanding the digitally disrupted film industry. For example, Vonderau (2013) makes great use of the notion of an organisational instrument to explain the attempts of Warner Bros. Digital’s activities in mustering allies (necessary felicitous conditions) to their ‘connected viewing’ vision of the home entertainment market which the company attempts to bring into reality. Shared inscriptions and calculation are crucial to the organisation of allies and here the performativity of digital marketing takes an important role in the theoretical framework for the thesis. As in the articulation of the ‘connected viewing’ initiative where investors, file formats, platforms amongst many associates form mutually binding agendas, the co-construction of value for digital information is vital in market arrangements involving digital marketing. The performance of target consumers through digital data produced by activity like ad-clicks (Cluely & Brown, 2015) achieved through materialisation of data trails, is key to getting to understanding how new markets are produced as an unfolding accomplishments.

Materiality

Explanations of how devices perform markets are bound up with the materiality of the devices themselves, how they are made up and interact with the world. Market equipment, for example, the tangible options pricing sheets that traders would walk around with in MacKenzie’s study of the Chicago options exchange (2006), is understood as a vital component in market performance. The sheets were portable, easy to use and also visible so that market actors could immediately recognise the increasingly common practice in motion. The material tools for calculation used as trading aides by individuals in risk management, their mathematical price finders, are recognised as leading to the instantiation of a particular practice (Millo & MacKenzie,

2007). The technical representations of risk, such as sophisticated technological artefacts, including predictions and operating blueprints, are also understood as key material elements of the performative process.

Materiality is important when considering processes of enrolment. Examining an academic spin-out, Doganova & Eyquem-Renault chart how the material embodiment of the business model shapes encounters with the market, including potential allies and investors (2009). Material specificities of business models make them knowable. Models are translated into related instruments that guide, coordinate or enact the model. Business plan documents and power points follow commonly intelligible formats. They can be annotated, and are easily circulate-able via email. Therefore they can be easily detached from their existing network, brought into the world of a potential investor, and compared with competing investments by being transformed into a metric like the Internal Rate of Return (IRR). The material characteristics partially determine the business model's usefulness as a market device to enable the management of entrepreneurial tensions (Doganova & Eyquem-Renault, 2009). Thus when examining the assembly of markets, or rearrangement of them, the material basis for markets is a core concern.

The foregrounding of a causal role for material elements in market construction reasserts the notion of distributed agency derived from ANT, and conceptualised in the market devices literature as a compound form (Callon, 2008). This is to say, humans and objects act together, and in concert with the many prostheses they co-produce. Numerous actors including human individuals, organisations, procedures, rules, methods, calculation tools, technical devices and instruments combine in a complex series of interrelated processes that often deal with the conception, production, valuation, circulation and exchange of goods (Callon *et al.*, 2007: 4). For instance the existence of the 'self', in self-service shopping, does not essentially belong to the shopper but is reliant on a technological regime where actors, materials and agencies interact (McFall, 2009a; Du Gay, 2004). The arrangements of goods and space, marketing strategies and materials and transactional mechanisms combine for the self-service concept to become actualised.

Digital Materiality

The existence of online markets for copies of intellectual properties such as films is fundamentally due to specifically digital characteristics of the material from which the market is made. The digitalisation of artefacts such as video clips is argued to give them new forms of materiality e.g. making them more generative than analogue counterparts (Yoo, 2012). The negligible cost of digital reproduction and transmission due to the processing of information via, ultimately, binary code is one such relevant feature.

There are different readings concerning definitions of materiality in relation to physicality in respect of the role of technology, and in particular, digital technology. Faulkner & Runde (2013) question whether digital objects can be material, preferring to talk of material inscription devices that house the immaterial bit-strings of digital code. This argument equates materiality to physical tangibility. It is certainly the case that digital data is untouchable, whereas its bearer, e.g. a computer screen or hard-drive are tangible objects. In contrast, MacKenzie, Beunza & Hardie (2009) foreground prices, models, tools, and indicators that include digital data as physical entities, and state that the physical form of objects comprising market devices have important impacts. In the example of financial arbitrage, prices are taken to be physically embodied in speech or digital code and email and this ‘physicality’ determines their speed of transmission and therefore the efficacy of exploitation of price differences across the world (MacKenzie *et al.*, 2009).

However, the notion of materiality in the market devices literature should not be confused with physicality (Callon & Muniesa, 2005: 1233). Materiality can be understood as practical instantiation and significance, as opposed to physical form (Leonardi, 2010), though often a format or manner of artefact arrangement has an important role in this property. So, an intangible service is material in the sense of its objectified properties, its boundaries and connections give it practical import, although some of these features may well be physical. Latour (2014) comments on the issue of digital materiality in two ways. First, he brings ‘the digital’ down to the basics of its constant refreshment of analogue signals (electricity) thereby negating the claim that digital objects are immaterial because they are non-physical. Second he privileges the notion that materialisation refers more to being made meaningful, to

being important, than just being physical (Latour, 2014).

It is also important to recognise that from a market devices perspective, the phenomena which may not have tangible forms e.g. a bit-string, the sequence of 1s and 0s that code for instance Facebook Likes, are uninteresting on their own. It is only through coordination amongst larger, diverse configurations of multiple elements that they are able to co-construct market activity. As Latour put it in keynote speech concerning re-materialisation via digital traces: “digital is not a domain but a single entity or entry into the materiality of interpreting complex data within a collective of co-enquirers” (2014). For instance, in the sharing and purchasing of films online, code is only one necessary component of a device also reliant on human social networks and the aggregation of information into new evaluative frameworks by marketing managers. It is crucial to recognise that the digital format is important not because it is, or is not, defined physically, but because of the ability to organise actors and actions that it facilitates (Leonardi, 2010). This inclusive and assemblage focused perspective is similar to Yoo’s view of artefacts as including forms of standardised routines and representations as well as physical tools (2012: 136). I.E. Instructions for action and tangible elements are both present in the material artefact. I take materiality to include both what something is made of, its form or format, and how this matters.

The notion of representation is important to the market construction role of social media data, one component of DEMs. Due to their particular material configuration, social media metrics are easily created, stimulate information diffusion, are often presented publicly and simultaneously both represent and constitute network connections. As a result these figures have performative characteristics in that “they can generate user affects, enact more activities and thus multiply themselves” (Gerlitz & Helmond, 2013: 1360). To do so they rely on a “medium-specific infrastructure”, one based on digital code that simultaneously measures action as well as conducting it (Gerlitz & Helmond, 2013: 1360). The editable, interactive and distributed characteristics of digital objects mean they can be rearranged and disseminated (Kallinikos, Leonardi & Nardi, 2012). This mass sharing of traceable objects produces metrics that enable quantified management processes in market construction (Braun 2012). As multifaceted rankings, marketing metrics are not passive, but constitutive of

the world, influencing the organisation of actors within the domain they create (Leonardi *et al.*, 2012, 12). Therefore such rankings are a prime example of a market device, which in the guise of DEMs such as social media scores, are beginning to receive attention in Internet studies (Baym, 2013). Metrics influence the conception of, and relationships with, audiences, and thereby reorganise multi-media industries, not least through their implications for advertising revenue.

Assemblage

The task of market devices scholarship is to examine the content and arrangement of assemblages. Assemblages are the collision and combination of material, corporeal, social and technical elements that constitute a market. The term *agencement*, is also adopted in the same manner as a tool for conceptualising the symbiotic networks of individuals, organisation and objects that together render and concretise markets (Callon, 2005; Callon *et al.*, 2007; MacKenzie, 2007). These actively account for how “particular versions of being economic are summoned into being, how they succeed for a time and how they eventually fail” (McFall, 2009a, 268). Agencements have been defined as interconnected “agencies and arrangements with the capacity to act and give meaning to action” (Callon, 2005; McFall, 2009a: 270). The term *agencement* is intended to avoid separating technical objects (potentially labelled ‘devices’) and human agents taken to be leveraging such tools. Instead, the two types of agencies co-construct a market through a dynamic, conjoined network of agents and actions, agency and arrangement are unified as *agencement* (Roscoe, 2013: 65).

In their introductory exploration, Callon *et al.*, (2007, 10) characterise market devices as a specific kind of economic *agencement*, “market *agencements*”. This specifies an interest in the agenced, active work of people and things in the service of ‘marketization’, the movements that bring the economic into being in a market setting (Caliskan & Callon, 2010). *Agencement* is used to describe or characterise the mechanisms or assemblages that “act as socio-cognitive prostheses to ensure the coordination of agents” as well as the “active participation of materialities or of practical and cognitive competencies in valuing agencies” (Caliskan & Callon, 2010: 22). Characterised as hybrid, diverse, evolving and emergent, *agencements* encompass processes of detachment and disentanglement, framing and calculation, attachment and entanglement needed for economic transaction.

The two concepts, market device and agencement, are sometimes noted to be distinct but interrelated. Together they provide a “robust platform for organising efforts to understand precisely how forms of market activities come to be instantiated” (McFall, 2009a: 271). To understand how this combination of theoretical concepts might work, it is useful to return to Callon *et al.* (2007) who state market devices should be ‘characterised’ as agencements. One term does not replace or define the other, but when examining a market device, for example, a pricing mechanism or analyst’s report, it should be traced, analysed and understood by recognising the core concept of conjoined action embedded in the notion of agencement. It is important to note the terms assemblage, arrangement and agencement are often used in very similar ways, sometimes terms interchangeably in the literature of market devices. For instance in situating their study of market devices in the publishing industry Gullede, Roscoe & Townley (2014: 5) note: “The economic agent is not person, but ‘agencement’ (assemblage); and the device an artefact of co-ordination, something that ‘holds together’ a particular network.”

Whether labelled *agencement* or *assemblage*, the theoretical insight of the market devices approach is drawn from examining how the market is instantiated according to the particular configuration of the arranged actors (Caliskan & Callon, 2010: 9). The point of looking at individual market device configurations and trajectories is both to contribute to the understanding of a specific empirical field in a new and precise way, and also to see how markets get to be the way they are (MacKenzie, & Pardo-Guerra, 2014). Localised works of cultural construction and engineering can transform understandings of markets in a much broader sense (MacKenzie & Pardo Guerra, 2014). As shown by the variety of areas studied in this way, there is no fixed scale for interpretation of markets. For example, in the wealth of social studies investigating financial markets, a number of papers employ the conceptual term agencement to make sense of multiple actors constituting market devices, from individual products to entire organisations. Hardie & MacKenzie trace the market agencement of a hedge fund, a combination of humans, algorithms and other technical devices and that operates as an economic actor (2007). The examination illustrates how an agencement that includes certain mobile calculative devices e.g. bond yield calculators, are faster and more powerful market actors than others because they allow

for easy comparison between individual market objects and common agreement over the limits of what is available for trade. So advantageous and therefore commonplace is their use that they have now become black-boxed (Hardie & MacKenzie, 2007: 67). These types of agencement and device related studies often investigate how data helps perform markets, for example, Azimont & Araujo (2010ab) investigate how performance metrics are combined in facilitation of product management in the retail sector.

A number of different subsectors of the economy and market tools are also interrogated using the theoretical concept of agencement, from the UK Housing market (Lovell & Smith, 2010) to specific uses of technology like the telephone in financial trading rooms (Muniesa, 2008). At the core of these investigations is the contingent agency produced by compounds of people and materials as economic actors, influencing the market in one way or another. This capacity for change is a focus for Lovell & Smith (2010) who argue that agencement is a property of markets, an active quality by which markets can reformat or remain the same, whereas an *assemblage* is a description of the market at a given time and place. Assemblage can also work as a verb for the same purpose, if one is careful to mark out the active agents at work, and to use the concept to examine how the configuration of the assemblage determines its capacity to act. For example, Muniesa's attention to the agency of the telephone in assembling market activity on the trading desks of investment banks includes the negotiation aspect of social networks, which are missing in electronic financial markets (2008). McFall (2009b) applies agencement to market attachment processes in consumer markets, emphasising its usefulness as a model for understanding the emergence of markets. Analysing how particular forms of market action come into being and are sustained, requires identification of the implicated networked human and material actors, but also characterisation of their dynamic mode of articulation (McFall, 2009ab). The behaviours a technology or tool helps to impose, the script it enacts, are examples of such articulation, and often revolve around valuation.

Market Making

The literature concerned with market devices has been bolstered by research in marketing (Araujo, 2007; Kjellberg & Helgesson, 2006; 2007ab) and on valuation

(Karpik, 2011; Muniesa, 2011; Helgesson & Muniesa, 2013). These studies share an interest in market making related to Callon & Caliskan's (2009) programme of *marketization*, as one aspect of what is considered economic, and attend to the role of performativity in such activity (Mason *et al.*, 2015). The goal of marketization is to "understand how complex and hybrid social configurations are perpetually being constructed through the conjoined contributions of circulating material entities, as well as competent agents engaged in valuation practices" (Latour, 2011a; 2013, in Callon & Caliskan 2009: 390⁶). Such an attention to valuation heeds the objects of economic sociology: "networks and social relations, institutions, rules, conventions, norms and power struggle" but also materialised infrastructure as well, which includes knowledge, "techniques, sciences, standards, calculating instruments, and metrology" (Callon & Caliskan, 2009: 390). For instance in analysing the development of merchandising as a practice, Barrey (2007: 105) uses concepts of enrolment and translation to show multiple actors' attempts at advancing their own "action logic" and construct the market.

The understanding of a market as an entity that needs to "build itself up", that is dependent on organisational concepts, is based on the notion that valuation mobilises action and that the definition of value is not fixed, either in cognitive processes or organisational structures (Callon & Caliskan, 2009: 384). Value and the market are both constructs, symbiotically achieved through interactions between people and things, in particular ways, over time (Guyer, 2004; Callon & Caliskan, 2009) and these interactions are at the focus of market devices research. The exponential digitisation of marketing has given rise to a sphere of research investigating digital technology's role in market making, for example, the enrolment work of online purchasing mechanisms to configure market action (Hagberg, 2010). The interaction of technology and complex technical calculation captured by concepts like agencement, foregrounds the importance of metrics, or metrological devices, which in their digital guise, enable scale-free assessments of markets according to Latour (2013; 2014).

⁶ Latour's work is cited as forthcoming in Caliskan & Callon, 2009.

Research attending to the ‘building up’ of markets also foregrounds the notion of performativity. In some cases the role of metrics like performance measurements (Azimont & Araujo, 2010ab) are constitutive of the market. Measurements are set up to conform to certain limits, according to agents who already believe in them, as opposed to appeals to some objective rationality (Barrey, 2007). Segments of the market itself are also deemed to be performative (Venter, Wright & Dibb, 2015), marketing practices such as advertising bring sets of consumers to life based on successful network generation, rather than objective accuracy (Jacobi, Freund, & Araujo, 2015). New digital tools facilitate related types of consumer audience definition, and indeed, manipulation (Cluley & Brown, 2015). These are all elements of market making that may be traced through the notion of the market device.

Whether any particular aspect of a market device e.g. the calculative component, is most important in market organisation is a point of contention. Caliskan & Callon deem markets impossible without calculation (2005: 5). Whereas Slater (2002) proposes that transactions hold primacy over calculation in market organisation, though he agrees entanglements are key to enabling market exchange. Despite this hierarchy in Slater’s (2002) reading of the market, or the chronological development of Callon’s attention from interessement, to framing, qualification, performativity and marketization, there is no reason to maintain a privilege for any market component over another. Each is deeply interrelated with another, and often terms used in theory overlap in their meaning. What is of paramount importance is how components of framing, calculation, transaction and others interrelate and operate in a particular market circumstance. This position mirrors Hegelsson & Muniesa (2013) in assessing valuation practices. They contend that the shape of the networked arrangement of human and material actors, and technological and evaluative components is key to understanding market organisation. The particular pertinence of this theoretical framework is highlighted by the impact of disruptive digital technology.

Theoretical Implications of Digital Data

The importance of themes such as network, socio-materiality and calculation to market construction are emphasised by the individualisation of data through digital technology. The abilities that digital assemblages offer, to move from individual to aggregate scales without changing conceptual lens, are argued to have profound

political implications. Due to the “coincidence of the conceptual notion of network (action is radically redistributed) and the re-materialisation allowed by digital” technology, the problematic distinction between individual and society is collapsed (Latour, 2011c: 802). Traditional explanatory techniques for collective phenomena: an overarching society, neo-classical rational actor models, or emergent structures, all attribute a substantial reality to the aggregate. Thus individuals are understood to be are ‘in’ a society, or guided by the invisible hand of neoclassical economics. Latour (2011) argues this is because of a historical difficulty in obtaining data. Due to discontinuity in what information is available, and despite starting with individuals, social theorists soon jump to a metaphor of a second, superior level, be it ‘the social’, ‘the economy’ or ‘culture’ as a set of substantive values explaining action (Entwistle & Slater, 2013; Callon, 1998b). Digital data potentially enables one to move back and forth seamlessly between individuals with their assembled profiles of attributes, and totalled collectives. Metrological devices in their digital guise thus enable scale-free assessments of markets, and as such reduce the reliance on external explanatory levels (Latour, 2013; 2014).

The related ease of individualisation and quantification thereby makes analysis through conceptual tools such as objectification, singularisation and calculations particularly appropriate. As Latour notes: “ ‘to have’ (friends, relations, profiles...) is quickly becoming a stronger definition of oneself than ‘to be’ ”; identity is increasingly composed of materialised consumption and presentation, and therefore understandings of how markets come into being should reflect on the role of such network data (2011c: 801). The market roles of digital networks develop in concert with other “socio-technical, cognitive and community elements”; digital traces have the benefits of re-materialising, or underlining that which is not usually visible e.g. artists collaborations (Latour, 2011c). Latour (2011b) argues this mapping or bridging function can allow greater understanding of global problems, instead of relying on distancing abstractions such as nature or society as macro concepts. For example, research visualising social media responses to natural disasters (Yin, Lampert, Cameron, Robinson, & Power, 2012) can achieve what Latour calls an underlining that enables a clearer understanding of the world (2014).

In reviewing the literature of market devices and its various component streams, there is a gap to address regarding our understanding of the role of specific kinds of digital data in market construction. Whilst business metrics (Azimont & Araujo, 2010ab) and marketing practices such as segmentation and individualisation have been examined (Cluley & Brown 2014; Venter *et al.*, 2015), and digital mediation in markets is no new field (Stark, 2008), getting to grips with market construction and performance when digital metrics constitute both the audience and market, and are also part of the product itself offers a window to a different view. Within the creative industries, independent film provides a rich opportunity to examine these issues in an empirical field understudied from the market devices perspective.

Market Devices and ANT in the Creative Industries

The application of ANT and related theoretical concepts to the study of media and the creative industries has been limited, but is increasing as scholars look for ways to understand the role of digital technology (Braun, 2013; Vonderau, 2013). Whilst the empirical field of film receives ample academic attention (Pardo, 2013; Tryon, 2013), take up of ANT in studying creative industries is “minimal” (Entwistle & Slater, 2013, 13). In fact “ANT has said the least about assemblages such as creative industries and objects” despite there being “no good reason for a reluctance to ‘follow the actors’ into the model agency, TV studio or brand consultancy any less than into the laboratory or financial market” (Entwistle & Slater, 2013: 2). In their argument to ‘reassemble the cultural’, Entwistle & Slater (2013) propose that ‘culture’ has been dismissed because of the risk of its use as a universal explanation for calculation. However, understanding the materialising and performative work that occurs in assembling the cultural is presented as an important theoretical project (Entwistle & Slater, 2013). This is an undertaking that complements a device-focused style of investigation, which can benefit studies of digital technology the creative industries, particularly those involving social media. Caliskan & Callon (2010: 12) note: “recent research on financial markets, and more generally electronic markets, has demonstrated the advantages of an approach centered on the various tools available to agencies”, be they supply side, intermediaries like sales professionals, or consumption related agencies. Examining the detail of calculation in creative and cultural industries is opened up by digital disruption.

Notions of performativity, materiality, and valuation in market construction have been applied to investigate a select number of traditional arts and cultural industries. Gullledge *et al.*, (2014) examine book proposals in the publishing industry as a market device. They show how the shared framing and calculations by actors such as literary agents and publishers contribute to making the market for a particular manuscript. The authors adopt Bourdieu's concept of habitus to capture the learned, field-specific social evaluation involved in such calculations (Gullledge *et al.*, 2014). In the field of fine art, Herrero (2010) analyses auction catalogues as market devices, whereby their materially generated, aesthetic value cannot be dissociated from their role in calculative performance. Displaying products in an attractive manner, in combination with the rules and guidelines which abstract the object as a lot for bidding, combine in a process of marketization. Leahy (2009) also demonstrates the requirement for framing to facilitate market transactions of creative goods in the case of paintings. Entwistle and Slater's (2013) ANT-inspired analysis of creative assembly in fashion traces the arrangements through which a 'model's look' is accomplished. They show the cultural object to be a material and evolving assemblage, sustained by an extended and distributed apparatus, including websites, blogs and tweets, and interconnected practices leading to eventual consumption by readers (Entwistle & Slater, 2013: 7). The 'look provides a market organisation role through the conceptual function it performs in evaluation. One model may have the 'look' being sought after, but another may not. This result determines legal and economic transactions; people move their behaviour towards the look as a concept, co-construct it and legitimise its worth (Entwistle & Slater, 2013).

The practical role of a coordinating concept or theory is also found in Vonderau's assessment of the role of 'connected viewing' as a device to construct the home entertainment film market in a manner conducive to the aims of Warner Bros. (2013). These organisational interventions can be described in traditional ANT terminology such as translation and enrolment. The notion of 'connected viewing' is "an organisational instrument to muster allies", it aims at enrolling "a heterogeneous set of associates" to achieve co-constructed goals i.e. performing translation for the specific purpose of market exchanges (Vonderau 2013: 100). The instrument is 'productive'—a term linked to Gerlitz & Helmond's concept of performativity (2013). Both Facebook Likes and 'connected viewing' are used to enrol other market actors,

each describes and makes the market in a certain way. The concept of ‘organisational instrument’ is one I use in my analysis as it captures the agency of a market device in its initial performative role, that of enrolling the necessary actors and resources required for the device to take shape (Mason *et al.*, 2015).

In many areas of media and the creative industries, the successfully composed, and stable networks of connections that ANT would deem black-boxed (Couldry, 2008) are currently being opened and rearranged by digital technology. This period of controversy, in which assumptions of actors become “uniquely visible” (Braun, 2013: 433) makes the area particularly attractive to study. This is because markets are in the ‘re-making’ and additionally, digital technologies provide exceptional tools for tracing action (Latour, 2011c). The availability of large numbers of digital profiles, such as those of social media sites, is a significant positive development for industries that rely on consumer or audience engagement, and research based on these empirical fields. Digital profiles are easily calculable and navigable. The network, a market assemblage, can encompass high numbers of individual consumers, large organisations, and creative artefacts all at once, without appeals to micro or macro separations (Latour *et al.*, 2012). Audiences need not now be summed to their Box Office composites to be treated as material and agential, as is typically the case in film industry management research.

Examining interactions of producers, broadcasters, advertisers and audiences as networks of heterogeneous actors generates a more nuanced understanding of the agency of the non-human actors like audience ratings (Teurlings, 2013: 106). Digital data allows the large numbers of individuals labelled ‘the audience’ who are a dynamic network, but also a coherent actor, and in the case of this research, an additional component of the market object, to be researched as such. These varying roles can be charted according to their configuration over time. For instance, total viewing figures for television programmes are a traditionally cohesive device, dependent on aggregated individuals working in conjunction with a broadcaster to leverage economic transactions from advertisers. Digital technology facilitates both new roles and our understanding of them, allowing recognition that amongst the massed audience are collectives taking marketing and distribution roles. Such groups do so by creating and sharing further creative works with economic effect during the

life of a TV show or film. This activity can be navigated and mapped through access to digital datasets and need not be thought of in terms of a different structural levels, but captured through the same analytical lens (Latour *et al.*, 2012: 593, 595).

Literature at the nexus of creative industries and socio-technical, (digital) material investigations is beginning to explore the power of an assemblage-oriented approach. In the music industry, Baym (2013) explores the unseen, evaluative and constructive role of social media metrics such as Facebook Likes for engaging fans. Baym demonstrates how musical artists, their management companies and fans all combine to create a system in which social media metrics put a value on an artist, song or video that influences career management (Baym, 2013). In investigating online television distribution platform Hulu, Braun (2013: 442) uses elements of ANT to examine how Internet companies attempt to enrol the technological elements of Hulu's network toward their own purposes. Braun analyses the collisions and the choreographed relationships in a network to understand how artefacts are made to move and are disrupted. Braun praises the socio-technical theoretical language as a means of grappling with technologically mediated organisation and the "current media moment" (2013: 435).

Technological enrolment explains screen industry phenomena in the Internet age with more accuracy and detail than do appeals to overarching cultural contexts in which they might be embedded (the FVC), or market explanation through predictive laws (extreme Pareto distributions). The examples in this subsection demonstrate the new and valuable understanding produced by applying market devices and related theoretical concepts to the empirical field of the creative industries. Noticeable by their absence in this area are studies of digital metrics in film. This is a gap that I address and I now turn to the particular field into which I fit my study. Related works specifically in television and film industries are few, and concentrate on traditional networks of production.

An advantage of market devices oriented accounts of the creative industries is its grasp of the conflict and contingency in their organisation. As Tuerlings (2013: 106) puts it, functionalist flow-chart conceptions, such as the FVC, are unable to account for friction and the possibility of betrayal e.g. when producers sell to different

distribution partners than usual. Instead of only offering an interpretation of activity as a smooth, cooperative chain, the network assemblage approach recognises the dynamism of action, the requirement for continual assembly, and the contested nature of market construction. A producer must continually act as a translator-spokesperson, claiming to speak for other actors (e.g. knowing what the audience wants) in order to assemble a program of action and enrol the requisite resources to actualise their film or TV show (Teurlings, 2013: 107).

The application of agency by creative objects to enrol other market actors is extended in the case of independent film by Strandvad (2011). By charting how an evolving object, a film, moves from script towards the screen, Strandvad (2011) analyses moments of detachment, attachment and postponement of closure. The market object as an idea is first materialised as a text. The stabilised draft is conceptualised as an immutable mobile, separated from the author via a purchase fee, and thus able to make new attachments and enrol other participants in the film's development. Through retention of openness, an overflow, the possibility of mutation throughout the life of the work persists. The evolving project makes attachments by engendering contingent value judgements by perspective partners. Often such evaluations are matters of aesthetic sensation rather than perceived rationality. A director may sign up to shoot a film because the script is attractive, rather than the split of revenues assigned to the job. However, attending to how certain materialised calculative practices play a role in the many different attachments involved in the life of a film, allows a much richer understanding of market construction.

Whilst these investigations have explored the active organisation of socio-material networks in the film industry, their attention to the devices that mobilise networks as markets has not been detailed. The analysis of audience ratings and scripts as immutable mobiles have not been traced and unpacked rigorously. Indeed these are only two of several devices that orchestrate the film business, a set of tools to which DEMs have recently been added. Relatively new to the film industry, DEMs are in the process of developing authority (Espeland & Stevens, 2008) and generating trust (Porter, 1995). They are crucial to the way producers and consumers have changed to also become marketers and distributors. These extended capacities influence market actors' agency and their relative positions within networks. I argue that to get to grips

with new calculative mechanisms by which market relationships are coordinated, and changes to established mechanisms, the role of DEMs, their legitimisation and concretisation, will be best explored part of the multiple materials and agencies that intervene in market construction (Callon *et al.*, 2007). To demonstrate the value of examining the field from a market devices perspective I now provide an illustrative example of a traditional device and then I move on to DEMs specifically.

Market Devices in the independent film business

The Sales Estimate Sheet

The theoretical framework and methodological toolset of the market devices literature enables a new view, or reconceptualisation, of the organisation of the film business. Approaches to market devices, or market studies encompass a practice-based perspective that moves research from striving for comprehensive typologies, to engaging with emerging and unfolding practices (Araujo, Kjellberg & Spencer, 2008: 7). Films can be helpfully conceived as moving assemblages, which are “continually redesigned to make future attachments” (Entwistle & Slater, 2013: 8). A film can be said to undergo a career as a product, it is qualified and sold many times over between different qualification professionals (financiers, sales agents, and distributors) (Callon *et al.*, 2002). This career is traditionally described through the established FVC construct, but may be more insightfully broken down according to the multiple market devices that mobilise market actors, and frame a film as a good at different times of its life. As a market object, a film can be packaged and sold in various combinations of script, budget, finance plan and sets of intellectual property rights. It can also be sold as a digital file of audio-visual information. Approaching the film business through the different devices involved in each of these transactions is better able to give an account of the extended and overlapping timeframes that mark the contested and complex progress of a film.

A crucial and well-established instrumental device in the independent film industry is the sales estimate sheet. Considering it through the theoretical lens of the market devices literature provides a rich and deep understanding of its operation. It is an evaluation framework created for most films, which, through its particular material

format coordinates a number of different transactions between market actors. It operates as follows. The legal rights to capitalise on a film financially are split up by geographic territory. An international sales agent will purchase permission to sell the distribution rights from a film's producer, and then take a commission on every sale to different distributors around the world. To manage this sales process, agents generate a list of prices the sales agent believes the film can be sold for in each territory. A selection from a sheet can be seen in Figure 2. The sheet also qualifies the film by a few headline characteristics such as budget, genre, director, key cast, language and likely age classification.

Figure 2. Selection from a sales estimate sheet

	DEAL AGREED	ASKING US\$	TAKING US\$
NORTH AMERICA			
USA		500,000	150,000
Total		500,000	150,000
EUROPE			
Benelux		75,000	35,000
France		250,000	150,000
Germany/Austria		400,000	200,000
Greece		50,000	20,000
Italy		250,000	150,000
Portugal		30,000	15,000
Scandinavia		100,000	50,000

Estimates are often classified in terms of “ask” and “take” levels. These figures are the amounts with which the sales agents open negotiations with distributors (ask), and the amounts they are prepared to accept as a last chance to make a sale, (take). Estimates are calculated based on personal opinion and reference to the historical past performance of films with similar attributes. The prices are for all film exploitation rights, i.e. exploitation in cinemas, via DVD, TV and online, generally for a period of 25 years. Sales contracts include many more detailed stipulations such as the exact chronological timing for release, and various revenue splits applied between licensee and licensor in each channel or ‘window’ of exploitation e.g. cinema or DVD. However, the sales estimate sheet is a one-page summary that functions primarily as an organisational tool.

The sales estimate sheet performs many different market construction tasks depending on the particular arrangement of actors in a given network. The standardised nature of

the sheet, the formatting of its data so it can be easily aggregated for future use, and that the device is fully mobile, has led to its adoption outwith its initially conceived purpose. As well as its initial function for rights sales, the sheet is also utilised early in a film's life as a financing tool, and by distributors to manage their acquisition strategies. The original role for the sheet is to enable the sales agent to evaluate how much money the company will generate from any one film. This allows them to manage their cashflow to acquire and exploit a portfolio of films. Then the sales agent, in combination with the sheet, attempts to structure a network of distributors and transactions according to the ask prices per territory. In doing so the sales agent is problematizing the market situation, in the sense of providing a solution for the producer's need to sell the film and find an audience, and the distributor's requirement for product to run their business. By working at volume, the sales agent can afford to attend international markets and festivals, meeting distributors in regional settings, which a producer is unable to do. The agent can bring global films to local distributors and thereby fulfil an intermediary role. The sales agent becomes a translator-spokesperson for the films, pitching them to distributors on and offline, personally and through marketing materials, film festivals, press, premieres, trailers and in negotiations. The market device thus attempts to bring the world encapsulated in the list of 'ask' prices into existence, and in doing so perform and stabilise a network of buyers in transactional relationships with the creative product (Callon, 1986a; 1999). Thus it plays a key role in a market socio-technical agencement (Callon *et al.*, 2007).

The device also functions as a guide for market actors on the other side of the transaction. As sales estimates sheets are a common norm, and exist in a stable format, distributors can model likely prices for a film based on past experience of comparable titles. Whilst the estimates sheet is not shared with distributors, sales announcements in the trade press and deal term discussions indicate 'ballpark figures', and the territory and rights sold are typically announced or leaked. Distributors take keen notice of this information, they 'track' the films they are considering acquiring. The material framework of the sales estimate sheet allows for market actors to literally 'fill in the box', annotating a matrix to trace when and where sales have been made, and for roughly how much. Distributors analyse the speed of sales and whether the deals are assumed to be high or low. This determines how the

distributor then values the film and operates their negotiation and acquisition practice. For instance, if few sales have been announced, especially if the film has already played at its most high profile festivals, then the potential buyer assumes the sales agent will be willing to accept a lower offer.

For a limited time, and for a particular function, the sales estimate sheet allows the film to be detached from its current relationships, arranged in a formal, calculative space, associated with other objects and be transformed (Callon & Muniesa, 2005). The film is detached from the writer and production company and framed in a standardised fashion so that its qualities can be objectified and made stable as an artefact ready for transaction. The film's core characteristics in terms of aesthetic value and cost are summarised and then its specific geographic worth set out within precise boundaries (Latour, 2005). This particular type of qualification allows the films to be associated with, in other words compared to, other films and thereby singularised. There follows a series of negotiations and the film, bracketed and materialised as a certain set of legal rights, is transformed into an agreed price (Beunza & Garud, 2007). These legal assignments are qualified in terms of the technology by which the film can be distributed, the timing of that release, and the split of revenues from the resulting exploitation. The film then becomes attached to the buyer's world and the network relation is confirmed. This is one of the moments in which the film, a product, becomes a good during its career (Callon *et al.*, 2002).

Sales estimates also influence film financing. Estimates are often provided as a service by sales agents before a film is made. The evaluative data, in conjunction with materials such as script and finance plan, can convince investors to lend the production funds in order to shoot the film. Financiers often perform internal calculations regarding the provision of debt, based on sales estimates as coverage for their exposure. For instance, lending an amount such that it is covered three times over by the totalled 'take' sales estimates. Sales estimates sheets thus materialise value in a particular format, and function as a currency. Despite the ultimate end value of the film being uncertain, and market actors having contrasting financial goals (producers want to borrow the maximum against the estimates, financiers want to lend the least) agreement across company boundaries is achieved. Sales estimates provide a common language, with enough plasticity that it can be brought inside each market

actor's internal valuation system, analysed and then returned to the fray for organising transactions object (Bowker & Star, 1999). The market device thus facilitates centres of calculation and grasps spatially distributed networks of potential and actualised allies (distributors). As such the sheet may be considered an 'immutable mobile' (Latour, 1987, Teurlings, 2013) and a boundary object (Bowker & Star, 1999). The technical capacities of the device are key to its role in the enrolment of network ties.

Whilst having a mechanical, reliable aspect in terms of format and purpose, the sales estimate sheet is not an automated formula. Prices are generated in a dialogue between individuals' personal opinions and historical data. The power that these figures then exert is not solely a function of the pure numbers themselves, but also the relations in which their creators and interpreters sit, agency is distributed. A sales agent will generate the estimates, and there will be a relative expectation of accuracy for those figures based on the previous record of that company in delivering actual sales close to their estimates. In advance of actual sales being achieved, the estimates can become further legitimised as a valuation if the figures are used by the producer as security to procure a loan from a bank. Through the successful enrolment of other market actors, the position of the sales agent and the power of the device are increased. If low estimates are not achieved then the calculative capacities of the sales agent are called into question, and also those of related investors. The reputation of market actors, the sales agent and the bank, become allied to the fate of specific elements of the estimate sheet.

Those market actors intermediated by sales estimates sheet have come to rely on the device as second nature, their related actions that can be considered black-boxed. As such the sheet's operation is seldom discussed and despite their vital organisational role, the tool has drawn little attention from researchers. Yet understanding how the calculative aspect of the sheet operates to construct market networks and perform value provides rich insight to the management of the industry. Digital disruption has shaken up the organisation of the film industry. The contents of such black-boxes are coming to light as they are influenced by digital technology. Examining resulting market reconfigurations with a comprehension of the contributions of market devices provides a new route to knowledge contribution

Examining DEMs through the theory of Market Studies and Market Devices

Drawing on literature examining digital technology in the creative industries and initial field experience, this subsection illustrates why the frameworks and focus of theoretical work concerned with market devices is appropriate for investigating the role of DEMs.

What are DEMs?

Digital technologies including social media services or VOD players, which rely on multiple interactions between users and content, produce quantifiable traces of activity (Van der Graaf, 2014). I label this data DEMs. They are generated as a matter of course through human engagement with such tools due to the fabric of digital technology, which is ultimately composed of binary code, and inherently quantitatively described. All digital interactions are nominally traceable. Every click on a website can be tracked and indeed must be processed and accounted for so that the technology can function. DEMs are data that both descriptively measure and materially constitute the activity of many digital tools. Often businesses that depend on interactivity and sharing networks present these figures that constitute their existence publicly, for example Facebook *Likes*⁷, or *Shares*⁸, and Youtube *Views*⁹ (Jenkins *et al.*, 2013). In other circumstances where such metrics equate to purchases or are extremely complex, the metrics remain hidden or privileged within systems such as Google Analytics, which measures website activity.

What motivates the production and use of DEMs in the film industry?

The multiple and complex ways that digital technology operates in the film industry, in financing, marketing and distribution are captured in relationships involving these metrics. At the heart of such activity is the notion that DEMs play a new role in film evaluation, they are believed to indicate how many people are likely to want to see the film, and as such are pulled into numerous calculations that help to construct the market. This includes the ways producers attempt to reconfigure activities to improve their economic performance.

⁷ <<https://developers.facebook.com/docs/plugins/like-button>>.

⁸ <<https://developers.facebook.com/docs/plugins/share-button>>

⁹ <<https://support.google.com/youtube/answer/1714329?hl=en>>

Producers traditionally earn money through fees from the production budget of a film, and by sharing in any profits. As digital piracy has decreased sales, and the capital that distribution companies have for acquiring films, investors have pressured budget cuts, reducing producer fees. Once cinemas and retailers, distributors, collection services and sales agents have taken their expenses and commissions, and the original investors have been repaid, only then may producers take a cut of revenues, usually 50% of what is remaining at this point. The BFI (2013) estimates less than 7% of British films go into profit. This environment makes elements of self-distribution a financially and strategically attractive option for producers. In simplistic terms, by doing some of the work traditionally conceived to be that of a distributor, by for example using Youtube, the producer is able to retain a greater proportion of revenues themselves and so market roles as historically conceived are merged, or reconfigured.

Filmmakers' responses to digital disruption have regularly included the use of social media discussion, digital VOD distribution, and international film marketing to engage audiences. Transmedia content, including video, audio and text outside of the typical 90-minute feature film is disseminated online and delivered in multiple forms, at non-traditional times. DEMs are produced through interaction between digital materials and other market actors, often constituting direct relations between participants traditionally deemed to be separated by FVC segments. Digital communication increases amongst creative talent and audience networks who can now finance, market, sell and contribute creatively to films through a variety of different digital services, for example Distrify, Youtube, and Kickstarter. As a result DEMs are produced at a quickening rate as the differentiation between film as a product, or a service is increasingly difficult. These initiatives and the data they create are envisaged to improve the financial performance of individual film projects.

Although DEMs vary, for example from Youtube to Twitter, a core, albeit complex through-line links their purpose in creative markets. These data are not simply unproblematic representations of some emotion or action (Styhre, 2013), but have complex meanings that also force actions. Audiences are no longer passive recipients, untouched until a release. For example, early in a film's life, audiences engage with the materials comprising a film, such as its trailer or cast via social media. These engagements are captured by DEMs and utilised by market actors. Such numbers are

conceptualised as ‘intent to buy’. Likes, email sign-ups, blog reviews, all count in this space of evaluating creative work, because, though ambiguous on their own, they are constructed as systems of valuation through the actions of the individuals, companies and materials they connect (Baym, 2013). In order to understand the potential audience for a film and exploit it, DEMs are appropriated by market actors’ own bespoke information systems for data collection, interpretation and application (Baym, 2013; Napoli, 2011). However, “we know nearly nothing about how people approach and build ad hoc information systems to understand their own audiences” (Baym, 2013, 2). Existing literature generally takes a positivistic approach to link DEMs to financial results, as opposed to investigating the role of DEMs in the many management activities that construct the market.

Why don't existing theoretical applications fully account for DEMs in independent film?

Traditional explanations of the film business have characterised management processes in terms of action under conditions of uncertainty (DeVany, 2004). Action is often interpreted in terms of social devices such as conventions, institutions, organisational structures and power (Berkert, 1996). Indeed, in film the most prevalent market conceptualisation, the FVC, conforms to the idea that conventional, repeated use of existing frameworks function to make the future more predictable by others (Keynes, 1973; Bibow *et al.*, 2005). The FVC is a construct that engenders market action by providing a shared shorthand, and a co-performed positioning of actors to coordinate their roles, even if the model is not deemed an accurate reflection of events.

The intermittent framing, stabilisation and exchange pattern of independent film summarised as a staged, single-channel linearity by the traditional FVC, is now greatly disrupted. This means that the model’s explanatory and organisational legitimacy is threatened even as a summary, performative map of events with accepted flaws. There are a greater total number and more diverse set of market actors interactively involved in the continuous transformation of a film. The FVC does not sufficiently account for the increased importance and agency of non-human materials such as digital tools, nor the way such tools materialise the agency of the audience. The FVC’s foregrounding of defined sections of activity (development, production,

sales) that indicates a smoothness in the way a film passes through this life cycle, is increasingly inaccurate, and unhelpful as a concept. It is at the contested boundaries between the 'chain links' where much management work occurs over extended periods of time, through a great deal of conflict and friction in the dynamic arrangement of networks of companies, individuals, their tools and materials. These boundary points of interaction are proliferating, extending and changing as digital tools re-materialise existing connections, force their reformulation, and create brand new arrangements. Digital technology impacts the scale, depth and dynamism of networks that comprise the market for an individual film. By looking at the role of DEMs, it is possible to examine how the film business is mobilised in a way that previous approaches have not achieved, providing a deeper understanding of the phenomena. Digital disruption has led to current market practitioners either claiming there is no longer any reference model for organisation, or to define their action in specific contrast to the FVC. Strong definitions characterise what a thing is, rather than what it is not, for instance. Instead, positive explanations of creative work, including conditions of originality and value under the influence of directed agency are argued to be better definitions (Gaut 2010b, 1040). The inability of the established construct, the FVC, to capture current events points to the value in exploring new conceptualisations.

What benefits emerge from considering DEMs through the theories of this literature review?

An initial consideration of film DEMs through the conceptual frameworks for studying market devices uncovers features that can't be seen from the FVC standpoint, or by reducing DEMs to correlations with financial returns. Personal interaction and deliberate preference setting as a social action (Callon *et al.*, 2002: 209), for instance, Liking on Facebook (Gerlitz & Helmond, 2013), is becoming part of electronic markets as new collective calculative devices emerge (Callon *et al.*, 2002: 219). Interactions between consumers and film content, between consumers and film distributors all generate information continually. DEMs are constantly accumulated, thereby providing an intricate, fine-grained example of how the qualities of an object keep developing. Callon (1998) invites scholars to explore the conditions under which calculation is rendered possible and how calculative agents emerge. The opportunity afforded by considering the role of DEMs in the development of

coordinative, calculative frameworks for configuring the film market thus offers great potential for a contribution to knowledge. Layer upon layer of DEMs are traced as part of the technological means of doing business. DEMs encompass not just raw data but all their relationships incorporating human and material elements. The intervention of aggregated audiences in the market making process has multiplied due to the increased information and opportunity the Internet provides for evaluation. Examining how DEMs are framed in and out of calculations can illustrate how different communities of market actors become attached or detached to the market good. In addition to coming to terms with how to best exploit digital information, actors must also be able to interpret its use by others. This places further significance on the emergence of calculative frames to organise interaction amongst agencies. The unequal distribution of such competencies leads to the establishment of certain market arrangements over others. If one market actor is unable to cross-calculate the position of another, there is scope for transactions in which one actor dominates another, which can reinforce and anchor certain configurations (Caliskan & Callon, 2010: 11-12) or engender disruption and a new market process.

The independent film industry is composed of multiple dynamic arrangements involving social relationships, technical tools and creative materials. The sales estimate sheet is one such market device and it is productive and insightful to examine the role of DEMs from a similar perspective. I do not attempt to isolate DEMs from other devices, indeed this is impossible as interaction amongst different tools is required for a film to be realised. The focus is on understanding reshaping through the lens of DEMs, informed by the market devices literature that also illuminates the role of established calculative frames. Deciphering how processes of understanding are built up and function through such networked actors is essential to grasping new forms of evaluation that coordinate market organisation (Holm, 2007). I trace the making, or assemblage, of the market for a number of different feature films over an extended period. Examining these instances enables me to discover and articulate the multiple, digitally mediated processes of negotiation, calculation and exchange that mobilise the film industry. Braun notes many studies which examine trends in file-sharing or streaming data, miss the ways in which industry organisation processes are “hammered out”, meaning how they emerge, are constructed, and understood (2013, 453). It is this ‘hammering out’ process that I am interested in: how audiences are

anticipated, engaged and exploited; and thereby what their role in performing or constituting economic transactions to mobilise the market. These assemblages or systems have been understood as ephemeral, and hybrids or temporary alterations, yet are recognised to have the potential for lasting impact (Braun, 2013). I apply the theoretical concepts of the literature reviewed here to analyse empirical data from an extensive embedded case study exploring the role of DEMs.

Chapter 3. Methodology

Research Aims, Objectives and Questions

The guiding aim of the research is a deeper understanding of how the organisation of the film industry is being reshaped by digital disruption. DEMs provide a previously hidden view of this phenomenon. They implicate production companies, audiences, cultural objects, creative practices and management processes. Studies of digital technologies in film from a variety of academic perspectives and changes in practice reported by industry bodies, as set out in the preceding two chapters, indicate notable reconfigurations of the business are occurring. In order to consider the broad scope of DEMs' potential importance, and reflect the new status of both the empirical phenomena and theoretical field of market studies, I choose an exploratory overarching research question:

What is the role of DEMs in reconfiguring the independent film business?

The film market is constituted by the dynamic establishment of particular configurations of multiple materials, practices, individuals and companies. Identifying the specific arrangements involving the interventions of DEMs is crucial to understanding the industry, therefore I adopt an operational research question to direct the approach:

What are the specific arrangements involving the intervention of DEMs in configuring the diverse elements that constitute the market for independent films?

This question reflects both the research paradigm of the market devices literature and the specific empirical field.

In order to analyse these arrangements I put forward two, more detailed and theoretically grounded research questions:

1. What are the material characteristics of DEMs' involvement in film valuation and market calculation?
2. What are the dynamics of action at play in DEMs' role in the coordination of the multiple market actors which constitute the independent film business?

These questions are prompted by the theoretical focus of the scholarship reviewed in the preceding chapter and two salient features of the topic of study. The evaluative capacity of DEMs is readily visible in public social media campaigns for films, and attributable to the material characteristics of digital technology. The interaction between multiple actors is a defining characteristic of the independent film market, and thus DEMs' role in the organisation of these industry relationships is extremely important.

By tracing and unpacking the assembly of different film productions through time I am able to account for if, and how, new ways of film making, in the broadest sense, come into being. I examine how market instances are created according to DEMs' role in creating and mobilising both established and new networks, their role of framing and calculation in market construction, and how these connections of social and material agents are embedded over an extended period. This research approach is predicated on a situated and multi-sided examination of the field that allows for multiple contributions to a construction of reality and knowledge.

I adopt a constructivist methodology and take a longitudinal case study approach. The case study is of the Cannes Film Festival award winning company *Sigma Films* (Sigma). Using participant observation I trace the role of DEMs throughout four of its feature films over the period 2010-2014 (*Donkeys*, *You Instead*, *Perfect Sense*, *Citadel*), its film portfolio more broadly, and its financing business Film City Capital. I use the case to explore and examine DEMs' role through Sigma's films and business management operations. Whilst I have chosen to focus on DEMs in their role related to the distinct films produced by a single case company, this theoretically informed choice is made with the recognition that any such framing is artificially imposed. Market devices are not separable from the larger assembled elements of the world in which they are set (Law and Rupert 2013a). I have chosen the frame of DEMs and there are market features that will inevitably escape it, however I believe this

approach is best able to address the chosen research agenda. In the following chapter I detail my ontological and epistemological position, explain my case study method, the selection and characteristics of the case. I then address my procedures of data collection and analysis, and consider matters of research ethics.

Research Philosophy: Ontology and Epistemology

A research philosophy is composed of a position on the nature of existence and reality (ontology) and a conceptualisation of how knowledge is created or obtained, and of what it consists (epistemology). A researcher's ontological and epistemological assumptions underpin the research methods they use. I adopt a middle ground constructivism (Schwandt, 2000), which is characterised by a recognition that "knowledge is socially constructed, as is the social itself, but reality has a say in that construction as well as the acts, agency and social character of the knowledge makers" (Byrne, 2009: 5). Thus the position combines qualified elements of epistemic relativism and ontological realism.

Conceiving that organisational phenomena are constructed through social interaction, as opposed to being "hard proofs" (Flyvberg, 2011: 303) to be discovered or "unvarying standards by which truth can be universally known" (Guba & Lincoln, 2005: 204), implies some type of epistemological relativism (Rouse, 1996 in Wehling, 2006: 84). Therefore there is room to accept multiple accounts of a researched phenomenon because of subjectivity in interpretation. The subjectivity of each individual involved in the case study methodology has an effect on the research process, and has impacted the data from which I compose this thesis. Multiple sources of information about the world, be they quantitative data concerning digital materials or documents of traditional filmmaking practices, are interpreted by numerous actors including myself. The interpretations of others, filtered to me in conversation, observation and materialised in emails and reports, all contain elements of bias and partiality. The researcher is not a mere observer and reporter of events and structures but instead an actor in the co-construction of knowledge (Mir & Watson, 2000).

The standpoint that there is not a single measureable truth to reality is not to say that absolutely "any interpretation is as good as another" (Schwandt, 2000: 199). Holding that knowledge of the world is mediated by the researcher, does not entail total

relativism about what exists. As Mir and Watson put it: “it makes obvious sense to hold on to a notion of ontological realism—one where the existence of phenomena themselves is taken for granted. For instance, one does not need to argue that people working together produce tangible things like cars and insurance policies, while the existence of a car is no social construction, its utility is socially produced” (Mir & Watson, 2000: 945). The middle ground constructivist recognises “that scientific knowledge is in part the product of processes of social negotiation” but is not solely that (Schwandt, 2000: 199), because unequivocal, empirical materials also play a role. I have chosen this particular research philosophy to take account of certain biases in how I see the world and the correlative knowledge claims I make about it. Investigating elements of digital social networks, their engagement metrics in restructuring market transactions requires acceptance of both situated, contingent knowledge of social assemblies, and the unquestioned existence of some material facts. For example, one on hand is the construction of inter-subjective agreements between companies and individuals about value for unique products, and on the other, the unproblematic existence of “real things” such as physical materials like the Digital Cinema Package (DCP) storing a film.

The benefits of the moderate constructivist approach are that the productive, in knowledge terms, attention to materiality in creative industry research does not need to be technologically deterministic. I can recognise the technical characteristics of digital networks as real and stable, and combine this with an understanding of them via the active and social creation and maintenance of association practices (Munir & Jones, 2005). Speaking to this issue Barad (2003: 817) contends that reality is not composed of things-in-themselves or things-behind-phenomena, but ‘things’-in-phenomena. Barad’s statement is eminently applicable in respect of this research. I am not looking to uncover essential, single truths about certain natural phenomena, nor do I ascribe to an over-arching macro system or structure responsible for action. I look to the dynamic combination of human and material agencies that bring markets into existence.

The dominance of neoclassical economic thought in researching market organisation and operation tends to imply a realist ontology to the investigation of market construction – that there is a built world to be discovered and catalogued. However,

the framework I choose to guide my research is indebted to the theory of market devices and its contributory concepts in ANT, economic sociology and performativity scholarship. Markets are made of calculation in networks of social and material agencies, which grow and become dominant or fade away (MacKenzie & Pardo-Guerra, 2014). The research process thus entails a negotiated and socially constructed argument that recognises competing agencies and interpretations that contribute to the continuous making of markets. The theoretical literature holds that markets exist constantly “in the making”, and that the making is distributed and embodied in various changing combinations (Hardie & MacKenzie, 2006). Thus the research approach must be able to “respect and render” a “diversity of forces” and “panoply of entities” that coordinate in performing and producing market infrastructure (Caliskan & Callon, 2010: 8). Flexibility is thereby required to discover the particular machinery that determines how and whether particular market instances come into being, and with what result.

As the research objectives I focus on concern the assemblage of ‘what is happening’ rather than addressing more limited questions of asking ‘what is’, there are some specific research approach criticisms to be addressed. Critics have taken this attention to process to mean “constructivist literature does not often have much to say about ontology” (Barad, 1997: 163). One might even argue that certain constructivist studies avoid the area or equivocate regarding their ontological position: “we stress the emergent character of reality rather than whether or not it exists independently of our perception of it” (Kjellberg & Helgesson, 2006: 840). Yet I do not believe the critique that ontology is bypassed by constructivism necessarily holds. Kjellberg & Helgesson’s ‘practical’ constructivism ascribes equality of explanatory power to non-human and human actants (Wehling, 2006). One implication of this feature is that the attribution of “causal primacy to human beings in the process of constructing reality”, which has been levied as a fault of social constructivism, is avoided (Kjellberg & Helgesson, 2006: 841). By taking into account the potential agency of inanimate objects, the nature of reality is extremely important to researchers. The moderate constructivist position pulls both contingent, socially constructed phenomena and indisputable empirical facts such as physical objects into accounts of what is real and what constitutes knowledge.

Case Method

Why Case Study?

In order to understand DEMs' role in assembling the independent film market I adopt a case study method. The case study approach is a research strategy in its own right and not simply one of many qualitative methods (Yin, 1981). Such a strategy consists of close observation and interaction with the researched phenomena to generate meaning through rich, particularised explanation (Denzin & Lincoln, 2005; Eisenhardt & Graebner, 2007). This process is recognised as particularly useful to answer exploratory, explanatory, or descriptive questions because "such questions deal with operational links needing to be traced over time, rather than mere frequencies or incidence" (Easton, 1995: 8; Yin, 1994). I choose a single, embedded, longitudinal case as opposed to multiple cases or an holistic approach (Yin, 2012: 50-53). This choice was made for a number of reasons.

The goal of the research is to provide a revelatory case. The phenomena under investigation, DEMs, are new to the industry, their role is emerging and their use is often hidden in behind-the-scenes activity. Their operation is also integrated within the management of an extremely expensive and exclusive process. Thus I chose to capitalise on unique access to a critical case, the production company Sigma Films (Sigma). The company released numerous feature films over the fieldwork period, thereby providing subunits of analysis to chart the emergence of DEMs' role over time (Scholz & Tietje, 2002). The theoretical approach I have taken for the research does not demand replication for validity, but rather authenticity and plausibility, which are generated from rich, in-depth analyses that engage with theory (Golden-Biddle & Locke, 1993).

The contemporary film industry has a number of characteristics that makes case study research particularly appropriate. Much of the organisational work that constitutes the film industry requires teasing out by observing "the sense-making of engaged participants, as co-creators of social structures" and of knowledge (Buchan & Bryman, 2007: 486). The market for a film is assembled over an extended period as the film is financed, produced, sold, distributed and consumed by a complex cast of collaborators. The film industry involves many types and many instances of market

exchange. Films are sold in many different forms, from intellectual property rights to physical DVDs, and to many different people and organisations over their lives. Modes of exchange are argued to be “more readily examined in the making than ready made” (Kjellberg & Helgesson, 2007: 861), and case analysis is especially useful at capturing the multiple and nuances aspects of this making process over time.

Market making involves constant combination and recombination of elements that contribute via the mediation and coordination of agency (Holm, 2007). These agencies are social (Beunza & Stark, 2004), distributed, and include material artefacts as well as organisational actors and relationships (Callon & Muniesa, 2005; D’Adderio, 2008). For example, to evaluate and execute a particular set of film exploitation rights, a diverse range of networked actors in many temporary associations are involved. Producers, sales companies, distributors, marketing events, and press coverage are ruled by industry conventions, all of which are disrupted by digital technologies, are engaged many times over in different arrangements concerning a creative work. To get a full understanding of the role of DEMs in this world, I therefore use various sources of data including participant observation, archival research, records of oral presentations and emails. From these types of data I then build illustrative and revelatory empirical analyses (Phillips & Di Domenico 2009).

Utilising different sources of evidence provides multiple perspectives on events, additional to observing action first-hand. These resources provide the opportunity to generate accounts of fine-grained detail. The flexible data collection and analysis method is combined with a rigorous focus on a specifically selected, bounded unit, the case. Together the flexible collection and concentrated examination of data enables a rich, in situ understanding of a phenomenon emerging in concrete practice (Easton, 1995). The use of DEMs in the film industry is at a crucial point in becoming reified and thus offers a precious opportunity to tell us something about emerging assemblages in a disrupted environment. Adopting case study method is appropriate to the middle ground constructivist perspective outlined earlier. The goal of case study is to learn and produce an accurate description with “subjective yet disciplined interpretation” (Stake, 2005: 452). So the type of knowledge produced is not claiming to reveal a single, real nature, but is a “local and temporal achievement” connected to

accounts of the apparatus observed (Wehling, 2006: 91). In creating theoretical reflections from the market apparatus drawn from the field, the aim is to produce a “significant, coherent and intelligible” account (Wehling, 2006:85).

As well as relying on accepted items such as the existence of specific films, this account is inevitably influenced by my position as a researcher. Due to this subjectivity, a degree of relativism applies: “there are social and material reasons for knowledge claims... and socially constructed knowledge has real material consequences”, but this does not mean that any interpretation is valid (Barad, 1997, 186). This point links to a question of compatibility that has been raised as a potential criticism of case study – that the method relies on the realist proposition that there is an independent, objective reality out there to be studied. This standpoint is argued to be incompatible with a position that knowledge of the world is socially constructed (Easton, 1995; Sandberg, 2005). I do not agree with that position. Certainly this case study is partially built upon the recording and impressions of objects and events deemed to be uncontroversial in their existence. However, the methodological logic by which conclusions from such data are drawn is not the same as, for instance, positivistic quantitative methods, which would seek experimental replication of observed instances for proving some result to a pre-evaluated degree. The understanding of market assemblage and operation in terms of the role of features attributable to a device does not have an objective threshold level for acceptance. The perspective here is that there are some independent, objectively real items that are part of the study. These artefacts are taken into account alongside interactive social constructs (Schwandt, 1998: 249) and other phenomena whose meanings can also be understood as socially constructed (Fitzgerald & Dopson, 2009), even including quantitative data. There is not one single correct reality to discover, nor are their infinite valid interpretations. The belief in a variety of forms of really existing markets, reliant on different types of sociotechnical arrangements is not the same as declaring any, and every, proposed interpretation of market structure is plausible (Araujo, 2010; Latour, 1987).

A Single Production Company

In addition to criticisms of case study regarding its ontology, there are also generic questions about the epistemological value it can produce. These issues of

generalizability and validity can be dealt with in the context of my particular choice of case approach. I have chosen to concentrate on one production company in order to provide a bounded unit of analysis, designed to provide insight through a powerful single story (Dyer & Wilkins, 1991). Findings from single cases can provide further academic contribution by enabling analytic generalisation (Yin, 1981; 1989). This is achieved by demonstrating how case findings inform relationships between concepts and implicate other relevant instances outside the specific case context. This argument is similar to Bennet & George's (1997) concept of contingent generalizability in which case learnings are applicable and thus valid with reference to cases similar in terms of the variables being studied.

Locating the study of the role of DEMs in the context of one company over time provides a valuable framework within which the detailed complexity of market dynamics in a disrupted environment can be examined. The company, through its organisational form, provides a defined entity and agency with which to frame materials and activities that are oriented towards DEMs. The company's established role in the marketplace and related interactions make it a "constant" in the field, and a solid benchmark from which to make qualified statements (Flyvberg, 2011: 301). These positions speak to the generic criticisms of cases and single cases as flawed due to their lack of generalizability in the sense of populations and samples, by offering different concepts of generalizability based on notions of integration and differentiation, instead of pure individuals versus aggregates (Donmoyer, 2000; Schofield, 2000).

In choosing an individual organisation as a focus, the study benefits from specificity (Stake, 2005). One aim of such a choice is to deliver a rich illustrative account, as opposed to attempting to gather a representative sample of market actions. Detailed description of close data, based on systematic collection and analysis is crucial to establishing the quality of case study research (Golden-Biddle & Locke, 1993). The considered choice of case unit and specific case examples can evidence plausibility, a crucial measure of research quality in demonstrating and transferring understanding, and developing critical engagement (Golden-Biddle & Locke, 1993: 599, 605).

Case Selection

The selection method for choosing Sigma involved both purposive and convenience sampling (Barratt, Choi & Li, 2011; Saunders, Thornhill & Lewis, 2009). The selection was purposive in the sense that Sigma indicated potential for new insight into my specific research question. Selection was convenient in that I was in a unique position to exploit extremely rare access to a company in a very exclusive industry at a key, volatile industrial moment. It enabled effective and legitimate empirical investigation within my chosen theoretical domain (Denzin & Lincoln, 2000). The purposive nature of selecting Sigma was based on expectations of information to generate a case with prototypical value, to discover insights not found elsewhere (Saunders *et al.*, 2009: 282; Siggelkow, 2007). DEMs in the context of the film production company and film market have not previously been studied in this way. Sigma proved the best case for a number of different, but complementary reasons that I will expand upon in the following sections. As a result, the case has the potential to establish a paradigm for understanding film producers and other creative companies in a digitally disrupted field (Flyvberg, 2011: 307). The company was chosen and designed to generate an illustrative and in some respects revelatory case (Eisenhardt & Graebner, 2007: 62; Bryman & Bell, 2007).

Access to film projects is very difficult to obtain as a researcher, and overcoming this challenge was a major step in this investigation. There are a number of reasons why access is hard to achieve. The industry is intensely competitive and the few successful companies that operate in the UK are oversubscribed with researchers wishing to study them and hopeful new entrants willing to work for free. Staff are overworked and under resourced in terms of time and money. Given the extreme uncertainty inherent in market activity and the large financial exposure taken on by relatively small (sales and distribution) companies, information is highly privileged. The film business is a small world where confidentiality is important (Blair, 2003). The unique nature of each product and fierce market competition for finance, distribution and audiences means that deal terms and rights acquisition offers are considered highly sensitive and the vast majority of market actors are unwilling to share this information, regardless of its intended use. Companies believe current market information is one of the few sources of potential advantage and thus jealously guard their data. Therefore the acceptance and facilitation of research is a low priority.

The ability to select and study Sigma stemmed from my employment as a Research Associate at a National Film Fund (NFF) from January 2010 to January 2012, and follow on backing and access provided by the NFF as an official supporter of this research. In my NFF employment, I was charged with investigating the impact of digital technology on film marketing and distribution to improve the fund's return on investment. I was based at the fund's offices in two major cities and was a member of the Market Development department. I was the point person for any film company with marketing or distribution based interest in the Digital Innovation Fund (£0.5m) and the single run Film Investment Fund (£1m). I also performed similar but shared role regarding Market Development Fund investments (£50k). Within the NFF I attended all-staff meetings, investment meetings, and selected conference calls with co-financiers. This meant I was fully informed of the broad industry landscape and current state of investment in on-going film production, and films going into international sales and distribution. I was invited to share my analysis on applications for fund investments with the Portfolio Manager for Film and Broadcasting; Portfolio Manager for Digital and Market Development; and the Market Development Officer responsible for the Market Development Fund. The backing of these staff members provided me with unlimited access to historical archives on the nature and performance of all of the fund's previous, and ongoing investments. Thus, in addition to serving case selection, the NFF also provided a continuous source of data. This extremely privileged position, being informed of the context of historical examples and current comparators, provided me with a long-list of potential companies to select for study. It also meant that due to NFF's position as a key investor, partner and thus joint-owner of film projects I had full access to all live project information.

I was introduced by established members of staff to their contacts in the industry. These included any film production companies, digital technology companies or individuals with an interest in digital media, marketing or distribution. At the beginning of the research period I visited the nation's most influential companies at their offices to introduce myself and made my research interest overt. I worked full time on digital marketing and distribution issues and Sigma came to the fore in these endeavours. Sigma was an exceptional case chosen from a larger set of possibilities because of their unmatched potential to illustrate new perspectives. This approach does not conform to all the tenets of convenience sampling as described in Tansey

(2007), in which selection is implied to be made based on convenience regardless of the characteristics of the case. Instead, convenient access to the field afforded to me by the NFF, contributed significantly to my capacity to select purposively. I achieved entry to Sigma by offering valuable skilled work in order to garner access and simultaneously gather data. Through provision of expert services in film finance, specifically, recoupment modelling (the calculation of future revenue generation estimates) and Social Network Analysis (Hansen, Shneiderman & Smith, 2010), I was able to gain acceptance by becoming part of the larger construction that I wished to study. At the conclusion of my NFF Research Associate role I was able to continue my research thanks to NFF's continued official support, and further research placements with Sigma. Project work related to the development of new financing models making use of digital means of marketing and distribution, which was seed funded by the NFF and occurred over periods of intense activity separated by segments of downtime.

The Case

Sigma is a well-established, internationally renowned independent film production company. It is one of very few UK companies that consistently produce high quality feature films, which are regularly selected for international film festivals. Its films are presented at markets around the globe for film financing and sales deals, and typically secure significant releases in major film territories including the USA. Sigma is the most successful film production company in its home nation, in terms of being the most productive (21 features produced/coproduced), longest operating (18 years), best funded (most NFF investment), best connected (international partners include Zentropa Films, the company of Cannes Film Festival Palme D'Or winning director Lars Von Trier) and most award winning (including Cannes Jury Prize and SXSW Audience Prize). The company's founder and lead producer is credited on multiple high profile films which have been nominated for Oscars, BAFTAs and the Palme D'Or.

Sigma has historically operated a traditional production model, developing and producing short and feature films. The company obtains revenues by taking a fee from the budget of feature films that go into production and recouping any costs they have incurred in development of that film. Should a film achieve net profits, Sigma also

shares in these monies. Using the established language of the traditional FVC, Sigma located itself in the production sector but was dissatisfied with the results of this position. Company representatives remarked at how, despite successfully getting films into production, they had not received their 'fair share' of financial reward. This state of affairs was attributed to the industry-wide practice of appropriation of revenues by sales agents and distributors, which have historically held de facto gatekeeper roles with respect to investment and audiences. The company are typical of the industry in that they had an explicit interest in exploiting digital technology, but atypical in that they are one of the few successful producers in the UK able to viably pursue such an agenda.

To address this issue, Sigma tested and increasingly adopted digital tools for marketing and distributing their films, and therefore was an unparalleled research site. From 2010 the company applied for and was awarded multiple rounds of investment for their films from national and UK-wide public funds that specifically promoted the use of digital marketing and distribution technology. This means that many of Sigma's actions were explicitly focused on using digital technology in constructing the market for their films. The company is generally working on multiple projects at any one time, developing one film whilst shooting another, and so taking on a significant new business operation was no small matter.

Between February 2010 and February 2012 Sigma explicitly trialled a new approach to managing its business. This approach was predicated on the capacity of digital technology to enable both audience engagement and direct film distribution, the initiative was called Sigma Releasing. Sigma operated as both producer and distributor and released or co-released three feature films (*Donkeys* 2010; *You Instead* 2011; *Perfect Sense* 2011). A further project *Citadel* (2013) was developed, produced and sold with the same logic in mind, as was *Swung*, to be released in 2015. The approach was not abandoned in 2012, rather the first tranche of funding was exhausted, however the application and integration of the logic was extended into Sigma's development of a film-financing instrument, an Enterprise Investment Scheme (EIS) called Film City Capital (FCC), into which a great deal of Sigma's digital understanding flowed.

The company produced or co-produced seven films over the fieldwork period and I concentrate on the four titles that benefited most from digitally directed investment. They were also the projects over which Sigma exerted most control and therefore provided data regarding the role of DEMs. Sigma used tools such as social media and websites to motivate audiences to see the film and thus provide revenue. The films themselves have features that make them appropriate to the research, and complementary as a set. They provide a spread of different genres, production budget levels, marketing and distribution budget levels and distribution campaign strategies. *Donkeys*, *You Instead*, *Perfect Sense* and *Citadel* are respectively: comedy, romance, drama and horror, with a spread of micro, low and medium budgets. These budgets are measured in the context of independent film, which operates with much lower capital than major studio movies. The different films show a range of contributions to market assemblage, involving different partner companies, different digital tools and different configurations of these agents and their metrics. As a result, a spread in the stages and levels of DEMs adoption is available. This means that variations and commonalities amongst the evidence can be usefully examined to make inductive conclusions (Dul & Hak, 2008; Eisenhardt & Graebner, 2007; Yin, 1994). It is important to note the progression of the degree to which digital elements are enmeshed in the company's operations. The pursuit of digital marketing and distribution began as an afterthought to releasing *Donkeys*, but later DEMs came to be considered from project inception for other films.

In 2010, *Donkeys* was self-released theatrically by Sigma in cinemas in Scotland. This represented the company's first move towards becoming a proto-distributor and adopting a self-defined vertically integrated business model with reference to the FVC. The potential of digital tools to reach and engage audiences directly was used to successfully apply for a £10k investment from the NFF to support the release. DEMs including social media metrics (e.g. Facebook Likes, Facebook Page Views, Twitter Followers, relevant Tweets) were a constant focus in the life of *Donkeys* and then contributed to the network of resources for the joint-release of *You Instead* and *Perfect Sense*. The later films involved increased amounts of investment, greater numbers of industry actors and advanced levels of complexity in the application of different digital tools.

Sigma was awarded £250k by the NFF towards the release of both *You Instead* and *Perfect Sense* and a separate £90k investment for the specifically digital work on *You Instead*. The company aimed to release the films exclusively, but circumstance and timing resulted in a partnership model. The details and results of these operations were captured through negotiations and product performance encapsulated in the construction, format and content of DEMs; deal memos; recoupment charts; P&A budgets; social media metrics; personal meetings and email conversations. The availability of the documents listed above, in conjunction with conversations and interactions with the individuals involved provided an exceptional opportunity to construct a picture of the role of digital tools and their metrics in engaging audiences and how this effects market organisation. Sigma was also fully or partially responsible for producing *Starred Up* and *Under the Skin* both released in 2014 and *Swung* (2015). These films provide further detail on DEMs in the market assembly process.

A balance to the variation amongst the films is provided through the typicality of the company and its films with respect to non-DEMs related features. Elements of the case company and its films may be considered typical in the sense of their “contextually specific nature” (Miles, 1979 quoted in Yin, 1981: 62; Dul & Hak, 2008), i.e. in relation to the broad manner independent film functions, the films are not radical exceptions. Their budget levels, narrative content, and financing arrangements, such as use of the UK tax credit in a classical patchwork model of regular international industry actors, is the norm (BFI, 2011; Finney, 2010). Sigma has broadly as much power and access to resources as other established independent film producers. They are considered serious market participants, and evaluated through that industry lens, as opposed to being new entrants and are specifically known as technology innovators. The characteristics of Sigma as a traditional production company are complemented by the stable general format of the work under observation. The financing, production, sale, marketing and distribution of a film, a multi-million pound creative work, occurs over a relatively similar chronology for every film of a period of years. Therefore the longitudinal approach, typically used to map change (Bryman & Bell, 2007) also allows for the charting of market assemblage configuration over time. This ordered work process provides an action plan for conducting the case research as well as constituting the area of study (Yin, 1994).

Data Collection

In order to build a case study to address the research question, I adopted participant observation and document analysis methods. This meant extensive fieldwork in-house at Sigma's offices, attending, participating in and recording meetings, screenings and daily work practices. The approach also entailed tracing the construction of the market for each film through iterations of key Sigma and NFF documents and the conversations surrounding them. The aims of the field research, qualitative studies and ethnographic practices to generate an explanatory narrative have often been bracketed together by academic literature (Locke, 2011). In this case study, the fieldwork was oriented to uncovering and understanding the role of DEMs. To do so, a great depth and breadth of information was obtained in a wide variety of formats from numerous sources. These include the metrics themselves from websites, and just as importantly their interpretation in formal documents, email and in-person conversations. The data types collected are qualitative and quantitative and include archival and contextual information. The complex system of observed configurations, material tools, embodied skills and material processes witnessed over the production and distribution of Sigma's films were converted into annotated documents, field notes, memos to the self and records of conversations (Denzin & Lincoln, 2000; Shove & Pantzar, 2005; Araujo *et al.*, 2008).

Over 275 hours of direct contact time was translated into more than fifty A4 pages of typed up field notes, linked to over 200 pages of email communications discussing the detail of over 350 documents. These case documents deal with the financing, production, sale, distribution and consumption of different feature films and the creation of a film investment company. The vast majority of data concerns four films released over the period with combined investments of approximately £8m, but a significant minority refer to future projects and processes developed to bring them into existence. Day-to-day contact revolved around six key Sigma team members, but data also derived from Sigma's relations with three distribution companies, four sales agencies, a cinema chain, two PR companies, two digital marketing agencies, two VOD providers, a UK Film Fund and other important individuals such as script writers and consultants. All of the data, for example, my meeting notes, were dated and labelled with regard to company, film and activity e.g. Sundance Digital

Marketing, for easy tracking and collation, and stored safely in hard and digital copies.

It is the observed interaction of the networked organisations and film artefacts – documents, marketing materials and digital metrics that comprise the core of the case evidence. For example, I address how Sigma team members react to a set of social media figures, evaluate them, reallocate funding, contact cinemas and arrange future film releases. There are numerous documents, marketing materials, conversations, observed meetings, emails, contracts and financing arrangements that constitute this market arrangement. Thus the collection and analysis of observations and documents can't be separated out. Certainly, hundreds of documents were collected in themselves, but they were also recorded in context and annotated accordingly in situ. Documents or artefacts include: audio-visual materials, film premieres, pitch documents, contracts, deal memos, company records, letters, investment meeting agendas, film progress reports, powerpoints, business plans, meeting notes, budgets, investment assessments, marketing plans, film posters and promotional goods, websites, trailers and mobile applications and the data they produce: spreadsheets of social media interaction results and digital analytics e.g. video views, and Box Office receipts.

By definition, companies in the independent industry are not integrated within the studio system and must work together to approximate its multiple capacities. For instance, investors, producers, distributors, investors and cinemas must interact with numerous other actors cast, crew, and cash to get a film to an audience. These elements combine in networks for varying objectives with different lengths and strengths of association. Data collection was designed to capture multiple types of evidence about such networks and how they operate. As an investigator I did not attempt to, nor have any great ability to control or influence case events. Having reviewed the market devices literature, I approached the films looking for elements that would help explain operations in terms of construction of market assemblages. The film releases were allowed to unfold without interference so that contemporary phenomenon could be studied with minimal researcher influence (Yin, 1994).

Participant Observation

Participant observation entails taking an active role in events whilst concurrently researching the same phenomena. The method is noted as “exceptional for studying processes, relationships among people and events,” and is especially suited for cases where understanding of a new phenomenon is blocked to outsiders and knowledge is deemed subjective (Jorgensen, 1989: 12). The method requires the researcher to gain trust as an insider and balance the composite elements of their position so as to produce a maximally informed but reasoned explanation (Jorgensen 1989). I gained access and trust by providing advice and executing tasks in the areas of film finance, marketing and distribution, and occupied a position more as participant-observer, than observer-participant. Although this process has implications in terms of power relations, which I address in discussion of research limitations, it also resulted in unfettered observation of the planning and execution of digitally supported development, pre-production, production, sales and marketing and distribution campaigns for multiple feature films. I was able to be unobtrusive and non-disruptive and thereby obtain an insider’s perspective (Ackroyd & Hughes, 1992).

Adopting this method provided a number of benefits. Work as participant can enable questions to be asked and answered that would not usually be tolerated (Michel, 2007). By becoming a reliable team member, not only did I ensure that I did not miss out on the key moments in the life of a film, I was also able to tease out pertinent information through conversational questioning of the calculative, decision-making, connectivity, networked, and material elements of digital tools used for marketing and distribution of films. Through sustained systematic observation and data gathering I became able to describe what goes on, who or what is involved, when, where, how and why things happen in terms of the organisation of relationships (Attkinson & Hammersley, 1994; Jorgensen, 1989).

Making notes, keeping records and constructing data files are among the most important aspects of participant observation (Jorgensen, 1989). Whilst there was no typical daily routine for my fieldwork, during weekdays of February 2010-2012 when I was fully engaged at the NFF I would combine work within the Fund offices, with situated participant observation at Sigma’s offices on a project specific basis. Recording immediate memories of ongoing casual conversations over sustained

periods is an important part of the method (Michel, 2007). Regular and timely write-ups were necessary to my NFF role. These notes recorded both mundane facts and my thoughts regarding the central research topic and initial theorisation for future revision. Field notes were made on draft documents, meetings, and observations of day-to-day practice such as the generation of a digital marketing budget. I would make notes on my laptop during meetings and throughout the working process if I was in the Sigma office. I wrote these sketch notes up as meeting memos, giving a record of subjects, events and opinions, interspersed with my readings of the data. I would work in-house during particularly busy times for each given film e.g. in the run up to a funding application or to a film festival release. This intermittent physical presence for meetings and continued phone and email contact was maintained through 2012-2014.

Film productions companies, as SMEs, are generally top-heavy in that they have few permanent staff and these are predominantly those with significant decision-making power. As the most experienced, internationally connected and successful producer in the national film industry, meeting the owner/operator, of Sigma was the most important influence on the empirical research process. In creative SMEs official job titles or positions are rare, I use the term Company Principal to reflect the leadership and expertise of this lead producer, who is also one of four directors of the company. A successful first impression led to being invited back and fairly continuous interaction with the company. I was successful in converting Sigma's key market participants into becoming 'intimates' to the research project, able to provide information on a regular basis in an informal setting (Dyer & Wilkins, 1991). During busy times I was provided a desk in the studio. I became a trusted adviser on deal term negotiation, often consulted by their Head of Business Affairs even on non-Sigma and non-NFF projects, which I believe indicates the level of trust placed in me. The Company Principal approved my research with all members of the company and related teams, introducing my research role and authorising my access to multiple people and projects.

Over the period of field research I had continued interaction with Sigma's key players who included the following individuals:

Title / Role
Company Principal of Sigma, Producer of the films <i>Donkeys</i> , <i>You Instead</i> , <i>Perfect Sense</i> , Executive Producer of the films <i>Citadel</i> and Company director of Film City Capital;
Company Director of Sigma, Director of the films <i>You Instead</i> , <i>Perfect Sense</i> and company director of Film City Capital
Sigma Employee, Producer of <i>Citadel</i> , Associate Producer of <i>Donkeys</i> , <i>You Instead</i> , <i>Perfect Sense</i>
Director of <i>Swung</i> , Sigma team member, lead on digital for <i>Perfect Sense</i> , 2 nd Unit Director of the films <i>You Instead</i> , <i>Perfect Sense</i>
Head of Finance and Business Affairs freelance for Sigma
Producer of <i>Donkeys</i>
Company Director of Film City Capital

Interactions centred on topic specific meetings with people connected to individual projects e.g. script development or marketing strategy, and overarching business issues. I recorded the statements of workers as they were made, both in one-to-one settings and in extended conversations as part of a project team. This observation style can be designated in the terms of Yin's (1981, 12) view of open-ended, non-structured interviews: "conversations can occur over the course of an entire day, with a researcher and one or more participants accompanying one another to view or participate in different events" this "can reveal how case study participants construct reality and think about situations." I found this method of eliciting information most productive. Previous experience and witnessing other researchers' attempting formal interviews to investigate related areas indicated that such a direct approach often generated responses that reflected idealised situations, recent hot topics, or future agendas, as opposed to day-to-day reality. Therefore I decided to avoid typical research interviews and draw data from embedded observation through conversation and impressions from being around the development of each project.

Often conversations were about general film business issues rather than project specific tasks, and DEMs related issues were repeated topics. Shared contacts from the film industry in London and the trading of stories allowed me to become a confidant and thereby obtain valuable project specific information when it became

available. I became a relied upon source of information for marketing and distribution issues such that I was invited to lunch and a series of meetings with a Sigma Company Director, who is also the film director of *You Instead*, *Perfect Sense* (*Young Adam*, *Hallam Foe*, *Starred Up*) to talk about how to market the films at Sundance and to explain how digital distribution could impact revenue positions. I believe the extended and regular contact gave more honest, open nuanced data than formal interviews would have done.

Further to the personnel listed above, I also observed to a lesser extent, the following unitary actors in Sigma's partner firms:

Title / Role
Sales Agent for <i>You Instead</i>
Distributor of <i>You Instead</i>
PR for <i>Perfect Sense</i>
Digital Advisor; Digital Technology company
Distributor of <i>Perfect Sense</i>
Sales Agent for <i>Perfect Sense</i>
PR for <i>Donkeys</i>
Digital Agency for <i>Donkeys</i>
Digital Agency for <i>You Instead</i>
Joint Sales Agent for North America for <i>Perfect Sense</i>
Managing Director of Film City Capital

A crucial method of data collection and essential, rich data source, complementary to direct in-person observation was the use of email. Emails can provide a window into cognitive processes in real time and supporting findings as well as (Beunza & Garud, 2007). Emails' content, tone, timing and their attached reference documents all provide valuable evidence in the lives of film projects. This was particularly the case in this research for a number of reasons. First, independent films are collaborative endeavours involving many widely geographically distributed individuals and companies over an extended period of time. Email exchanges form the majority of communication between these actors. Second, as well as the content, the pattern of

emails and the list of those copied in reveals priorities in terms of relationships and issues. Third, DEMs and other key devices like legal contracts, deal terms and estimates sheets are generally circulated and discussed in relation to one another via email over many iterations. The transfer of materials and opinions, and the charting of conflict, negotiation and consensus through email evidence is extremely valuable. In addition, email chains offer corresponding evidence to confirm and give life to processes and decisions observed in person and through other data sources. As well as direct and immediate access to information, email also provided excellent contextual background data in which to situate the case. I was “cc”-ed into all emails the case company and the NFF felt were related to the films or general topic area on which I was working. For example in my inbox 1000 emails were referenced “Sigma”. This multi-layered, insider knowledge provided me exceptional depth of understanding of the case.

As an example of the role of email data, I take one of the case’s sub-units, the film *You Instead*. As negotiations develop over time through extended email communications it is possible to track how arguments for particular transactions are assembled with different material tools, for instance attached financial spreadsheets. This can also happen over very compressed, high-pressure timeframes. My participant as observer role allowed me to access intense market activity during deal term negotiation at the European Film Market of the Berlinale (Berlin Film Festival) 2011. During 24 hours from 2pm on 14/2/2011, 10 emails running to 5 pages of calculation and argument were exchanged with Company Principal, as Sigma considered and negotiated distribution deals for their film *You Instead* totalling £675k during the night. In my role as a participant observer, I provided assessments of various proposed deal terms. This included analysing the impact of P&A expenses on Sigma’s potential profits; the impact of a distributor’s fee at specified percentages of revenue; and estimating Box Office figures and DVD sales to give Sigma their desired output.

In pursuit of identifying the role of DEMs in market construction, I looked to gather data on all potential components of this process. I questioned how digital technology was used, how their metrics were created and evaluated, and how they were shared and translated amongst networks of different organisations. I did not set out with any particular configuration in mind, but looked to record the events and situated action.

This required charting the life of film projects as comprehensively as possible and interpreting how understandings of digital related practices built up over time, including looking for their impact on established operations even when not explicitly signposted.

For each film, a relatively similar general pattern of events took place. Sigma conceived a project, then plans and budgets were drawn up and investment applications made. The promise of digital marketing and distribution leveraged public investment and the life of the film would unfold. My active role would increase as the project gained momentum. I was present for the planning, execution and analysis of key events such as premiere screenings and the recording and interpretation of resultant critical and social media reaction. Observing these types of industry practices in themselves, and recording the views of practitioners related to their material forms e.g. spreadsheets of film returns, analytics data (Likes, Follows, Hits, Views and measures of network scale) and VOD reports, enabled me to develop an understanding of how numbers were correlated informally, linking digital creation of an audience and anticipated financial results. I would typically become involved with a particular task, but also observe the full execution of that project. For instance, I worked with the producers on the details of a P&A budget and mapping its expected results against a recoupment chart. Involvement in complex calculations concerning Sigma's actions with respect to potential film profitability enabled me to collect data regarding Sigma's conception of the market for the film, and the role of DEMs in the process. I paid attention to how any differences in legitimacy gained by DEMs were expressed: in a flowing written argument, as a table of simple figures, or graphically displayed. How DEMs are formatted is part of the case data. Some of the digital interactions were captured by direct observation of media platforms and some via remote reporting.

I recognise that the data is not value neutral. I bring a set of assumptions to the data collection process. As a participant observer I am motivated to record and interpret information in a particular way and this produces a biased selection. Approaching the research by drawing on the theories presented in the preceding chapter I am motivated by an epistemological perspective that sees knowledge as collectively produced and validated through negotiated consensus within a specific community. Therefore I

undertook to flexibly chart the materials and agencies mobilised in connection with DEMs across the life of many films. This is as opposed to, for instance, setting up experimental methods to capture DEMs' causal behaviour as one might if considering order as regularities, instead of as social and material arrangements (Schatzki, 2001). Following the view of market devices scholarship, also sometimes labelled the sociology of socio-technical agencements - from the sociology of translation, I focus on DEMs as statements inscribed in their various circulatory frameworks (Callon *et al.*, 2007). This concentration is born of the belief that understanding is to be found in the network of translations that make up a particular market configuration. Data was not collected with the intent to predict future patterns with certainty in a single reality, but to inform a logical abstraction which accounts for the strength of certain market statements and the worlds they bring into existence.

The timing and style of data collection was dependent on the development of each film. The nature of the sought after data, and the means of extracting it, were pre-planned and pre-organised, as is usual with case studies in contrast to ethnographies (Fitzgerald & Dopson, 2009). However, the exact timeframe and methods of the research process had to be flexible enough to adapt to the life of each film and, in some cases, had an influence on data production. For instance, in the marketing of the films *You Instead* and *Perfect Sense*, I created Social Network Analysis graphs from Twitter data to examine how potential audiences were talking about the films online. To do so I followed the best practice methods set out by Barash & Golder (2010). The process was undertaken so that Sigma had the best data with which to interpret the effects of digital marketing and the work of their partner distributors. Thus as a participant I was producing data, which in turn generated research data for me as an observer.

I came to the research with a 'pre-understanding' of the UK film industry following professional work in film finance and digital innovation for other film investment funds across the UK. I was thereby able to avoid the problems of lacking knowledge specific to the industrial and market context (Gummesson, 1991), but needed to be aware of potential bias and intransigence of viewpoint. I countered the risk of assuming new films would conform to historical examples of my experience by systematically reviewing my noted opinions of emerging constructs against multiple

data points and immersing myself in projects from different positions. This included taking into account the history and view of the NFF, talking with producers, distributors, marketers, investors on each film and obtaining their point of view.

Potential problems of unconscious influences on the case were posed not just by my existing, entrenched knowledge, but also by virtue of my connection to the NFF. This issue required regular reflection during the research. My affiliation with the public funder lent me the status of trusted expert and also a degree of power by association. Film companies regularly apply to the NFF to partially fund their operations, and the NFF's support of my research was explicit. Sigma's accommodation in having a Research Associate from that organisation work with them was likely made initially on the basis of wanting to keep potential funders happy. However, I realised that if I was solely seen as an agent of the NFF, with access to investment funds, then there is the chance of company action being directed to my potential influence, which could mask the importance of other agents and materials. I recognised this risk before entering the field and took measures to minimise the chances of this happening. These included careful self-presentation, clear role identification as developing new knowledge for the industry to use, and extensive longitudinal in-house participation to build trust and develop relationships. I perceived the reasons for accommodating me changed over time from acceptance of an initial request from the NFF, to valuing my contribution. Thanks to my experience in script evaluation at an international sales company and multiple other film business roles, I was able to interact meaningfully at various types of meetings and quickly provide useful pieces of work. I believe the resulting acceptance allowed for data collection to be unencumbered by any pretence by Sigma to influence my view of their activity and obtain a ground level, as opposed to an arms' length observational study.

Data Analysis

I adopt thematic data analysis with the purpose of developing conceptual propositions to account for the role of DEMs (Aronson, 1994; Boyatzis, 1998). Whilst there is no "easy formula" for case analysis (Yin 1981, 60), a generally recognised feature of case method is to organise collected data according to thematic codes to compare with and question theoretical relationships (Akrich *et al.*, 2002; Locke & Golden-Biddle, 2002). In doing so I aim to "give meaning to abstract propositions" by interrogating

them through the case evidence (Bryman & Bell, 2007: 61). As the data collection was an extended, longitudinal method involving large amounts of qualitative data, the highly iterative analysis process began during data collection. Numerous rounds of coding (see below) and writing took place. The resulting, final, analytic product from which thesis conclusions are drawn is a detailed construction both describing and explaining the market assemblages of each feature film (Akrich *et al.*, 2002). Through a process of abductive reasoning, I generate propositions to conceptualise the role of DEMs (Locke, Golden-Biddle & Feldman, 2004).

The analytic process began with an initial creation of codes or categories for classifying data, identifying patterns and reflection across the large amounts of information collected (Stake, 2005). The generation of thematic codes is based on the theoretical literature (Eisenhardt, 1989; Strauss & Corbin, 1998) as well as previous experience in the field and initial work at the NFF (Fitzgerald & Dopson, 2009; Stake, 2005). I entered the field with a strong grounding in the knowledge and language of the previously sedimented market assemblage, the FVC. This enabled the categorisation of data according to the widely recognised segments of: development, financing, presales, production, sales, distribution, exhibition and ancillary exploitation. By initially utilising these common categories I was able to source a large volume of data attributed to such labels by market participants, which also concerned DEMs. I looked across all the data sources for indications of market assembly practices: what work was going on to build the market for a film, and how were DEMs involved?

The field notes I maintained throughout co-performed project work and during moments of reflection, provide an entry level of analysis as they were written up into a first research text. Interpretations of conversations, observed events and interrogated documents were then contextualised with thought to the overarching research question (Van Maanen, 1988). I tabulated case films' data by FVC section and determined, for instance, whether the digitally related activity captured would be deemed new or transgressive to established constructs in each instance, were there new calculations at play or a reorganisation of frame-making activities? During data collection, I began to conceptualise how to translate the observations of the empirical site into theoretical terms. I looked to identify and describe the network of entities involved, and generate

real time snapshots of on-going practice. I did this by cross-referencing the examples of activity in traditional industry segments with a set of theoretically derived conceptual codes: audience enrolment / interessement; frame-making; calculation; materiality; networking; performativity and agency.

Having begun the analytical process in situ, I was well placed to segment data, separate it into small units, sort through it, code and then reassemble it in multiple different constructions (Jorgensen, 1989). The practical steps of classifying the collected data involved the manual annotation of data points, for example, print outs of website analytics, marketing reports, and notes on conversations with producers. Exploring the data through the first set of labels led to a first summary of the disparate sources into more condensed notes oriented to the re-organisation of the film business (Saunders *et al.*, 2009). Terms used by the companies involved, and themes emerging as important over the lives of the films, were added to the set of categories (Ahrens & Chapman, 2006; Dempster, 2009), as opposed to retaining a single prepared list of characteristics to look for *a priori*. A next stage of reflection and finer categorisation was then undertaken after revisiting and re-reading the data, for instance breaking down calculation into objectification and singularisation elements of qualification and arranging material accordingly (Fitzgerald & Dopson, 2009; Miles & Huberman, 1994). New copies of the dataset were then made and rearranged into themed categories. By cross classifying initial themes, new re-combinations of the codes were considered, known as axial codes (Parker, 2011).

For every step in the chronological life of a film, I identified and described in theoretical terms the instrumental devices at work. These included: development budget, output deal, first look deal, script package, finance plan and interparty agreement (IPA), recoupment chart and collection account management agreement (CAMA), sales estimate sheet and presales, festival and market reports (screener reactions, prizes, reviews), marketing plan, prints and advertising budget (P&A) and the distributor's wrap sheet. I analysed these industry tools according to the previously mentioned codes and related further concepts such as: boundary spanning, evaluative practices, product stabilisation and value creation. For each of these devices I matched data from the film cases and examined how DEMs were involved at each stage. I considered, from the perspectives of different actors involved, whether

the intervention of DEMs forced a hybridisation of existing arrangements and, if so, how. I also noted the use of traditional FVC language as a counterpoint to the new initiatives. Where completely innovative digital tools were apparent in the industrial environment, for instance, crossmedia campaigns (Jenkins *et al.*, 2013), I traced and coded their evaluative, material and social aspects and compared these configurations with the alignment of data in the established FVC construct.

Where certain features of activity related to DEMs appeared promising in terms of explaining new market construction, I looked for confirmation by bringing up my ideas implicitly in conversation or meetings and allowing team members to speak to those points. I then revisited incidents and contextualised the data by overlaying the later results with practitioners' opinions, for example, similar market flashpoints such as the use of Twitter at the Sundance Film Festival to manage market demand for *Perfect Sense*, and the use of a mobile trailer app for *Citadel* promotion at South-by-South-West Film Festival.

Although explanatory themes derived from the data are open and flexible (Dey, 2003), by systematically recording observations e.g. per meeting, per film, per digital medium, per fund, an orderly and authentic piece of research can be produced. Authenticity is a key measure of quality for case study research according to Golden-Biddle & Locke (1993), and can be achieved in part by demonstrably engaging with case data to construct knowledge claims. Data organisation is crucial to this analytic process. Rather than looking to display counts of previously categorised variables, I aim to build meaning by confirming or contrasting empirical evidence of market disruption, reconstruction and anchoring processes with concepts from the established literature (Akrich *et al.*, 2002; Locke & Golden-Biddle, 2002). This process resulted in production of further sets of texts, working interpretive documents before creating a final case study narrative (a small snapshot of the document annotation, in field initial coding, analytic thematic arrangement and rearrangement is included in Appendix A).

The multiple sources and types of data built over several years required many rounds of assessment, arrangement and revision to synthesise into conceptual conclusions (Saunders *et al.*, 2009; Van Maanen, Sørensen & Mitchell, 2007). During this time, I

continually scanned for emergent themes with explanatory power. By considering themes from different market elements across and between the films, via a relational process of bricolage or montage (Barley, 1990; Denzin & Lincoln, 2000), these thematic tools also shaped and sharpened each other. By iteratively trying various different standpoints against each one another, patterns of evidence are uncovered that develop interpretive unity (Denzin & Lincoln, 2000).

Both *a posteriori* and *a priori* creation of analytic categories are noted to risk imposition of simplified and inaccurate views of social reality (Barley, 1990). However, the development of thematic codes from close interaction with the data potentially lessens the researcher's own bias. Additionally, the rigour of repetition should allow demonstration through case writing that proposed conclusions are evidently plausible (Parker, 2011; Yin, 1994). I worked back and forth through the case data to enable analysis of the relationships and dimensions of film market assembly techniques. The particular organisation of important characteristics in the case study is crucial for these interpretive knowledge claims to be reasonable (Yin, 1994) and support explanations of broader conditions (digital market devices) than just the very specific social-historical context (certain independent films) (Golden-Biddle & Locke, 1993; Hagberg & Kjellberg, 2010, 1031).

Ethical Considerations

There are important ethical issues to consider when this type of conducting research. Jorgensen (1989: 39) notes that "Research ethics is a daily concern for the participant observer" who must constantly seek awareness of the rights of the people whose lives are being studied and appreciate the consequences for them. In this research I was guided by the fundamental ethical principles of informed consent, privacy, anonymity and confidentiality, both for individuals and companies. One of the main aims of ethical regulation of research is to avoid potential harm to participants (Bryman & Bell, 2007). This is enshrined in the concept of informed consent. Informed consent is defined as the state of understanding sufficient for a prospective participant to judge whether they want to take part in a study (Bryman & Bell, 2011).

Close observation of, and conversation with, permanent and temporary workers, and the recording of work practices to get films from script to screen depend upon

intimate and extended interactions. I sought to avoid harming participants, both individuals and businesses, (Bryman & Bell, 2007: 68) firstly by protecting their privacy. I did so by openly identifying the research agenda and giving potential and ongoing participants the opportunity to decline or retire from research at any stage. Via providing information through introductory emails and a Participant Information Sheet, potential participants were provided with the fullest information possible with which to make an informed decision about their participation. Thirdly, no covert or misleading practices were engaged in. Informed consent was asked for in person by the researcher with ample provision for questions. Whilst the case was selected for their ability to serve the research question according to the assessment of the researcher, ethical considerations especially regarding business confidentiality were interrogated and addressed by the University of St Andrews, School of Management Ethics Committee and through the NFF's (a public organisation) contracts.

All data was treated as confidential and protected from unauthorised access, loss or destruction by safe storage at the NFF premises in line with their data protection policies. Further non-NFF digital data was stored on a password protected laptop in my constant possession, on a password protected cloud server, and backed up on two external hard drives accessible only by me. With regard to anonymity: informed consent included differentiation between consent to participate and consent to have information shared. The case company was given the opportunity to have their data (all elements of their contribution) made anonymous and made unidentifiable. The relatively small size of the research field, i.e. the UK film industry, means that anonymisation may not de-contextualise data sufficiently to protect the identity of companies or individuals. This point was to be made to potential participants, and it was determined that the study will be held under embargo for 5 years to protect business relationships that could be inferred from the names of the case study films.

In addition to privacy rights of individuals' personal information and the company's data, there is also the crucial feature of reputation embedded in personal and business relationships, which is vital to success in the independent film business. Very often a potential project rests on the track record and peer perception of the individuals and companies involved. Before scripts are completed and finance plans 'greenlit' many different organisations must be convinced to trust the vision and expertise of the

producer. Producers must align numerous “soft yes’es” using only a few tangible props, perhaps a synopsis, before the process of signing contracts can begin. This places a great reliance on social professional reputation for continued business. As a participant observer, I frequently came into contact, often for one or two interactions only, but in some cases on a repeated basis, with many different business partners of Sigma. The opinions of these partners have material impact on film successes and thus the livelihood of the market actors under observation. To protect the interests of those I studied I made sure to behave appropriately by taking cues from the case company personnel. I was discreet and kept privileged information private in all work situations. The context of work situations in the film industry is sometimes markedly different to those of many other businesses. The importance of film festivals, film premieres, and their accompanying social engagements to the film market entail that numerous meetings are conducted in social situations ‘out-of-hours’. I was privy to information about many film projects, which were the subject of discussion by many other attendees at such events. I had to carefully protect confidential information whilst maintaining personal relationships so as to retain access to others’ closely guarded information in future.

Chapter 4. A pilot network configuration: *Donkeys* (2010)

Introduction

The use of digital marketing technology in the self-distribution of the film *Donkeys* by production company Sigma, demonstrates the intervention of DEMs as a new market actor. DEMs disrupt the established configuration of companies, resources and individuals that usually constitute the market for a film. They do so by creating two new, interdependent sets of relationships. First, the promise of these digital social networks serves to obtain and arrange the financial resources and actor partnerships for Sigma to market and deliver their film to cinemas. This new set of relationships exists without the regular market intermediary of a distribution company. Second, the instantiation of digital connections between the film and its audience actively influences the management of its release. Iterative evaluation of the market through DEMs-based calculations is at the heart of the arrangement.

To analyse the market moves being made I employ a theoretical framework that draws on the sociology of translation and the ANT toolset to investigate how the network of market actors assembles. This construction work is usefully interrogated through notions of *problematization*, *interessement* and *enrolment* (Callon, 1986a) adopted with respect to how the theory of DEMs as a marketing and business management logic, performs the market. By looking at the materials and interactions in which the value of DEMs - a network of potential audiences connected to creative content – is proposed, and how this manipulates and connects different market actors, I elucidate a market oriented *translation* process (Callon, 1991) where DEMs feature as an organisational instrument (Vonderau, 2013).

Once produced, DEMs' particularly digital, material characteristics make them easily aggregated and comparable with other data sets (Kallinikos *et al.*, 2012). I analyse these properties as contributing to DEMs' role as an instrumental device (Caliskan & Callon, 2010) through their enabling of market calculation (Callon & Muniesa, 2005). This approach applies an understanding of social network connections as showing affect materialised as value (Gerlitz & Helmond, 2013), which can be considered to have valorisation effects (Vatin, 2013). The tracking and evaluation of DEMs as part of iterative, coordinative calculation efforts, distributed across multiple market actors

that help to form the shape the market, is predicated on that constructed value. An important contributory element to DEMs' value is uncovered by reading their capacities as appresentational (Knorr Cetina & Bruegger, 2002). By making the market present for actors to evaluate and act upon, DEMs help to perform the market. I utilise the concept of agencement to capture the particular arrangement in which DEMs display new agency in relation to a network of traditional market actors. This highlights the film market as an environment in which competing actors each attempt to realise the market in specific ways to suit their interests. Sigma's intended arrangements were not fully completed, but the pilot operations set foundations for DEMs' influence on future filmmaking activities.

I structure the chapter as follows. First, I describe the film, its release and a timeline of activity. Second, I analyse how a network that includes NFF, its finance, Sigma, marketing agencies and cinemas is mustered by DEMs. Third, I examine and explain the processes involved in the development of a simple calculative framework that coordinates market relationships. The final section of the chapter addresses the breakdown of idealised arrangements for the film that were proposed by Sigma.

Each of the analytic components link to future chapters in which interrogation of further empirical evidence develops on elements of DEMs' role uncovered in the life of the first film. The constructive enrolment effort of DEMs' action logic, their performative, promissory role, is replicated across three more films and the creation of a new company. As evidence of past projects builds up, the appeals to the marketing model or theory of DEMs' agency becomes increasingly sedimented and networks of actors are repeatedly built up using tools that materialise DEMs' market knowledge. Over time these market configurations become increasingly elaborate. In Chapter 5 a different type of actor, a sales agent is enrolled, and in Chapter 6 the intersement process is extended to external investors. In addition, the basic frameworks of numerical association examined in their joint evaluation and thus market coordinative role, become increasingly intricate in the qualification of the film *You Instead* (Chapter 5). Increasing complexity is found both in the new, technical, metric tracking and strategy of digital social network attachments, and in the adaptation of established practices in response to DEMs' influence.

The illumination of less overt effects of DEMs in the background of the explicit use of social media figures, is possible because of the first steps of the pilot R&D model examined here. The market making, performative capacities of DEMs shown in their representation of, and connection to, the audience-as-market through collated social media data, drive certain simplistic aspects of economic activity for *Donkeys*. For later films *Perfect Sense* and *Citadel* (Chapter 6), these market productive features take on more nuanced forms, for instance in qualitative aspects of digital material, in the fine detail of contractual market attachments, and in the widening set of relationships partially predicated on the assumed power of DEMs.

In examining the specific arrangements and agencies that assemble the market for *Donkeys* I am able to take several important steps toward the research goal of understanding the market reconfiguration role of DEMs. I interrogate the detail of the emotive strategies and mechanistic aspects of digitally materialised social attachments, and demonstrate the establishment of common notions of equivalence between DEMs as consumer demand and as future revenues. Thus I contribute to answering the question of what the material characteristics of DEMs involvement in market valuation activities. The intervention of DEMs into important components of product framing enables a new type of calculated market action to be conducted by a temporarily aligned group: the producer-led distribution initiative. Despite Sigma's financial goals for the film not all being met, the cross-boundary joint interpretation of DEMs by different actors, materialised through a number of documents and practices, within a relatively short space of time constitutes a new market assemblage. This analysis speaks to the dynamics of action at play in a re-configuring of typical film business practice.

***Donkeys* 2010**

The 2010 film *Donkeys* is a low budget, black comedy starring actors known from British independent films, and from character parts in Hollywood movies (Martin Compston: *Sweet Sixteen* and James Cosmo: *Troy*, *Braveheart*). The film is the second in a collection of films that share the same characters called the 'Advance Party' slate. The films are co-produced by Sigma and Zentropa Films of Denmark, the company of acclaimed director Lars Von Trier (*Dogville*, *Dancer in the Dark*, *Melancholia*). The first film in the collection, *Red Road*, won the Jury Prize at the

2006 Cannes Film Festival. *Donkeys* premiered to good reviews at the Edinburgh International Film Festival in June 2010 and Sigma decided to self-distribute the film in Scotland. The Scottish narrative indicated likely local audience interest, and the company principal at Sigma has connections with Scottish cinemas, including a large Multiplex Chain. The particularities of the film's finance plan and budget meant the UK distribution rights were available to be exploited.

However, the instigator and most important enabler of Sigma's reorganisation of their typical activities to include distribution, were the capacities of digital audience engagement tools. Without the ability to market the film directly to potential cinemagoers at low cost and with great potential reach, Sigma would not have conceived of circumventing traditional intermediaries by pursuing direct distribution. Self-distribution provided Sigma with much more control over the exploitation of their product than the established mode of operations, as well as securing them a greater proportion of potential revenues.

During October and November 2010, the film received 67 screenings across 9 separate cinemas. The release was funded by a £20,000 Prints and Advertising (P&A) budget, fifty percent of which provided by the National Film Fund (NFF). P&A is a catchall term for all costs associated with the marketing and distribution of a film, from posters to the costs of social media analysis. The *Donkeys* strategy focused on digital audience engagement. Following discussions with the NFF beginning in April 2010, Sigma made a successful application to their Market Development Fund. In their application for funding, Sigma outlined two interdependent strategies. These complementary approaches were: the circumvention of traditional intermediaries in delivering a film to audiences, thereby securing a greater proportion of revenues, and simultaneously, digitally enabled audience engagement to market the film. These initiatives were inspired, co-produced and managed via DEMs. The most important DEMs were Youtube Views, Facebook Likes, Twitter Followers and website visitors.

After convincing the funders with their argument and obtaining investment, a team was assembled including, a PR company, digital agency, and digital advisor, as well as Sigma's staff. Multiple digital assets were produced: a series of seventeen Youtube videos, Facebook and Twitter campaigns and web and email marketing tools were

combined as part of the audience engagement strategy. The team met weekly to set goals for performance and to review results. They mapped aims for DEMs against cinema bookings and Box Office performance, and planned future activity after interpreting these figures. The film was deemed to have performed reasonably well within the frame of its release parameters and relative to comparable independent films, though it was not a financial hit. In the following months the production team conducted a review of the data and their processes of interpretation. Two further market opportunities arose for the film. The first was a potential deal with a large UK home entertainment rental provider. The second was a proposed theatrical release across key cities in the UK and simultaneous digital home entertainment release. Neither of these opportunities came to fruition in part because reliable calculations on which to value DEMs for these market arrangements could not be achieved. The following table sets out the chronology of the major events in the life of the film.

Timeline: *Donkeys*

Date	Market Action
2010	
April 2010	Sigma begins discussion of self-distribution with NFF.
June 2010	Film receives festival premiere and Sigma develops plans to deliver the film to audiences directly.
September 2010	Sigma, the producer, takes on a task traditionally reserved for distribution companies, and negotiates with cinema chains.
September 2010	Successful application for investment from the NFF to support producer-led digital audience engagement capacities.
	Digital engagement strategy planning, budgeting, and creation of digital assets e.g. videos and graphics.
October 2010	Digital media campaign via Facebook, Twitter, Youtube, website.
	Cinema release, strategy meetings monitoring DEMs' performance, PR campaign.
	Further cinema dates added, marketing campaign continues, and DEMs manage the release.

November 2010	Negotiations with DVD and VOD streaming service over a deal for rights to release the film in the UK.
2011	
January 2011	Sigma analysis of digital engagement campaign.
June 2011	Sigma pitches for UKFF investment for a limited London theatrical release complemented by an innovative digital release involving Distrify, a technology company providing social VOD services. The application was rejected and these other actors do not become involved.
August 2012	VOD and DVD rental and retail release via a traditional distributor.

An Organisational Instrument

The adoption of digital marketing and distribution technologies necessitates the creation and use of DEMs. Not only are they part of the material itself, but are a fundamental requirement of the management method that gives the technology purpose in this market. The central idea for how digital film marketing and distribution works is inseparable from DEMs. As part of a theory or model for how the film market should operate they exist as a concept, as well as sheets or databases of figures. This agency is apparent in examining their role in the multiple network ties that form the fabric of the market, and how such relations are established and materialised. Sigma's self-distribution of *Donkeys* in the UK demonstrates the construction of equivalence between DEMs and financial returns, and this construction is crucial to how market actors interact and operate. Before this relationship is made visible in framing calculations and their resulting actions, however, the force of DEMs is felt more implicitly and indirectly as an organisational concept.

The release of *Donkeys* was based upon the creation and maintenance, for a short period, of a network of market actors including an investor, producer, digital agency, PR Company, several cinema chains, the film, its marketing materials and its audience. Flowing through, and mobilising these actors, in different conceptual and

material forms, were DEMs. DEMs became most visible through social media and website analytics software and in how these figures are discussed in management meetings. But their first role, in part of a proposed future for the film's market life, was to enrol the NFF and its resources into the assemblage that constituted the market for *Donkeys*. The initial connection in the group of actions by which Sigma's desired release for *Donkeys* was constructed, was the presentation of DEMs to the NFF in Sigma's funding applications. These documents are long established tools for evaluating projects and connecting different market actors: companies, films and financial resources. Through a selection of quotes from Sigma's request for investment, I show how Sigma positioned their use of digital engagement tools as a solution to their problem of financial unsustainability, an issue it is also NFF's responsibility to address.

Stimulated by a recent poor experience with a major studio's release of previous film *Hallam Foe* in 2007, and the challenging financial environment of digitally disrupted independent filmmaking, in their application for NFF funding, Sigma proposed a new manner of operating:

"Given the relative lack of faith in a lot of the current film distribution companies in the UK we would like to propose that we undertakes the Scottish release of Donkeys ourselves, using it as a platform before going wider into the UK and beyond" (Sigma Application to NFF for distribution funding prior to release, 9/09/2010).¹⁰

The basic concept of a producer seizing control of distribution activities is only possible due to the capacity of digital tools to enable direct, low cost, interactive communication between filmmakers and potential audience members. In the application, Sigma further explained:

"We will employ... a digital marketing consultant and take advantage of social networking sites... We'll complement this with our blog and website featuring interviews, podcasts, stills, trailers etc. ... We also

¹⁰ Please note excerpts have not been altered except for inclusions of corrections in square brackets as vital for comprehension.

intend to look at new and innovative ways of distributing the film online and beyond using new and varied outlets” (Sigma Application to NFF for distribution funding prior to release, 9/09/2010).

The quotation summarises Sigma’s proposition to adopt digital tools to engage an audience. The online viewing, listening and sharing of creative works listed by Sigma above all aim to engender increasing audience demand for the film, and establish an ongoing connection to that fanbase. Each of the tools produce DEMs to inform Sigma about the audience and help them refine their marketing and distribution strategy, and this is anticipated to improve financial returns through increased total sales overall.

The role of digital materials to mediate audience demand was recognised as the key project component. Following an initial meeting between the NFF Market Development Officer and Sigma on 27/8/2010, regular communications discussed how the project could be organised. Sigma’s ability to connect with their home territory audience and access a population of moviegoers familiar with their past work was grounded in the use of digital tools. Conversations also considered how the project could fit the specific goals of the NFF Market Development Fund. Increasing Sigma’s capacity to exploit its own intellectual property, and avoid its profits being appropriated by non-local companies, was deemed to be an important organisational goal for NFF as well as Sigma.

The ways that the NFF becomes aligned to the project and subsequently locked in occurred through a series of positioning arguments. In Sigma’s application form and supplementary materials, including a marketing and distribution plan, letters of interest from partners and details of subcontractors, the company positioned their plan for *Donkeys* in the terms of the NFF’s aims for public investment. Sigma had to answer a number of questions regarding the market interest in, and the international, cultural and creative impact of, their project. They did so by placing their *Donkeys* activity in line with the NFF’s organisational goals set out in Fund guidelines, the NFF annual plan, and in discussions with the NFF representative. For example:

“Success in this area [digitally enabled distribution of Donkeys] will have a huge impact on our business in future... we will be able to show our

results to our sales agent who, in turn will start approaching buyers in the international territories, the success of which will have a serious commercial impact” (Sigma Application to NFF for distribution funding prior to release, 9/09/2010).

Sigma here refers to “*our results*”, meaning the combined DEMs and financial returns from their self-distribution activity, which neither producer nor agent usually gets access to, and links them to anticipated international sales, with which they are assumed to correlate. The demonstration, in a data-rich, digitally mediated way, of how the film attracted an audience is believed to be of value internationally. The sales agent for the film, with whom Sigma had already worked on three previous films, were understood to be able to leverage a successful UK performance and audience knowledge via DEMs into more, and improved, sales in global territories. This would contribute, to both Sigma’s economic performance and the NFF’s remit for improving the business strength of local companies, and promoting its national film culture.

The details of DEMs’ role in the marketing and distribution arrangements of *Donkeys* were discussed and agreed in principle during planning conversations at company offices during August and September 2010. Sigma included the cost of appointing a Digital Advisor on a consultancy basis in their funding application. However, the inherent importance of DEMs to the operation of new marketing and distribution projects was often taken as a given and not made explicit. It is general industry consensus that digital media, including social networks, can attract film audiences and deliver content in a measureable manner, making the films easily accessible and their release more manageable (Pardo, 2013; Tryon, 2013). Such characteristics are attributed to the particular materiality of digital technology, its shareable, editable and quantifiable characteristics. To ensure that detailed learning from their investment was passed on to future beneficiaries, the NFF required the Digital Advisor to report on his role. His post project, quoted below outlines how DEMs operated at the heart of *Donkeys*’ release.

The Digital Advisor, a specialist marketing consultant immediately foregrounds DEMs, in this case Likes, as an important component of enticing audiences, with the objective of revenue generation: “*I coded and implemented the Facebook landing tab to encourage Facebook likes.... I ensured that the trailer was the focus of attention...*

I drove traffic to the YouTube trailer” (Digital Advisor Role Review Document, 24/11/2010). The consultant highlights the technical endeavour in promoting creative material, in this case the trailer, which is aimed to engage viewers and would provide viewership metrics. He also explicitly states a goal of action to be the encouragement of Facebook Likes, indicating that in and of themselves they have value. The notion of Likes as valorising the content to which they are attached and producing a snowball effect of further Likes, is replicated in many instances across the case.

The measurement and management of DEMs is stipulated as an important component of the organisation of distribution activity. The consultant specifically states his role as *“making sure that the weekly stats were gathered and discussed by the team”*, which included *“setting up the tracking system (Google Docs), Gathering the data... Co-ordinating the weekly Skype call”* and *“Focussing attention on results by comparison of activity with ticket sales”* (Digital Advisor Role Review Document, 24/11/2010). The association that the consultant makes between the *“activity”* in question – that encapsulated by DEMs, i.e. *“the data”* - and ticket sales is an important step in the construction of the association framework that underpins DEMs’ role in constituting the market. This step is repeated on continuous basis, the linking of digital activity (DEMs) and economic performance indicators. The interrelationship between creative content, their relevant DEMs, and associated equivalence with financial success is reiterated throughout the document and in the daily life of the project. A space for connecting the two sets of valuations was maintained for an extended period through written materials and social interactions. In the following sections I account for the first steps in the active building of DEMs as an interpretive device that reconfigures the actions and responsibilities of market actors.

The first, and crucial, transactional relationship derived from the market power of DEMs, was the attachment of the NFF to the project as an investor. NFF’s assessment of Sigma’s funding application recognised the value of the production company having *direct relationships*, meaning digital and thus traceable, quantifiable, and manipulable interactions with their (potential) audience. This set of relations is deemed to be valuable, not only for Sigma and *Donkeys*, but also for future films and different companies in years to come. The NFF connect Sigma’s direct audience

relations, which are digitally created and managed to the greater performance of the national industry if similar reconfigurations (self-distribution) are adopted:

“Sigma has the opportunity to build direct relationships with exhibitors and audiences, and to develop a structure for distribution that may prove useful for themselves or other producers in future...innovative approaches, such as self-distribution by Scottish producers should be supported.” (NFF Assessment of Sigma Application for distribution funding, 10/9/2010 – Market Development Officer).

In implicitly noting the non-traditional methods of distribution, the assessor privileges the role of digital technology in laying the foundations for this investor-producer relationship:

“Previous Sigma feature films have been released through traditional methods, but in this case, Sigma believes that they have a better understanding of how to approach audiences, and will dedicate more appropriate time and resources to releasing the film than an external distributor... Marketing and distribution is the next natural step for them to explore, and develop expertise in. By self-distributing this film, they will build their skills in this area, with the possibility of following the same approach for forthcoming feature.” (NFF Assessment of Sigma Application for distribution funding: 10/9/2010 – Market Development Officer).

The ability for Sigma to ‘understand’ and ‘approach’ audiences, to market and distribute their film is contingent on digital tools and their constitutive metrics. The Digital Advisor reported on the “*Ideal*” use of these tools in a project review document called “Donkeys-For-Discussion” shared with Sigma and NFF on 23/11/2010. He stated: “*Clear definition of target audience segments is needed. Their pains and motivations need to be documented... Who is this film being made for? Why will they want to see it?*” (Donkeys-For-Discussion Project Review 23/11/2010 - Digital Advisor). The answers to such questions were sought through researching social media profiles, their aggregation and manipulation to inform the targeting of

marketing. This DEMs-based work brings the audience—as-market to life, providing the marketing team a target and endowing it with life (Clueley & Brown 2015).

Certain DEMs were selected as fundamental measures of campaign performance: “*how many target visitors [a DEM] might we expect these lead valves [an online communication channel producing DEMs] to bring to the proposition?*” The chosen DEMs, e.g. visitors, are then framed in such a way as to be converted into a currency. The document foregrounds DEMs as a crucial management tool with the question: “*What is the specific financial value of each lead valve in relation to the needs of the business objectives?*” (Donkeys-For-Discussion Project Review 23/11/2010 - Digital Advisor). The use of digital marketing and distribution tools, and therefore the DEMs that comprise them, is central to the *Donkeys* project and to the transactions that brought it to life in the first place. By virtue of the link between DEMs and intended market results in Sigma’s application materials and in-person pitches, the NFF invested £10,000 on 23/9/2010.

The transactional economic relationship between Sigma and the NFF was formalised through a legal contract and reporting requirements. This sharing of data was listed as a binding condition of investment: “*Conditions: Thorough reporting on all project activities (including digital engagement, press coverage, admissions to all venues, subsequent bookings and sales)*” (NFF Assessment of Sigma Application for distribution funding: 10/9/2010 – Market Development Officer). This requirement is a core element of material assembly of the release of *Donkeys*. The contract generates the financial conditions for the market arrangement to come into being and enshrines the conjoined agreement over a link between digital engagement and industry results. The next section unpacks the technical detail of how social network data is associated with, and directs market management activity in newly created material frameworks.

Calculation and coordination through new evaluative frameworks

Following the successful enrolment of NFF and its financial resources to bring the project to life, Sigma’s attention quickly shifted to the detailed day-to-day operation of marketing and distribution. Project activity consisted of the formation of a team of individuals and companies to conduct the release; the creation of digital assets and strategies with which to engage potential audience members; and the tracking and modification of campaign performance. In this section I firstly introduce the simple

calculative framework that served to coordinate market activity in a new way. Second I will illustrate the generation of DEMs' strategic use of creative materials for network construction. Third I will chart the detail of metric evaluation including notions of currency.

Every week the individuals and companies involved in the film's release would meet in person at Film City or via Skype, discuss the data and determine how to improve the digital engagement, and, it was assumed as a result, business performance measures such as percentage seat capacity sold. As the Digital Advisor sets out, the guiding purpose of activity was a very simple DEMs-based formula: *"It is essential to regularly measure the levels of engagement with the campaign so that lead conversion can be tracked. Weekly analysis of this data enables refinement of campaign activity to deliver greater conversion"* (Donkeys-For-Discussion Project Review, 23/11/2010 - Digital Advisor). The *"conversion"* mentioned here is the calculation of DEMs (regularly measured levels of engagement) being converted into theatrical revenue. Selections from excel spreadsheets created and maintained during the project by the Digital Advisor: "Donkeys Weekly Digital Stats" and "Donkeys Theatrical Data" presented in Figure 3, demonstrate the different sets of variables, DEMs (views, fans) and economic goals such as ticket sales that were brought together, compared and understood as correlated. Later in the chapter I will show how the detailed the DEMs creation comes about, but here it is the basic co-presentation of trends for project management that is important.

Figure 3. A composite selection of DEMs and ticket sales spreadsheets

Date	Trailer views	Facebook fans	Actual Sales	Percentage capacity
5 Oct 2010	667	159		
12 Oct 2010	2608	325	310	18.54%
19 Oct 2010	3062	425	191	16.13%
26 Oct 2010	4521	586	0	
2 Nov 2010	5981	762	214	33.02%
9 Nov 2010	6626	846	132	2.59%
16 Nov 2010	7220	912	150	4.18%
23 Nov 2010	7413	944	84	32.56%

Network formation: companies, individuals and creative content

To engender the engagement quantified in Figure 3, the team created marketing materials and disseminated them via social media. The digital marketing campaign was centred on Facebook with support from YouTube and Twitter. Along with a trailer, a fourteen-part promotional video series “Looking for Donkeys” was released along with three “Inside the Donkeys Studio” videos.

Figure 4. *Donkeys* promotional Youtube video screenshot – opening



The videos follows a character around different neighbourhoods looking for something with comedic results, and then ask if the viewer is also looking for *Donkeys* and provide the link to Facebook, where the majority of digital assets were posted and whose service provided the most fine-grained analytics. The final video shows the main character finding the film’s poster and discovering the film playing at a large Multiplex Chain cinema complex, the second largest in the UK.¹¹

¹¹ <http://www.youtube.com/watch?v=thJ3Oc4uIH0>

Figure 5. *Donkeys* promotional Youtube video screenshot - link



The marketing and distribution team employed traditional campaign strategies such as ticket competitions and then made use of the digital medium by encouraging audiences to Like, Share and undertake many kinds of digital recommendations in order that more data could be collected. This accumulation of preference information about the audience and its location was used to refine future marketing with the aim of generating even more attachments to the film. For example, the Facebook post below illustrates how creative content, a pastiche of the famous “Inside the Actor’s Studio” video series, was promoted to exploit the spreadable nature of digital material. The invitation in the Facebook post: *“The first person to share this video with all their friends gets 2 free tickets”* is explicitly oriented to develop the network of digitally measurable audience members in service of a market goal. All Clicks, Likes, Shares for each such initiative were collected and evaluated.

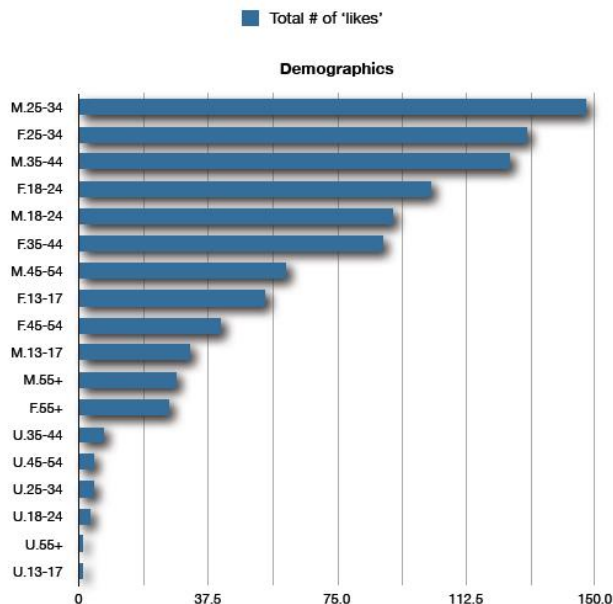
Figure 6. *Donkeys* Social Media Marketing Campaign Facebook Post



Facebook analytics formed an important part of the collection and evaluation process undertaken by the Digital Advisor and the Digital Agency that he instructed. In reporting his work, which totalled seventy one hours over nine weeks, the Advisor addressed: *“how the Facebook ads campaign should be run”* and *“how to engage more compellingly in Facebook status updates”* (Donkeys-For-Discussion, Project Review, 23/11/2010 - Digital Advisor). The desired compulsion being for the audience to engage with the creative material and continue their relationship with the film until purchase. The resulting engagements from Facebook activity provided detailed information about *Donkeys*’ potential audience, for example the breakdown in Figure 7.

Figure 7. Facebook Analytics: Demographics of who Likes the posted social media content.

The data is categorised by age range, gender (Male / Female and U where unknown by the website)



The marketing and distribution team also used a similar graph representing the number of Likes by city. London and Glasgow were amongst the top ranked geographic locations. This type of data was cross-referenced with offline information such as the locations of cinema bookings, poster marketing, and local partner promotions. Activity was refined in attempts to ensure that demand – as captured by Likes and other DEMs - was increasing in cities with upcoming screenings, and ensure population segments expected to attend were targeted e.g. males and females 18-24 in university towns. Fine-grained Facebook advertising targeted niche audiences: *“We have mainly used Facebook to target these groups within the music/Comedy/lifestyle/sport scene as discussed, please see attached list of groups contacted. Specifically we have contacted Music Bloggers”* (PR Company Mid Project Weekly Update, PR Company Liaison Email to Sigma Company Principal, 12/10/2010). Where performance was poorest, judging by DEMs and sales figures, or new cinema bookings provided increased capacity, responsive initiatives were undertaken. For example, the Facebook posts below show partnerships to generate further attachments between audience and film.

Figure 8. *Donkeys* Facebook Competition Posts



Social Attachments

At the heart of the digital marketing campaign is the traceable attachment of potential audience members to the film. The technical creation of digital social attachments required coordination between multiple partners: *“the Digital Agency have been subcontracted via the PR Company to deliver the online campaign as decreed by the Donkeys team. This will involve using “Social Interaction” and exciting content to drive unique hits to the trailer and facebook page”* (NFF Contract for Sigma distribution funding, 6/11/2010). The term ‘hits’ refers to online or mobile visitors to the web content – a universal DEM. The film as a market good is multifaceted, it is inclusive of, and dependent on, its digital materials such as the videos and posts in Figures 5 and 8. These are the means by which the film exerts its agency at this point in its life.

If successful in making the first attachment between content and an audience member, the marketing and distribution team want to adopt their network and enrol them as active supporters, further spreading demand for the film. For example, motivating a Facebook Fan to share content with their friends. Due to all online action being traceable, and the centrality of digital marketing to *Sigma*’s market construction for *Donkeys*, DEMs become the pathway through which action is oriented and success is understood. The Digital Agency, who were responsible for the daily operation of the Facebook account, explicitly link social media’s properties for audience engagement and emotional affect with a positive customer response and resulting economic transaction:

“By being introduced to Donkeys in this non-intrusive way [social media] users are likely to make their own decision to click on the link. As result there is a greater chance that they respond positively to the messages on the Facebook page... i.e. buy tickets, watch trailer. This method

contributes to the viral affect as, users who "discover" something via social media are more likely to share and indulge in positive word of mouth, because it re-enforces their own beliefs" (Digital Agency Liaison Email to Sigma Company Principal detailing social interaction approach, 27/11/2010).

The Digital Agency propose that a potential audience member is much more likely to be susceptible to the film's marketing message if they hear about it (digitally) from a social connection, as opposed to being targeted by advertising, which is considered more intrusive. The notion of reinforcement here is that the public like being reassured they have good taste. Therefore being exposed to the film's marketing as organically as possible is believed to create feelings of 'natural fit' and an inevitability to purchase. This is an example of the very conscious way that digital materials are understood to combine to create and configure the network of individuals upon which the financial success of the film is believed to rest. DEMs demonstrate a version of how the performance of social activities are converted into economic value through the mediated process of creating comparable data (Gerlitz & Helmond, 2013: 1360). In this case the comparison is a constructed relation to ticket sales. Although regularly aggregated and recalculated in relation to sales over time, each DEM contains a lot more consideration than a simple count.

Metric Tracking and Evaluation: Performance Interpretation and Revision of Action

The process of engaging audiences digitally through creative content, measuring engagement using metrics, interpreting these figures as consumer demand and converting this demand into an economic meaning, involves a set of technical associations. The Digital Advisor summarises this by saying: *"I've set up monitoring systems to track traffic to the offer as well as ticket sales themselves and we'll be having the first weekly reporting meeting on Tuesday"* (Digital Advisor Email to NFF Research Associate & Sigma Company Principal, 4/10/2010). The "offer" the quote refers to, is the appeal of the film online i.e. how the film is presented, its narrative and comedic features that come across in clips, trailers and social media interactions. The monitoring systems he mentions are a combination of the social media analytics

services, which account for multiple DEMs, and information provided by other actors such as Sigma or the cinemas.

One calculative framework for managing the marketing and distribution of *Donkeys* was a ‘master sheet’ of DEMs and distribution data. This set of excel spreadsheets was compiled and maintained by the Digital Advisor from raw data derived from social media sources, their analytics software, and information provided by Sigma regarding cinema screenings. The tables framed meeting discussions by providing a limit to the almost infinite amount of digital data that could be addressed. The format and content of the sheet meant it was easily shared and revised, detached and reattached to other pieces of information within the confines of a particular company. For instance, the Digital Agency, and separately the Digital Advisor, could compare these DEMs to their own confidential past film projects and assess current performance. A selection is presented here to illustrate the statistics deemed to be demanding attention.

Figure 9. *Donkeys* weekly digital stats (DEMs) spreadsheet (for sake of space only four of the eleven regularly presented and discussed data columns are included here).

Date	Trailer views	Facebook fans	Landing page visits	Twitter Followers
1 Oct 2010	253	99	0	148
5 Oct 2010	667	159	21	158
12 Oct 2010	2608	325	58	187
19 Oct 2010	3062	425	35	193
26 Oct 2010	4521	586	24	202
2 Nov 2010	5981	762	85	212
9 Nov 2010	6626	846	60	226
16 Nov 2010	7220	912	100	238
23 Nov 2010	7413	944	33	278

The DEMs in Figure 9 show an agglomeration of different kinds of digital interactions over *Donkeys*’ theatrical run collated by the Digital Advisor. “Trailer

views” and “Landing page visits” capture interactions between users and creative content. The trailer was hosted on Youtube, which counted views wherever the videos were embedded online, including Facebook and other websites. The “Landing page visits” refer to the Facebook page, which served as the centre for marketing activity. The other two columns capture those participating in the interactions. A Facebook Fan (now defined within Facebook as someone who has Liked the page) or Twitter Follower is a member of the digital social network connected to the film. They receive each marketing message sent by the team and are digitally connected to each other by virtue of shared connections to the film’s digital presence. These digital experiences are quite different. A visit to a website may take a matter of seconds and mean very little to the user; watching a full three minute video is a qualitatively different aesthetic encounter. Yet whilst individual social media channel campaigns were refined according to their specific metrics, the overall management of the life of *Donkeys* was relatively unsophisticated, guided predominantly by the assumed need to increase total levels of DEMs.

The structure of digital databases that house DEMs meant that when online during meetings, the team could drill down from the totals of fans and followers right to individual profiles. What helps to imbue DEMs with agency is the view that these profiles and the sets of relations they have, define individuals’ identities. The DEMs in Figure 9 were routinely compared with the sales data in Figure 10. The two tables form the summary evaluative framework for managing *Donkeys*’ release. Figure 10 shows the number of cinema tickets available each week, the team’s goal and the actual sales, by total and percentage of total capacity. This information was collected by Sigma as they booked the film into screenings, which, as this quote demonstrates, was an emergent process: *“I had a good meeting with [the programmer of a Glasgow cinema] this morning who has offered 14 screenings over one week starting 8th October. Not much time to prep everything but possible, and we could use it as the platform then onto [Multiplex Chain] and beyond”* (Sigma Company Principal Email to NFF Research Associate at project planning stage, 03/09/2010). The evaluation of DEMs, cinema booking and sales information together, by multiple market actors, was responsible for how advertising budgets were allocated, the content of communications and the strategy for disseminating market materials.

Figure 10. *Donkeys* weekly sales stats spreadsheet (sheet 1)

Week commencing	Tickets On Sale	Target Sales (25%)	Actual Sales	Percentage capacity
10/4/2010	1672	418	310	18.54%
10/11/2010	1184	296	191	16.13%
10/18/2010	0	0	0	
10/25/2010	648	162	214	33.02%
11/1/2010	5095	1273.75	132	2.59%
11/8/2010	3585	896.25	150	4.18%
11/15/2010	258	64.5	84	32.56%

When key information such as the data in tables in Figures 9 and 10 was discussed, side-by-side on a laptop or on paper, the most pressing issue of the day, be it a particularly low metric or a new set of cinema bookings, would orient the discussion of how to proceed. I will now illustrate with examples of inter-company conversations and the fabric of digitally enabled marketing practices, the piece-by-piece establishment of DEMs' role in how *Donkeys* reached its audience.

Conversion of Communication to Currency

The aggregates of individual attachments, of each Like, View and Follow have agency. Higher levels of hits or any publicly visible DEMs were taken to increase the perceived legitimacy of the product in the eyes of the audience, creating a further positive feedback loop of market attachment. YouTube video players and Facebook pages display a count of their Hits, Views and Likes respectively. Low figures were assumed to indicate to the viewer that the content is not worth their while, whilst high figures entice their interest. DEMs on individual marketing assets, a video, a page, valorise the film as a market object. The agency of DEMs also appears when they are scaled up and collated. As the Digital Advisor for *Donkeys* explains: "*the online part of the plan revolves around directing as much traffic as possible to a Facebook landing page*" (Digital Advisor planning Email to NFF Research Associate & Sigma Company Principal, 4/10/2010). It is common knowledge that significant volumes of

Internet traffic are required to achieve e-marketing goals. The campaign aimed to capitalise on every lead, or first attachment, by building more network ties over the top: *“Once we have them as fans on Facebook, we’ll be able to communicate with them compellingly on a daily basis”* (Digital Advisor planning Email to NFF Research Associate & Sigma Company Principal, 4/10/2010). When the Advisor refers to ‘having them’ he means each human individual that has become aware of the film through various marketing channels and has clicked a Like button on the film’s Facebook page. This digital interaction makes the individual contactable at any time by the film’s marketing team. The publicly visible data such as Likes are adjusted and reframed behind closed doors, alongside private analytics data such as page views and demographics. The following examples of marketing campaign adaptations shows how they get to work.

A typical email reporting on live project activity reads: *“Some very good news here in that [Multiplex Chain] have just come back with confirmation of more dates... All the current focus is on making sure that we can make these screenings very visible...we’re tracking all the important metrics on a weekly basis. These are then discussed in detail during a weekly team meeting on Skype where actions for the next week are agreed...objectives were set, target audiences identified and content strategy defined”* (Digital Advisor project update Email to NFF Research Associate & Sigma Company Principal, 20/10/2010). Creating digital awareness of the screenings meant increasing DEMs. When the Digital Advisor references *“all the important metrics”*, these are the top level metrics included in the summary tables of Figure 9 and 10, as well as specific measures of initiatives targeted at individual screening dates. So, for example, Sigma describe their activity in response to the booking mentioned above: *“we had a face-to-face with the Digital Agency and PR Company today...I’ve told everyone to... focus entirely on getting the [Multiplex Chain] news out there. I think you’ll see some intense activity over the weekend - some of it quite amusing! Competitions, new partners, press, tie-ins and even some Opera”* (Company Principal project update Email to NFF Research Associate, 20/10/2010). The success of the marketing operation was then assessed by the ‘click-through rate’ to materials such as the Facebook posts in Figure 8, as well as ticket sales for the screenings.

Digitally publicising the film's availability in a large multiplex chain was deemed vital. Based on anticipation of, and then levels of actual tickets sold, cinemas will rebook a film, keeping it available for longer whilst audiences who have seen it can spread positive word of mouth online. If well received, a film will develop momentum and enjoy an extended theatrical life. The following email report gives the total number of cinema tickets sold for each recent screening of *Donkeys*, followed by the DEMs determined to be important by the team. These measures include: how many marketing emails were sent, opened and clicked on. In addition, views of the YouTube and Facebook trailers and the digital routes taken toward them (*clicks to*) are included as measures of how well the marketing campaign is attracting attention. Further, clicks to screening events are reported as an indication of how well this attention is being converted into economic transaction:

"Glasgow Film Theatre Stats (matinee and evening) – Friday: Donkeys 32 then 124... Saturday: Donkeys 57 then 38;

Email: Released 4658; Unsubscribes 106; Opens 20.3%; Clicks 300 (429).

You tube: views have gone up from 253 to 2,617

Twitter Traffic: Clicks to Facebook Trailer page - 1,261; Clicks to direct to YouTube trailer - 147 Clicks to Glasgow Screening Event – 52; Total – 1458" (Sigma Company Principal Email to NFF Research Associate giving weekly statistics, 12/10/2010).

The direct placement of these figures together is designed to stimulate comparison and imply correlation. The Digital Advisor, Digital Agency and Sigma associated the theatrical performance metrics with the DEMs for the content of the creative materials distributed on the relevant dates and the targeting of advertising. The team would then refine their approach, aiming to improve the statistics and thereby generate further bookings from cinemas. The result is that DEMs obtain and exert agency in the assembled network of market actors.

In their evaluative role DEMs are not an isolated tool, but one device amongst many. On occasion, other framing mechanisms, mixing qualitative and quantitative comparisons, were also set up to guide activity. For example, the benchmarking target of 25% capacity for screen attendances seen in Figure 10 was set on the basis that it represented a similar performance to other comparable independent films which had won critical acclaim similar to that of *Donkeys*' predecessor *Red Road*. The average result for *Donkeys*' screenings was 18%, but across different venues, sometimes the film outperformed titles such as Oscar nominee *Winter's Bone*, BAFTA winner *Fish Tank*, and Venice Golden Lion nominee *White Material*.

Incomplete Performative Assemblage

Donkeys did not perform well as hoped commercially, despite Sigma's digital marketing efforts. However, this was not perceived to disprove the constructed link between high levels of DEMs and Box Office success, and so the expected positive correlation was unquestioned. This assumption is a common, if relatively new understanding. It stems from widely promulgated positions in industry reports, trade newspapers, and film festival events, which espouse research headlines such as significant relationships between social media volume and Box Office (Asur & Huberman, 2010). Typically however, industry discussion does not provide relevant context for such conclusions. As a consequence, little attention is paid to the specific conditions of such relationships, and only the core concept is retained. The association between DEMs and financial success recurred in casual conversations during meetings at NFF and Sigma as a foundation assumption underlying distribution activity, and was deeply embedded in multiple project materials: the financing applications; employment relationships and networked activity.

High total DEMs and few ticket sales may have contravened the core logic of the market construct and prompted a rethink, but low scores on both counts did not disprove the original concept for organising market activity. Instead, other reasons explaining poor results were explicitly set out. Usually a film's digital marketing campaign will start in earnest six to eight weeks in advance of release, having been well planned and arranged before that. Such a staged process was not possible for *Donkeys*. Sigma's status as a new entrant to distribution made the company reliant on

the opportunity provided by the Multiplex Chain. As Sigma lacked other films to offer to the cinemas on a continuous basis as leverage, Sigma did not have the power to dictate the release date. Instead they had to take any available bookings. This meant that instead of a lead-time of several months to plan and build awareness of the film online, there was a relatively small amount of time to market the film: *“because this project kicked off very late in the day and the team had to hit the ground running, it was judged that there was not enough time to go through the very formal planning process which we'd normally do... the overall levels of engagement with the campaign were not as high as might have been hoped...most of the issues with this campaign can be easily fixed if the planning process begins early enough. One of the issues with using Facebook is that it takes time to build the levels of engagement that a campaign like this requires.”* (Digital Advisor project update Email to NFF Research Associate & Sigma Company Principal, 03/10/2010). It was this environmental factor that was deemed to cause underperformance, rather than any detail of the DEMs-based activity.

Importantly, despite the perceived connection between digitally measured expressions of demand and ticket sales, a reliable causal relationship is not proposed. There was no presentation of a statistical correlation between social media efforts and economic performance. Instead, the concept was more nebulous, and as such possibly more flexible and resistant to breaking down following the release. Rather than dismiss the model, a proposal to materialise, to put in writing, the shared understanding of DEMs meaning financial returns was put forward for the future: *“An ideal scenario: Clear business objectives that are tied to financial goals must be written. Without these objectives all later decisions cannot be prioritised or validated which is to the serious detriment of the campaign”* (Donkeys-For-Discussion Project Review, 23/11/2010 - Digital Advisor). This does not mean, however, that DEMs-based market arrangements were unchallenged. The role of DEMs in market assemblage for *Donkeys* ultimately broke down as a lack of sophistication in the DEMs construct prevented further deals being made to complete the film's life cycle.

When a new market actor proposed a much wider release, Sigma's calculative framework for establishing the value of DEMs was put under pressure. The relatively simple but central role that DEMs were playing faced further demands of complexity

and reliability, as more money would have to be placed on their importance. The deal proposal from a large DVD rental service in the UK offered a big theatrical release in England and Wales, but required co-investment by Sigma for marketing. The prospective distributor highlighted a need to use digital assets and online engagement for a home entertainment release. The role of online marketing featured heavily from the opening of negotiations: *“Is it [the release of Donkeys] an opportunity for a digital release and for us to buy DVD’s for rental? Do you have any online marketing budgets you could allocate to us to help us raise the profile of the film to our audience?”* (Email from Sigma Principal to NFF Research Associate describing Home Entertainment Distributor’s wishes, 24/11/2010). This quote shows how the potential distribution deal was immediately predicated on an economic transaction for generating digital audiences. In order for the Home Entertainment Distributor to engage with Sigma for *Donkeys*, they needed to base their engagement on the provision of digital materials that could serve ultimate consumer demand. This interaction is a precursor to contractual stipulations by a distributor for access to added value digital content in the market arrangement for later film *Citadel*.

The Home Entertainment Distributor’s DVD proposal was connected to a cinematic marketing plan. The company characterised the approach as a *“supported release would provide a phased approach to the release including the following activity.... Clips / extended trailers; Potential for online chat room to be part of the Q&A; micro site built and hosted by Home Entertainment Distributor; Including links to facebook like and comments; Promoting cinema showings and links to buy tickets* [for a proposed wider cinema release].” (Email from Sigma Principal to NFF Research Associate concerning Home Entertainment Distributor’s wishes, 24/11/2010). The sketch of online activity here privileges interactivity: a *“chat room”* and a *“Q&A”* that would produce DEMs such as *“facebook like and comments”* around creative content such as *“Clips / extended trailers”*. This activity was believed to be able to drive cinema ticket sales, which would increase demand for DVD rentals. The distributor was looking for around £10,000 to support their plan.

Sigma was unable, in 2010, to evaluate with confidence whether there was a threshold of digital attention that would generate a specific revenue level to recoup a cash investment. This was potentially owing to the lack of a shared value calculation tool

across the divide between these specific market actors. Sigma was unfamiliar with how the DVD and streaming company made its own internal calculations for the Home Entertainment market. Producers tend not to come into contact with Home Entertainment companies, but traditionally have direct negotiations with sales agents, and home territory distributors only. Digital technology alters the possibilities of communication and of transactional relationships, but these are complex interactions requiring detailed calculative frameworks, some of which were not yet fully realised. The links between digital and financial data were co-co-constructed by NFF and Sigma's distribution team, but not externally anchored. The various companies temporarily organised to release *Donkeys* agreed on a shared or inter-subjective value for DEMs (Biggart & Beamish, 2003). They had not though, for example, calculated a price per DEM per ticket. The technology existed for Sigma to self-distribute theatrically by circumventing traditional distribution, and conducting a Home Entertainment release through a direct deal. However, such an attachment would rely on a strong, shared evaluation of DEMs, yet to be achieved. As McFall (2009a) notes, market agencements succeed for a time and then fail. Sigma trialled a pilot reconfiguration of how to organise the market for their film, but the new way of doing business had to be abandoned in the last part of the film's life for a traditional mode of operation.

Discussion

The life of the film *Donkeys* offers a series of insights on the new market making role of DEMs. Their agency is exhibited explicitly in the manner that materialised figures are produced and evaluated, and direct market action across a network of different actors, whose configuration establishes a different way of organising business in the independent film market. Before this relationship is made visible in framing calculations and their resulting actions, however, the force of DEMs is felt more implicitly and indirectly as an organisational instrument (Latour, 1990; Vonderau, 2013).

The idea and understanding of what DEMs are, their value, and what they could mean for the economic life of a film production company, is socially and materially constructed. This process begins with performative statements pointing to a market agencement (Callon *et al.*, 2007). Before, and whilst, a particular market assemblage

comes to pass, ‘the future’ needs to be set in motion. This means allies have to be mustered around a core concept. This is the assemblage of a network of market actors, which Vonderau (2013) understands as the reciprocal attachment of heterogeneous associates with “mutually binding agendas” (2013: 101). These associates or market actors are human, material, institutional and technological. They include creative content, audiences, file standards, platforms, and apps and combine to conjure up the market. In the case of Warner Bros’ concept of ‘connected viewing’, that term was part of a dynamic network of productive visions and evoked scenarios which aims at bringing a model for digital entertainment consumption and infrastructure into being (Vonderau, 2013). Similar components of the organisational instrument are at play in DEMs’ role in organising the market life of *Donkeys*.

Donkeys shows the importance of the very promise of DEMs. Their potential plays a vital performative role in pulling together the resources required for DEMs to be created and take effect. They take a role as an organisational instrument (Vonderau, 2013), enrolling and arranging market actors and resources such that a market agencement begins to take shape. Sigma positioned NFF to provide resources leading to the arrangement of a broader network of market actors. These individuals and companies were mobilised based on the same core action logic (Barrrey, 2007): that increasing DEMs would increase paying audiences and thus improve financial returns. The initial connection in the group of actions, or *interessement* (Callon, 1999) concerns the way that the NFF became aligned to the project and subsequently locked in, and can be conceptualised through the process of translation. As Callon (1986b: 114) notes “to translate is also to express in one’s own language what others say and want, why they act in the way they do and how they associate with each other: it is to establish oneself as a spokesman.” Sigma’s market agencement, prominently relying on DEMs, fulfilled that function for NFF, promising to deliver industry benefits and thereby attaching an ally.

The concept of enrolment is critical to understanding DEMs’ role. If considered in terms of *interessement*, the digital marketing content is a series of propositions to members of the public with the aim to firmly position them as audience members (Callon, 1986a; 1999). To do this the campaign aimed to exploit specific characteristics of digital materiality, i.e. its features of being highly targetable, easily

shared amongst public audiences and inherently traceable (Jenkins *et al.*, 2013; Kallinikos *et al.*, 2012). When the Digital Advisor referred to marketing to a defined audience, in order to then ‘have’ them, the ‘having’ being referred to, is the result of a technically created and mediated enrolment (Callon, 1999). The establishment of each single relationship e.g. a Like attachment, also incrementally alters the identity and power of a larger network (Law, 1999) and it is in the private and typically invisible manipulations of these aggregated DEMs that action is then formulated.

Whilst in one way DEMs are the ‘having’ of the audience or market, DEMs also play a role in creating that audience. Through segmentation, targeting and cross-company strategizing, productive work is undertaken. The range of digital and digitised properties that people have, including their connections to other humans, creative works, brands and purported interests, serve to qualify that person (Callon & Muniesa, 2005). Through attachment to the film, they then also become qualities of the market artefact (Latour, 2011c: 801). Here this means that DEMs are not simple representations, but in a very practical sense they are the audience, the potential paying customers. This is because DEMs are commonly understood and performed as such, through the work of other market actors. The overarching notion of DEMs effectively *being* the audience and therefore defining the film’s financial performance was put into reality through actions taken by the group based on this concept (Cluley & Brown, 2015). Thus the market, if considered a general metaphor for exchange (Vonderau, 2013), and the audience, are performed through construction of market knowledge enacted by market participants, for example in the calculated actions of team meetings. The sheets of DEMs pulled together, evaluated and arranged can be considered an appresentational device, which transports “details from different geographical locations and time zones to a particular domain of activities” (Knorr Cetina & Bruegger, 2002: 394). DEMs are a world-constituting technological information structure, which, much like many types of financial market, rely on digital networks and the computer screen (MacKenzie & Pardo Guerra, 2014). It is through such materialisation that the calculative function of DEMs becomes possible, and directly shapes market activity.

Coordination across multiple company boundaries in a new kind of arrangement for the film industry was facilitated by the common valuation of DEMs. The

establishment of commensurability between DEMs and consumer demand, as equivalent to, and a determinant of, financial return is attributable to layers of socio-material construction (Callon & Muniesa, 2005). Through multiple materials, including the creative works such as trailers, which generate DEMs, spreadsheets for framing calculative activity, and company workers' daily procedures, the theatrical release was conducted according to DEMs' script for enactment (McFall, 2009a). As Gerlitz & Helmond (2013: 1360) have pointed out in the specific case of Facebook Likes: "Being social online means being traced and contributing to value creation for multiple actors including Facebook." The generation of DEMs and their subsequent use in multiple framing processes can be viewed as a kind of what Callon *et al.* (2002) call *qualification*, for the film. Videos and social media campaigns became part of the film as a product, or as Finch & Geiger (2010) put it, the marketing object. These materials re-positioned the title in comparison to competition in the market by attaching valorising audiences via DEMs. As DEMs, the audience of potential consumers thus intervene in marketization with a greater and new type of agency: "consumers... participate in qualifying the available products – they judge and evaluate relevant differences...gradually and unconsciously" albeit in an organised, quantified way in this case (Callon *et al.*, 2002: 201). DEMs, in their association with cinema bookings for *Donkeys*, can be thought of as an example of Caliskan & Callon's (2010) understanding of how technologies, through rules and material devices, organise encounters between, and aggregation of, supply and demand.

Although the film did not secure the desired Box Office success, a simple calculative instrument for conducting many market relationships did emerge (Preda, 2008). DEMs served as a conjoined interpretive device (Beunza & Garud, 2007) for Sigma, the Digital Advisor, the Digital Agency, and the PR Company to manage the allocation of human and financial resources. These are the productive socio-technical evaluations that lead to DEMs are becoming an obligatory passage point in the management of the business affairs (Callon, 1986a). However, what has still to be established is a level of stability and sophistication to this kind of market assemblage. The tentative foundation of this new way of coordinating the market is solidified by the repetition of the market arrangements tested here in the lives of later film projects. Whilst evaluative calculations become more complex and networks of market actors larger and more diverse, the DEMs-driven logic and pattern of connections for

financing and managing film marketing and distribution are maintained. The market assemblages become more adept at dealing with challenge through calculations of finer detail and the hybridisation of existing market tools by DEMs.

Chapter 5. Increased complexity: sedimentation of DEMs in the joint-distribution of *You Instead* (2011)

Introduction

The 2011 planning, deal making and UK release of romantic comedy *You Instead* demonstrates an increase in the complexity of both the network of market actors, and of the calculative frameworks involved in DEMs' contribution to market construction. The assemblage of elements that constitute the market for *You Instead* shows a variety in the degrees to which DEMs are embedded in market activities, and in the significance of their success in enrolling other market actors. The *You Instead* project evolved over a longer period of time and had a significantly higher budget compared to *Donkeys*. This led to a more elaborate set of digital engagements between Sigma and the audience, as well as an increase in the number and type of DEMs-oriented transactions between established market actors.

In analysing the role of DEMs in the life of *You Instead*, I utilise market studies' attention to the materiality of markets to give an account of the developing dimensions of DEMs' agency. Building on the enrolment of allies and the creation of felicitous conditions for the DEMs-dependent market assemblage of *Donkeys*, the perlocutionary performative nature of DEMs' role in market making becomes increasingly complex (Callon, 2010). To understand the detailed work undertaken, I pursue a number of different strands of analysis. I address both the distributed but hidden influence of DEMs in the hybridisation of existing market tools, and DEMs' more prominent activities in the framing of films for transactions. Both of these sets of activities contribute to market assemblage by facilitating the coordination of a network of market actors across boundaries.

The importance of DEMs is further illuminated in the life of *You Instead* through the tension between competing market agencements, and the ultimate incompleteness of Sigma's version of the market world. I adopt the conceptual tools of Callon *et al.* (2002) and Callon & Muniesa (2005) to examine the fine-grained qualification of the film as a market object. This involves analysis of the disentangling and objectification work required to achieve the minimum agreement over the nature and limits of property rights necessary for transaction (Callon *et al.*, 2007). This framing occurs in

a contested environment of rival market shaping efforts, as opposed to smooth linear processes (Millo, 2007). DEMs' agency in the life of *You Instead* is spatio-temporally dispersed (Entwistle & Slater, 2013), extending across new evaluative frames that direct market arrangements, such as rights sales or advertising spending, as well as effecting subtle alterations of the existing market fabric. Thus DEMs act as a moving assemblage and are present as both actors and action over an extended period and multiple digital and physical locations.

I develop the argument from Chapter 4 that DEMs' contribution to the contingent art of intersement (Callon, 1986a; Akrich *et al.*, 2002) as part of the accomplishment of market construction (Araujo *et al.*, 2010) is performative in nature. This chapter's analysis of the technical market construction process involving DEMs, their role in evaluating a film earlier in its life and in managing its final release, extends the premise of DEMs as a basic currency trialled for *Donkeys*. I show multiple instances of DEMs as part of boundary objects (Bowker & Starr, 1999). These are based on common, if insecure appreciations of DEMs' value, which enables joint-distribution. These are added to in Chapter 6, for instance between producer and distributor of *Perfect Sense*. A through-line from the simplistic association of sets of figures for equating DEMs to financial value in *Donkeys*' release, to the detailed DEMs-oriented strategizing across both the rights sales and release of *You Instead*, leads on to the embedding of DEMs' consideration in the set up of film investments in Chapter 6.

The development of DEMs' role is evident in the multiplying material frameworks in which they are highly visible, such as excel spreadsheets. DEMs' behind-the-scenes influence in disrupting and hybridising other connective market tissue also sets precedents. In Chapter 6 contractual deal terms and revenue models for multiple filmmaking endeavours build on the various materialisations of DEMs' influence and value articulated for *You Instead*. So even though Sigma's goals for this film were not completely fulfilled, these layers of attachments and interactions play an important part in the gradual anchoring of DEMs.

In understanding DEMs' role in reconfiguring the independent film business, the specific arrangements for *You Instead*, highlight several aspects of market intervention. In the first section of the chapter I show how DEMs repeat, but on a

larger scale, the performative action of generating the requisite conditions for a specific market arrangement to come into being, namely the mustering and coordination of financial resources and industry partners. I then illustrate how DEMs force the adaptation of traditional business mechanisms such as recoupment charts, sales estimates sheets, deal memos, P&A plans and budgets, emphasising the varied material instruments effected by DEMs, which are subsequently attached to the market assemblage. DEMs' agency and increasing prevalence is foregrounded by considering both the multi-faceted cross-boundary coordination work that such tools facilitate, and also by recognising the appearance of DEMs in competing versions of the market.

In the second section of the chapter, I provide a fine-grained examination of DEMs-based framing processes that qualify the film in order to help produce and coordinate economic transactions. Having addressed DEMs' role in rights sales I move on to the full public market release and examine DEMs' creation and evaluation in influencing market action. Even when relations are contested, DEMs re-organise the dynamics of how market actors coordinate. By becoming woven into an ever-greater patchwork of tools for market construction, constituting a new market network, DEMs are embedded increasingly deeper in market making activity.

***You Instead* 2011**

You Instead marked an increasing commitment by Sigma to build digital engagement into multiple facets of their films. A romantic comedy, still at a low budget, *You Instead*, represented a step up in expectations of DEMs-based success. The film was directed by the production company's most well known and established film director, whose previous work includes: *Young Adam* (Ewan McGregor, Tilda Swinton), *Hallam Foe* (Jamie Bell, Arthouse Award Berlin Film Festival), and *Spread* (Ashton Kutcher, in competition at Sundance Film Festival). The film is set at the 'T in the Park' music festival and tells the story of two musicians. Although without a star cast, the film includes actors recognisable to the general audience: Natalia Tena (the *Harry Potter* series) and Luke Treadaway (*Attack the Block*, *Clash of the Titans*). The cast also includes bands familiar to the music festival audience such as Biffy Clyro; Calvin Harris; and The Proclaimers. The film was shot over four days during the festival in 2010 and follows an indie music star, Treadaway, and a punk-rock girl bandleader,

Tena. The two get into a fight backstage and are handcuffed together. Unable to be separated they perform their gigs together and eventually fall for each other. *You Instead* is different to the director's previous more dramatic work. It is much lighter in tone and more youth oriented, as such it was considered to have many features that would attract a digitally engaged audience.

During *Donkeys*' release, self-distribution of *You Instead* was also being conceived. Reflecting that they could improve on the results of *Donkeys*, Sigma pursued extra control and revenue by self-distributing *You Instead* in the UK. In considering their reshaped market activity, staff continued to use the traditional terminology of the FVC, but primarily to demonstrate how their aim was to contravene traditional boundaries: "*Sigma is intending to develop and diversify our business model to become a vertically integrated producer/distributor*" (Sigma Draft Application to NFF Film Investment Fund for P&A support, 6/2/2011). Sigma's belief that they could achieve this rearrangement was prompted by their residual confidence in the opportunities of digital technology. Specifically, Sigma relied upon the way digital communication could bring an audience to the film and how these attachments to be strategically and analytically managed, and converted into revenue.

The project initially moved smoothly. Similar core components to those for *Donkeys*, the market actors, resources and expectations, were put in place, organising a world for the film around DEMs. Sigma used pitches and application materials to reprise the arrangement, by which NFF would part-finance the marketing and distribution activities. Sigma was successful in applying to the Film Investment Fund to support its self-distribution endeavours and additionally, the Digital Innovation Fund for specific elements of *You Instead*'s digital campaign. This success was partially because the NFF perceived DEMs to be able to deliver its specific policy goal of greater film business sustainability. Sigma also successfully enrolled a sales agent, responsible for selling the film's distribution rights into international territories. Whilst one might consider that, because of their policy goals and digital funds, the market arrangement for *You Instead* was stimulated by the NFF, in fact Sigma developed and made known their plans to the NFF long before the specific public funding stream was launched. Indeed the instantiation of the new film fund can be viewed partly as a response to this demand.

Sigma proposed a market construction in which it would retain and exploit UK distribution rights and thereby broaden its sources of income. However, as the public investment for a self-distribution release was delayed, pressure rose from the sales agent and a major co-investor, a Public Television Broadcaster (PTVB), for Sigma to adopt a traditional mode of distribution. Thus began a challenge to the intended assemblage. The contested arrangement of interests and associated assets played out across late night negotiations at the February 2011 Berlinale European Film Market and extensive re-working of existing evaluative frameworks. These included recoupment positions that would have the longer-term benefits in legacy deal terms for later film *Citadel*.

On the basis of public funding announced at the Cannes Film Festival in May 2011, Sigma was able to proceed with an innovative release model. Their distribution partner, Distributor A then successfully leveraged further public investment from the UK Film Fund (UKFF). Distributor A hired two digital agencies, Distrify and Digital Agency B, to work on the release, replacing a company Sigma hired in February 2011. The companies Distributor A brought in had split tasks. Distrify was specifically tasked with innovative digital trailer marketing via a tool that also distributed shareable assets and generated email sign-ups. Digital Agency B was in charge of general online marketing, including advertising. Over the course of the summer, offline marketing events at music festivals also promoted the film and built towards the September theatrical release.

Distributor A and its affiliated companies provided regular updates to Sigma during the marketing of the film, and gave Sigma the opportunity to comment prior to the theatrical release. However, Sigma did not gain meaningful joint or partial control of any elements of the campaign, largely because the NFF contract for funds to jointly market and distribute the film was still not signed a month from cinema release. In the opinion of the companies involved, the film underachieved at the Box Office. It suffered from strong competition for audiences from *Tinker Tailor Soldier Spy* (a Le Carré adaptation with Colin Firth and Tom Hardy) and *Drive* (the Cannes Best Director Award winning film with Ryan Gosling) playing against it in successive weeks.

Timeline: *You Instead*

Date	Market Action
2010	
October	Sigma begins discussions with NFF regarding marketing <i>You Instead</i> .
November	Sigma develops initial plans for self-distribution.
	Proposition of the self-distribution plan to their international sales representative, Sales Agent A through marketing documents and discussion.
	Sigma hires a PR company and interviews Digital Agency A that will be hired in early 2011.
	American Film Market: international sales of rights to the film, agreement of the sales agent to Sigma's self-distribution in the UK.
December	Application to the UKFF for financial support for a UK-wide self-distribution release.
	A large Multiplex Chain offers screening slots for the film for May 2011. Social Media campaign begins, DEMs are collected.
2011	
February	Festival premiere at Glasgow Film Festival. "#LoveFestivals" Twitter campaign using digitally interactive posters create DEMs for early campaign management.
	Digital Agency A discuss with Sigma key questions regarding analytics data to support an additional funding proposal. The film's public digital awareness campaign continues to build.
	A leading French distributor buys rights for France, Spain, and Benelux.
	Berlin Film Festival / European Film Market, Sigma negotiate with multiple UK distributors, and investors in the film, including the TV rights holders and NFF, as

	well as Sales Agent A. Sigma evaluate numerous recoupment deal term scenarios and make arguments to retain ability to self-distribute, eventually agreeing terms for joint-distribution with an established Distributor.
	Distribution plans, offline marketing and digital engagement campaigns developed.
March	SXSW Film Festival, recoupment modelling for joint-distribution deal, continued digital engagement campaign with social media and bespoke website.
April	Applications and assessments for public investment in distribution model.
May	Cannes Film Festival announcement of NFF support for innovative release initiative.
June	Distributor A successfully obtains UKFF investment to support digital engagement campaign involving two new digital agencies.
July	Film trailer released on MTV.co.uk and viewing metrics are added to the collection of DEMs. Paid advertising and marketing builds during the summer. NFF develop monitoring and evaluation requirements of the joint-distribution model.
August	NFF issues contracts for the investment.
	Distributor A provides investors and Sigma with details of their marketing budget and plans. Absence of signed contracts means that Sigma cannot influence the plans should they wish to do so. Online advertising and marketing, heavily reliant on DEMs increases dramatically up until cinematic release.
September	<i>You Instead</i> is released in 89 cinema locations covering UK and Ireland to mixed reviews and fewer than aimed for ticket sales.
2012	
January	<i>You Instead</i> is released on DVD

Arranging a more complex network: DEMs enrol multiple market partners

The joint-release of *You Instead* by Sigma in partnership with the distributor required the complicated construction of a network of market actors. As well as the producer and distributor, these actors included the NFF as an investor, a PTVB company, a sales agent, numerous cinemas, the film, its digital marketing materials and the public audience. To self-distribute *You Instead* in the UK, Sigma required investment for P&A costs. A number of the film's characteristics paved the way for an application to the NFF, including its local cast, crew, narrative focus and the NFF's previous investment in development and production of the film. The economic attachment between Sigma, the NFF and the film was predicated on the association between the companies being mediated via DEMs. Sigma made clear the importance of DEMs to the envisaged market construction. In their application, they highlighted the explicit use of certain metrics to enable operations, linking product delivery to consumer demand: *"At distribution stage, we will set a carefully targeted, planned and scheduled campaign aimed at the main audience sector identified at the development stage. Response to the initial online campaign will be monitored using statistics gathered through the platforms used, e.g. Twitter, Facebook etc."* (Sigma Application to NFF Film Investment Fund, Support Document, 17/3/2011). I will show how this initial, constructed perception of DEMs informs subsequent action.

The investment application assessor concurred with Sigma's contention that digital engagement in marketing and distribution is linked to the company's financial prospects. This agreement and the subsequent award of financing legitimised the constructed logic of DEMs. The assessment states: *"This proposal... could mark a step change in their business and greatly improve their chances of building a more sustainable business model. The key benefit of the proposed structure ... is the ability to return value to the company much earlier in the profit profile... ahead of recoupment and profit split for equity financiers."* (NFF Assessment of Sigma application to Film Investment Funding for P&A funding, 17/3/2011 – Portfolio Manager). This analysis was ratified in official documents and at a funding board meeting and Sigma's digitally enabled marketing and distribution of *You Instead*, was successfully positioned in terms of the NFF fund's goals.

The aims of the fund to which Sigma applied were quite broad as can be seen from the following excerpt: *“This fund is a pilot initiative that aims to allow for the exploration and investigation of new models of investment in feature film across one or more of the following areas: development, production, distribution or exploitation. The proposals received... should seek to increase the distribution and appreciation of Scottish cultural content, develop new audiences and return greater value to Scottish companies”* (NFF Film Investment Fund Published Guidelines, 8/1/2011). The use of digital tools or metrics was not mandated by the NFF, however the importance of DEMs was clearly recognised. In making an investment the NFF attached itself to the project in a very specific way. As a condition of making a £250,000 investment, NFF contractually stipulated *“Conditions of investment: National Public Funder to have full access to all information, metrics and data from distribution”* (NFF Assessment of Sigma application to Film Investment Funding for P&A funding, 17/3/2011 – Portfolio Manager). This legal entitlement indicates that NFF sees itself as investing specifically in understanding the expected relationship between DEMs and film sales.

From discussions with the NFF film team and business affairs departments it was apparent that this distinction between *“data”* and *“metrics”* was made for a reason. Here *“data”* is deemed to simply be relevant raw information, a record of actions, but the *“metrics”* are understood as distinct evaluations, the chosen measures of activity by which the release would be managed i.e. DEMs. The distinction was made to ensure NFF had absolutely comprehensive access to information. The motivation for demanding such breadth of reporting was that the NFF were still unsure about exactly what DEMs mean in relation to audiences, and which information was most important. The NFF was also aware that all kinds of data is often held back by distributors due to their view that reserved access to such information gives them a competitive advantage. By demanding access, the NFF foreground DEMs in the very fabric of network ties between their organisation and the producer. But the NFF’s stipulation also highlights a commitment to the general principle of using DEMs to achieve engagement and revenues, without a concrete hold on how they work. The NFF is both still learning, and expressing a want to continue to do so, as the data will be used to inform the NFF’s wider industry work.

In the NFF's detailed assessment of Sigma's digital proposals and their business model implications, the NFF draws attention to the market structuring relationship between digital engagement and economic transactions. The NFF does so in a way that associates the reconfiguration of agency in the market with the capacities of DEMs:

“Sigma is intending to diversity [diversify] its business model... creating and marketing new digital assets and material, embracing the digital and online opportunities that are available to help reach and communicate with their target audience... it has become clear that taking more control of the marketing and exploitation leads to stronger relationship with audiences. This can increase a film's chances [chances] of success at the box office. The digital environment offer[s] ideal opportunity to do this”
(NFF Assessment of Sigma application to the Digital Innovation Fund: 1/3/2011 – Portfolio Manager).

Whilst metrics are mentioned by name in the contractual conditions of investment, they are not included in the quote above. However, they are inseparable from, and implicitly contained in, the *“digital and online opportunities”* believed to deliver power over financial results, i.e. the increased chances of Box Office success. DEMs are indivisible from the technology and activity described, their managerial role is taken as read, as part of the technology, both by the NFF across their own departments and other project assessments and in Sigma's daily operations. To use these digital opportunities strategically is to use DEMs. As demonstrated in the practice of releasing *Donkeys*, digital assets and materials are made up of, understood through, and controlled by, DEMs. This means DEMs are the conduit by which the *“relationship with audiences”* are established, defined, managed and strengthened. Binary code defines the *“digital environment”* and enables the quantitative representation of, and connectivity with, the audience. The understanding of DEMs in a marketing and distribution setting is integral to creating the opportunity to improve chances of Box Office success, whether or not DEMs are capitalised upon.

By investing several hundred thousand pounds in such an initiative, the NFF lends the activity legitimacy as well as the resources to bring the project to life. However, the

NFF is only one market actor in the network required. In the following examples, DEMs' influence in constructing the market by qualifying the film as a good, establishing its characteristics and influencing the industry perception of its value, is demonstrated through the adaption of traditional mediating materials.

Coordination through calculation across organisational boundaries

This section concerns the behind-the-scenes market activities which take an independent film from the editing bay to being seen around the world. Typically such processes involve evaluation of the film in a number of legal and economic contexts, which together serve to join a network of parties and release the film. *You Instead* illustrates the interaction of the prospect of DEMs, their attachments with other market evaluative tools, and the resulting configurations that bring a DEMs-mobilised release to life.

Enrolment of market actors and DEMs' implications across market instruments

In November 2010 before the American Film Market (AFM) (an important annual film sales gathering), Sigma proposed their UK self-release plan to Sales Agent A. Their proposal document focused heavily on the role of digital technologies in audience engagement and distribution. It stated:

“Given the limited value estimated in sales to UK distributors without TV rights and Sigma’ contacts in UK theatrical exhibition: [Multiplex Chain], and ancillary windows: [Home Entertainment Distributor], Sigma intends to increase its burgeoning distribution capacity by delivering You Instead directly to UK audiences using an engaging cross media [digital] campaign.” (Sigma Draft Marketing and Distribution Strategy Proposal, 3/11/2010).

The detail explanation was designed to give the sales agent confidence that the film would receive just as high profile a release with Sigma, as it would with a normal distributor. To impart this confidence, Sigma highlighted the role of DEMs as performance targets for their audience engagement strategy. Such a release, both in expectation and once completed, would allow Sales Agent A to convince distributors around the world of the film's worth. As the public TV broadcaster part financing the

film, PTVB obtained the TV license to the movie. This means a typical ‘all-rights’ sale could not be made i.e. a UK distributor would not be able to sell on the TV broadcast rights of the film. Due to this product characteristic, the potential sales figures were expected to be relatively low and therefore international sales revenues took on greater importance.

The following selection from Sigma’s proposal sketches the digital engagement campaign and sets the DEM targets. The quote illustrates the planned large-scale interconnection of quantitative evaluation and creative materials, indicating how the calculated audience “85k Facebook fans” will be materialised in different asset interactions:

“SUPPORTING ACTIVITY - February: Trailer premieres on T in the Park ticket website (est: visitors= X) and seeded through Social Media to core audience e.g. 85k Facebook fans.

March: Launch of interactive rich media levels of website – including the following items to be released (or unlocked through email provision) over timed schedule and disseminated via social media through to theatrical release: Interactive festival site map - different areas provide different content: stages for music downloads, VIP tent for behind-the-scenes video, crowd sections for interactive video, competitions and applications.” (Sigma Draft Marketing and Distribution Strategy Proposal, 3/11/2010).

The aim of the marketing campaign is to create links between the film and the largest audience network possible. To do so, Sigma intended to deliver a lot of “interactive” and high quality creative content. This includes the trailer but also other “rich media”, “music downloads” and “behind-the-scenes video.” Engagement with any such content, such as viewing a video, and sharing it on social media creates the digital traces collated as DEMs. That Sales Agent A approved the self-release arrangement based on a proposal heavily reliant on DEMs, indicates their adoption of DEMs as a valued asset.

Sales Agent A became positively aligned, initially, with Sigma’s proposed release based on the premise of Sigma engaging audiences digitally, and manipulating these attachments to maximize revenue. However, planning the release and bringing together the necessary partners required market actors reconsideration of the sales sheet and other established film industry devices such as the finance plan. Sigma was able to assemble the total budget for *You Instead* without selling UK rights to a distributor, or rely on sales estimates for the UK territory to complete production financing.

Figure 11. *You Instead* Finance Plan, created by Sigma, 4/7/2010

Financier	£000s
PTVB Films License Fee	150
PTVB Films Equity	150
UK tax credit Tax Credit at 83%	137,25
Sales Agent MG incl 15% fee	200
NFF Pre-2010 Equity	200
Dir/Wri/Prod/DF Deferments	308
Gap Equity/Gap/Post Deferment	92.75
Total Budget	1,238.00
Cash Budget less deferments	930

The finance plan for *You Instead* (Figure 11) describes amounts invested into the production of the film. Deferments such as those taken by the writer and director and other talent, totalling over £300,000 need to be paid back. Sigma relied on estimates in Figure 12 that calculated the total deferments would be covered by sales of distribution rights to non-UK territories. Sigma could therefore pursue self-distribution as they did not require any money upfront from a UK distributor to pay back uncovered deferments or loans. As is highlighted in the bottom right hand corner the “take” price for UK rights was zero and the rights were still available to Sigma to assign.

Figure 12. *You Instead* Sales Estimates Sheet, created by Sales Agency A: June 2010¹²

SALES ESTIMATES			
SALES ESTIMATES			
06/10 hd/sk			
	DEAL AGREED	ASKING US\$	TAKING US\$
NORTH AMERICA			
USA		500,000	150,000
Total		500,000	150,000
EUROPE			
Benelux		75,000	35,000
France		250,000	150,000
Germany/Austria		400,000	200,000
Greece		50,000	20,000
Italy		250,000	150,000
Portugal		30,000	15,000
Scandinavia		100,000	50,000
Spain		150,000	75,000
Switzerland		40,000	20,000
United Kingdom (theatrical & video only)		25,000	0

As an investor in the finance plan and a company whose revenues are based on commissions from sales of film rights, Sales Agent A carefully considered likely sales per territory. They were forced to assess whether the prices they could ask, or could achieve as the lowest “takes” would be detrimentally affected by Sigma’s self-release in the UK. Activity in one market, especially an English language territory can have knock-on effects in other markets. The sales agent was convinced Sigma’s digitally enabled release would perform sufficiently well not to jeopardise other returns. Following AFM, Sales Agent A gave its backing to Sigma’s new style of DEMs-reliant self-distribution. Tracing the motivations and actions of market actors and material instruments illustrates that even without the visible presentation of DEMs, they still exert agency and take a performative role by influencing conditions such that they may shape the market.

¹² N.B. At the stage the film was financed and estimates drawn up, the film was titled *In the Park*

Calculating how to unlock funding with DEMs

Sigma made preparations for building an audience online as early as possible. A social media campaign started in advance of the UK film festival launch in February 2011, and reference to the evaluative role of the data became more explicit. A digital campaign for *You Instead*, with the attendant Facebook connections to a growing audience, prior to a UK distribution deal being struck, provided Sigma with some insight and control over film marketing not traditionally afforded to production companies.

The attempted enrolment of a UK-wide film investment fund shows how DEMs intervene in layers of market construction work, that the role is calculative and materially dependent but also emergent, yet to fully settle into regular patterns of operation. Sigma applied for funding from the UK-wide public film body to support their distribution of *You Instead*. In an email that charts Sigma's preparation of application documents, a comment from Digital Agency A specifically highlights the role of digital metrics in obtaining finance: *"I'm just talking with the Producer about stats / data for a You Instead additional funding proposal... Are you able to define some key questions? So that when we head off into the analytics ether we're sure we're generating a useful set of information."* (Digital Agency A Liaison application planning email to Sigma's Digital Producer for *You Instead* & NFF Research Associate: 07/02/2011). The "key questions" referred to by Digital Agency A are a request for advice as to what DEMs are influential for calculating future success from the point of view of a financier. Sigma sought the right combination of information with which to sway the opinion of an investor. They assumed DEMs would be crucial for UKFF to calculate their likely return on investment, and thus privileged them in their attempts to draw in partnerships.

Digital Agency A go on to state how much data they have and certain measures they think are important e.g. *reach* (which refers to how many people have been contacted): *"We've got 1.5 weeks of live grassroots campaign to play with, and can fairly easily establish reach / impressions from that. And then extrapolate to give worst case / best case scenarios re. reach by the time we get to May (the anticipated release month)"* . " (Digital Agency A Liaison application planning email to Sigma's Digital Producer for *You Instead* & NFF Research Associate: 07/02/2011). Tellingly,

rather than propose some DEMs objectively known to reliably impact consumer demand, the digital agency requests input as to what other market actors, those taking investment decisions, deem important. The agency of DEMs is taken for granted, however, the specific value of different DEMs is yet to be established or standardised for all market actors, and thus market assemblage relies on co-production. It is important to note that although the goal of Sigma's use of digital technology is to engage consumers and increase audience demand for the finished film, to do so, DEMs must continually perform work to create and maintain the world in which they can operate. This starts with the coordination processes that produce, value, exchange and circulate the overall 'film' as an assembled market object. Concretely, this means enrolling market actors and their resources to produce and disseminate creative materials using DEMs to manage activity.

DEMs' importance to competing agencements

There are similarities in the operation of established film evaluation tools and the emerging frameworks of DEMs. For example, the simple tabular cross-referencing for associating certain properties of a film, be they territorial distribution rights or collated social media metrics and indicators of financial performance, are present in both bespoke DEMs reports and sales estimates sheets (Figures 2 and 3, 12 and 16). By looking at a series of challenges to Sigma's market arrangements, the multiple processes, logic and actors involved in establishing DEMs' calculative toolsets become clearer. The coordinated understanding of DEMs as objectifying a film with particular properties, and as singularising a film from many competitors, was largely achieved in pitches, word documents, spreadsheets and meetings with other market actors. Examining how these interactions were received, and responded to in kind, shows the myriad type of inputs to DEMs' market role.

At the European Film Market of the Berlin Film Festival in February 2011, *You Instead* received a lot of market attention and offers from two large, well-reputed UK distributors. Sigma was pressured by other market actors attached to the film towards taking a traditional UK distribution deal. This email, one of several during the night from the film's producer, also the Company Principal, demonstrates the competitive nature of establishing market attachment: "*Been run off my feet with YI in Berlin. [Distributor A], [Distributor B], and [Distributor C] v interested for the UK.*

With tv gone the offers are small - £100k ish. P&A commitment £400k +. [Film Director] and I keen to say no but might get bullied into it. Any help with an argument you can think of would be great” (Sigma Company Principal email to NFF Research Associate during festival negotiations, 14/02/2011). The three distribution companies had pitched a traditional deal to Sigma, each proposing a value for the film, *the offers*. These proposals try to further define the market object by transforming and qualifying the film through a £400k P&A commitment for marketing and distribution, which is a relatively large amount for such a film. The level of the P&A provision has a radical impact on how many audience members can be reached and thus this budget becomes a salient property of the product.. Nevertheless, Sigma wanted to avoid this traditional market arrangement so that they could distribute the film themselves, but had a number of difficulties to overcome.

PTVB, an equity investor and UK TV rights-holder, strongly wanted to obtain a traditional distribution deal. Their reasons included the guarantee of a certain level of marketing spending and number of theatrical screens. Rather than evaluating release options on the basis of potential financial recoupment or profit, the most important currency to the PTVB was viewership. A high profile cinema release was anticipated to drive high TV viewing figures. These motivations and expectations are well known to the other participants. This influenced the action of other companies involved. Sigma’s principal explains their understanding of the situation: “[The film director] *and i want to say no* [to the traditional deal] *but* [Distributor] *are desperate and they will put pressure on the* [PTVB]. *Sod's law!*” (Sigma Company Principal email to NFF Research Associate during festival negotiations, 14/02/2011). The reconfigured arrangements for release proposed by Sigma, and the traditional ones put forward by the distributor can be viewed as competing agencements (Callon *et al.*, 2007). Sigma expected the distributor to leverage their capability to deliver PTVB’s expectations in an attempt to fix other market actors into their version of the market and thereby circumscribe Sigma’s opportunity to self-release.

Film market arrangements are dynamic, stabilised only for short periods and the Berlin deal negotiation illustrates the tensions at play. Sales Agent A, previously supportive of the self-release model would gain knock-on benefits from any UK, thus they also now pressed the case that a high profile UK sale was required: “*We strongly*

recommend this deal. They love the film and will take great care of it. We also feel it important to close a high profile UK deal to influence rest of world sales” (Sigma Company Principal email to NFF Research Associate detailing festival negotiations, 14/02/2011). Sales Agent A invoked the need for a wider network of territorial distributors as vital for the film’s success. Such market attachments are presented as tied to the single transaction of the UK distribution rights. The previously established agreement of participation by the Sales Agent at the AFM was not strong enough to hold. The NFF funding which arrived at the May Cannes Film Festival may have enforced their disruptive agenda as a *fait accompli*, but instead a different configuration emerged.

Sigma responded with an argument against the proposed traditional distribution deal. Their perspective emphasised that a digital connection already existed between Sigma and the audience. An email conversation with the NFF shows Sigma, jointly with NFF, attempted to frame their market activity as a solution to the other market actor’s needs: *“The direct link Sigma has to its target fanbase – the digital campaign that is in place that [Distributor A] or another cannot replicate. This is what would make a Sigma self release more successful and deliver to [PTVB] the reputational assets they desire*” (Sigma Company Principal email conversation with NFF Research Associate discussing festival negotiations, 14/02/2011). The logic of action discussed illustrates how important scaled, socially networked relationships, i.e. those encapsulated by DEMs, are understood to be in the market making process. These relationships, the *“direct link”* are not only viewed as having leverage for constructing distribution deals, but also as irreplaceable by others.

Based on this email conversation Sigma presented their case to their investors and Sales Agent A. Although Sigma did not obtain the ability to completely self-distribute, they did manage to negotiate a compromise. This was an option to adopt a hybrid joint-release approach: *“I met them [the distributor] and told them what we could do and was there a way to work on it together”* (Sigma Company Principal email to NFF Research Associate detailing festival negotiations, 15/02/11). The agreement would lead to NFF financing the joint-release model and Sigma and the distributor becoming partners. In order to understand what a digitally enabled release would mean for them, each actor had to consider the related management and

financial implications. For example, the distributor calculated that sharing the costs of P&A would be to its benefit and more of their own capital could then be spent across their own portfolio of other films. The agreement came to fruition partly because of a shared positive expectation for motivating audiences digitally. Distributor A's marketing and distribution pitch document, which they created independently in pursuit of buying the rights to release the film outright, foregrounded digital audience engagement activities:

“You Instead/UK Release Plans: *All the festival activity will tie back to a hub/community on Facebook using a specific mechanic... Throughout the summer we will build this community continuing to interact with and engage its members”* (Sigma Company Principal email explaining Distributor A release proposals to NFF Research Associate: 16/02/11).

The “*specific mechanic*” referenced by the distributor is a formulaic strategy using creative content to attract users to a digital space in which the audience can be measured, monitored, known and captured, all using DEMs. This language recalls the propositions made by the Digital Advisor for *Donkeys* in terms of “*lead valves*” for business creation. This engineering terminology highlights the view of creative marketing practices, the generation of videos and stories for conversation, as part of a self-built infrastructure, albeit one that is easily quantifiable and re-combinable.

The detail of qualification and stabilisation: calculating distribution rights

The embedding of DEMs earlier life of a film and the knock-on effects for distribution reshapes many typical sets of business relationships. DEMs become increasingly interwoven with the many existing mechanisms that mobilise the industry, and these tools become altered or hybrids. This process is often very technical, but these changes are important because they materialise the reconfiguration of market transactions taking place. The recoupment chart, a core evaluative framework for calculating different distribution scenarios was influenced, and so became part of the overall market assemblage for *You Instead*.

Negotiations between Sigma and Distributor A over distribution deal terms continued during March, April and May. The set of prices, proposals and commitments offered

by Distributor A at Berlin fulfilled one function – to establish a deal and ensure a competitor would not do so instead. But once Sigma made the choice to sign with Distributor A, negotiation began again. The producer no longer had a position of power because competitive market interest has dissipated. Therefore Sigma had fight to make the most of the deal they struck at the festival. Discussions internal to Sigma referred to potential recoupment structures for the joint-distribution arrangement (Figure 13). These interpretive tools informed which deal dimensions, such as VOD return percentages, Sigma determined to be of particular importance. Such issues then formed the focus of negotiations between Sigma, the distributor, and equity funders, PTVB and the NFF. Sigma's Company Principal summarises the results of this contest in an email: *"friday was spent mostly fighting with [PTVB] about our fee below... [Distributor A] puts in £200k P&A, as does Sigma both recoup pro rata and Pari passu¹³ identical expenses allowed then the deal is 30% distrib fee to [Distributor A] 5% to sigma"* (Sigma Company Principal email to NFF Research Associate regarding deal term negotiations, 28/02/2011). By negotiating a 5% distribution fee as well as benefiting from its terms as a licensor, Sigma was able to demonstrably reorganise and improve the way it could make money by reconfiguring independent film industry practice. Even if the acceptance of a 5% corridor for Sigma as a distributor is a small, begrudged amount, it is a material change, one facilitated by the power of DEMs.

By comparing Figure 13, a selection from a 2011 recoupment chart version calculated by Sigma with the original iteration of the recoupment chart created by Sales Agent A in Figure 14, it is possible to identify the materialised financial implications of Sigma's digitally enabled joint-distribution role. Whilst the chart does not contain DEMs itself, the 5% fee to Sigma pointed out by the arrows in Figure 13 is essentially pricing their power and agency. This role is predicated upon, and brought into being through DEMs.

¹³ *"Pro rata pari passu"* means that actors recoup revenues proportionate to the amounts they invest and do so at the same time as each other.

Figure 13. Selection from Sigma's *You Instead* Recoupment Chart Model 2011

Revenue Streams Generating Sales		Percentages/ Assumptions	£1m	£1.5m	£2m
Theatrical					
Gross BO			1,000,000	1500000	2,000,000
Net of VAT		0.20	800000	1200000	1600000
Distributor's Gross		0.35	280000	420000	560000
Icon fee		0.30	84,000	126,000	168,000
Sigma fee		0.05	14,000	21,000	28,000
Licensors share to expenses of:		0.65	182,000	273,000	364,000
Less expenses@	200,000	0.5	91,000	136,500	182,000
Less Sigma expenses@	200,000	0.5	91,000	136,500	182,000
until recouped	400,000		- 218,000	- 127,000	- 36,000
To Collection Account or (P&A unrecovered)			- 218,000	- 127,000	- 36,000
Plus Ancillary Revenues					
Total DVD Retail Units	UKFC Averages		143,000	214500	286000
Wholesale Returns net VAT	£7.29 -Vat /2		416,988	625,482	833,976
Royalty@	0.30		125,096	187,645	250,193
Sigma Royalty	0.05		20,849	31,274	41,699
Producer participations	0.65		271,042	406,563	542,084
Producer Participations - expenses (manufacture + distribution)	£1 per unit		128,042	192,063	256,084
Less Marketing	£.50 per unit		56,542	84,813	113,084
To Collection Account			56,542	84,813	113,084
DVD Rental					
	10% of DVD sell thru		41,699	62,548	83,398
fee	0.30		12,510	18,764	25,019
Sigma fee	0.05		2,085	3,127	4,170
Producer participations	0.65		27,104	40,656	54,208

For comparison, in the typical way of operating, Sigma as a producer would receive no distribution fee at all, but wait until after distribution costs and the distribution MG are recouped before it receives any returns in order to pay back investors. The “Sigma fee” cannot be identified in the 2010 edition of the chart shown in Figure 14. Instead the first money Sigma would make according to this traditional configuration of returns is labelled “Producer’s Equity” and is indicated with an arrow

Figure 14 Original Recoupment Chart for Sigma's *You Instead* 2010

GBP			
Gross Revenues			
Collecting Agent fees			
Less Marketing Costs			
UKTC Shortfall		if any	
Net Revenues			
Tier 1			
Sales Fee	15,00		
<u>Sales MG plus premium</u>	<u>85,00</u>	<u>up to</u>	<u>207.500</u>
Subtotal	100,00		
Tier 2			
	%		
Sales Fee	15,00		
Deferments Dir/Writer	46,12	up to	110.000
<u>Gap</u>	<u>38,88</u>	<u>up to</u>	<u>92.750</u>
Subtotal	100,00		202.750
Tier 3			
Sales Fee	15,00		
██████████	3,83	up to	23.000
Producers Equity	22,95	up to	138.000
██████████ Films Equity	24,95	up to	150.000
██████████ <u>Screen</u>	<u>33,27</u>	<u>up to</u>	<u>200.000</u>
Subtotal	100,00		511.000
Tier 4			
Sales Fee	15,00		
<u>Deferments</u>	<u>85,00</u>	<u>up to</u>	<u>175.000</u>
Subtotal	100,00		
Tier 5 Backend			
Sales Fee			

The recoupment chart is not a stand-alone device, it rests on the finance plan, which in turn corresponds to the budget. The economic relations calculated through such frameworks are then enshrined in legal contracts. Through the adaptation of this interrelated apparatus, the film is defined for transactions in a new way. The boundaries between market actors are mediated differently due to such interactions being calculated with reference to the import of DEMs.

DEMs: materialising the audience during release

The planning and execution of *You Instead*'s release illuminates how DEMs are envisioned, created, evaluated in the management of resources and coordinated activity. This visible and explicit manifestation of DEMs' market role can be seen from one of the of the many interventions which generated a wealth of data, in this case in the early creative campaign is shown in Figure 15. Scanning the poster with a smartphone app enables the user to download a song and share on social media using the hashtag #lovefestivals. Each action is traced, collected and analysed as DEMs.

Figure 15. *You Instead* Digital Marketing Tool



Once the P&A deal was completed and paid advertising purchased, activity increased dramatically. Distributors traditionally use a suite of marketing and distribution documents to manage their exposure on a single film within their broader portfolio. Choices are made over how many screens to try and book, prints to strike and how to support that scale of release. These plans include amounts spent on digital components of the release and are accompanied by detailed strategy documents showing how the digital elements fit in with the overall marketing plan. DEMs

infiltrated these established methods and materials. The advertising booking sheet selection included as Figure 16 details DEMs and their price. It directs how much will be spent on digital advertising. The document was devised by the distributor, and shared with Sigma, the producer, for comment. The websites or digital locations of the adverts are on the left, and metrics totalling the amount of people the adverts should reach, and details of the targeted audience are spread across columns to the right. Under the column “Placement” and row “target audience” the socio-demographics of the intended consumers are made explicit, under the column “Planned Units” the number of these targeted people the campaign intends to purchase is stipulated. The “Site” column on the far left dictates which website or digital mobile service will provide this scope and scale of audience.


Figure 16. *You Instead* Digital Advertising Budget: 16/9/2011

Client: [REDACTED]											
Product: You Instead											
Release Date: 16th Sep 2011											
Target Audience: 16-34 ABC1											
Campaign Period: 5th Sep - 21st Sep 2011											
Budget: £30,000.00											
Target Contact: [REDACTED]											
Site	Monthly Unique Users	Monthly Impressions	Placement	Format	Production Incl.	Planned Units	Unit Cost	Total Media Cost	Adserving	Total Client Cost	Copy/ Creative Deadline
CPM											
facebook	30,087,000	18,111,000,000	16-21 Targeted	Standard Ads (£6390.71 pre; £2130.24 main burst)	No	2,840,317	£3.00	£8,520.95	£142.02	£10,166.66	22nd Aug
Total						2,840,317	-	£8,520.95	£142.02	£10,166.66	
Per Message											
O ₂	1,500,000	-	Targeted to 16-21 with smartphones	Text Message + Link	No	33,333	£0.15	£5,000.00	-	£5,000.00	22nd Aug
Total						33,333	-	£5,000.00	£0.00	£5,000.00	
CPM											
Spotify	2,197,000	3,000,000	Pop, Rock, Indie - 16+ Targeted	Audio Ads	No	728,200	£10.00	£7,282.00	£36.41	£7,318.41	22nd Aug
Total						728,200	-	£7,282.00	£36.41	£7,318.41	
CPM											
VEVO	9,999,000	90,000,000	Targeted to 16-34 - Indie Genre	20"/30" Pre-roll	No	300,000	£25.00	£7,500.00	£15.00	£7,515.00	22nd Aug
Total						300,000	-	£7,500.00	£15.00	£7,515.00	
TOTAL CAMPAIGN						3,901,850		£28,302.95	£193.43	£30,000.07	

Whilst digital advertising is not new for distributors, the circulation of such data to a production company is a significant adaption of common practice. Although overall the aims of producers and distributors can be superficially reduced to a shared focus on maximising revenues, finer grained issues are also at play. A distributor always looks to continually maximise profit from a slate of different films from various producers; whereas the producer aims at recoupment of marketing funds and profit from the single project. These factors influence where each actor would prefer to focus marketing money and attention, and what part of that information they wish to share. Distributors are motivated to allocate money to marketing the channels of exploitation from which their split of the revenue is higher, and where there may be follow on benefits for support of their future films. So whilst the booking sheet is a single evaluation space, multiple agencies are able to contribute to its final arrangement. Another component of the established distribution toolset, the P&A budget further illustrates the input of diverse influences.

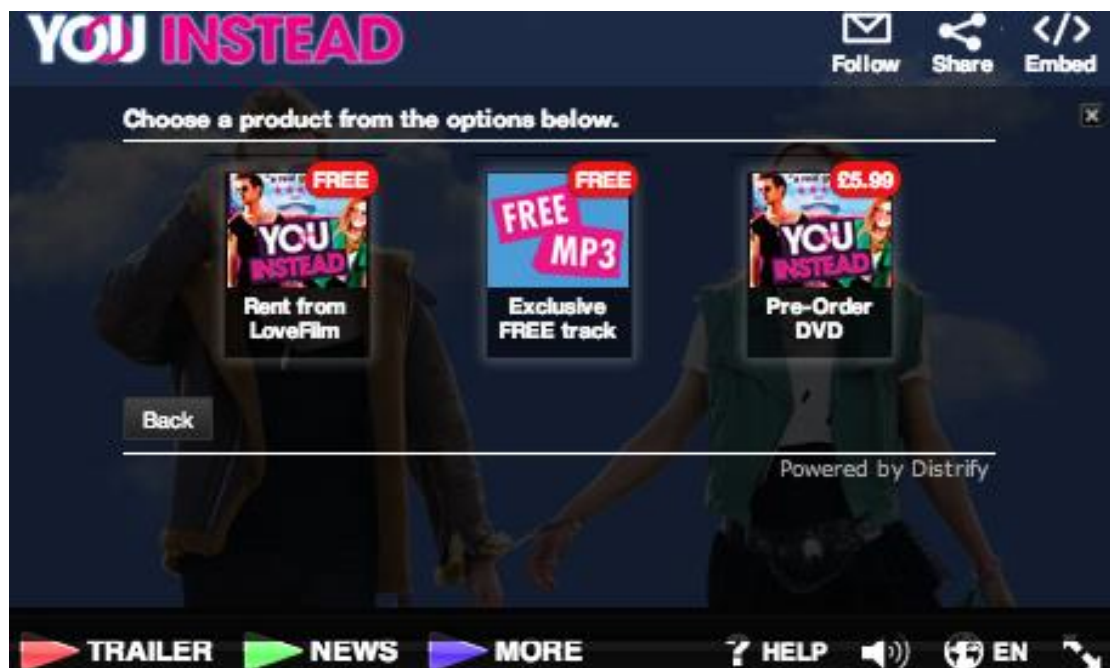
Both the advertising booking sheet (Figure 16) and the budget (Figure 17) give prominence to Facebook. One project-specific reason for this is that the audience engagement work of digital agency Distrify focussed largely on that platform. In Figure 16, the penultimate column from the right shows the allocation of most money to Facebook. In Figure 17, it is important to note the indicated comment aligned to the “*Online Media*” budget commitment (code 61014): “*Live, currently driving likes*”. DEMs, in this case the most commonly referenced currency of online attention, Facebook Likes, are now included and highlighted in the P&A budget. This not only demonstrates the simple embedding of DEMs in established frameworks for managing market activity, but their early importance as a directive in laying the foundation for the rest of the campaign, rather than simply a measurement.

Figure 17. *You Instead* P&A Budget – digital highlights: 16/9/2011

You Instead		P&A Budget	
Code	Category	Amount	Notes
60	Prints & Trailers		
60000	Prints (new)	£60,000	100 screens, approx 60% print, 40% digital (35MM prints at £550, Digital with a
61014	Online Media	£25,000	Live, currently driving likes 
61015	Trade Press Media (In Cinema)		
61016	Miscellaneous Media		
61017	Sustain	£20,000	
	Total Media Advertising:	£143,735	#REF!
611	Media Production		
61101	Consumer Press Production	£3,000	
61102	Poster Design	£7,500	
61103	Poster Printing	£5,000	
61104	TV Production		
61105	Radio Production		
61106	Online Production	£5,000	

Facebook was particularly important because it housed the film’s innovative trailer player funded by a £25,000 investment from the UKFF P&A Fund obtained by Distributor A. The player was integrated with cinema listings so that trailer viewers could immediately search to buy a ticket without changing websites. The aim of the technology deployment was: *“To engage with the target audience for YOU INSTEAD identified as music fans and festival goers aged 15 – 24 by supplying a fun, dynamic and useful tool they can interact with, share and which will ultimately drive ticket sales and retail sell through”* (Distrify proposal for digital marketing and distribution activity, 21/6/2011). The video player’s creative assets enabled multiple types of market interactions. These included transfer of news regarding the film’s release; a free MP3 music download; and DVD rental or purchase options. The distributor and Distrify specifically picked out cinema ticket sales and retail copies of the film as the sources of revenue that would be impacted by digital audience engagement, but multiple engagement patterns with inferences for financial performance were possible.

Figure 18. *You Instead* digital trailer marketing tool by Distrify



The player interface suggests that users Follow, Share or Embed the video player (see the top right hand corner of the screen). All of these options produce DEMs. There are many different types, some are simply read off a counter, others are the product of formulae or basic ratios. The resulting aggregated data was called “intent to view” and formed a focus of attention. Distrify analytics software allows cross-referencing of people who shared the player and bought the film, or followed the Twitter feed and downloaded the music track. There are myriad combinations that can be calculated, and, from these results, assumptions are made about how best to further engage the audience and sell more film copies. Extensive time and effort was allocated to this evaluation practice. The joint-distributors of *You Instead* both communicated with, and evaluated the performance of their digital agencies via DEMs. For example, Distrify’s report to the distributor on their trailer marketing noted:

“The Facebook community was clearly active; though less than 1,000 users visited the player [Distrify’s bespoke trailer tool, see Figure 18], while the page garnered over 5,000 fans [users that clicked “Like”]. Still the conversion ratio from page-view to player view on the Distrify

Facebook page was outstanding” (Distrify Report on *You Instead* Digital Activity, 7/12/2011).

In this excerpt, the detailed nature of the DEMs calculations, previously labelled “mechanics” or “lead valves” by other actors, shines through. The digitally connected audience are evaluated in terms of their attachment to particular pieces of creative content.

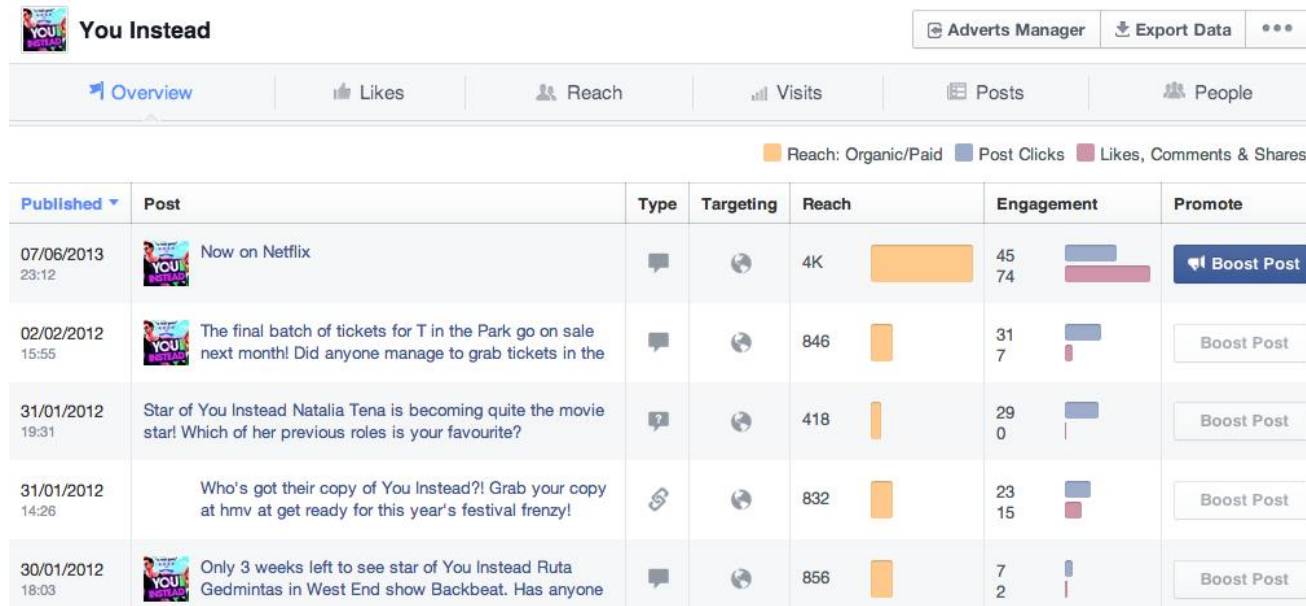
The Distrify technological initiative aimed at building buzz for the film throughout its cinematic and home entertainment release. Distrify even specifically highlighted the generation and traceability of audiences through DEMs at the juncture between different consumption periods, proposing: *“Bridging the traditional window between theatrical and home entertainment release with further exclusive content and competitions followed by direct links to the home viewing opportunities as they arise: rental, online streaming and buy to own”* (Distrify Report on *You Instead* Digital Activity, 7/12/2011). The rates of DEM production, the location and channel of audience activity then influence market actors’ behaviour over an extended period. Whereas traditionally a producer would be detached from the film following the end of shooting and appointment of a sales agent, Sigma was engaged throughout the campaign.

The core marketing and distribution activity ran from summer 2011 to spring 2012 and adopted the logic Sigma and their first digital agency appointment (subsequently fired by the Distributor) had set out: *“You Instead PR campaign – concentrating mainly on Scottish pre-premiere coverage and building an online buzz... We’ll track downloads and referrals from here on in and give an update after one week”* (Email from Digital Agency A Liaison & PR Liaison to NFF, 11/02/2011). Sigma, Distrify, Distributor A and the subcontracted Digital Agency B collaborated on the creative materials, the trailers, images and songs chosen to enrol audiences. The role of metrics in this management of this process was paramount: *“From the Facebook embed, the conversion to trailer view was enormous at around 70%...conversion from trailer view to (music) track download...1 in 25. We consider this to be a good conversion for sales. If more users are directed to the Distrify tab on the Facebook page we expect this conversion ration [ratio] to persist during the next phases.”*

(Distrify Report on *You Instead* Digital Activity, 7/12/2011). This quote shows how variously formatted DEMs: “70%,” or “1 in 25”, are converted to indications of sales. Due to the digital capacities of creative materials being easily altered and refined, these figures are understood to be improvable through manipulation of the marketing campaign. No probabilities are discussed in relation to financial performance, purely that more users means good conversion for sales. So DEMs provide both a common, but simplified language for coordinated evaluation, despite the calculations producing DEMs being very complex.

Figure 19 shows Facebook analytics for *You Instead*. The DEMs produced are monitored with the view that some proportion of the Facebook audience can become interested in, and attached to Sigma’s film as a buyer of cinema tickets or DVDs. Whilst these algorithmically defined characteristics e.g. the reach of its Facebook campaign, are not known to the audience, their mobilisation nevertheless contribute to determining the film’s path. In the screenshot, each *Post*, which contains the content or message disseminated by the marketing campaign, has metrics for both *Reach* and *Engagement*, there is also the opportunity to click *Boost Post* and pay to improve these figures. Depending on the performance of the *Post*, which is further broken down by more DEMs: Clicks, or Likes, Comments and Shares, the marketer can alter their content strategy. In the lead up to particularly important events in the life of the film, for instance a release in a particular exhibition window, marketers aim for DEMs to be spiking.

Figure 19. *You Instead* Facebook Insights Analytics Page Screen Shot



The most recent post communicated that the film is now viewable via the VOD streaming service Netflix. The aim of the marketers is to inform as many people as possible to increase the likelihood of increased Netflix viewers. Sigma do not have access to Netflix's internal data, indeed, importantly there is no proven causal relationship referred to between DEMs and the viewing figures to which Sigma do have access. The number of viewers will be recorded via the internal analytics of Netflix, and, if sufficiently high, may influence that company to purchase rights to Sigmas' films in the future.

The film as a market object which enters the world of the sales agent, distributor and consumer, is connected to multiple pieces of digital content and a connected audience of varying levels. *You Instead* is a construct including a 90 minute film, its Facebook and Twitter accounts, every one of the many thousand of individuals networked together by virtue of the digital code tracing their socio-technical expressions of Liking a trailer and so on. Even the iterative plans for such connections are important qualities of the film as a market good. The shared P&A budget and advertising sheets form a calculative space, one which is adjusted over time in conjunction with other details of the marketing and distribution campaign, e.g. information from digital user interfaces such as Facebook Analytics. The spreadsheets enable the joint-distribution team to identify the audience for their product and assess how they are going to reach them. At the point of purchase, the particular DEMs available to the buyer also differentiate it from other films available with different levels and types of social media attention. The film is qualified as a market object according to its current and anticipated social connections. The interpretation of these figures by the joint distributors helps them refine their marketing strategy in pursuit of ever more connections and higher figures. The choice of digital advertising purchases in Figure 16, and the relative amounts attributed to online marketing as opposed to print or TV in Figure 17, set the terms for a film's engagement with audiences. As Facebook Likes are re-inscribed into other syntactic forms, firstly into analytics software, then into data tables, they help to frame the film. The film becomes finely distinguished by its many characteristics set out in neat rows. Just as its cost, its revenue splits and its distribution in international markets are calculated, so too is its social fanbase, and are all understood as interrelated by the industry actors.

Communication Breakdown: Non-aligned DEMs valuations and issues of access

The ultimate arrangement of the market for *You Instead* was not the idealised version originally envisaged by Sigma. Although the producers ostensibly had the right and opportunity to input and decide on marketing and distribution activity via their joint-distribution agreement, they did not obtain sufficient control to do so effectively. This was because the distributor had a long history of distributing films and Sigma's only experience was in the limited release of *Donkeys*. In addition, the delay in contracting gave Sigma little ability to leverage any extra information or influence.

In May 2011, following several months of digital engagement work by Sigma and their hired agency, Distributor A chose not to build directly from the existing digital presence for the film. The website was discontinued and the original agency not kept on as part of the project. The change was ostensibly made because of differing views on aesthetics and strategy. Distributor A felt a different, more traditional design of online content would attract more Views and Likes. As can be seen from the two film posters in Figure 20, the early stage, more design-focused imagery on the left, was replaced by more typical film marketing images, on the right. Film marketing campaigns tend to deploy unified content across online, outdoor and mobile. So the images on Facebook reflect the design of posters in cinemas. The configuration of images and other creative content feeds into considerations about digital marketing and how audiences are positioned and more or less successfully engaged.

Figure 20. Comparison of producer and distributor led poster design



Additionally, this curtailing of Sigma's appointed and directed the digital agency enabled the traditional gatekeepers of information (the distributor) to retain their commonly enjoyed position of control. Over time, it became clear that Distributor A valued the availability of funding brought to the deal by Sigma much more highly than the digital engagement they had achieved and might continue to deliver. It may have been that the DEMs created through the original work were not high enough, or presented in a way the distributor could easily value in line with their own operations. Or, it may be that access to any digital audience data was viewed as so highly important by Distributor A that they could not risk Sigma, a relative novice, controlling this social network. This is the interpretation that Sigma considered.

The potential for Sigma's loss of control was identified at the time. The film's producer noted in an email before one planning meeting with the distributor: *"I think [Distributor A] are treading carefully with us (just in case we turn out to be annoying wannabe control freak distributors)... I'm going to meet them (subcontracted digital agency) and make sure we have direct contact/reporting so we can share our ideas and info - we've got all the content so there will need to be a good working relationship. I want to make sure that the UK is leading on the international activity too so we need to be able to access all and work together."* (Company Principal release planning email to NFF Research Associate, 11/05/2011). This quote illustrates a number of important points. Sigma recognised that through their new market arrangement, they are challenging an established order. Even though the distributor was attached to the film in a manner initiated by Sigma films, the arrangement is a tense one. It was a relationship, Sigma noted, they had to manage carefully, and one they thought about having to deal with by hard negotiation over access to the creative materials that create DEMs: *"we've got all the content so there will need to be a good working relationship"* (Company Principal release planning Email to NFF Research Associate, 11/05/2011). The importance of access to data is apparent in the views put forward. Sigma values it so highly they want to protect it from any threat: *"I'm going to meet them and make sure we have direct contact/reporting so we can share our ideas and info"* (Company Principal release planning email to NFF Research Associate, 11/05/2011). Sigma considered the transfer of information amongst market

actors as crucial to the success of the film in the UK, which in turn can determine international performance.

There are, however, conflicting valuations of the audience connections materialised as DEMs. These differences in evaluation and interpretation of the data became clear as Sigma's loss of control was reflected upon, post project: "[Distributor A] *lost the momentum built from the Sigma appointed consultant's work and from that point Sigma were unable to obtain any live data and therefore effect any decision making*" (NFF Research Associate notes of Sigma project review meeting, 18/1/2012). The difficulty in obtaining data in a timely fashion from the distributor, and not being able to use DEMs during the film's theatrical release period, was deemed a significant barrier to the success of the film. *You Instead* opened in 89 cinema locations on September 16, 2011 and under performed. Although lack of communication between partners contributed negatively to the campaign organisation and operation, mediocre reviews and stiff competition in the marketplace were believed by all partners to have contributed to underperformance. The autumn 2010 conclusions from the release of *Donkeys*, that digital engagement campaigns require early activity and detailed planning had been into action in February 2011 for *You Instead*. However, the potential effectiveness of such action was understood to be hampered both by delayed investment and a later loss of control and therefore continuity in audience engagement activity.

Despite a lack of success at the Box Office, the shared construction that connected the use of DEMs to market results remained stable. The notion of useful inaccurate models is applicable here. The logic of DEMs was materialised in numerous budgets, analytics reports, digital materials and the collaborative discussion of such items. The role of DEMs was not questioned. Only the execution of the joint-distribution model was criticised: "*Sigma's time and effort on marketing activity is very precious, the need to know what is actually working through digital tools is a priority. Due to their negotiation from a position of weakness, Sigma could not leverage enough information and control from [Distributor A], regarding digital engagement metrics or others. Their contact at [Distributor A] did not want any input at all, no digital assets that Sigma had prepared.*" (NFF Research Associate notes of Sigma project review, 18/1/2012). Here the producer expressed concern that though DEMs are

valuable, they can be created without the production company's materials, and therefore though valuable, are in some cases unreachable.

DEMs did play an important role. They were a key feature in configuring the market for the film, in the execution of its release, and were highly valued and utilised by Distributor A. However, Sigma was not able to fully capitalise on DEMs' embedding in the many industry market assemblage. DEMs' value motivated action on the part of Sigma and the distributor, but these were often imperfectly aligned operations, and in Sigma's opinion to the detriment of the film's performance. The evidence indicates DEMs' role to still be developing, not yet stabilised in the way Sigma conceived and desired them to work. However, the repeated performance of DEMs in capturing finance and audiences, altering how established market tools work, and inserting new tools leads to further activity on the films *Perfect Sense* and *Citadel* to anchor these market operations. DEMs provide a through-line for the rearrangement of multiple aspects of market making. DEMs are shown to be both material and processual, made of people and technology, and to create networks of market attachments that enable a variety of economic transactions.

Discussion

This chapter has shown a great increase in the depth and breadth of market activities that contribute to DEMs' emergent influence. Competition amongst different market actors' visions for the life of *You Instead* draws attention to how DEMs weave into established calculative tools and alter them. These adaptations play an important part in creating the network of actors, including distributors and numerous digital agencies, which allow for the complex framing, qualification and calculation work of DEMs to take place. Digital materiality has a significant role in the observed coordinated evaluation of the film. The film as a market object becomes increasingly elaborate as marketing materials are created and attached to it. The market and market(ing) object are co-composed (Finch & Geiger, 2010). These are then linked digitally to 'the audience'- the potential consumers perceived to be the market, are made present and thus performed as DEMs.

As DEMs start being monitored, they also become part of the film being valued. In the work of connecting the film to its audience, DEMs become a valuable property of

the film. Their resulting product qualification capacity leads to further connections amongst other market actors. DEMs operate as representations of the audience, but which still retain connections to the individual and their social network. For example, the aggregation of DEMs allows for highly mobile, easily manipulable calculative frames to be created. But when those tools contain hypertext links, or the calculations are conducted using analytics software, a user can very quickly move from manipulated aggregates down to individual viewers. The audience member, the potential consumer is not cut off. Investors, distributors and cinemas all require audience attachments at some level of mediation, and so DEMs are inputted to calculations that frame relations between these actors. The expression of digital technology's capacity to engage audiences successfully enrolled external finance to spend on a marketing and distribution strategy, and determined how any resulting revenues would be allocated.

Interessement of a complex network in competitive conditions

The contested nature of *You Instead's* distribution arrangements, and the continued challenges presented to Sigma's ideal version of the film's life illuminate the multiple influences on, and components of, DEMs' shaping of the market. To fund and organise the distribution of the film, DEMs repeated their role as an organisational concept (Entwistle & Slater, 2013). They exerted agency through their promise of delivering audiences and anticipated, related revenue generation. Sigma used DEMs and other evidence from the first self-release as part of their investment application to the public funder, and this was sufficient to position and lock in the NFF as a financial supporter.

However, despite common acceptance of certain valuation logics, including the embedding for DEMs in multiple distributors' propositions for the film, interessement is foregrounded as a competitive endeavour (Callon, 1986; Akrich *et al.*, 2002). Due to the film's relative popularity with potential rights buyers, tensions between contrasting agencements looking to arrange the marketing, distribution and sale of the film in various configurations emerged (Callon *et al.*, 2007). The way that such tensions were navigated through different calculative frames illustrates the multiple ways that DEMs attempt to coordinate market actors, specifically through communication across company boundaries based on processes of framing value.

The precise configuration of *You Instead*'s market existence was played out through hybridised material tools. That DEMs' role was still developing made their use complicated. This is because, to smoothen market transactions, each actor has to understand the actions and motivations of the others (Callon & Caliskan, 2010). For a product like a film, where multiple companies are involved in many transactions, the introduction of a new evaluative component makes the necessary second-guessing process extremely complex. DEMs forced themselves to be taken into account in the often tense, market construction activity.

The period of deal making for *You Instead* following the 2011 Berlin Film Festival, demonstrates how Sigma's DEMs-based marketing and distribution project influenced evaluation of the film's properties as a market object. To make an object tradable, it needs to be 'reasonably stable' and this requires a minimum agreement over the type and scope of property rights (Callon *et al.*, 2007). This more detailed part of the framing process, a disentangling and objectification (Callon & Muniesa, 2005) was conducted via tens of emails back and forth, following the initial agreement for a joint-distribution arrangement. The discussions concerned iterative construction of recoupment charts for modelling distribution deal terms. Sigma repeatedly calculated what different kinds of self and joint-distribution deals, predicated on DEMs, would mean in terms of expected revenue. For each type of distribution right, for instance theatrical release or DVD, specific divisions of returns were negotiated and stipulated i.e. 50% to licensee, 50% to licensor, to qualify the product. These conversations used key materials such as deal memoranda to separate out the components of the artefact and determine what is at stake in the market transfer. The instrumental process sets limits for what is being traded in order that it can be valued by both buyer and seller (Barrey 2007), so that extensive negotiations to come to a final agreement on the exact percentages at stake (Callon & Caliskan, 2010).

The extended process has similarities with Caliskan's study of proxy prices, in which different pricing techniques fulfil various stepwise functions until a final resolution is brought about (2007). An initial price for distribution rights and P&A commitment was made at the festival in order to establish an first agreement, and followed by

repeated and extensive emailing back and forth of deal term iterations amongst Sigma personnel and the NFF, and between Sigma and Distributor A, calculating specific access rights to future revenues from different digital and non-digital modes of exploitation. This supports Millo's (2007) reading of Callon that the qualification of a product is the result of multiple network interactions involving conflicting parties, rather than a linear process. This resulting joint-distribution arrangement is a destabilisation of the traditional all-rights distribution deal and recoupment chart, which had become black-boxed (Finch & Geiger, 2011).

The rival efforts to shape the market bring DEMs' performative capacities into sharp relief (Kjellberg & Helgesson, 2006: 844). The mustering of allies, creation of felicitous conditions such as the enrolment of resources, all to bring a DEMs-oriented market configuration about, could be described in terms of a generic performativity (MacKenzie, 2006ab). This explanation would be more towards the minimalist "helping" rather than a deterministic or "maximalist" forcing of action, but certainly there is an exhibition of agency bringing into being the world in which DEMs take effect (Callon *et al.*, 2007: 3). The recognisable effort expended and numerous networks mobilised, particularly to influence the arrangement of interactions through evaluative frames at company boundaries is skilfully accomplished and delicate (Araujo *et al.*, 2010: 6-7). By tracing DEMs' activity and connections across the myriad elements that compose the film as a market object, it is possible to see the constructive role DEMs have, even when they themselves are not yet visible, it is most insightful to consider their performativity in terms of perlocutionary acts (Butler, 2010). This reading takes into account the intent of marketing models to influence events (Mason *et al.*, 2015), as opposed to the descriptive theory of economics and its effects. Examining the market configuration of *You Instead* in this way requires close attention to the often hidden influence of DEMs as a concept before they are fully realised in the film life cycle. As their rate of creation increases and their public totals multiply, the explicitly visible performative role of DEMs becomes more apparent in the organisation of market activity.

Going live: making the audience present and part of the market object

Once financed, bought and sold as distribution rights, the film is ready to be released to the public. It is then that the agency of DEMs as an organisational instrument (Vonderau, 2013) shifts to the agency of DEMs as visible material connections with the audience, beginning to fulfil their promise of audience management (Baym, 2013; Tuerlings, 2013). The marketing and distribution endeavour is in effect a process of qualification, summarisation and translation of many heterogeneous processes (Azimont & Araujo, 2010a: 5). DEMs provide a language, they perform a shortcut to make coordination and communication possible (Zargar, 2013). For example in the digital agencies' reports to the joint-distributors and NFF, continued, revised activity is motivated by their belief that DEMs equate to consumer demand and thus uncertainty over future revenues can be managed through this system (Beunza & Garud, 2007: 45; D'Adderio, 2008).

The network of market actors involved in the film believe in the basic logic of DEMs concept and, as a result, expend time and resources managing incredibly complex systems to compose their product and qualify it with new properties for potential audience members (Lepinay, 2007; Sjorgen & Helgesson, 2007). DEMs, such as Likes, form part of its characteristics and these publicly presented figures generate user affect (Gerlitz & Helmond, 2013, 1360). At the point of purchase the particular DEMs available to the buyer singularise the good, differentiating it from other films available with different levels of social media attention. For example, the marketing team consider that a potential audience member could come to find out about the film by looking at the Facebook page, and then attribute a value to the film based on how many Likes the page already had. Based on such a judgement the audience member might Like, Share, buy a ticket or ignore the film and move on. Similar metrics were viewed in analytic frames such as Figure 19.

The use of DEMs analytics tools was maintained over the life of the film and used to guide the action of digital agencies and the distributor, for example by choosing specific digital destinations at which to direct marketing traffic like the Distrify tab on the Facebook page. This detailed set of mediated practices between producer/distributor and consumer, are effective in reconfiguring market relations because digital material leads the performed audience relationships to be considered

more manipulable than previously the case. DEMs can be called up, repurposed, pulled into multiple social calculative spaces at one time, and thus take part in increasing numbers of arrangements for market transaction.

When DEMs exist in an evaluative space such as the software in Figure 19 and not simply reports, they become user interfaces that pull together previously external, dispersed relations. The frameworks not only present data but also make those presented available for engagement, and thus both offer an indexing and an instantiation of the market (Entwistle & Slater, 2013: 13; Knorr Cetina & Bruegger, 2000). The analytics toolset in Figure 19 allows almost instantaneous market intervention as well as capturing a larger market entity for understanding. Together, the DEMs framework, and the network of other market actors co-construct the market for *You Instead*. Individually, these elements have agency that bring the overall assemblage together. Resultantly the totality of the network has an agency, which is dynamic and distributed, suspended amongst its performed relations rather than attributable to any central orchestration, Sigma is not working alone (Callon, 1991; Millo, 2007). The result is a market for *You Instead* configured in this new non-traditional way, as opposed to competing versions, which, for example, may have detached Sigma from the release.

The role of DEMs in marketing and distribution involves a continuous process of market definition including repeated attempts to create, read, understand and articulate the market. Entwistle and Slater (2013: 13) propose that in the following quote from Knorr Cetina and Bruegger (2000: 149-150) the word ‘market’ can be replaced with ‘buzz’ and this position is certainly apposite here: “*traders are engaged in a process of continually defining the market, not only in the sense of trying to read and understand it, but also in the sense of making or articulating it...markets are never completely understood.*” A core role of DEMs is to function as a working definition of the ‘market.’ DEMs are often referred to by non-specialists using the term buzz. The meaning of the term is typically taken to be the expression of positive sentiment about the film indicating intention to buy tickets. Buzz is thus consumer demand, materialised as DEMs, and this is taken to be the market (Cluley & Brown, 2015). In this form, buzz is quantified and for that reason assumed to be manageable. In this construction the market and audience are simultaneously performed. Whilst

not claimed to be the major influence on the films financial performance or even a radical re-invention of filmmaking practice, DEMs still constitute a new and important reshaping of the typical market assemblage. Indeed, by virtue of their integration with the product being marketed and sold, DEMs cannot be disentangled, externalised and framed out of the market artefact in most evaluations (Callon & Muniesa, 2005; Caliskan & Callon, 2009).

Chapter 6. A new assemblage: From films to a film fund – *Perfect Sense* (2011), *Citadel* (2012) and Film City Capital

Introduction

This chapter charts the expansion and proliferation of DEMs' market construction efforts, which demonstrates a feedback loop of applied learning regarding the role of DEMs during the case. Sigma is continually engaged in a sequence of projects, when one film is in cinemas, future films are being planned, financed, shot and presented at festivals and markets. Whilst *Donkeys* was in cinemas in October 2010, the release of *You Instead*, which was shot in summer 2010, was being planned for 2011. During late 2011 and early 2012 when *You Instead* and *Perfect Sense* were released and their results reviewed, *Citadel* was produced and its release planned. This continuous reflection on DEMs-related activity increased in scope with each cycle, as DEMs progressively found their way into more films, and more filmmaking activities, leading to the incorporation of Film City Capital (FCC), a film funding company conceived by Sigma. The embedding of DEMs in market assembly took on a new dimension by becoming a key business proposition for the fund, materialised in tools for the enrolment of investors.

In order to analyse the variety of involvements of DEMs in a greater number and type of existing evaluative frameworks, as well as new interventions for market configuration, I engage theories that account for the breadth of values, and apply them to market calculation. I adopt Latour's (2011c) notion of digital underlining to capture the specificities of the ranked qualitative valuations that compose part of DEMs' role in the sale of the international distribution rights to romantic drama *Perfect Sense*. This translation process (Callon, 1991) was based upon DEMs performing a relative ranking function, one more nuanced than the simple totalling of potential audience connections into a currency. The example demonstrates the scope of information contained in DEMs by virtue of the multiple values of social network ties. The distributed construction of DEMs' value from various assembled and associated social profiles and their connections (Latour, 2011c: 801) is shown in this instance to have great import in the singularisation (Callon & Muniesa, 2005) of *Perfect Sense* so that it could be bought and released in the USA.

The digital performance of the audience-as-market, encapsulated by DEMs can be understood through theorising market actors' belief that DEMs like social media figures exist with multiple facets. They are convertible objectifications of the public's dispositions (Gerlitz & Helmond, 2013), manipulable connections to those audiences, and also properties of the market object itself. In their marketization role as part of the framing of a film (Callon & Caliskan, 2010), DEMs qualify the market good, so that it can be evaluated and potentially entangled with other market actors (Miller, 2002). To understand how this takes place, I examine the extensive landscape of market making, coordinative, evaluative practices that DEMs infiltrate both explicitly and implicitly. For example, respectively, the management of theatrical marketing campaigns and the negotiation of revenues from digital rights exploitation. Both of these activities are materialised in coordinative tools that constitute the market across a heterogeneous network of agenced actors: human, organisational and technical.

These analyses build on the understanding of practices developed in the life of *Donkeys* and *You Instead*. The enrolment of audiences is pursued through the generation of digital creative materials and their attachment to, for example, social media account holders. Through the organisation and management of DEMs for the promotion of *Perfect Sense* (2011) and *Citadel* (2012), and in producers' interpretation of the value of DEMs in later films outside of their direct control *Starred Up* (2014) and *Under the Skin* (2014), the constructed logic of DEMs that mobilises market action via a perlocutionary performativity is reasserted (Mason *et al.*, 2015).

In addition to the overt presence and explicit referencing of DEMs in marketing models, their hidden role is also reconfirmed. This typically unseen work reshapes historically accepted film industry apparatus into new hybrid tools. Furthering the insight developed in Chapter 5, I concentrate on two frameworks in particular. These are distribution deal terms and information memoranda. Both are rearranged as a result of DEMs' impact on previous projects, and are crucial to the marketization (Caliskan & Callon, 2010) of related films. Distribution deal terms determine the allocation of financial returns from exploitation of a film in a particular geographic territory. Negotiations of these legal arrangements are facilitated through a recoupment chart, whose particular configuration has become re-adjusted in favour of

Sigma due to precedents set by the agency of DEMs. *Citadel* illustrates how a producer's belief in the power of DEMs and material evaluative frameworks combine to arrange the market in a particular way, despite set-backs and conflict. An Information Memorandum (IM) is an enrolment tool, which seeks to convince investors to finance FCC's films. FCC is another layer sedimenting DEMs' role in how the film market as an entity attempts to "build itself up" (Callon & Caliskan, 2009: 384). The IM is a material, evaluative framework that plays a role in actively constructing both DEMs' value and the film market overall. It takes the form of a combined business model narrative, a creative 'look-book' and set of spreadsheets proposing future returns.

Analysis in this chapter contributes to the overarching aim of understanding the role of DEMs in reconfiguring the independent film business, by illuminating specific arrangements for multiple films and film companies. Through unpicking these agencements it is possible to see how the material characteristics of DEMs' agency alter the dynamics of actors' coordination in different ways. A new network arrangement was predicated on the enrolment of films' digitally mediated critical evaluation, because such properties were deemed vital for engendering the desired market attachment. This aspect of *Perfect Sense*'s marketization (Callon & Caliskan, 2010) provides a specific example of market mediation in which joint action is formulated and coordinated with DEMs understood as a new and significant type of market actor. The nature of DEMs as semi-public market representation, and market intervention tool, as shown in the marketing of *Perfect Sense* and *Citadel*, complements the entrenchment of their value through the private organisation of market transactions based on concepts of derived-demand (Finch *et al.*, 2015). DEMs' role as an organisational concept, performed in these interactions on a film-by-film basis is further embedded through the revenue expectations and anticipated investor relations that contribute to the business proposition for the assembly of FCC.

Perfect Sense 2011

Charting the market life of the film *Perfect Sense* uncovers a new aspect to DEM's market role, specifically the features of qualitative evaluation which form part of their calculative, coordinative capacities in the international market for distribution rights. The assembly of original resources and allies of market possibility, and the execution

of the theatrical release of the film reconfirm the performative characteristics of DEMs.

In 2011, Sigma obtained a £250,000 investment for marketing and distribution from the NFF, which was substantially predicated upon, and impossible without, the use of DEMs. This award was split between distribution activity for *You Instead* and *Perfect Sense*. In both cases, a release partnership with traditional distribution companies was negotiated. *Perfect Sense* has the same director as *You Instead* and features Hollywood stars Ewan McGregor (*Trainspotting*, *Star Wars*) and Eva Green (*Casino Royale*, *300: Rise of An Empire*). The film is a love story with elements of science fiction. The two leads develop their relationship as the world is gripped by an apocalyptic epidemic that progressively takes away people's senses. As a combination of genres, the film was a difficult marketing proposition, but benefited from the strong industry reputation of its talent. The film premiered in the UK in October 2011 following festival performances at Sundance. As the release of *You Instead* was delayed until after the summer music festival season to capitalise on an immediate nostalgia interest, *Perfect Sense* was in cinemas only shortly afterwards.

The film's distribution rights were successfully sold to all major territories, but it did not perform as well as hoped at the UK Box Office. This was not associated with the capacity of DEMs for delivering a successful release, but rather the tough competition from *Midnight in Paris* (Woody Allen's most financially successful film) and *Tyrannosaur* (winner of BAFTA and Sundance awards). The limited opportunity for Sigma to fully exploit DEMs due to a poor relationship with their distribution partner was also cited as a problem. This attribution of a lack of success to external factors protects the belief in DEMs and the agenda to embed them in future ways of working.

Figure 21. Promotional Poster for *Perfect Sense*



Timeline: *Perfect Sense*

Date of Activity	Market Action
2010	
November	Sigma start to develop the marketing strategy for <i>Perfect Sense</i> , determining how they want to pitch the film to the international sales market. A public relations firm is contracted. Planning for the North American premiere at the Sundance Film Festival begins, with multiple Talent Agency companies involved.
2011	
January	Trailer is released via MTV and all marketing results were tracked digitally by the PR Company.
	Sundance Film Festival Premiere, screening and marketing of the film by the sales agent and US Talent Agent to US distributors culminating in sale of North American rights. Key use of Twitter reviews in this process.
March	Evaluation by Sigma of competing distribution offers for UK rights to the film. Negotiation with public investor, sales agent and TV broadcaster regarding P&A investment and relative benefits of release proposals.
April	Applications and assessments for public investment to distribution model: Sigma Releasing.
	Complex deal term negotiations with the Distributor
May	Cannes Film Festival announcement of public funder support for innovative release.
	The Distributor struggle to develop UK marketing plan for the film, marketing campaigns are outlined and begin late summer building towards an October release.
June	Recoupment deal term modelling by public investor and Sigma
July	Sigma takes over digital side of marketing and engages technology company Distrify to work on the film, and access to DEMs is secured.
September	Late stages of film marketing campaign with digital advertising

	and online engagement campaign taken over by Sigma.
October	UK theatrical release in 60 cinemas, with mixed reviews.
2012	
January	UK DVD release, followed by On-Demand and TV

**The emergence of a new qualitative component of DEMs' market coordination:
Perfect Sense at the Sundance Film Festival**

Perfect Sense demonstrates a different type of network configuration in which DEMs play a new and crucial role for market construction at an earlier chronological period in the life of the film than seen in previous examples. The film shows how qualitative values of digital engagements, as opposed to simple counts of interactions, also form metrics and that these rankings, agreed amongst different companies, serve to both coordinate market action and are understood to motivate market attachments. In this instance, the market attachment is between the film, qualified as a set of distribution rights in the USA, and a distribution company. This process is dependent on the characteristics of connectivity inherent to digital structures (Kallinikos *et al.*, 2010) and their combined enactment of quantitative and qualitative valuation. As with the previous films, the enrolment of financiers and potential audience members still occurs at the early and latter stages of the film's life respectively. However, the further embedding of DEMs throughout the life of the film shows increased agency of digital material in traditional economic exchanges.

Film festivals have traditionally featured as crucial components of the international film market. Potential buyers, the distributors, view the film, sometimes attending screenings with paying audiences to gauge the public reaction. Critics review the film and generate positive or negative media attention. The public and critical receptions to a film's festival performance are taken as indicators of future demand for the film and can influence the execution, and price of, rights sales. Through digital media such as Twitter and film blogs, these reactions are now immediately materialised and globally shareable. So, a critic's, or a screening audience member's own opinion and their social networks become implicated in the marketization of a film. The individual will

post a review, broadly classifiable as positive or negative, and this can be re-transmitted. That this information can be aggregated and evaluated according to various DEMs is considered to mean the process of international sales is more manageable. For example, see the positive tweets in Figure 22 below from respectively, a magazine, a website, a press journalist and a film blogger. These were collated by the PR company for *Perfect Sense* and shared with all production, sales, distribution, management and financing companies involved via email.

Figure 22. Sundance Twitter Reviews for ranking and managing marketing collated by the PR company

Subject: Perfect Sense/Twitter Reactions

Latest Perfect Sense tweets...

@totalfilm: #sundance2011 – the line for Perfect Sense is massive. The buzz on this one is stellar.

@screenrave: Sundance 2011: Perfect Sense Movie Review – Best of the fest? <https://sup.pr/29mj26>

@KieraLanae: Wow. Perfect Sense. So thought-provoking and unique. Loved it. #Sundance

@Ethan_Anderton: PERFECT SENSE: beautiful story where love overcomes all obstacles in the face of a uniquely devastating epidemic. Powerful drama & romance

These tweets were received by all of the individual author's followers and could be forwarded on ad infinitum. Depending on factors such as the size of that individual's or company's social network and their professional reputation, these messages may be highly valued by the film's producer, PR team and sales agent and become adopted as sales materials. Historically, festival audiences and reviewers have influenced distributors through laughs, cries and boos in the theatre and the newspaper reviews some days later. However, the digitally mediated nature of public and industry perception, often called 'buzz', means that this way of attracting other markets actors to the film is now immediate, searchable, recyclable and spreadable (Jenkins *et al.*, 2013). At the Sundance Film Festival in January 2011, *Perfect Sense* received its North American premiere and the sales agent, jointly with a US Talent Agency and a specifically appointed PR company, positioned the film for sale to distributors around

the world. The film's key talent were flown to Sundance for press interviews and the event. Screenings for buyers and reviewers were held.

Sigma believed the digital dissemination of marketing information would play an important part in establishing the grounds for a sale in the US. When hiring the film's PR Company for the festival campaign, Sigma noted that digital elements were not specifically mentioned in the company's proposal and this needed attention: "*The PR team must be able to control on and offline press and publicity, getting the material in front of the right blogs and sites*" (NFF Research Associate notes of Sigma festival strategy meeting, 12/11/2010). By "*right blogs and sites*" Sigma is making a qualification based on both viewership and tone, evaluating which media channels will be most likely to influence the opinion of potential audiences, critics and buyers. Viewership or readership figures are common DEMs, and are either publicly attached to web pages e.g. Facebook counters, or shared within privileged industry relationships.

Sigma questioned: "*Can they [the PR Company] get a trailer onto iTunes or Empire front page?*" (NFF Research Associate notes of Sigma festival strategy meeting, 12/11/2010). The planning meeting indicated the value attributed to various websites. For example iTunes, the most popular music and film downloading site, and movie magazine, Empire, were proposed. Such a high profile positioning of content, front and centre of well-visited sites, would likely attract a high number of Hits, Views and Shares. These DEMs were associated with better chances of obtaining distribution interest. The chances of securing and then capitalising on such high profile digital points of display for generating market attachments was connected to the use of digital assets whose spreadable nature would also generate DEMs: "*Sigma noted the need to get trailers, clips, an Electronic Press Kit ready to be used around the Sundance film festival launch. The online presence of comparable title Never Let Me Go (2010) was discussed*" (NFF Research Associate notes of Sigma festival strategy meeting, 12/11/2010). Digitised trailers, clips and posters and other marketing materials are often collated and together labelled an Electronic Press Kit (EPK). As their consumption is traceable, the multiple social networks connected by virtue of common interaction with such content then become part of the overall network of market actors assembled for the film, they also become properties of the film itself.

The evaluation, ranking and appropriation of digital content related to the film, such as reviews and responses to the EPK, proved to be a key market making activity for *Perfect Sense*. To create and manage the buzz for *Perfect Sense*, the PR Company monitored Sundance reviews and viewer responses digitally. Often three or four emails per day, full of collated digital materials to be sorted, analysed and disseminated would be shared with partner companies, the producer, the sales agent, the US talent agent, the funder NFF. Information was fed live to key partners and then included in a Sundance PR wrap report document.

The framing of *Perfect Sense*'s qualities in this manner involved a series of evaluations, with iterative market activity responding to joint decision-making. The following excerpt from a campaign email update quotes a tweet review by the account named "picturegift": "*see below for online coverage of the Perfect Sense premiere and press day at Sundance yesterday:..*" [*picturegift: "Perfect Sense" was amazing! Unlike any other film...I am moved/speechless*](#)" (PR Company campaign update email to Sigma Company Principal, 25/01/2011). By inserting this digital response into the network of market actors typically used to reading magazine reviews and press cuttings, the new type of data gains importance and helps to establish novel valuation practices.

The selected twitter account "picturegift" had approximately 300 followers, who are the immediate audience for the message. This number is relatively low for an official magazine or blog. A professional media company, online magazine, or review site usually has a much higher total. It is reasonable to assume that "picturegift" is probably a freelance writer. Due to their low number of Followers, the pertinent DEM in this case, and their lack of reputational value, this source and type of reaction was of low value. In contrast, the audience for the message: "@totalfilm: #sundance2011 – the line for *Perfect Sense* is massive. The buzz on this one is stellar" was approximately 100,000 Followers" (PR Company campaign update email to Sigma Company Principal, 26/01/2011). The source account, "totalfilm" is a well-recognised film magazine and as such was understood as valid in the eyes of potential buyers.

In building attention for selling film rights to an individual entity, rather than a mass audience, each relationship measured and captured by DEMs is not equal. Total numbers of followers can be compared, but the status of the producer of the Tweet alters the value of the currency. During the cinematic marketing and release of previous films, Sigma's basic calculations of each traced networked relationship (e.g. Like, Follow, View) instantiated a common value to all DEMs. In most interpretations of data for *Donkeys* or *You Instead*, each interaction counted the same, in an undifferentiated 1 to 1 ratio of equivalent currency. But in the festival market configuration organised by Sigma and related actors, some reviewers and audience members are perceived to have more legitimacy, and so other qualitative measures are also significant here. By their very engagement with the film some reviewers add value, regardless of their total number of Followers or Readers. Therefore, their interaction counts more than others. Each company involved with the film had an internal ranking of the most important media channels and these combined evaluations were felt in the management of the Sundance activity.

One of the most senior executives engaged with the film, a lead agent at the US Talent Agency monitored reactions to the film. At a midpoint in the festival campaign, in their opinion, the film was not garnering a sufficient volume or quality of attention. Direction was given to the PR Company to target particular, high-priority media outlets including blogs, a clear recognition of the commensurate value of digital and traditional media. The Talent Agency wrote to the PR company in response to one of their reports: *"thanks for the reactions email We really need reactions from bigger us [US] outlets or bloggers. Please advise on if you can get Time Out, Glamour or Gordon and the Whale"* (PR Company Liaison campaign update email to Sigma Company Principal, 25/01/2011.) Time Out and Glamour are magazines with digital presences, but began in print. *Gordon and the Whale* was a film review blog without an offline element (since closed). The PR Company refocused their efforts in response: *"Please find attached the first round-up of reviews of Perfect Sense, please note we will continue to send reviews as they come in: Alison Loring / Gordon and the Whale: "Loved the film and will be writing a positive review."* (PR Company Liaison campaign update email to Sigma Company Principal, 26/01/2011). This statement and the continuous flow of similar emails amongst the Sundance team, indicate the common logic accepted and performed amongst

distributed agents. The connection between critical appreciation and commercial performance is a long held assumption. However, the legitimization of digitally mediated critical outlets and aggregated audience responses is a new market practice. In the Sundance example, DEMs are integrated in a social process of evaluation that serves to frame film as a good for market attachment.

The assembled network of companies, digitally connected people and materials achieved their goal. A key sale of the film to the North American Distributor was completed at the festival (Collection Agent Statement, September 2012). This culmination of activity was, ironically, discovered by the PR Company via industry blog “The Wrap” through the digital channels they were monitoring: “*I’m assuming that the report on The Wrap is true and that the movie has been bought by [North American Distributor] many congratulations, wonderful news*” (PR Company Liaison campaign update email to Sigma Company Principal, 25/01/2011.) What emerges from this particular market entanglement is the depth of layers of value captured by DEMs as a device and the complexity of the ways in which it intervenes in the market. Sundance demonstrated that aggregated volume of digital reviews and their quantified audience figures are important, but so are the sentiment of the message and the status of the message creator. It is unknown how important the North American Distributor considered *Perfect Sense*’s digital buzz when they decided to buy the film. The sellers believed in DEMs’ importance to market attachment and acted accordingly, taking steps to shape the market in a particular way. *Perfect Sense* was singularised by its unique digital qualities, as well as many other properties such as price, stars, creative content. The link between achievement of the sales goal and DEMs management was maintained and legitimised because action was so explicitly directed, and because no counterfactual information disputed the construction. The buyer did not share the relative reasoning behind their interest.

Reconfirming the market management logic of DEMs: the planning and release of *Perfect Sense*

Alongside asserting the importance of reputational quality as part of DEMs’ agency, *Perfect Sense* reiterates the continuous and materialised association between volume

of aggregated DEMs, consumer demand, and future financial success. This connection was again a foundation of the relationships by which funds were mustered for the project, by being presented as a solution to NFF's problem of improving film Return On Investment and film company sustainability. The role of digital engagement and the correlative importance of certain analytics is evident in the way digital's potential was leveraged to obtain investment, DEMs were proposed to: *"allow constant analysis of the depth of impact of the campaign and identification of emerging secondary platforms people will use to consume: cinema; VOD.... mobile devices etc."* (Sigma Application to NFF Film Investment Fund, Support Document, 17/3/2011). The resulting investment, shared between *You Instead* and *Perfect Sense*, then became a tool to leverage other necessary partners into coming on board.

The financial resources from the NFF were obtained by presenting digital tools and their inseparable metrics, which constitute the fabric of connections that practitioners desire to manage. The management benefits of DEMs were constructed as crucial to future company sustainability if used in a manner that secures Sigma new distribution revenue. This change in business model for Sigma, moving toward self-distribution capability in order to pursue self-sustainability was put forward in negotiations with the distributor: *"if the possible funding does come through it is on the basis that Sigma can be self sustaining in the future in respect of distribution, i.e. in having a P&A pot for future films... The funding is also on the basis that Sigma need to participate as a distributor would in receipts (and we do feel Sigma do have experience and connections to bring value in respect of distribution)"* (Sigma Company Principal email to Distributor, 24/03/2011). A deal was struck on this basis and the typical arrangement for releasing an independent feature film reconfigured.

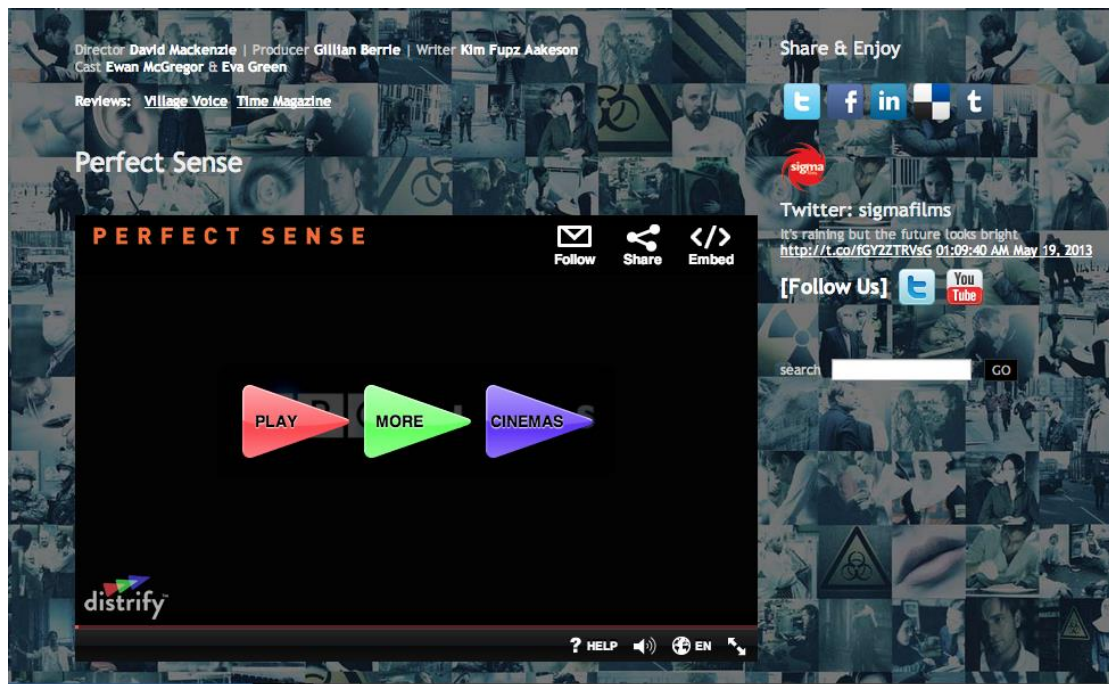
During the theatrical release of *Perfect Sense*, Sigma obtained more control of the marketing of the film as compared with *You Instead*. The PR company explains the types of materials used to drive audience engagement via social media networks and establish consumer interest: *"Trailer, Clips and Artwork exclusives will begin the campaign...Objective...To boost regular awareness of the film and post regular content on Facebook and Twitter"* (PR Company Online Plan, 05/08/2011). The Views and Shares of such content were understood to indicate trends in demand and therefore ticket sales. This conceptual link is mediated across a network of multiple

market actors, both through company interactions, and material tools such as cinema booking sheets.

During the run up to the UK release, Sigma was able to belatedly wrest control of online marketing from the distributor and use DEMs to manipulate audience demand through various technological initiatives. The screen shot in Figure 23 shows one of many websites that embedded a trailer player made for film by VOD company, Distrify. The player hosts over 20 digital “featurettes” and a poster download designed to engage potential audiences. The screen shot shows various clickable options for the user: *Play*, *More* and *Cinemas*. Each interaction with the player produces a metric, aggregates of which were monitored as part of the marketing and distribution campaign. Clicking *Play* generates a view of the film’s trailer; *More* provides the ability to watch and then share any of the extra 20 videos or obtain the film poster, and the *Cinemas* button links the user to nearby theatrical screenings.

In the top right hand corner of the screen is see the invocation to “*share and enjoy*”, while underneath links to several social networks: Twitter, Facebook, LinkedIn and Tumblr. Interaction with any of these buttons or the Share, Follow and Embed tools within the trailer frame, all produce DEMs. All of these interactions are deemed to correlate with ticket purchases and ultimately improved financial performance for Sigma. The company aimed to maximise these figures, and through a network of allies exerted considerable effort considering relevant creative and technical strategies.

Figure 23. Screen shot of *Perfect Sense* social film trailer by Distrify



In the run up to the film's release, a point at which Sigma had taken over direct control over digital marketing from the distributor, Sigma sent an email specifically linking cinema bookings to DEMs. The email was sent to a large network of people including those who had a vested financial interest in the film's economic performance and those working on the digital media campaign. The email foregrounds the number of screens, which is a key variable used to calculate how many people the marketing campaign needed to reach, captured via DEMs, in order to generate ticket sales and make the release profitable. *"In terms of screen numbers, we have 35 confirmed in the UK with [Multiplex Chain] still to come back to us...if we can get to 70-90 screens in the right venues, we would have got near to where we wanted to be"* (Sigma Marketing Lead email to NFF Research Associate, detailing distributor's position pre-release, 21/9/2011). Sigma connected online performance to offline cinema bookings and thus financial transactions with the audience, and directed its creative campaign accordingly: *"Anything that feels like it's missing the mark in terms of our online campaign is very important, anything that people talk about as being disengaging or irrelevant is very important."* (Sigma Marketing Lead email to NFF Research Associate, detailing distributor's position pre-release, 21/9/2011). Engagement is created through content and measured through DEMs.

Detailed qualitative evaluation in the application of digital tools was constant during the life of the film, and was mapped to quantitative interpretation. The creation of equivalence between DEMs, screens and financial returns is based on an imprecise notion of value, but one that is repeated and concretised through multiple calculative components.

In their review of 2011's film releases, Sigma restated their commitment to DEMs' importance in market organisation and indicated a further embedding of DEMs in the early life of films. *"Digital engagement and marketing is to start a lot earlier, be based on metrics or figures that chart audience engagement and will impact film development and production financing"* (NFF Research Associate notes of Sigma project review meeting, 18/1/2012). In the same meeting the role of DEMs was privileged in Sigma's idealised construction of future projects, partly for the reason that powerful market actors are taking that position: *"new funding models like Film 4.0 demand it."*¹⁴ In order to communicate and leverage finance from such market partners, Sigma must retain the conception that links DEMs to traditional market concerns. The next two market assemblages demonstrate this commitment.

Citadel 2012

Sigma's continued active construction of the market for their films using DEMs has filtered through to the most technical of legal arrangements. The distribution deal memorandum is a contract determining what rights are being transferred from producer to distributor, and the shared allocation of monies derived from the exploitation of those rights. The negotiations between Sigma and several UK distributors for *Citadel* point to a number of ways in which the role of DEMs is becoming further integrated with every film's market assemblage. Sigma's previous deal terms were organised to capitalise on the management of DEMs. Their legacy is felt in how the film is defined as a tradable object, and how its profitable exploitation is anticipated. Importantly, Sigma is not the only actor attempting to configure the

¹⁴ Film 4.0 was a department of a Public TV Broadcaster that invests in films and in digital marketing and distribution components as cohesive projects.
http://www.bfi.org.uk/sites/bfi.org.uk/files/downloads/bfi-insight-report-a-field-in-england-2013_1.pdf

market in a way that enshrines the results of DEMs-oriented activity in their favour. DEMs' value is jointly constructed as Sigma and the distributors contest maximum access to revenues from digital distribution.

Citadel is a low budget horror film from a debut director, produced by a more junior member of the Sigma team. The film is the semi-autobiographical story of a young father whose family is attacked by local youths, who is forced to face his agoraphobia and protect his baby daughter. The cast included character actor James Cosmo (*Donkeys, Game of Thrones, Sons of Anarchy*) but no other stars. As a genre film, the marketing hook was simple and the film was successful in being selected for the high profile US South-by-South-West festival where it won the Audience Award. *Citadel* secured distribution in the major global markets of the UK, US and Japan.

Although the public investment for Sigma's joint release initiative was completely spent on *You Instead* and *Perfect Sense*, Sigma retained sufficient belief in the value of digital engagement and thus DEMs, to self-fund early stage digital market activity for *Citadel*. This included augmented posters that enabled the viewing of an interactive trailer via a smartphone app for promotion at festivals. Over the period when *You Instead* and *Perfect Sense* went to market and were released, *Citadel* was developed and produced. During this time reflections on the new marketing and distribution models facilitated by DEMs percolated through Sigma's operations. Following production, a successful schedule of festival screenings and sales of distribution rights occurred contemporaneously with the development and on-going execution of a digital marketing campaign.

However, in the UK, protracted negotiations with an unstable distribution company led to a significant delay between the UK festival premiere in October 2012 and theatrical release by a different distributor in July 2013. Sigma was able to successfully leverage public investment to support the UK release, but difficulties in communication with the distributor led the producers to consider the release a failure. The release in the USA involved a far greater amount of digital engagement and Sigma considered this approach a success. Frustration with a lack of communication with their UK distributor, poor access to information including DEMs, and thus a separation from the audience was felt with both *Perfect Sense* and *Citadel*. This led to

a desire for access to data being built into the structure of a new financing company Film City Capital, reflecting the power assumed to reside in access to DEMs.

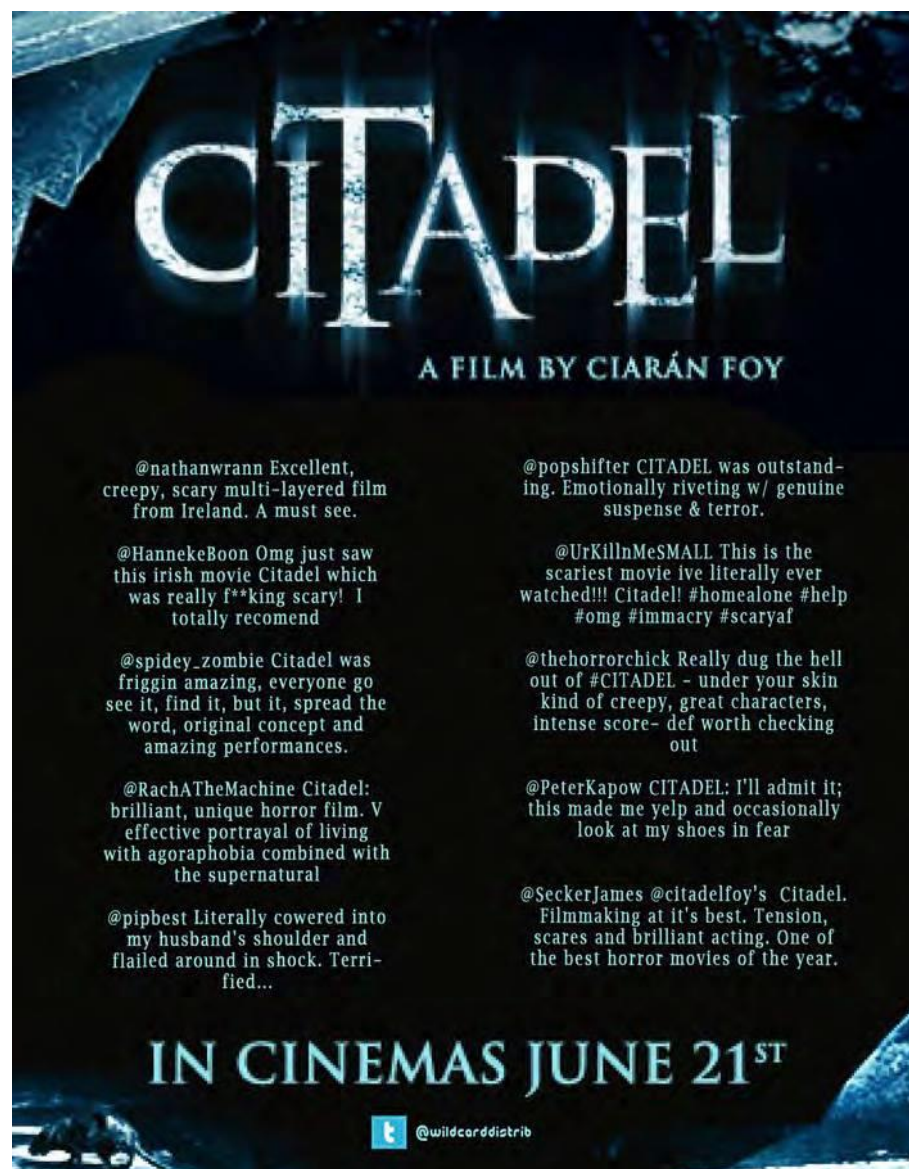
Timeline: *Citadel*

Date	Market Action
2010	
November	Physical production on the film begins.
2011	
February	Sigma is encouraged by NFF to seek investment for exploitation of the film's rights that would make use of digital technology.
March	Drafting and submission of investment proposals to NFF including details of digital asset production such as an interactive game for <i>Citadel</i> .
May-July	NFF decisions made to award public investment to <i>You Instead</i> and <i>Perfect Sense</i> .
2012	
February	Sigma hire digital company to produce a smart phone app to promote <i>Citadel</i> at the festival premiere of the film.
March	North American Premiere of <i>Citadel</i> at the South-by-South-West Film Festival (SXSW) where the film wins the Audience Award. US Distributor acquires the film's distribution rights for USA.
August	Extensive contract negotiations for UK distribution deal (until May 2013) involving bankruptcy of one company and stipulation of revenue streams according to precedent-setting deals on previous films, as driven by their digitally enabled release models.
October	UK premiere at London Film Festival.
	Start of social media campaign using the hashtag “#What's your fear” across the social media platforms Facebook, Twitter, Tumblr, and Instagram. A hashtag is a common code appended to all marketing messages that acts as a traceable piece of metadata.
November	US theatrical release via Cinedigm, digital engagement using Tumblr, Twitter Q&As and Reddit, another online platform.
2013	

July	UK theatrical release in “Key Cities” a designation of limited release by the Film Distributor’s Association.
September	UK DVD release.

Figure 24. *Citadel* promotional poster

A theatrical poster for *Citadel*’s release assembles quotes culled from Twitter audience responses to give a positive impression to potential viewers. The practice requires qualitative evaluation of digital information, first the materials must be collated, ranked and counted (to ensure sufficient positive coverage for use). The creation of metrics is part of the fabric of market making efforts.



**DEMs' extended, detailed infiltration of market assembly infrastructure,
qualifying the market good**

Sigma determined that due to *Citadel's* narrative content, it had the potential to be developed into broader media, which could be exploited financially, specifically via digital tools without a traditional distributor. The tower block setting for the psychological horror was considered from inception to have possibilities for games and online trans-media. Two years before release, the production company began to concentrate on these opportunities: *"This weekend's homework is to come up with the theme for the game!"* (Sigma Company Principal email to Co-Producer following pre-production meeting, 3/12/2010). The film's producer and assistant applied for and attended a specialist marketing consultancy session at the 2011 Edinburgh International Film Festival. The aim of the engagement was to: *"Discuss and plot an online marketing campaign, for self-distributing this Genre of film"*, in particular the producer was interested in expert advice on developing a *"Website / Splash page – to drive traffic to FB, Twitter, Online Game and Trailer(s)"* (Sigma Marketing and Distribution Consultancy Application, 26/6/2011). Drawing on these considerations Sigma chose to retain *"without limitation, all merchandising, all interactive and computer games rights, all sequel, prequel and tv spin off rights"* (Draft Distribution License Agreement, 16/8/2012). Having considered the digital presence of the film from development onward, Sigma was aware of the legal ramifications regarding what creative material other market actors wish to define as part of the film.

Distributors shared Sigma's view that *Citadel's* intellectual property potentially had digitally exploitable value, necessarily requiring management via DEMs. I use three quotations from the distribution deal memo, formally called a License Agreement, struck on 6/9/2012 between Sigma and the distributor to illustrate the desire of Distributor A to obtain as much creative content as possible. The film as market object for transaction is qualified contractually as *"CITADEL including any and all available versions plus all available bonus/highlight/extra materials"* (Distribution License Agreement, 6/9/2012). The inclusion of extra materials is repeated in the specification of *"Delivery & Materials – Licensee [the distributor] shall have free access to all B-Roll and extras materials"* (Distribution License Agreement, 6/9/2012). B-roll is footage that does not make the final cut of the film. All of this

material is deemed to be valuable because it can be disseminated online as a marketing tool, enrolling potential audience members via social media – processes captured in DEMs.

The final reference to creative content is especially informative. At the end of the document, the distributor makes an evaluative statement regarding the type of creative content, clips and stills, that is distributed online to engage audiences: “*Licensors shall deliver the film and added value content (and all materials and elements)*” (Distribution License Agreement, 6/9/2012). This quote illustrates that certain content is being legally defined, and thus commonly conceived as particularly important to market performance. The assignment of “*added value*” to these digital materials is an important element of market construction. From the traditional FVC perspective, one might consider such content to be ‘extras’, separate from the film. Or they might be viewed as an ‘entertainment as service’ component, rather than part of the product. However, this contractual attachment provides cause to consider the qualities and connections of DEMs a bit deeper. Not only are the film and added value content sold as one, conceptualised together by producer and marketers, but they are materially connected through digital links and the audience’s perception. *Citadel* entered the public domain at an early stage through Sigma’s online marketing. The market artefact is then built up from those foundations. The socially networked audience, digitally connected to the increasing amounts of creative material disseminated, can’t be cut off from the film. They are a property of the market artefact, made calculable via DEMs.

Intimately related to the above point, was the contest over rights to access maximum revenues derived from digital distribution channels, such as VOD and Electronic Sell Through (EST, the online purchase of digital copies). These were understood by both Sigma and Distributor A as standing to provide the most benefit from exploitation of the assets assigned in the previous paragraph. Sigma envisioned the horror film as having a strong appeal to digitally aware, online audiences, which could quickly be converted to purchase via digital tools. EST could thus be a significant source of income. Sigma was confident they could exploit this financial avenue because of their planned digital engagement work and ability to use DEMs as a management tool. The split of EST and VOD revenues became a tense point of deal negotiation. Sigma

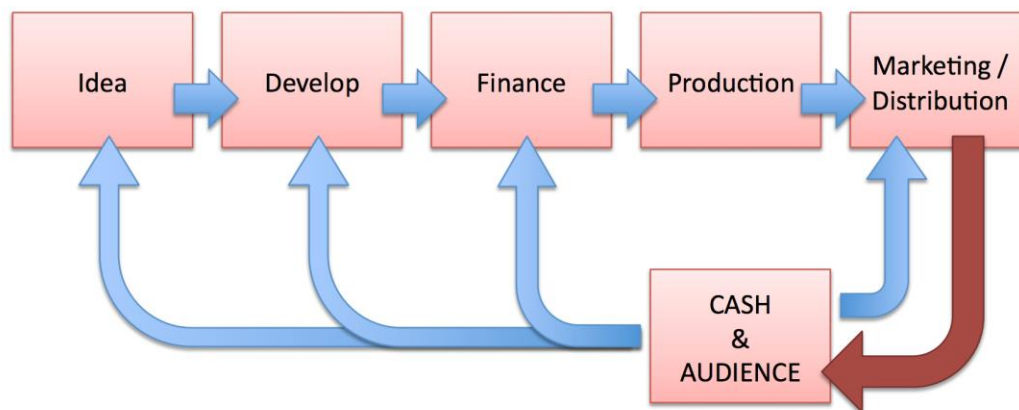
proposed a 50/50 split on both revenue streams, whereas the distributor stipulated 25% for Sigma on EST. Following extended discussions and stalemate, in which Sigma considered the issue a potential ‘deal-breaker’, the distributor raised their provision to 27.5%. This contest emphasises the importance of DEMs’ implications at crucial boundary points in the market, governing whether and how major transactions can be made due to their influence on market actors’ definitions of the product at stake and the potential returns.

Citadel represented the next major opportunity to pursue Sigma’s reconfigured business model, to which the financial performance of *You Instead* and *Perfect Sense* were setbacks. The initial aim for NFF investment in the 2011 films was to “*recycle the funds, and use in addition to the proceeds of our recoupment streams, create P&A funds for our slate of forthcoming films which we will self-release, taking the full distribution fee of 30% starting with the third project on the slate of completed films – CITADEL...* ” (Sigma Application to NFF Film Investment Fund, Support Document, 17/3/2011). The films’ poor financial performance prohibited the idealised release of *Citadel* “*with a dedicated distribution executive on board and a P&A spend of at least £200k*” (Sigma Application to NFF Film Investment Fund, Support Document, 17/3/2011). However, one material change to the construction of the market for *Citadel* resulting from digitally enabled activities of previous films did manifest itself. Despite no retained funding being available with which to leverage a distribution role, the precedent set by the 5% gross distribution fee *You Instead* and *Perfect Sense*, enabled Sigma to build it into their deal-making and the new revenue stream was retained. Thus the agency of DEMs as a performative, market making instrument does feedback into organisational practice if not the large scale anticipated revenues.

Figure 25. Sigma Self-Distribution Model Proposal 17/3/2011

Annex 5

Sigma Pilot Production Cycle



The hard-fought negotiation over a distribution fee, and rights to exploitation windows deemed most preferential in a digitally disrupted market environment, were not motivated by expectation of future benefits alone, but in order capitalise on activity already undertaken. Digital marketing campaign for the film began with the US premiere at the South-by-South-West (SXSW) festival in March 2012. The festival showcases films, music, digital tools and companies. Sigma used an application enabling smartphone users to scan promotional materials such as the poster in Figure 26 and have dynamic content then play onscreen. This aimed to gain attention as press were more likely to cover a film that also had a digital innovation hook: *“Download the free app, and then scan the poster image and watch it come to life! We will do a press release about this... The buzz out here (SXSW) is great on CITADEL”* (Producer email during festival to NFF Portfolio Manager, 9/3/2012). This further illustrates the interlinked nature of market making activity through which a line can be traced charting the agency of DEMs: from the creation and dissemination of content and the measurement of buzz, to the technical specification of legal distribution contracts for serving company and national agency economic aims.

Figure 26. *Citadel* app-enabled promotional poster



The influence of DEMs diffuses across various aspects of the business and reshapes market activity. Such activity was motivated by Sigma’s aims written following their pilot release of *Donkeys*: *“Understanding all platforms available to us, embracing digital... should be a typical part of our process.... allowing us to reach our goal of being an integrated producer/distributor... This will ensure a significant improvement in audience numbers, an increase in revenues and increased accessibility to our films”* (Sigma Application to NFF Film Investment Fund, Support Document, 17/3/2011). The work on *Citadel* demonstrates the company’s commitment to this logic even without the NFF’s major funding of 2011. Sigma’s projects over 2010-2012 show that attachments across the network of market actors necessary to bring a

film to market are increasingly mediated by digital materials and guided by their influence.

The role of digital engagement technology in mobilising action was perpetuated and grounded by Sigma's move to develop their own film finance fund: Film City Capital (FCC). The release of *Citadel* was cited specifically by a director of FCC in the earliest formulations of FCC planning. In an FCC working document, the use of various DEMs-led endeavours were set out: "*One potential avenue for investigation is Social Network Analysis of sales agents / distributors social media announcements of deals at film markets... historical indicators of interest*" (Sigma Films EIS Fund Scoping Document, 20/9/2012). Upon which the director annotated: "*What systems are [Citadel's US sales representatives] working with? They seem to be one of the most forward thinking sales companies at the moment. I would also be interested in taking a closer look at [Citadel's US distributor] (Citadel being one of their acquisitions, but chiefly because of their frontman [a public digital innovation advocate])*". Social Network Analysis revolves around DEMs, as do *Citadel's* US companies' innovative methods. This commentary illustrates Sigma's continued and detailed interest in market construction involving DEMs, and the interweaving of multiple projects in this process.

Film City Capital (FCC)

Following the piloting of new digitally enabled market configurations (*Donkeys*), and their combination with established market arrangements (*You Instead*, *Perfect Sense*), the multiple social and material components of DEMs were anchored in Sigma's ongoing operations (*Citadel*). The role of DEMs in how Sigma attempts to construct the market for its films became further entrenched, culminating in the construction of a wholly new company by several of Sigma's company directors (FCC). Enthused by the possibilities of digital marketing and distribution, but disappointed with the unfulfilled ambitions of their previous endeavours, Sigma looked to develop a way they could take fuller control of this area of the market. The purpose of FCC is to raise finance and invest it in Sigma productions. The company, secured two public funding bodies as initial backers and has created a tax efficient film investment scheme that will leverage DEMs as part of its business model.

The proposal which sets FCC apart from other investment vehicles, is substantially grounded in the power of DEMs. The FCC IM was designed to enrol capital partly by actively constructing the value of DEMs as a commonly conceived driver of future shared profits. The development of the IM as a material market making tool forms part of the dense technical, economic, legal and social infrastructure (Vonderau, 2013: 102) into which DEMs insert themselves and exert agency. Engaging with content in a socially networked digital environment not only involves connections between people, organisations and technologies, but also transforms, often in subtle ways the arrangement of film markets by interacting with corporate financial management instruments.

Timeline: *Film City Capital*

Date	Market Action
2012	
July- November	Development of scoping work for a Sigma owned and operated film investment fund, applications for business support to NFF and a National Business Support agency for a feasibility study.
2013	Sigma repeatedly expresses concern over revenue reporting from distributors of previous films. Interrogation of collection statements and contractual deal terms. Investigation of how digital distribution can be embedded in fund operations to increase transparency.
January	Investment awarded by NFF.
	Incorporation of company: Film City Capital.
February - April	Drafting of business plan / parameters of operation, market research.
	Legal consultations on operating tax efficient investment vehicle – Enterprise Investment Scheme.
August – December	Consideration of digital distribution element to film fund in line with sales and distribution of Sigma feature film <i>Swung</i> , produced and edited during autumn winter 2013-14, presented at the European Film Market of the Berlin Film Festival 2015.

2014	
January-May	Drafting of Film City Capital Investment Memorandum in consultation with Corporate Finance advisers who access high net worth individuals.
June-August	Confirmation of DEMs-oriented film investment process.
November-December	Review and approval of DEMs-oriented film investment process by NFF.

From individual films to a film fund: Capitalising on a portfolio and DEMs at volume

The FCC initiative was partly motivated by negative experiences of the non-alignment of value in the historical FVC construct, in which distributors' portfolio approach and attempts to control audience data were felt to be detrimental to Sigma's films. Whilst Sigma had tried new, and progressively more accepted ways of working with digital tools, none provided large financial returns, and Sigma was still reliant on historical financing sources. In the conception of arranging the sale of rights for *Swung*, Sigma reiterated that the traditional market assemblage deprives them of power: "*As we go forward to production I am concerned that we are going to go down the same old sales route as usual and just get trampled on when it comes to selling the film*" (FCC Director email to Research Associate, 4/9/2013). This comment also alludes to the lack of recognition felt by Sigma for their work in marketing *You Instead* especially. As an alternative, Sigma developed the idea of creating their own investment fund with digital film delivery, hence DEMs, as a core component.

The use of digital tools would circumvent some traditional operators such as the aforementioned sales agents. The process of pursuing a radically new way of operating began with planning the release of *Swung*: "*This is an idea that has been gestating for quite a while... it does have a real chance of being the beginning of a way to release our films in the UK and beyond... it could become the backbone to FCC*" (FCC Director email to Research Associate, 25/9/2013). The idea, the "*it*", being discussed is the ownership and control of all films' digital data. FCC's proposal

to reshape the market more favourably utilised digital innovation to entice investment: “FCC will pay particular attention to potential for leveraging value from the fast moving world of digital innovation, especially in distribution and marketing. The application of digital technology to film marketing and consumption can bring important benefits for investors including devices for demand assessment and greater transparency of revenue reporting.” (FCC Draft IM, September 2013, 15). The IM document was written for use by corporate financiers to raise equity for FCC. It states, in general terms, FCC’s intent to use centralised digital systems for collecting data, including DEMs and financial information, so that intermediaries are avoided and fund performance is maximised. At the core of this proposition is the low-cost impact of scale that can be achieved with digital technology.

Sigma reflected that the improvement in DEMs for its 2014 films, *Starred Up* and *Under the Skin* was largely due to the benefits of scale found in a distributor’s scaled resources, as opposed to a project-based model of marketing and distribution. A comparison of the most visible total DEMs achieved by distributors’ and producers’ digital accounts emphasises the difference in potential audiences. The screen shots in Figures 27 from the official Facebook and Twitter pages of the major studio distributor display some half million Facebook Likes and over seven thousand Twitter Followers. In contrast, Figure 28 shows Sigma’s own individual Twitter account for the film *Starred Up*. This has a little over one thousand recipients of its messages.

Figure 27.

Social Marketing Pages for the Distribution Company hosting *Starred Up*



Figure 28.

Production Company initiated Page for the individual film *Starred Up*

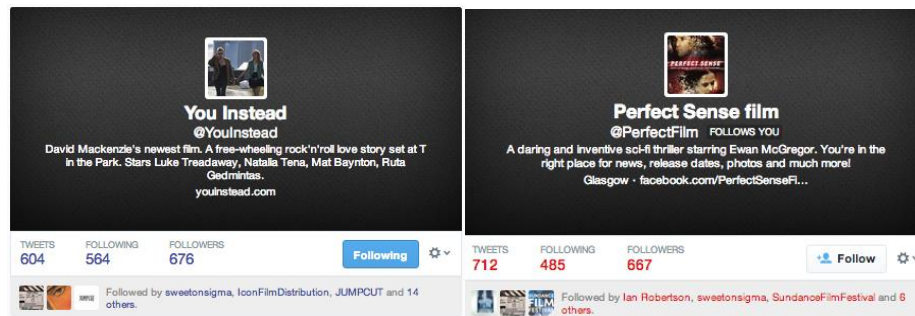


The extensive public network the film was able to access by leveraging the distributor's established market presence and resources, as opposed to starting from scratch, formed part of its successful UK theatrical release. *Starred Up* earned over £1m in its first two weeks in UK cinemas. However, this digital marketing arrangement lasted only for the few weeks of the theatrical release, after which the distributor turned its focus to their next film and materials relating to *Starred Up* were removed from its online channels. In addition, Sigma did not obtain and retain any of the audience connections. Sigma became detached from the film upon the sale of the rights to the distributor. Unlike in the instances of *You Instead* and *Perfect Sense* where a joint release model was agreed and thus formed part of the properties defining the film, for *Starred Up* there were far fewer remaining ties between producer and the film.

There are trade offs that Sigma must continually assess between possible market arrangements for their films, and DEMs are at the centre of many evaluations. Sigma was able to assemble the market for *You Instead* and *Perfect Sense* such that they obtained direct access to DEMs and significant marketing and distribution funds. However, they did not gain sufficient control over operations or have the existing internal skills or capacity to capitalise on the opportunity. The Twitter account examples below show fewer than 700 followers each. This demonstrates the small size of networks achieved by Sigma's accounts via the co-distribution arrangements.

Figure 29.

Sigma operated Twitter accounts for the films *You Instead* and *Perfect Sense*



Levels of DEMs are not simply a function of which actor has control of a film's social media presence or the existing networks of those market actors. The popularity of the films, the stars, the advertising budgets also all play major roles. However, where contrasts were noted by Sigma between their operations and more successful exploiters of DEMs e.g. Fox Searchlight, steps were taken to append elements of the other models. For instance, in March 2013, Sigma applied for a "Geek-in-residence" grant to pay for digital expertise in the company. This action was prompted by Sigma's view of industry analysis that DEMs perform a self-advertising function: as users and automated algorithms rate pages with higher DEMs with greater legitimacy and social capital, further Shares and Likes are instantiated and contribute to the extreme hit-like model understood to define the industry (Baym, 2013; De Vany, 2004). Based on this theory Sigma wanted to enhance the digital component of their market management:

"Sigma has explored digital marketing and distribution: leveraging social media... However, Sigma wants to take the opportunity to build in digital capacity to capitalise on, and retain digital information across the development, financing, pre-production and production of films on a continuous basis. Current common industry practice cedes control and data to external agencies. Without the knowledge and capacity to challenge this status quo and fully exploit digital data sets, production companies remain at a digital disadvantage...Specifically, Sigma is interested in exploring a prototype to make use of existing data online concerning rights exploitation in global territories, to mine and wrangle

that data into useful forms for the company's decision-making process."

(Final Sigma Sync Geek-in-Residence Application, 15/3/2013).

The excerpt emphasises how management via DEMs has developed over time. From the relationship constructed between social media totals and revenues via their association on computer screens and in meetings, through to ambitions for data-mining on international sales.

FCC further formalised the role of DEMs by making them a material part of the business model (Doganova & Eyquem-Renault, 2009). The FCC IM expresses Sigma's proficiency in leveraging digital technology for financial gain. It highlights that: *"Sigma Films has successfully raised investment for innovative distribution models from a number of different funds... The application of digital technology to film marketing and consumption can bring important benefits for investors including devices for demand assessment and greater transparency of revenue reporting"* (FCC Draft IM, February 2013, 10). In selectively foregrounding the company's experience, expertise and contact list, the document attempts to further ingrain digital activity in future FCC operations. In doing so it pursues the establishment of ongoing relationships with investors on the basis of agreement regarding the value of companies and projects that use DEMs as an evaluation and management tool.

The use of DEMs is proposed as a solution to the problems of digital disruption, and thus of earning profit from film as an asset class. Specifically, the role of digital engagement technology for FCC has two intertwined elements. Digital tools are to fulfil both functions of infrastructure and evaluation. Online, mobile and digital cinema connections provide a traceable, controlled pipeline to audiences, direct from the original rights-holder for FCC to exploit. This business model is framed as a positive reconfiguration of the traditional market actor network: *"This [the current film business] is an area fraught with problems for distributors as the landscape of platforms changes from DVD and cable/satellite TV to a multitude of choice for the consumer... Whilst new media outlets such as Video on Demand and Online Streaming of films are also now beginning to contribute to overall cashflow potential, certain other income streams such as DVD revenues have fallen in the last 2 years"*

(FCC Draft IM, September 2013, 26). In jointly putting forward DEMs as a solution to digital disruption, and FCC as an answer to investors' needs for tax efficient returns, FCC's IM is an attempt to control the specific arrangement of market actors in a much larger network than those constructed previously.

The planned distribution activity of FCC is based on digital film copies being created, controlled, marketed and sold by FCC: *"Each download comes from our [FCCs] server. This would include any DCP [from which a film is projected] delivery to cinema chains and we would charge for that privilege rather than take a percentage of Box Office"* (FCC Director email to NFF Research Associate, 25/9/2013). The proposed arrangement is predicated upon unfettered access to data and financial returns and is utterly reliant on DEMs. The IM heralds: *"a revenue stream that flows directly into the collection agency from the potential exhibitor, not via the distributor"* (FCC Draft IM, September 2013). DEMs are thus a tool to connect some market actors and cut others out. FCC aim to attach investors and remove traditional distributors.

Connections are drawn between various aspects of FCC's DEMs-dependent digital engagement and a film's financial returns: *"In evaluating and investing in film projects FCC will pay particular attention to potential for leveraging value from digital innovation. This will include assessing digital distribution opportunities including split rights deals and digital marketing campaigns to cumulatively drive revenues"* (FCC Draft IM, February 2013). The composite elements of FCC's strategy are derived from Sigma's experience over the last few years. This activity developed significantly in sophistication over the case period. Sigma's data collection began in 2010 with an exploratory request for DEMs from the 'Sweet-on-Sigma' fansite, stating: *"We have started to get more serious about the facts and figures side of things"* and receiving purely descriptive statistics: *"523,000 unique with only 187,000 consistently returning visitors this quarter"* (FCC Director email to blogger, 12/8/2010). Over time the use of DEMs was built into a strategic design for guiding economic action in distribution:

"The monitoring and evaluation of scheduled targets set at the start will be constant. These will comprise reach, conversion and attendance

figures and ultimately a series of revenue targets. We will then use the highly detailed data gathered for subsequent projects.”(Sigma Application to NFF Film Investment Fund, Support Document, 17/3/2011).

This quote illustrates that DEMs’ (“*reach, conversion*”) linkage to revenue goals was intended to inform long-term business practices. These cited plans that partially emerged during Sigma’s joint-distribution endeavour fed into FCC. By pulling together the evaluative and infrastructural elements of digital engagement technology in a legal document designed for enrolling investors and thereby performing a reconfigured market, the FCC IM stamps DEMs into the fabric of future market assemblages. Just as the deal for *Citadel* built upon past action and further anchored the role of DEMs, so too does their implication in potential investor relationships, and any resulting films’ financial performance. The ongoing reiteration or layering of DEMs’ involvement can be considered an example of what Vonderau calls *normalizing* in order to “ontologize the market”, to “endow it with reality” (2013: 114). As such this reification may usefully be considered as one facet of DEMs operation as a market device.

Discussion

This third empirical chapter charts a proliferation in the number of activities, films, companies, and times during individual films’ lives in which DEMs intervene. They are shown to become involved earlier in the life of the films studied. In doing they so are spreading their hybridisation effects and new calculative frames, contributing to the assemblage of markets for films and creating a film company. DEMs are shown to influence what rights are sold, how they are sold at festivals and markets, and what fee percentages are realised for conducting digital engagement. The progressive anchorage of DEMs is achieved in a number of ways. Layers of sedimentation for establishing DEMs’ core logic were laid down through repeated market actor statements, linking DEMs to economic results, both in daily communications and material documents. The performative generation of felicitous conditions for DEMs to take effect (Butler, 2010; Callon, 2010), and their adoption in evaluative frameworks (Callon *et al.* 2002; Callon & Muniesa, 2005) are found in multiple instances and at an increased rate. The legacy of revenue allocations from previous films was further

solidified through repetition, and by being built into company agendas, as well as individual film arrangements.

In addition, DEMs found further footholds via the adaptation of established market mechanisms. These included distribution deal memoranda and accompanying recoupment charts. The sale of distribution rights to *Perfect Sense* demonstrates the detailed engagements that DEMs help to compose, illustrating that qualitative rankings of critical reviews are themselves a function of the perceived reputational quality of the author, their relative reach (Followers, Hits), and the type of networks the authors of such reviews operate within. DEMs' agency thus stems from more than the simplest power of large numbers explanation for their interpretation in the construction of value. The market actors that perform DEMs' value by creating them, calling them into their decisions for organising networked marketing and sales activity, take into account various aspects of digital media.

As in the cases of institutions such as professional schools, cities or publications, "rankings cause managers to redistribute resources" in pursuit of achieving ideal results (Gulledge *et al.*, 2014, 4). The activity of multiple market actors at Sundance provides a concentrated illustration of management based on the multifaceted valuation properties of DEMs. In this instance the assembled companies create the rankings themselves, rather than respond to them as business schools do (Espeland and Sauder 2007), but the particular process of organising information in order to manage highly time-sensitive and pressured activity is an emergent one. Similar to Lezan's (2007) conceptualisation of focus groups as tradable opinions, digital reviews are material, market making machinery, which require the continuous attention of those framing the film for sale. Digital reviews are features of the film making it readily assessable by potential buyers. Distributors can examine a film's buzz alongside its other properties like cast and genre, bring the film into their own internal calculations for judging worth, and then make an offer. The network of individuals and companies selling the film object, here qualified as a set of distribution rights and DEMs, collaboratively exert market agency. Together they singularise the film in the market place, framing it as distinct from the competition and therefore as particularly valuable (Callon & Muniesa, 2005).

Performativity as a self-realising relationship between statements and their worlds, and proposed through the concept of agencement (Callon, 2006) is especially insightful as a means of understanding DEMs' market role. When considering the enrolment activity conducted in attempting to set up the heterogeneous group required to effect the market: funders, distributors, technology companies, the envisaged model for how DEMs should shape the market is extremely important, and is inscribed in the text of application documents, marketing budgets and management emails. *Perfect Sense* reiterates the continuous and materialised association between volume of aggregated DEMs, consumer demand, and future financial success. The promise of such returns, to which the notion of direct audience access and control is key.

Complementing the qualitative evaluation capacity of DEMs, their quantitative specificity plays a role in facilitating new arenas of boundary interaction amongst market actors that lead to transaction. The hard negotiations over potential revenue from the digital exploitation of *Citadel* illustrate how competition and challenge continuously stimulate market performance. The example shows how interruption to market networks, and thus the resulting reconfiguration, can take the form of incredibly precise details of market attachment thanks to digital materials (Latour, 2011c: 802).

The market making agency of DEMs broadens as their enrolment responsibility is directed at a wider target. The individuals, funders, finance, and different film companies required for an individual film are now joined by non-films specialists, corporate financiers and potential private investors. In addition to securing financial backing from two public funders, FCC constructed their IM as an instrument to engage multiple private financiers. DEMs are set up via the IM as part of a plan to position FCC as a solution to investors' desire for returns. The promotion of DEMs as a market device in the IM, was an endeavour motivated by Sigma's experience of their recent films' high DEMs and Box Office returns escaping their direct control. Despite low performance figures for *Perfect Sense*, market actors' belief that such figures are a currency of audience intentions (Gerlitz & Helmond, 2013) was reiterated. Interventionist social marketing, based on measurement and valuation that creates many DEMs (Moor, 2012) is shown to take hold through the digital materialisation of the figures (Latour, 2011c). Partly because they can be seen and

manipulated e.g. via social media advertising campaigns, DEMs are evaluated as really being the audience (Latour, 2011c).

The new ways in which DEMs are embedded through the life of *Citadel* are captured through the concept of objectification. This process establishes the particular properties of the market object so that it can be defined and known as a good (Callon & Muniesa, 2005). By setting specific boundaries on the nature of the artefact, the film becomes *pacified* or stabilised, it can then be framed for evaluation and priced for sale. In the terms of Finch & Geiger (2010) and Callon *et al.*, (2002) respectively, at the moment of transaction between producer and distributor, the film and its attached properties change from marketing object (product) to stabilised market object (good). The new qualification of *Citadel* occurred through three elements, the legal specification of inclusion of digital assets in acquisition contracts, negotiation over the split of royalties from digital distribution, and the establishment of a precedent for additional revenue to Sigma based on their ability to convert digital connections into financial value. The influence of DEMs in framing a film for calculation and transaction thus spreads further and further into the patchwork of industry relations.

Whilst DEMs are only ever a component of larger contributions to marketization, be that financing or marketing and distribution, their involvement does reconfigure typical characteristics of independent film business arrangements. They influence the nature of the good - how it is conceptualised and circulated - the film becomes more than a single audiovisual work, but consists of multiple creative materials and their attached views and viewers. The existing “technical devices; metrological systems; logistical infrastructures” that mobilise the market are amended and supplemented with further DEMs-oriented tools, each requiring individuals interacting with them to develop and perform a particular kind of knowledge or understanding (Callon & Caliskan, 2010: 3). DEMs are shown to have an effect on the limits and spaces of transaction – what property rights form the focus of negotiation and how they are calculated with respect to their future value. The role of DEMs is thus diverse, and includes aspects of market making often hidden to most. Capturing the nuanced detail and importance of their role in involving so many different types of actors and

processes in the digitally disrupted environment, can be achieved by conceptualising DEMs as a market device (Callon *et al.* 2007).

Chapter 7. Discussion and Conclusion

Introduction

In this chapter I place my analysis of the empirical data into the context of a series of wider theoretical discussions. To address the exploratory research question, ‘what is the role of DEMs in reconfiguring the independent film business’; I adopted the research objective of addressing the ‘specific arrangements involving the intervention of DEMs, in configuring the diverse elements that constitute the market for independent films’. Informed by the theoretical literature, I undertook a longitudinal case study to examine such arrangements across a series of films over an extended period. Analysis of the case in the preceding empirical chapters was guided by the following two detailed questions. ‘What are the material characteristics of DEMs’ involvement in film valuation and market calculation?’ And, ‘What are the dynamics of action at play in DEMs’ role in the coordination of the multiple market actors which constitute the independent film business?’

I find that the role of DEMs in reconfiguring the independent film business is profitably understood as that of a market device (Callon *et al.*, 2007). By charting specific market arrangements or agencements, the case examination chapters show how DEMs’ agential elements are composed and how they operate. Exploring market assemblage through the terms of understanding of market devices allows me to capture the multiplicity of ways that DEMs make films calculable and thereby reconfigure the independent film business. Considering DEMs as a progressively anchored market device enables different aspects of assemblage to be considered. The material presentation of value or transformative utterances that take DEMs from one transaction to another, but remain within a bounded unit of analysis. I find that the material characteristics of DEMs’ involvement in valuation and market calculation, and the dynamics of action at play in their coordination of multiple market actors constituting the independent film business, are deeply interrelated. Through conceptualising DEMs as a market device, nuanced and typically hidden components of such interdependent action are brought to light. I discover DEMs to infiltrate and reshape of evaluative frames for private transactions based on the potential to capture the audience-as-market digitally, and qualify this as a property of the good.

The findings allow me to make several different research contributions. Through examination of DEMs' distributed marketization processes, I both extend the study of market devices into a new empirical field, and achieve a deeper understanding of how the digitally disrupted independent film business is reshaped. I propose a revised, device focused, conceptualisation for how the organisation of the film industry can be understood, advancing understanding beyond the smooth linearity of the FVC concept. In delivering a unique insight into an understudied area of a rarely accessed industry, I find an important site for developing theoretical understandings of digital materiality and market performativity.

I develop my argument for the theoretical contribution of the research as follows. First, I interrogate how the interdependence of DEMs' characteristics and capacities such as framing, calculation, and agency are bound up in digital materiality. I begin by foregrounding the coproduction of DEMs' evaluative and coordinative calculations that mobilise the market through transaction. This analysis is the cornerstone for DEMs' conceptualisation as a market device (Callon *et al.*, 2007). Next, by focusing on instances of competition, negotiation and maintenance in examples of device construction, I am able to draw attention to the valuable flexibility of the market device over films' careers as products (Callon *et al.*, 2002). This flexibility enables multiple qualification practices through quantitative and qualitative valuations, contributing to market construction over extended periods of time. I then address how DEM's assemblage is anchored through a combination of market intervention via new calculations, and interweaving with the existing fabric of market tools. The dynamic arrangement of materials and multiple market actors with evaluative frames at the heart of their coordination, leads to my reading of DEMs' role in reconfiguring the independent film business as that of a new market device.

The first section brings to light two specific elements of performativity that coordinate in contributing to market assemblage. In the second part of this chapter I concentrate on these two aspects of performativity: the creation of felicitous conditions that mobilise DEMs as an organisational instrument and enable the market to be brought to life (Mason *et al.*, 2015; Vonderau, 2013); and the role of a digitally performed audience in market reconfiguration (Cluley & Brown, 2015; Gerlitz & Helmond, 2013). Discussion of the epistemology and ontology of the digital in the

making present of the audience-as-market leads to a third area of contribution. Here I connect the explanatory value of conceptualising the film industry through market devices, as opposed to higher-level constructs (Latour, 2011c), with wider assemblage-focussed studies of creative and cultural industries and the media (Entwistle & Slater, 2013). Following these propositions I discuss the limitations to the thesis, engaging with relevant criticisms of the literature, and reflect on the knowledge production process. This leads finally to considerations of future work that can build on this research.

The dynamics of a market device's interdependent elements

The study of market devices privileges the notion that value and the market, as well as knowledge about them, are constructs, symbiotically achieved through interactions between people and materials in particular ways over time (Guyer, 2004; Caliskan & Callon, 2009). To understand the role of DEMs in reshaping the independent film business is to appreciate their composition as multifaceted and complex. The case of Sigma articulates the dynamics of how DEMs act as a market device in operation, and demonstrates how DEMs' role becomes progressively more established. Examples of competing market agencements for different films demonstrate how networked relations amongst market actors become entwined with DEMs. They highlight the flexible combination of quantitative and qualitative evaluation capacities enacted via DEMs in different situations during a film's life.

The level of co-dependence between materiality, framing, calculation, and coordinative agency in the multiple, networked configurations involving DEMs is extremely high. Parsing these themes out singly and prioritising amongst them is inappropriate. Each of these aspects co-contributes to the way in which DEMs act, and thus can be considered features of the same market device. These features define the dynamic compositional arrangement of markets, which determines how DEMs help to produce market action, and force other market actors into certain roles (Callon *et al.*, 2007; Onyas & Ryan, 2015). In this thesis I advance the theorising of market devices by going beyond simple confirmation of the value in showing film markets as a matter of contingent framing and calculation. I do so in the conceptualisation of DEMs as a market device to examine how different aspects of the device interact and operate. My findings pull to the surface how elements of performativity run through

device assemblage, and the related importance of peculiarly digital elements of the materials involved. The following subsections dealing with market device dynamics, look at the mobility provided by calculation, the role of negotiation and competition in market assemblage for films, and the anchoring of new frameworks through the forced hybridisation of existing tools.

Evaluative and coordinative calculations are co-produced to mobilise transactions

To demonstrate the contribution of DEMs as part of the conceptual vocabulary for studying market devices, I begin from their most visible angle. The prominence of public evaluation figures and the media attached to them is a core feature, one which prompted my initial consideration of DEMs' market role, and foregrounds the construction at work in digital materials (Bucher, 2012). Curiosity concerning the behind-the-scenes machinery that transforms these numbers from mere counts, into an industry organising tool immediately orients our attention to market construction in a networked context. Calculation is a complex collective practice (Callon, 1991; Miller & O'Leary, 2007) and DEMs highlight the process as ongoing, simultaneous, and co-performed. DEMs perform calculation through constant interplay between multiple networks, including thousands of individuals connected via social media, creative materials, and film businesses. Networks of digital traces and their attached market actors each play a role in developing and constituting the other's agency. They combine as part of the larger assemblage for a given film.

Central to these calculations is DEMs' emerging position in evaluating the worth of a film through their association with future revenues: increasing DEMs totals are equated to improved financial performance. Sigma's case provides multiple examples of qualification which Callon *et al.* (2002) and others variously describe through detachment, arrangement in a calculative space for pacification or stabilisation, objectification and singularisation, followed by transaction (Callon & Muniesa, 2005; Caliskan & Callon, 2009). The construction of a market for *independent* film is by definition reliant on the coordination of multiple market actors. Relations amongst the historically specialist businesses outside of the studio system, producers, sales agents and distributors, are ordered and conducted in relation to what Finch *et al.*, (2015: 167) examine as "derived demand", the perceived desire for a good that arranges multiple market instances. DEMs emerge as taking a new coordinative role at the

boundaries between market actors, contributing to the construction of market attachments by virtue of their flexible calculative capacities. The way that DEMs frame value, both internally for individual market actors and as part of negotiations, calls up elements of a boundary object (Bowker & Starr, 1999).

In the first film, *Donkeys*, DEMs operate at a new boundary, one between a production company and its arranged allies in their new model of distribution: the PR Company and Digital Agency. This boundary is operated through calculative frameworks. Associations are made between various heterogeneous market elements e.g. Youtube viewers of *Donkeys*' marketing videos and the economic performance of the production company, as summarised in tables of metrics. They enable DEMs to function as points of contact between actors with incompletely aligned value systems. DEMs are able to do this partly because their quantitative nature makes their framing and reframing among different market actors own internal calculative tools easy. Aggregated DEMs can be abstracted and converted via confidential formulae into potential financial returns and then re-shared. Figures can simply be copied, pasted and imputed into different spreadsheet calculations. The public nature of many DEMs and the speed with which they are associated in terms of currency, led to their quick permeation of industry operations (Espeland & Sauder, 2007: 2-3). For *You Instead* and *Perfect Sense*, DEMs function as a means of reshaping established boundaries between the production company and distributor, despite having the capacity to operate in a completely transgressive way and help to cut the distributor out of a particular market assemblage.

The simultaneous enrolment and construction of audiences has been a perennial feature of film marketing operations. However, DEMs stand out because of their reconfiguration and materialisation of agency, their introduction of new calculative frames and the hybridisation of traditional frameworks. There are a number of sources of these abilities. DEMs are embedded in, and derive value and evaluative capacities from, the network of potential audience members they comprise and hold together. DEMs are both part of the marketed entity and part of the marketing. They promote and form intricate connections between the potential audiences and digital elements of the creative work. These metrics are qualifications of the object, and in aggregate and through particular orderings, facilitate attachments between market actors and the

product. Thus DEMs mediate a network of transactional partners by virtue of their alteration of the properties of the entity to be exchanged, and their inherent connectivity and manipulability as digital items. This type of connectivity effects relations between the film and its market; and relations between other market devices.

DEMs singularise the product in a distinct way, depending on the particular kind of market being made (Jacobi *et al.*, 2015). As films are released in cinemas (*You Instead*), the P&A sheets link financial resources to methods of obtaining a certain amount of page views. These views are constructed as corresponding to, and for all intents and purposes, being the totals of individual potential audience members, which are constructed as future returns (Cluley & Brown, 2015). The sheet is a space of association and qualification, but also a strategic plan. It forms part of how the producer, distributor and digital agencies interact and take action. Thus through new forms and material formatting of calculative activity that DEMs bring into being, the detailed organisation of the independent film business is reconfigured.

In the sale of a set of distribution rights (*Perfect Sense*), a qualitative evaluation dimension to DEMs' agency was uncovered alongside and as part of the powerful use of numbers throughout the life of each film (Vollmer, Mennicken & Preda, 2009). The aggregate reputational status of Twitter and blog reviews, combined with their audience reach were ranked to guide market action. The digital tools were understood to play a key and novel role in the detachment of the film from the sales agent and its transfer to a US distributor. As Sjogren & Helgesson point out, a device "is made to be different things in different practices. The object is not fragmented, yet not unitary" (2007: 232). The rankings created were informal, but productive, rather than descriptive. They established dimensions upon which the ranked were conceived and perceived, and also influenced behaviour within that domain.

The market assemblages for Sigma's films are not influenced by DEMs alone. DEMs are a distributed calculative device that exists amongst other processes of entanglement and disentanglement, which enmesh and transform different actors within market networks. I find that DEMs rely on, and alter, the arrangement of other tools such as sales estimate sheets and recoupment charts, and together operate in many nested networks, like Russian dolls. Through compromise and hybridisation,

the relationships that DEMs as a market device create, serve to anchor it in market practice.

Negotiated framing dependent upon competition and maintenance

Market devices, “re-adjusted through the concept of agencement” (Callon *et al.*, 2007), are theorised as comprising the agenced material and social elements required to construct the market in line with a specific schedule. DEMs as a market device exist in an environment of contest and challenge. During every market assembly process, there are competing agencements constantly at work attempting to enrol actors into their own networks. Law’s (1987) view of this work as ‘heterogeneous engineering’ recognises that, in some cases, the successful associations and arrangement of one network builder, say obtaining and including data, can involve the breakdown and reconfiguration of others’ arrangements, and thus the process can be a zero sum game (Braun, 2013). On the other hand, there are situations where compromise can be achieved and incremental change gradually sedimenting new arrangements results. The very existence of repeated attempts to challenge Sigma and control DEMs, for instance by the established distribution companies of *You Instead* and *Perfect Sense*, indicates that DEMs are valued sufficiently to contribute to how multiple market network relations are conducted.

Examples of competing agencements elucidate the network relations involved in market construction, and highlight the various flexible combination of quantitative and qualitative evaluation capacities enacted via DEMs during a film’s life. The first, pilot self-distribution initiative, *Donkeys*, demonstrates a partially successful arrangement. Sigma released the film in cinemas supported by a social media marketing campaign. The technical management of temporarily assembled individuals such as the Digital Advisor and companies including Sigma, the NFF, the Digital Agency, PR Company, and Multiplex Cinema Chain was predicated on the association of DEMs with financial results through circulated material frameworks. Whilst Sigma did not consider that the full potential audience for the film had been engaged, a measurable community was created through interrelations between the film’s numerous digital marketing materials and the public. Unfortunately for Sigma, the apparatus for pricing potential DEMs in the DVD and VOD market had not been constructed. Thus the agencement for *Donkeys* was not fully realised, in that the

film's intended market path and anticipated corollary digital and financial success was not forthcoming. Certain obstacles to the market arrangement were overcome, such as the enrolment of finance, but not others. This misfire was attributed to the lack of lead-time for planning the digitally enabled self-release.

The agency of DEMs as a market actor stems from the anticipation and creation of digital connections amongst people and creative content. Similar to how individual metrics have an active, productive role in generating further engagements and greater networks of interaction (Gerlitz & Helmond, 2013; Kallinikos *et al.*, 2012), the company attachments facilitated by DEMs also have a snowballing effect. For *You Instead*, the initial combination of Sigma, the NFF and DEMs from early audience engagement, led on to a larger arrangement. This included the UKFF, Distributor A and two digital agencies. However, this arrangement was not the original self-distribution ideal pursued by Sigma, rather, a compromised joint-distribution effort resulting from a contest between traditional and new ways of organising a film release. The challenge, or competing agencement, to Sigma's DEMs-oriented vision for the film by Distributor A, points out the realisation of any new configuration is contingent on variety of arranged materials and actors. Economic ordering - the construction of markets - includes conflict between multiple agential configurations, each privileging a particular combination of calculative devices to perform their ideal version of the market (Kjellberg & Helgesson, 2007). For example, without signed contracts available at the crucial point in time, Sigma could not control the release exactly as it wished, and thus Distributor A retained the balance of power, even within a new and Sigma-initiated market arrangement.

Market performance is not a matter of simple selection between various courses of action, but a continuous mix of challenged approaches, in which some modes of qualification can "prevail in parallel" (Sjogren & Helgesson, 2007: 220). In this respect, DEMs as circulating, calculative devices can function as tools to address management tensions (Doganova & Eyquem-Renault, 2009). All of the actors involved in the marketization of *You Instead* and *Perfect Sense* assembled different, often overlapping agencements involving DEMs. Linking DEMs to sales contracts and investment decisions served an important coordinative function, even if not all market actors mobilised the same specific valuation of every DEM.

DEMS as a market device may be in the process of being fully established as part of the market apparatus, but were still sufficiently important to influence market relations. For instance, the distributor of *You Instead* dismissed the metrics related to the film's original website and created a new hub of audience activity, more valuable to them because they controlled it. They were either unwilling or unable to utilise the tools envisaged by Sigma, and so exerted their power to maintain much of the industry status quo by preventing the arrangements and associations Sigma sought to direct. The experimental nature of DEMs' interpretation for action made their market agencements susceptible to battles for control, different configurations of arranged materials and agencies have implications for relations between statements and their worlds (Callon *et al.*, 2007). I.E. the timing and degree of effective access to DEMs was understood to influence the market in certain ways, and partially determine the success or otherwise of companies' attempts to shape the market in a certain way.

The lack of stable cross-boundary DEMs-based practices, resulting from incomplete alignment of values and tension with the distributor's established ways of operating was cited by Sigma for *You Instead*'s underperformance. Difficulty in obtaining and influencing DEMs was seen as evidencing their importance, and so rather than the logic of their link to economic success being dismissed, it was strengthened by the competition. The potential of DEMs was held sacrosanct; the calculation that equates DEMs to financial performance remained unquestioned. This maintained understanding of activity fed back into further action determining the shape of future endeavours. For example, the incorporation of a company to start a film fund, FCC, and oversee DEMs from start to finish was partly motivated by the restricted data control Sigma experienced during the release of *You Instead*. Change and market development is expected in the manner by which market objects are singularised, for example via the significant work of proposing of new products through marketing tools (Finch *et al.*, 2015: 172), which in this case are DEMs.

Anchoring DEMs via intervention in new and hybrid material tools

Over time, and across increasing numbers of films, types of film evaluation and through a greater complexity of arrangements, DEMs become more deeply embedded in market activity. The role of DEMs in altering the means by which companies

operate moved earlier and earlier in a film's life cycle. From influencing the latter stages of a single film's distribution, to the creation of an entirely new company for originating films, DEMs' effects became increasingly dispersed and prominent. It is partially because digital engagement can be so well monitored, that action accountable by DEMs has increased. As Millo & MacKenzie (2007) indicate in respect to financial risk management, the legitimacy of valuation practices depends on factors being viewed as manageable, rather than simply measureable. In pursuit of financial returns, the film industry has continuously pursued the ideal of making audiences manageable. The case shows Sigma's continued pursuit of narrowing the knowledge gap between them and their audience. This activity is driven by the need to adopt the valuation metrics that other actors are able to use to build markets (Baym, 2013: 4), for instance distributors typically have access to DVD and VOD figures, but producers do not, and so use DEMs as proxies for their calculation of prospective performance.

The case shows that a greater intricacy of calculative frameworks has coincided with a more defined agency of DEMs, disseminated through a repeated set of materials. For example, the temporarily associated Digital Advisor, PR Company, Digital Agency and creative works affiliated with Sigma for the release of *Donkeys* constitutes a market network mobilised around a few key spreadsheets that associated DEMs with ticket purchases (Callon & Muniesa, 2005). For *You Instead*, the role of DEMs as a market device began much earlier. A larger, collective valuation system involved the hybridisation of established mechanisms such as recoupment charts, P&A plans and budgets, and deal memos. These linked a broader network of market actors. DEMs are implicated in each of these market materials. Through incremental change to existing tools, they subtly "reorganise the market in different ways" (Bessy & Chauvin, 2013: 83). DEMs' intervention influences the reallocation of film revenues, the type of work film companies undertake, and the relations they maintain with other market actors. DEMs also effect change by intervening more explicitly as a defined and recognised market actor, for example, in the sale of rights to *Perfect Sense* at Sundance in 2011. In this transaction, the US Talent Agency underlined the power of social media buzz in high profile market attachments, and foregrounded the new type of calculation involved in market construction.

DEMs' role as a market device relies greatly on their interweaving with the progressive complexity of market arrangements and the instantiation of new calculative practices, rather than on any particular final outcome. With *You Instead*, the distributor used the P&A budget and digital booking sheet to calculate the price of many thousand digital engagements, qualifying the film with many objective characteristics. Not all of these intended connections were achieved, nevertheless the notion that DEMs-based market assemblages could, and would, be advantageous was retained. For instance, Sigma viewed the successful UK release of *Starred Up* and the distributor's retention and aggregation of audience relationships established by DEMs, as evidence of how they themselves should operate. The addition of digital tools and their promises, implications for film market assembly, and mixed results have added both to the volume and technicality of the calculative practices involved in a film's life. But as Baym notes, there is "a significant distinction to be made between the availability of digital data and being willing or able to construct information systems to use the data" (2013: 7). The film industry is characterised by extreme uncertainty, and the "greater the uncertainty involved in making the valuation, the greater the need for widely used and credible judgment devices" (Aspers, 2013: 56). The field data shows that market actors construct links between data types, which become legitimised by the enrolment of partners, the achievement of consensus on shared evaluation systems, and the transactions based upon them (Millo & Mackenzie, 2007).

Despite DEMs such as social media metrics comprising only partial samples of audiences, connections are repeatedly made between general trends for the DEMs available, and a film's overarching financial returns. DEMs are one of a number of inaccurate, or partial models, such as sales estimates, which are shown to be useful in organising the market. This fits with De Vany's (2004: 258) position that when probabilistic rational action is impossible, "narrow static goals of prediction, optimization and control are replaced by concepts that recognize the importance of contingency, emergence, self-organisation, evolution, adaptation...network effects and flows" these are the "key drivers of the industry's organization and function". DEMs work to compose the market and to facilitate deals. They are not shown to be accurate predictors of events, but the credibility of digitally connected 'judgment devices' is being established through iterations of re-configured market agencements

involving DEMs involving multiple market actors. As De Vany (2004: 270) proposed, the management of a film is effectively “story telling about the project and its release”. The thesis shows how DEMs as a market device play a major role in this story.

DEMs’ agency is inscribed in the multiple market making materials that they infiltrate. Through pitch documents, financing applications and in-person meetings, contracts, suites of marketing and distribution plans and budgets, market participants are positioned to adopt DEMs into their own systems of evaluation. The granularity of quantitative calculation has proved key to DEMs’ market making capacities, including the hybridization of existing calculative frames. Because DEMs are non-exclusive, one actor’s consumption and reading of them does not prevent their use by another. They are easily made subject to multiple, specific calculations and connections. For instance, they are embedded in marketing budgets for the interpretation of digital agencies and distributors, as well as being mapped against theatre bookings for organising relations between producer and cinema chains.

The hybridisation of established evaluative frameworks by DEMs into new ‘temporary fixes’ (Braun, 2013) for the film business, recalls elements of Runde *et al.*’s (2009) understanding of the technological change in digital photography. There is neither sudden rupture nor seamless transition. DEMs alter traditional tools such as recoupment charts, contract negotiations and financing agreements, making them accommodate digital interventions, but no simple ‘digital switch over’ occurred. For example, the very technical manipulation of the market object through the negotiated distribution contract of *Citadel* defined the film according to half a percentage point in terms of the ownership of future revenues. The producer-distributor market tie was partly based upon the 5% distribution fee Sigma previously negotiated for *You Instead* and *Perfect Sense* in their recoupment charts. These building blocks for future economic transactions complement the retained belief in the power of DEMs, built into FCC and the other legacy arrangements.

By unpacking the interlinked elements of the assemblage of DEMs as a market device, I contribute, in a similar fashion to Onyas & Ryan (2015, 144), to Çalışkan & Callon’s (2010) call for analysis into the architecture, the composition, content, and

diffusion of market agencements. The location of this research in the rapidly evolving marketing and distribution arena of the film industry, where new practices are being trialled and learned, allows me to help answer the demand for knowledge about how specific tools and methods of marketing practice come to life (Jacobi *et al.*, 2015; Mason *et al.*, 2015). A key finding is the persistence of the organisational instrument despite a lack of demonstrable correlation between higher financial returns and increased DEMs. This points to the need for a closer look at the performativity of market organisation practices and the ontology of DEMs themselves.

The multifaceted performativity of DEMs

Understanding DEMs as a multifaceted device allows consideration of how DEMs repeatedly build up and deploy the resources necessary for a market to come to life in which they can take effect. They do so by enrolling multiple financiers, including the NFF, and simultaneously creating, connecting and making present the audience-as-market. A profitable conceptual analysis of this activity can be drawn in the area of market performativity, and this deepens our understanding of how markets are organised. Research in this field draws on the notion that economic and market theories and models, drive and constitute the economy with different degrees of agency and effectiveness, rather than simply reflecting or accounting for reality (MacKenzie 2006a; 2006b). Studies of market performativity consider the constructive effects of material devices, rules, ideas, technologies, techniques and relational practices in marketing or market making from this same perspective (Araujo & Kjellberg, 2009; Venter *et al.*, 2015). Investigating how the distributed agencies and materials enacting marketing theories contribute to assembling the market is a core pursuit. Performative action has been considered as a kind of effectuation, the act of bringing about (Muniesa, 2014: 9), and as models making the market in their own image.

The marketing theory or model I am concerned with is the previously outlined core ‘action logic’ (Barrey, 2007) that DEMs can be used to understand audiences and their willingness to buy the film. Market actors’ conceptions of DEMs in independent film contexts are based on popular conversation in the creative industries surrounding the predictive power of big data, which partially relies upon “uncritical faith in

numbers and hype about what those numbers can explain” (Baym, 2013: 5; boyd¹⁵ & Crawford, 2012). The relevant market knowledge in the case of DEMs is a very broad, undefined, but tightly and widely held belief that DEMs have a positive relationship with revenues. Understanding how this theory is instantiated in bundles of market practices in specific assemblages helps us to appreciate digital material’s role in the broader performative idiom.

The arguments and tools contained in the network of NFF, Sigma, marketers, creative content and calculative frameworks, which Sigma successfully translated as a solution to the problem of their financial stability in a digitally disrupted environment, became part of a repeated, normalised arrangement (Callon, 1991). The promise of DEMs’ future results helps to actualise the human-material market construction required for DEMs to be created and potentially take effect. DEMs thereby have a contributory performative role (Callon, 1986a; 2007), in which the theoretical underpinning of DEMs guides reality, becoming at least a co-constructor of market phenomena (Holm & Nielsen, 2007: 176).

There are two dominant kinds of performativity at work. The first is the creation of felicitous conditions such that the effects promised by DEMs’ marketing proposal may be brought to life (Mason *et al.*, 2015). Engaging with the case by considering the perlocutionary effects (Callon, 2010) of DEMs as a device allows us to see the behind-the-scenes agency of DEMs working on and offline to muster allies in an attempt to realise a desired world for each film. The second kind of performativity I consider, is the performance of DEMs as the audience, and thus as the market (Callon, 2010; Cluley & Brown, 2015). DEMs also demonstrate instances of generic performativity, in that their use contributes to practical results without being deterministic (MacKenzie, 2006b) marketing is only one influence amongst many in market construction. Effective performativity is also in evidence as Sigma’s use of DEMs differentiates them as an organisation from those companies not adopting DEMs-oriented approaches (MacKenzie, 2006b). However these weaker formulations of performativity, generic and effective, provide less detail on the dynamics and conditions in which marketing practice takes shape and takes hold. Therefore I

¹⁵ danah boyd’s name is intentionally spelt in lower case as intended by the author:
<http://www.danah.org/aboutme.html>

concentrate my attention on the performative work that brings DEMs as a device into being and that allow it to operate by performing the audience.

Creating felicitous conditions for an organisational instrument to mobilise

Recent research in marketing performativity has broadened scholars' focus from a concentration on whether theories are accurate descriptions of the world, or operate to change reality towards their representation (Kjellberg & Helgesson, 2006; 2007a). Latterly, studies have attended to how the promises made by such theories and models align market actors (Mason *et al.*, 2015). Whether dealing with the life of a brand, an advertisement, or a strategic application of a marketing technology, showing how the idea is translated to build allies, connect resources and materialise its own scenario, provides great insight to the reconfiguration of organisational arrangements (Cochoy, 2015; Jacobi *et al.*, 2015, Onyas & Ryan, 2015).

The statements aimed at creating a market world contained in the socio-material agencements posited by Callon and others, find purchase as actions for bringing about a possible future in which a model may reconfigure the market according to its own script (Butler, 2010; Jacobi *et al.*, 2015, Onyas & Ryan 2015). With each film, Sigma constructs DEMs as both evaluating, and being, consumers demanding the film. The temporarily stable conditions for DEMs to realise their goal of audience engagement and correlative revenues are put together through detailed processes of enrolment, attaching and coordinating multiple market "actors, objects and expectations" (Mason *et al.*, 2015: 6). The co-construction of shared beliefs in the potential insight of DEMs leads to buy-in by other market actors such as investors, which make markets possible. This contributes to the performative practice of producing conditions conducive for the generation of data, and connections into which a particular set of marketing knowledge or instructions are inscribed (Roscoe, 2015).

The understanding that potential audience members can be easily connected, collected, interacted with, and managed quantitatively underpins the value of DEMs. This value exists prior to DEMs being created for a particular project. The potential for audience connections to be created, managed and effectively made present via DEMs proved sufficient to attach market actors and leverage investment to bring numerous film projects to life. Both in anticipation and once created, the public

audience for a film is a networked market actor. As constituted by DEMs, the audience's network connections can be defined in detail and manipulated. This leads to DEMs' interventionist role in the make up of other tools that assemble the market for a film: contracts, release budgets and plans. The enrolment process for attaching investment based on the envisaged benefits of digital engagement was repeated for each film. This indicates the establishment of acceptance for DEMs as part of managing the release of a film, at least in the consideration of Sigma's repeat partners the NFF and UKFF.

The production company's maps for their world, which see DEMs as pathways to film sales are recognisably similar to models in performative readings of social studies of finance. Millo and MacKenzie describe such a tool as "a description of a given reality but [which] includes a prediction and is operated upon as a blueprint for action, it includes a constitutive (or performative) element" (2007: 5). There are parallels too with what Karpik (2011) designates as judgment devices, they are "guides for action" (in Aspers 2013: 55). DEMs are valuations that "sketch a plan, establish milestones and make explicit future activities" (Doganova & Karnoe, 2012: 16). Every film company seeks to make the market as they wish it to operate. Sigma's attempts met with competition from other market actors' attempts to employ DEMs, as well as challenges from versions of the market created on more traditional grounds. However when a negotiated position is realised, DEMs play a coordinative role by functioning as a boundary object (Bowker & Star, 1999). The distribution of calculation in the hybridised evaluative frameworks of recoupment charts and sales estimates impacted by DEMs is work that creates inter-subjective rationality and (re)-organises market encounters (Biggart & Beamish, 2003; Callon & Muniesa, 2005). Thus DEMs are not a mere instrument, applied by human agents, but compounds involving networked accounting, benchmarking and pricing procedures. They are jointly produced, but also exert agency of their own that helps to construct the market for independent film (Callon *et al.*, 2007).

As Alexander (2011: 477) notes, the "strength of a market depends upon narrative projections of future economic conditions" and the calculative and narrative elements of DEMs as a market device work hand in hand to do this. DEMs do not operate in isolation but rely on their mobilization within a network of market actors: "Audience

metrics... serve as proxies for size, engagement and affect, but can distort what they seem to measure. Constructions of audiences and approaches to data are guided by goals shaped by value systems” (Baym, 2013: 11). It is not just the digital connections materialised in specific formats for calculation that is important, but also, that the strategic goals of the NFF tell a story that can be exploited to bring particular market configurations to life.

I conclude that the repeatedly created network of market actors corralled by DEMs as an instrument to create fertile conditions for device enactment was a success. As Jacobi *et al.* (2015: 41) contend “marketing is performative when it intervenes in the construction of actions and agencies, or what (Callon 2008) calls agencements through a range of socio-material practices”. DEMs’ perlocutionary effects serve to enable market actors’ valuations and this collective enaction, even if materially dispersed, shapes market function to a degree. The idealised versions of the market suggested by DEMs’ intent are never fully rendered, the socio-technical agencements for each film are to an extent incomplete, they are partial misfires, yet DEMs still do ‘move things forward’ and contribute to new reconfigurations of the market (Callon, 2010; Mason *et al.*, 2015). At the heart of the device is the encapsulation of a public audience by DEMs. This brings us to the question of how such an encapsulation occurs? Such a question pulls into focus several ontological issues. The digital materials of which DEMs are composed are also the items they frame and calculate, for example a video, digital poster or music download are part of the overall film assemblage. The measurements that can be abstracted for valuation and market construction purposes (Jeacle & Carter, 2011) do not exist without the digital content, the individual(s) that engage with it, and the technology that connects them. Many DEMs are characterised by a widely disseminated nature and attributes of visibility and supposed transparency, which at least on the surface, makes actors believe they know what they are dealing with and characterise their original perceived value.

The role of a digitally performed audience on market reconfiguration

DEMs’ power to contribute to market construction is based on the way a network of market actors agree about, and thereby construct, DEMs’ value in relation to audiences. Turow & Draper (2014: 13) point out that media practitioners have long been understood from a social constructionist perspective to “fundamentally create

their audiences”. However, where, and how this construction takes place is important. In this section I explore the characteristics of digital materiality that lead the audience, and thus the market, to be understood as present via DEMs; the contribution to performativity of DEMs’ enactment in practice; the complexity of calculation that inculcates DEMs with multiple values; and how those values change in different situations over time.

DEMs’ agency is drawn from their capacity not just to represent market demand through audience engagement with creative content, but that they also constitute it. Participants’ actions help to perform DEMs as the network of consumers acting, and being acted upon. Individual actions such as holding a social media account and every single Twitter Follow or Facebook Like, can become transformed and translated by their digital existence into a composite. Some instances of evaluation are reliant on DEMs’ capacity to be transported and easily understood in diverse framing situations, for instance, through the circulation of manipulable aggregates. However, their underlying intelligibility and value stems from the characteristic of connectivity. As an example, consider the Facebook analytics screen used for *You Instead*, a few keystrokes provides direct communication to thousands of individuals whose totalled movements, even their anticipated movements, have significant bearing on market activity. *Perfect Sense* has thirty nine thousand Likers understood as sustained digital relationships that link the creator to audience. In the way that Knorr Cetina & Bruegger (2002) show graphical computer displays to be appresentational devices, both representing and making market actors present for interaction and meaningful transaction, DEMs management toolsets e.g. webpages and databases perform similar functions.

Conceiving DEMs’ agency in film market assembly through their performative attributes, can offer a means of re-considering “naive assumptions about the reality of market process and order” (Roscoe, 2015: 212). As market segments become accepted as representing social reality (Venter *et al.*, 2015), so too do DEMs establish their ontology. Through enactment in multiple market tools, online software, traditional budgeting and planning documents, and in emailed and live conversations, DEMs are realised as the audience and market. DEMs are produced by an interaction designed to shape consumption choice. Despite being, in most instances, without

acclaimed direct causal connection to purchases, DEMs are perceived as expressions of ‘awareness’ and ‘want to see’ leading to future revenues, forming a currency of sorts.

The terms – ‘awareness, want to see, buzz, audience, demand’ - are used interchangeably in practice. Although there are many labels and many sources of data, from social media, to blogs, to video players, the same inherent information is understood of them, they are market interest and potential paying customers. DEMs are thus typically translated, aligned or co-ordinated (Aspers, 2013: 19) into that interpretation, albeit with different influence depending on the particular stage of market configuration. DEMs as a market device share similarities with the pre-computation act suggested by Mallard’s exploration of the consumerist magazine device (2007). DEMs take hold of users prior to their engagement in the commercial act. They propose a choice long before the good is available, and even when it is, traditionally the proposition is made in a different physical space to the purchase (Mallard, 2007). For example, the digital marketing of a film begins years before its appearance in the cinema. Whilst the result of DEMs could well be “choose first, then (maybe) buy” i.e. “I might go to the cinema, but if I do go, I will definitely see film X”, the long-term goal of the application of DEMs is to narrow and condense these time-frames and situations, rather than separate them out (Mallard, 2007: 156).

Following Hacking’s (1999) proposal that classifications create previously non-existent categories of people, Venter *et al.*’s (2015) contention that market segmentation creates a corresponding social reality provides a helpful reference for understanding DEMs’ performativity. The external consumer does exist but is imagined or realised in a specific manner by engagement with the market device in order to arrange the market for a particular agency (Muniesa, 2014). As a result, marketing technologies are responsible alongside the consumer for the co-creation of the audience-as-market. Individuals are attracted through creative materials to render themselves into clusters of data traces, which produces the market in such a way that it can be valued to enable future transactions through disassembly and re-aggregation (Cluley & Brown, 2015). Thus the configuration of a given market is contingent partly on the control of the equipment that achieved such rendering. This leads to competition between market actors looking to, for instance, attach DEMs to their

networks and realise a version of the market. I now consider the kinds of qualification at play in the empirical data.

Due to DEMs, the alienation of film into the form of property to be transacted now involves more detailed decisions, associations and entanglements that effect the object's evaluation. The object being sold is not just a certain set of rights to the exploitation of audiovisual data, but also access to its existing set of connections with potential audience members. This access is qualitatively and materially different to any other property previously accounted for in film industry activities, and requires a new and different device to coordinate the market accordingly. The retention of access to these connections and the corresponding data by the seller is a point of negotiation and frames the limits of the transaction (Callon & Muniesa, 2005).

Although the core meaning of DEMs may lack finesse, it is drawn from an understanding of DEMs as expressions about the emotion and affect of users. These connections function as a metrological interpretation to approximate the market for a film, and in so doing facilitate action which realises DEMs as the market through performance. The value of DEMs changes depending on the point of view of a particular set of evaluating actors, and the period in time at which they are assessed. As DEMs are potentially always changing and often public facing (unlike a script or budget, which become 'locked'), the configuration of DEMs as a market device is constantly in flux and requires maintenance. As an abstract currency, a Like six months before release, and a Like one week before release when considered as part of an aggregated total, mean different things. The nature of the film product becomes more 'known', or at least more complex, as more materials and network components are added over time. At a very early stage in the life of a film, DEMs were taken to indicate awareness by 'active' fans rather than typical consumers, because advertising had not begun. The fans are particularly valuable because they are deemed to be audiences who will influence others by sharing digital content and thereby further increase demand. High, early DEMs are viewed as reducing consumer demand uncertainty and therefore, in combination with other elements attached to the film, are part of a rarer proposition, deemed to be more attractive to a sales agent or distributor. In contrast, a matter of weeks before a film's theatrical release, it is much more common for high DEMs to be present, therefore the weight assigned to them for

market attachment purchase decisions by consumers is lower. However, as a market device for distributors to gauge demand, and thereby manage their marketing and distribution budgets, DEMs' importance greatly increases towards the opening weekend as the pertinence of previous calculative frames subside.

Perfect Sense provides an illustration of the complexity involved in the construction of value for different DEMs, and how this influences the way Sigma runs their business. At the time of release, the film had 1,299 Facebook Likes, which was much lower than anticipated. Digital advertising focused on increasing these figures, with the underlying aims being spreading awareness and legitimising the film as buzz-worthy in the public eye. The value attributed to such DEMs at this point in time was high, because the cinematic release is typically the most important moment in the life of a film. Despite learning the importance of lag time in digital media campaigns and therefore starting work early, the team did not achieve sufficient control of operations from the distributor, nor enrol significant audiences to feel they had succeeded. The film presently has almost 40,000 Likes. However these 39,310 connections to Facebook account holders cannot now be converted into cinema ticket purchases, nor fulfil a valorisation function amongst social networks and improve the perceived chances of financial success. This supports Gerlitz & Helmond's (2013) view that in the web and "Like economy", personal interpretation features greatly in the transfiguration of data for multiple purposes. The authors cite Thrift (2008) in noting a "Like is always more than a number on the Like counter, or more than representational. Its value lies both in the present and in the future, in the 'plus one' it adds to the Like counter and the number of potential more Likes, comments, shares or other responses it might generate" (Gerlitz & Helmond, 2013: 1358). The performative aspects of DEMs' market presentation share such a promissory aspect.

The difference in importance assigned to Facebook data by Sigma at different times is not to say DEMs become increasingly meaningless, but their applicability, and thus value changes depending on other relations, potential or actual. Digital connections retain value because of the specific configuration of the market in which they were created and the intended buyer. The importance of the intent for the market object is explained by Lèpinay (2007: 262): the "final good, be it an industrial good meant to be part of another cycle of bundling, or a consumer good meant to disappear – gives

value to the components” for example, “without cars, no value could be attributed to rear view mirrors”. So when one considers the difference between a final finished film ready to be shown to cinemagoers, and a set of intellectual property rights aimed at the distributor market, it is understandable that the meanings of DEMs in their contribution to marketization may differ. As Sigma was a co-distributor of *Perfect Sense* and set up its social marketing accounts, these relationships are still accessible and can be mobilised for enrolling audiences into the life of their future films via FCC. Thus there is a longevity value to these DEMs as well.

DEMs differ from previously studied digital marketing phenomena and add to our knowledge due to the multiplicity of connections that they retain. They have productive value when aggregated because of the manipulability and flexible attachment to calculative frameworks of different market actors, partially because they still retain links to potential ticket purchasers. Unlike the conceptualisation of ‘dividualised’ consumers (Cluley & Brown, 2015), the fixed individual remains. In many materialisations of DEMs there is no discontinuity between individuals and their totals, moving between the two via Facebook analytics is extremely quick, potential consumers are directly accessible through Internet profile interaction (Latour, 2011c). This leads to a common understanding that all DEMs, in essence exist like this, thus the audience and market is continually made present. By understanding DEMs as a market device, an ongoing accomplishment of the market through human and material conversation, and by adopting a performativity lens, I contribute to the literature by addressing both how markets are made and how marketing processes are performed in practice (Venter *et al.*, 2015).

Implications of digital material’s ontology

Making a film’s potential audience present, calculable and tradable as a qualified property of that film is facilitated by the capacities of digital material. Digitisation makes audiences, however constructed, measurable, thereby turning them “into suitable objects in and for industry practices” (Ang, 1991: 86). The ontological work which, through quantification helps to construct DEMs as the audience, and thus, the market, is dependent upon the simultaneous creation and digital materialisation of network links (amongst individuals and content) (Ekbia, 2009: 2564). This process of creation occurs in “simultaneously evaluative, calculative spaces” (Cluley & Brown,

2015:119) where participation equates to data production. The spreadable nature of digital media, i.e. its costless ease of sharing and the public valorisation of such activity, means audiences can be rapidly created and exponentially increased (Jenkins *et al.*, 2013). Audiences then become part of films as measured objects. DEMs qualify the film as one of its many properties which frame it for valuation and economic transfer. As a result, DEMs become anchored as a device similar to those technologies examined in the social studies of finance, such as telephones, and fibre optic cables, that make the “market present and visible” by their performative action (Roscoe, 2015: 204). Often through computer screens showing DEMs in analytics software, shared spreadsheets or bespoke rankings, the audience, and thus the market, is made present. As DEMs change so visibly and are understood as both complex and real, the dynamic nature of markets as continuously unfolding ‘epistemic objects’ is emphasised (Entwistle & Slater, 2013: 13).

DEMs do not exist without the individual consumer but they also create and operationalize the audience-as-market. As Cluley & Brown put it in their study of dividualisation, “for practical purposes, all of us become at that moment [of evaluated action] packets of data” as there is “no meaningful distinction between the consuming subject and the mask through which they are represented in marketing practice” (2015: 119), the mask in this case being co-created by the wearer through the creation of DEMs. Conceptualising digitally mediated reconfiguration of the independent film business through the performative work of DEMs enhances our knowledge of how market devices shape practice. Cluley & Brown (2015: 119) recognise the “colossal data patterns that people leave in the form of cookie trails, Facebook profiles, tags on social media, Twitter feeds, customer profitability computations”, “Preferences, values and ‘likes’ ”, as attached to marketing strategies and thus constituting spaces of entanglement and attachment. Conceptualising DEMs as a market device helps to explain how creative industries markets can be understood without appeals to overarching second level constructs such as the rational actor model or a pre-existing framework of ‘the cultural’.

Market Studies of the Creative Industries

In the literature of market studies, ANT and the performativity programme, the creative industries appear infrequently. However, Entwistle & Slater (2013: 2) point out that there is good reason to trace the assemblage of cultural and creative goods, to apply ANT-inspired theoretical approaches in order that productions are examined as distributed accomplishments, rather than ascribed to overarching signifying structures. Examples of creative industries' assemblages: the fashion model's look (Entwistle & Slater, 2013), online television distribution workarounds (Braun, 2013), and the 'connected viewing' initiative for digital home entertainment (Vonderau, 2013) articulate how agency is dispersed and value is negotiated. The calculative agencies that hold the independent film market together have not received similar or sufficient attention. Their crucial role in maintaining and mobilizing the market has perhaps gone unnoticed due to the extended stability of previous, existing framing practices. The disruption of digital technology has pushed new calculations into the spotlight, prompting the need for deeper understanding of market composition, and I have addressed this gap in the literature. The interdependence of digital materiality, performativity and calculative networks that constitute DEMs' reshaping of the independent film industry would not be visible without the market devices lens. As a result, this investigation contributes to the research call to explore, describe and analyse the dynamic agencements that proliferate in the "constitution and calculation of tradable values" (Caliskan & Callon, 2010: 8). The thesis also speaks to other research fields attending to the creative industries. Film is cited as a paradigmatic case of modern valuation in the burgeoning field of valuation studies which combines elements of both STS and marketing (Helgesson & Muniesa, 2013).

This section proceeds by contextualizing thesis insights in terms of understanding the market role of digital, socio-material relations. This socio-technical approach demonstrates a more detailed articulation of market construction in film, one which is not captured by the dominant, FVC reading of the industry. Similar fields have been approached from related theoretical standpoints. Muniesa (2014: 32) cites studies engaging with creative industries as indicating appropriate ground for analysing the "provoked economy". Some trace media objects and their mediated, performed nature (Lash & Lury, 2007), but view the processes as linear, as opposed to involving parallel actions (Venter *et al.*, 2015). Others identify constructive practices as

embedded in some greater context (Negus 2002). McFall (2004) adopts Callon *et al.* (2002) to characterise advertising as a material, sociotechnical device. Gullede *et al.* (2014) bring both Callonistic calculation and Bourdieu's notion of habitus to bear on a market device in publishing. The authors adopt concepts of capital to account for the learned capacities of tacitly appreciating artistic work. Whilst nuanced judgments of creative worth are crucial in assembling the market for each feature film, in this research I focus on the calculative role of DEMs. I find the interactively produced visible and hidden metrics contribute to new models of distribution noted as consequential for frames of valuation that go beyond traditional marketing (Styhre, 2013: 97) and feedback into approaches to future production. Although some similar aspects of metrics have been evidenced in the music industry, for example Baym on metric visibility: "displaying the number of hits a site received 'became a valuable self-advertising tool'" (2013: 3), film has remained relatively untouched from this perspective.

Identifying differences in the configurations of film market arrangements driven by DEMs extends our understanding of socio-technical materiality. The multiple market making activities captured by DEMs reflect Leonardi's proposition that "perceptions of affordance lead people to change their routines" (2011: 147). Sigma's multifaceted configuration of DEMs as a means to conduct marketing and distribution, illustrates how the specific overlapping and interweaving of socio-material elements produce the way people, companies and networks operate. The case analysis contributes further evidence of the gradual interlocking between human and material agencies conceptualised as *imbrication* (Leonardi, 2011), and adds to the literature providing socio-technical histories of evolved, rather than designed, market arrangements (MacKenzie & Pardo-Guerra, 2014).

This study's distinctive contribution to scholarship on market devices in the creative industries foregrounds how networks of digital connections linking people (potential audience members) to creative content (videos, pictures, films), are aggregated in DEMs and enable key evaluative and calculative work that spans boundaries between companies, thus facilitating economic action. The extended apparatus of interconnected arrangements assembled by DEMs as a market device, show themselves to be, in the terms of Entwistle and Slater (2013: 13) "spatio-temporally

dispersed events.” They are part of a moving assemblage in which actors and action are both present. These characteristics of DEMs’ operation fit with Callon and Law’s (2005: 718) understanding that “it takes material and social effort to produce spatial practices appropriate to calculation”. This combined effort is what Poon (2007: 301) in the case of consumer scorecards, reads in terms of performativity as a place of “articulation between theory and circumstances, between statistical practices and data” requiring constant active rearrangement or adjustment. DEMs play a new market organisation role by conducting such mobile calculation.

Market actors often understand processes of change via new market devices in relation to previously constructed market concepts. In the case of independent film, despite the plethora of tools that mediate interaction between market actors to produce transactions, the career of a film is considered according to the FVC. As McFall (2009a) notes, when dealing with material practice, distinctions between various forms of phenomena are much less clear than between their proposed abstractions. Therefore market participants’ understanding of new market devices in terms of hybrids or contraventions of the historically dominant abstraction is expected. Whilst DEMs’ do instantiate new methods and force the adaption of some conventional practices, this is not a sudden switch to a completely new way of doing things. I find that the process of market construction is not a linear, stepwise plan of action, rather it is a continuous, dynamic, unstable and emergent pattern of activity. Current arrangements are negotiated, involve numerous material and human actors and are more contested than the static input-output measures the FVC representation implies. It is in the instances of valuation across borders that most market shaping occurs. The reconfigured market construction processes created by DEMs deserve to be conceptualized in positive terms (Gaut 2010b), rather than in negations of the FVC.

Characterising the disrupted film industry in terms of DEMs as a market device, also addresses some problems identified in ANT’s compatibility with the study of media and the cultural (Couldry, 2008: 11; Entwistle & Slater, 2013). Though not the focus of this study, attention to market arrangements’ emergent establishment and maintenance foregrounds the temporal dimension of assemblage. Recognition of the productive role of competing agencements in the organisation of markets brings the

concept of power to bear. Both power and time are aspects of market organisation previously acknowledged as missing from ANT explanations of media related fields.

The thesis also shows how the cultural is critical to empirical reality of market operations. Culture is not a macrostructure or a text, nor simply an inadequate explanation for the economic, which is how Entwistle and Slater see Callon's position (2013). Rather, the cultural is a material assemblage continually being re-created and maintained. Explanations focusing on market devices operate without reliance on overarching, pre-existing market structures or forces into which a phenomenon must be embedded (Latour, 2011c), such as a FVC or statistical correlations from which to extrapolate possible future audience behaviours (DeVany, 2004). There are no appeals to separate, discontinuous levels that prompt us towards market explanations based on second level contexts like 'the economy' or 'society'. This aspect of the theoretical approach is emphasized by digital data. Latour (2011c: 803-804) contends that digital tools' progression towards being able to chart data from individual records to their aggregates and back again, reduces the temptation to grant aggregates an independent existence. Without hard separations between levels of interpretation, 'culture', 'society' or 'economy' can be avoided as structural referents for explaining phenomena, and the focus can be on assemblage. In such frames, the network of associations behind what might appear neutral and mathematical market calculations can be explored (Poon, 2007).

Practical Applications

Understanding of the performative elements of DEMs as market devices, and interpreting the film business from this interrelated assemblage perspective, instead of through an overlain presupposed chain of activity or ascription of market forces, develops a more pragmatic view of the world. For instance, policy and operational decisions by film investment funds may be informed by deeper insight into how market actors construct value and transact as a result of the expected exponential proliferation of DEMs. As Logan Mulvey, senior VP of digital distribution at Alchemy, a distributor, points out in a quote from the 2015 Cannes Film Festival, the fabric of economic transaction is rapidly becoming predicated on ever more complex arrangements of DEMs:

“there’s a lot of new access to data and analytics, even over the last year, that’s changing the way distributors are evaluating movies and sales agents are selling movies.” Even with only limited reporting of ancillary revenue available, buyers can still analyse an onslaught of data from disparate sources — everything from info on select titles in Rentrak’s Dynamic Studio Share system, to analytics from platforms like YouTube and Vine, to social media numbers. *“We’d say ‘Well, (an actor) has 400,000 Instagram followers, and we think we can convert 3% of them to buy the movie on iTunes, so this is worth X amount.’ It’s looking at social/digital presence and digital data Rentrak collects on certain stars’ titles to make a judgment call”* (Goldstein, 2015)

The excerpt refers to multiple sources of DEMs, including Rentrak, a film analytics service, as well as relatively new social media sources such as Vine and Instagram. How such data is taken into account as properties of the films for sale, and the corresponding calculations formulated in order to generate a purchase price for certain rights, are increasingly important elements of the market making process. It is vital for managers to recognise that knowledge concerning this reading of the market is just as constructed as the FVC. A broader understanding by film professionals of the inherently subjective and performative dimension to their market knowledge could develop a more nuanced awareness of the political nature of action. For instance, the investments by NFF involve choices that deprive one applicant in favour of another, and a reading of the market that rejects value neutrality and looks to appreciate constructions, rather than identify facts and probabilities, could make those political decisions more informed.

Limitations of the study

The limitations of this research stem from both analytical and empirical matters, and whilst these features are imperfections of the study, they also point the way for future work. I first address criticisms of the market devices literature, including both the explanatory value of the theoretical concepts and its attendant methodologies. I then reflect upon the process of knowledge production and the specifics of my research

process. The final set of acknowledgements regarding what this study does not capture leads to plans for building on this research.

There are several critiques of the literature on market devices. They can be summarised as problems with a proliferation of terminology, a charge of a lack of focus and hence reduced explanatory power (McFall, 2009a). A profusion of neologisms over the course of literature can be seen as troublesome. For instance, the multiplicity of elements (humans, tools, equipment, devices) that are variously defined as: actors, as agencements, as objects, as devices and as agencies in varying contexts can lead to confusion (Callon, 1999; MacKenzie, 2009). Analytic terms also proliferate, for instance ‘qualculation’ (Callon & Law, 2005) can be taken as a typical example of the theory’s expansionist taxonomy of concepts. These developments make valuable contributions to theory, for instance driving more accommodating versions of calculation in scholarly debate (Cochoy 2002; Caliskan & Callon, 2010), but terms are often abandoned, even by their originators, and this begets a sprawl that can be inferred to indicate a lack of rigour. In this production of concepts there also appear to be circular, or at least unproductive definitions. For example: markets are the arrangements configured during a marketization process (Caliskan & Callon, 2010), or market practices are the “activities that contribute to constitute markets” (Kjellberg & Helgesson, 2007: 141). The notion of marketization is criticised too as simply a new name for the well-documented analysis of the social construction of markets. Caliskan & Callon (2010, 4) respond by stating previous social constructivist work has not accounted for either the specificity of market arrangements, or sufficiently foregrounded material and technical dimensions. Considering these arguments I conclude the potential redundancy of some terms does not discount the existence of insightful research regarding how markets are constructed, and the value of examining the specific assemblages responsible (Helgesson & Muniesa, 2013).

Critics have also queried the empirical content of market studies, labelling its pursuits “banal descriptions of processes and objects of limited interest” (McFall, 2009a: 274). Fine (2003) criticises Callon for his failure to move beyond description to explanation. Callon’s process of singularisation is assessed as allowing such fragmentation that all markets are unique, and therefore the theory betrays a lack of

generalisability or an uninteresting universality as a result (Fine, 2003). This diversity of inputs to agencements has been viewed as unbounded and meaningless in respect of its explanatory power. I.E. in the literature's attempts to chart all contributions to the assemblage, it fails to account for any one with sufficient clarity, and few findings or forecasts are made for a delimited context (McFall, 2009a; 2015). Such a criticism is drawn from the concentration of certain authors, notably Callon, to attend too greatly to agencement as a philosophical construct, at the expense of its practical application. The prominence given to materiality in the literature has also been challenged, with attention to market models and tools deemed to be mistaking the representation of economic life for practice (Holm, 2007).

Most defences emphasise the value of specificity. Hardie & MacKenzie (2007) argue that to avoid banal description and weak explanatory power, research should selectively focus on how configurations of agencements affect economic action and constitute often ignored economic infrastructure. Being surgical in choosing the aspects of markets to analyse and in the use of terminology, leads to a strong research approach. These choices can be made explicit, and enable the researcher to examine a particular question. Yet the answers and insights produced for a given market can have wider implications, even if not set up as a representative case for a larger population (Aspers *et al.*, 2013; Helgesson & Muniesa 2013). As Yin (1989) illustrates, learning from the Cuban Missile Crisis is not just about dealing with missile embargos, and is not extendable to all US-Cuban relations, but can prove useful in thinking about issues of evaluation and uncertainty in other areas. Tracing the emergence of important issues in a single instance can indicate paradigmatic exemplars: "histories of market devices make visible forms of cultural work that shape broader economic structures" (MacKenzie & Pardo-Guerra, 2014: 156). I adopt this argument to defend the validity and value of my thesis. The research is a specific case, oriented toward a defined area of economic and creative concern, and analysed with a selective conceptual toolkit focussed on calculation and performativity. From this exploration that leads to findings of market device assemblage, broader understanding about digital materiality and the performative organisation of creative industries is generated.

Uncovering configurations of agencements is especially valuable in areas where new markets are coming into being and existing conceptions of market organisation provide limited understanding. These are exactly the circumstances of the film industry following the digital revolution in music and publishing industries. This environment gave reason for my timely examination of DEMs. I have addressed DEMs from the market devices perspective, and shown them to be an increasingly important element of how this particular area of economic life is shaped by socio-cultural-technical practice. The research contributes to the literature examining the intersection of materiality, value and culture (McFall, 2015). In its most extensive claims, notably Entwistle and Slater's reassembly of the cultural (2013) such literature is criticised for amongst other things, ignoring the work of political economy and cultural studies (Oakley & O'Connor, 2015). However despite disputes over the political nature of such grand projects, the role of empirically grounded research in understanding the production of culture is retained as valuable, although debates over the ontological realm or totalisation of 'culture' are ongoing.

Undertaking research from the perspective that knowledge is constructed, and that the phenomena I study are constructed, prompts what Roscoe (2015: 212) calls recognition of the "self-fulfilling aspect" of a researcher's analysis. This is part of a critical reflection on the knowledge production process. Here I take 'being critical' in one of Muneisa's (2014: 130) readings, as consideration of the truth we hold from all angles, and addressing the "the connections and contradictions that govern our thought." This means appreciating that arguments made from my position and derived from my observation and analysis of consequential relations (Venter *et al.*, 2015) are performative. They too are constructs referring to temporary and contingent market making practices. Whilst appreciating that my view is contingent, and extremely fragile if presumed to be an outside view from on high (Onyas & Ryan, 2015: 146), I contend mine also offers new insight for understanding the activities of technology and knowledge implementation that help to re-organise this market (Jacobi *et al.*, 2015). The new understanding presented in this thesis, whilst specialised with regard to DEMs, has implications for wider studies of market performativity and assemblage, and for investigations of DEMs in other creative fields.

As well as the research being filtered by my personal reading of events, there are practical limitations to what evidence can be uncovered. The subject of research is only visible by tracing that which is typically hidden, and to which access is traditionally rare. This necessarily places some boundaries on what can be accounted for with requisite depth. Not every meeting, document iteration or conversation can be captured and thus the agencements constructed only cover part of the films' lives. Full descriptions of the networks involved in the market for each film were beyond the scope of my access. The empirical limitations of the study can be summarised as the focus on a single company, with a few films, not all of which were charted for exactly the same period of time. However, the value and validity of the findings is not drawn from a simple kind of generalizability. Adopting the theoretical framework of the market devices literature impacts the type of findings that are possible. Wholesale conclusions on the importance of particular variables' application to a wider population of cases are not being presented, rather I intend that useful findings for other areas can be read from the detailed tracing of the agencements. Inductive approaches to observational data provide exploratory findings (Beunza & Garard, 2007).

It is also important to address issues of bias in the research process. Interpretations of the case films are informed by my own experience of the industry and therefore have certain embedded biases (Riege, 2003). I am aware that, given my interest in digital metrics there was a risk I could have been motivated to foreground that issue, inflating its importance and ignoring DEMs' relations to other activity. I took measures to mitigate this risk. These included observation and recording an extremely large amount of filmmaking activity as it occurred, without pressuring a digital agenda or repeatedly raising the topic in an official interview style. Rather, I gathered all the available data that was possible to collect and allowed the role of DEMs to emerge through iterative analysis. As a result, the empirical material presented in the thesis is only a small proportion of that which was collated, thus I present only a piece of market practice selected as relevant to the subject, but one hewn from a larger source. The knowledge generated through my research is inevitably a construct, however this interpretation does not include attempts to manipulate the phenomenon of interest in the empirical setting (Dyer & Wilkins, 1991). The research process did

not privilege one device above another, indeed DEMs can only come to be known in relation to other aspects of market networks.

The research takes local realities seriously and recognises the importance of interactivity in the research methods employed. The researcher's closeness to the constraints of everyday life as experienced by practitioners, also puts a certain limitation on the data (Denzin & Lincoln, 2000). Due to my position as a participant observer embedded with Sigma via the NFF, my view reflects privileged access to data from some market actors above others. One might question the wider relevance of findings from such an evidence base. A further degree of access to all potential and actual buyers and sellers of the films would have given me the ability to address questions of the relative importance of DEMs to different market actors. As it stands, I am informed by the use of DEMs by a production company intending to realise the market for their films in the way most advantageous to them. Wider context is provided through document analysis and participant observation at the NFF, but general theory or broad predictions of economic outcomes are not the intended result of studying this social device for economic action (Berkert, 1996). In providing a constructivist account I am not claiming to provide the single truth of the matter, but aiming to provide a particular and insightful understanding (Sandberg, 2005). Other researchers might not have found the same results from the same data. Indeed it is unlikely that other researchers would have constructed exact replica cases from the same information. So it is important to acknowledge the conditional nature of the research produced (Atkinson and Delamont, 2005) and the indivisibility of the mutually dependent researcher and subject (Easton, 1995). The research site is not solely a part of the empirical world, but is shaped by the theoretical interests of the researcher, data are pieces of recorded activity that are selected for theoretical reasons (Ahrens & Chapman, 2006).

This is a mid range research study. I do not develop a brand new theory or merely apply aspects of others' work. Research should be judged on the basis of theoretical position in which it is entrenched, but also initiate in the reader an appreciation that empirical reality is being engaged and reflected upon. Nevertheless, I also seek to avoid a potential tautology of analytic validity, which assesses research as valid simply if the researcher looks at phenomena according to the rules he or she chose at

the outset of their research (Silverman, 2009). Instead, the criteria for quality research of this kind includes elements of dialogic validity (Saukko, 2005), which asks are the truths of observed events, personal acknowledgement of the researcher's own convictions, and an understanding of multiple interpretations all reflected? I believe this is the case. Whilst findings are contingent to the case, there are learnings about DEMs, about digital market devices, and about the organisation and management of creative industries that provide broader insight.

The argument produced has been made robust through a number of strategies. A variety of types of data, from a diversity of case components have been collected and compared. The data was interrogated for anomalies and, as a result the confidence in the findings can be increased (Sandberg, 2005). I have contemplated rival explanations for understanding the empirical data, most closely, the FVC concept, and concluded that my reading offers a greater, added insight. In reflecting on alternative interpretations of the case material, I considered the risk that introducing other interpretations of DEMs concentrate too narrowly on attempting to account for films' successes and failures. Many unpredictable factors combine and contribute to a film's popularity, its total levels of DEMs, and its Box Office returns. *Under the Skin* and *Starred Up* were released by large distribution companies, enjoyed greater budgets and involved star talent (Scarlett Johansson, Jack O'Connell) and one might be drawn into debating that DEMs are relatively meaningless in determining success. These issues are not the purpose of the study, rather, what is at stake, is understanding the role of DEMs the assemblage of human and material actors constructing the market for films (accurate predictors of revenues or not).

As well as limitations of the research process and site, it is also important to recognise the limits of the subject being studied. Unlike examples of other market devices research, DEMs are not a brand new product in and of themselves. They do not create an entirely new marketplace, as say Holm and Nielsen's Individual Transferable Quotas (2007), or intervene to completely alter the way a market operates akin to the dominance of consumer credit scores studied by Poon (2007). DEMs are much less broad in their impact, but nevertheless are particularly important in that they become part of the market object as well as functioning as a market device. They elaborate and alter the market construction of an existing creative good rather than generating a

new one. I studied DEMs during a period of trial and test, with a great amount of activity compressed into a relatively short time period. Such is the nature of digital development that pilot phases of new devices often fly by, unlike histories that account for decades of development of other kinds of device.

The role of DEMs has gradually become more formalised over time and across numerous projects, but is far from complete or rigidly set. The empirical material of the thesis does not quite provide a clean cut off point – time and circumstance are not so kind. A longer timeframe, greater numbers of companies and films may detail whether DEMs as a market device is a long-lived success for FCC, spreads widely, rapidly and is more concretely established, or sinks into the background as DEMs are overtaken (Poon, 2007). I argue the role of DEMs has been established sufficiently to have had a definite industrial impact. It may develop in new ways and thereby further prove the value in examining this field through the lens of the market device.

Future Work

By examining the role of DEMs I foreground the importance of market devices in the independent film business, and the benefits of considering the industry as a whole through this lens. Further research could both chart DEMs' future development and reconceptualise the management of the independent film business according to its most powerful market devices. Several core constructs that organise companies, talent, materials and resources to perform the industry should be examined with similar rigour. Investigations should include the finance plan, recoupment chart and Inter Party Agreement alongside DEMs and the sales estimate sheet, and thereby more clearly examine the industry in its dynamic and contested form.

As data becomes richer, and as film development, production, marketing and distribution tools become increasingly integrated thanks to standardised digital data formats, market devices will become more sophisticated. Further research could take a broadened approach to study the assemblage of DEMs in multiple cases across diverse territorial markets including Japan and the USA. As the rate of technological adoption increases, following the application of DEMs as a device, may point to smoother, more widely adopted patterns of calculative practice, for example for guiding investment decision making. Technological development provides great

opportunity for study. Just as the examination of physical sheets of formulae through to the infrastructure of high frequency trading allows for progressive investigation of the socio-material into the digital realm of social studies of finance, so too does change illuminate elements of the creative industries. In particular the adoption of digital tools into publicly funded fine arts institutions provides scope for both comparative studies of device adoption and investigation of more political dimensions of data use. However, the thesis also has implications beyond management and organisation studies. As digital material permeates throughout creative industries and sociological enquiry, the methodologies and theoretical concepts with a grip on these phenomena can aid other disciplines.

By following key devices we may be able to bridge between developing areas of research in management like valuation studies (Kjellberg & Mallard, 2013; Helgesson & Muniesa, 2013) and fields including Internet studies (Dutton, 2013) and social media, with particular in relation to distribution studies (Braun, 2015) and the media industry (Vonderau, 2014). For instance, in a directly relevant area, criticisms of film theory and film philosophy for characterising the audience as non-material, unlike the material film text, may be addressed by adopting a market devices indebted perspective to the computational, industry turn (Verhoeven, 2012). The role of distribution infrastructures such as Facebook as performative spaces for active audiences can have an important impact on peoples' sense of community belonging and civic responsibility (Braun 2015, 2). One prism to examine this arena would be through interaction with social issue documentary films and the campaigns which surround them. The concatenation of political and economic exchanges constructed in a digital social-material network, imbued with valuation frameworks such as DEMs can be a rich source of enquiry.

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Appendix A. Selection of thematic analysis case notes

This small selection of field materials and iterative research documents show how original film documents, of which there were many hundreds were annotated (A.1) and arranged according to initial codes by case and device (A.2). These sets of data were then iteratively reallocated into tables analysing the case sub unit examples by theme and in relation to new or established frameworks (A.3). Eventually the case study comprised a wealth of data theoretically coded by theme and arranged by empirical case characteristics (A.4) in order to be written into case study drafts.

A.1

Wireframe → *Pass + Perceptions* → *Link, Ang* → *Set 30*
Am, LEE → *some Pass PR sponsor. Broom*
Tin Pils & DF + Tink's Expense → *Set 30*
and then maybe Kevin

You Instead PR Schedule
a/o 14th January

DATE	ACTIVITY	DETAIL	STATUS
JANUARY			
14 th	Agree ideas & working partnerships	With Sigma and digital marketing agency	Done. Online project sharing kicked off.
	Hashtag campaign agreed	Input from all agencies	→ <i>Link Design = MACE</i>
17 th	DFC/ Material meeting	Agree guidelines, reporting and approval structure	
19 th	GFF launch	Attend launch, initial interviews with Gillian. Provide stills & synopsis for publicity.	
20 th	Campaign themes agreed	Meeting between Wire & Central Station	Set for 6pm
ASAP	Set up Stickybits/ QR codes	Decide on best app for campaign	
	Key brand/ PR meetings to be set up	Tangerine Fields, Tiso, Hunter, Apple, Urban Outfitters, HMV, Office, Citylink, Cineworld. Looking for prize incentives & contra deals	
27 th	Social networking launches	CAMPAIGN ONE	
	Press materials	Initial press materials written using production notes. News stories for trade & for film reviewers covering GFF	
FEBRUARY			
	First QR code ad to run in Skinny Magazine	Film focus on the Glasgow Film Festival. Guerrilla ad with hashtag and QR code featuring the You Instead song	
	Hashtag / QR campaign	In cinemas, selected legal fypost sites, stickering across Glasgow, use direct distribution for key locations across the country	
	Invite key journalists to premiere	Key editors/ ambassadors invited to premiere. Work with GFF film PR to manage photography distro etc.	
10-20	Berlin Film Festival	One national journalist to accompany Sigma to Berlin for a piece focusing on Sigma.	

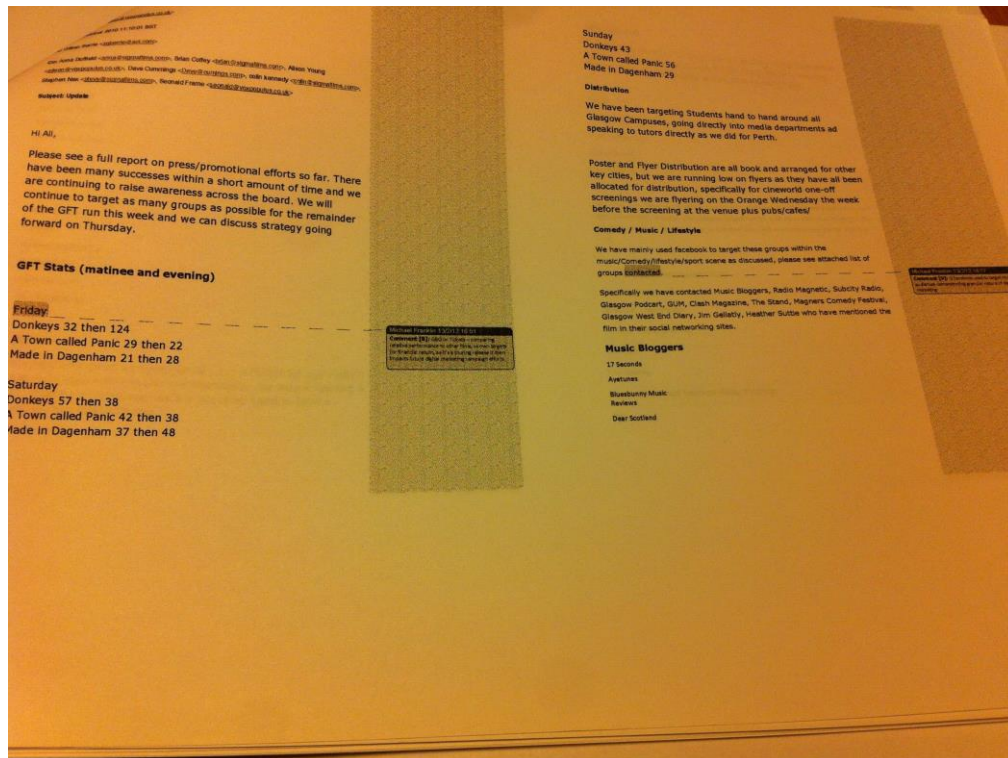
ts / data for a You Instead UKFC additional funding proposal. You
 you able to define some key questions? So that when we head off
 e're generating a useful set of information.

s campaign to play with, and can fairly easily establish reach /
 opolate to give worst case / best case scenarios re. reach by the

ories we need to tell?

Comment: Social media analytics as market
 devices, how do people talk about them?
 Used to generate investment, predict
 audience engagement and indirectly manage
 audience demand uncertainty.

A.1 continued



A.2

PK

Indic film set

Investment: for products to be made

Bygone days - vintage software

Products were made then = Product. Now

Questions of Transition to digital - what 10, what 20, what 30

Transition to digital - what 10, what 20, what 30

Agony + go - what 10, what 20, what 30

YI

Crashes - Beams down

Combination /

Crash / Crash

w/ Crash MDs too!

PS, C/S, FEE

D - what fit into 1/2 of

Recovering PDS YI, PS, →

Change work, analysis

PK

Indic film set

Investment: for products to be made

Bygone days - vintage software

Products were made then = Product. Now

Questions of Transition to digital - what 10, what 20, what 30

Transition to digital - what 10, what 20, what 30

Agony + go - what 10, what 20, what 30

YI

Crashes - Beams down

Combination /

Crash / Crash

w/ Crash MDs too!

PS, C/S, FEE

D - what fit into 1/2 of

Recovering PDS YI, PS, →

Change work, analysis

PK

Indic film set

Investment: for products to be made

Bygone days - vintage software

Products were made then = Product. Now

Questions of Transition to digital - what 10, what 20, what 30

Transition to digital - what 10, what 20, what 30

Agony + go - what 10, what 20, what 30

YI

Crashes - Beams down

Combination /

Crash / Crash

w/ Crash MDs too!

PS, C/S, FEE

D - what fit into 1/2 of

Recovering PDS YI, PS, →

Change work, analysis

PK

Indic film set

Investment: for products to be made

Bygone days - vintage software

Products were made then = Product. Now

Questions of Transition to digital - what 10, what 20, what 30

Transition to digital - what 10, what 20, what 30

Agony + go - what 10, what 20, what 30

YI

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Combination /

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PS, C/S, FEE

D - what fit into 1/2 of

Recovering PDS YI, PS, →

Change work, analysis

P. + feedback 2
to the cog ref writing

Redrafting toolset July 2014

Chapter 1. Intro

I will show this by

There are different types of evaluative framework that already exist and interact, just existing approaches do not shed light on these - instead focusing on other interpretations

I concentrate to understanding field

And extending these literatures

Thanks to studying a market as a critical point of change/transition

Arrangements negotiated, interdependent

When first talk about conflicting value systems - explain this will recur, break down into interest and systems

Chapter 4. Donkeys

What do we have?

- Enrolment - promise of digital engagement theory - early performance
- DEMs as device bring a certain type of economic activity into being?

How

- By framing - associating social and financial data together, impacting creative work, enabling calculation which determines organisation of companies
- Materialisation is important to circulation, calculation.

Performativity

Calculative Framing

Supervisors' Notes

Theory

Find that about

- p 94 hybridisation
- p 98 approximation device
- p 99 digital materiality
- p 100 interment
- p 101 Facebook valorising ratio
- p 102 all diff metrics = equivalences how/why table constructed - framing
- p 107 top performativity
- p 103/4 - creating an agreement
- p 104 networks within networks
- p 104 Calculative spaces; different strategies in different areas - DEMs

Summary intro to finance plan

Theoretical interrelationship

- Indirect quote para 10
- Consider, being ANT of it, whether MD DEMs = success
- Cut para 10 conclusion

In all cases - diversify how I use and integrate quotes - follow each quote

Give 1-2 sentences on detail of DEMs each time

Chapter 5. You Instead

DEMs in more materials, interwoven by more diff actors: not as much a reconfiguration of sig as that

p 117 intro much simpler - put explanation into core

"at a team meeting Sigma emphasised, endorsed"

p 129 - sales sets as calculative spaces - need to have clear use in terms of interaction with DEMs

spread

106 Performativity as assemblage - sphere in common agreement - not yet abandoned

107 Cut para, add ability

get Louise from BEM Clarity

Categories, attach/detach in calc space - refs to other award winning films

Can't back translate to cash when show on other foot - partial agreement/ framing

110 - Whole page redo

enrolment of materials - ANT - network

p 111 failure of enrolment of UKFC

lack of problematisation, translation, interment, locked metrics - materials matter, were not able to produce evaluations

What is in here not in other chapters, relative weight of figs?

Theory

p 121 Praise DEMs at centre

p 122 specify new type of audience agency

p 122 material / legal linkages of enrolment interment - elaborate on types of data

p 123 top - competing agreements - explain more inc - rivals quotes

p 123 middle - demo as material of conservation of enrolment - totally

Fig 158 comparison of types of eval frameworks, comp titles vs sales sets overlapping and interrelated

p 8 227 buzz earlier, + So what on PR Co-building block - maintains on DEMs

P5 - cut para on intro to DEMs and Film festival role in market

Comparable titles in sales - repeats similar framework for reworking Donkeys BO performance

Elaborate on role of PR co-metrics and assembly

P161 explain more specific 1-2 sentences e.g.s

165 - explain relationships with success of film and marketing

Citadel, FCC

Intro films individually + fact that all come together to make point - chronology, say evidence coming thru yrs

Legacy 5% important

Spread to portfolio model

Need explanation of v film specific content

Reconfigure to demo establishment of DEMs

161 explain more up front as before dropping the quote

165 joint access and control to DEMs - imp in building network around demo, joint evaluation of resource

162 - actually middle section about agency of DEMs and need for constant reinforcement of MD

163 - specific detailed unpacking of the data - [actually always introduce that there is more data coming next]

164 - explain earlier about causal gap - then theorise it in terms of construction - digital materiality - gap, so MD must be performed!!!

165 - how DEMs are given agency by actors in / configuration of the network

Tensions in power - network of DEMs

Citadel, FCC

Explain everything, evidence everything, every point + para!!

Idea for thematic analysis:

- Same in each, building?
- Up front statement that to move/lessen degrees evidence of each found in every case, but concentrate on few elements?

Chapter 6: Perfect Sense, Citadel, FCC

Perfect Sense:

performed - not empirically driven, explain terms and connections more

p 123/4 unpack

124 bottom - explain granularity - digital materiality - type of calculation performed, then how network of materials instructions viewpoints, tech combine to perform market - configure in particular way

125 - non aligned value - make sure explained earlier, recall, but link to theory joining = translation, enrolment

125 ESTABLISHED MARKET ACCEMENT = MGS

126 top - 400k - eval, valorise, qualitative, objective market object

127 explain social material more

127/8 para - change to non agent/subject language - more to ANT

139 - agency production of K and logic

Enrolment again a major theme

Are there ANT deadwords - context, levels, joined up?

141 decide on use of agreement

p 149 'prevailing agency' probably no, but point out difference in assemblages established by summarising diff in configuration

Theory

SLATER BUZZ ENT

Fig 158 comparison of types of eval frameworks, comp titles vs sales sets overlapping and interrelated

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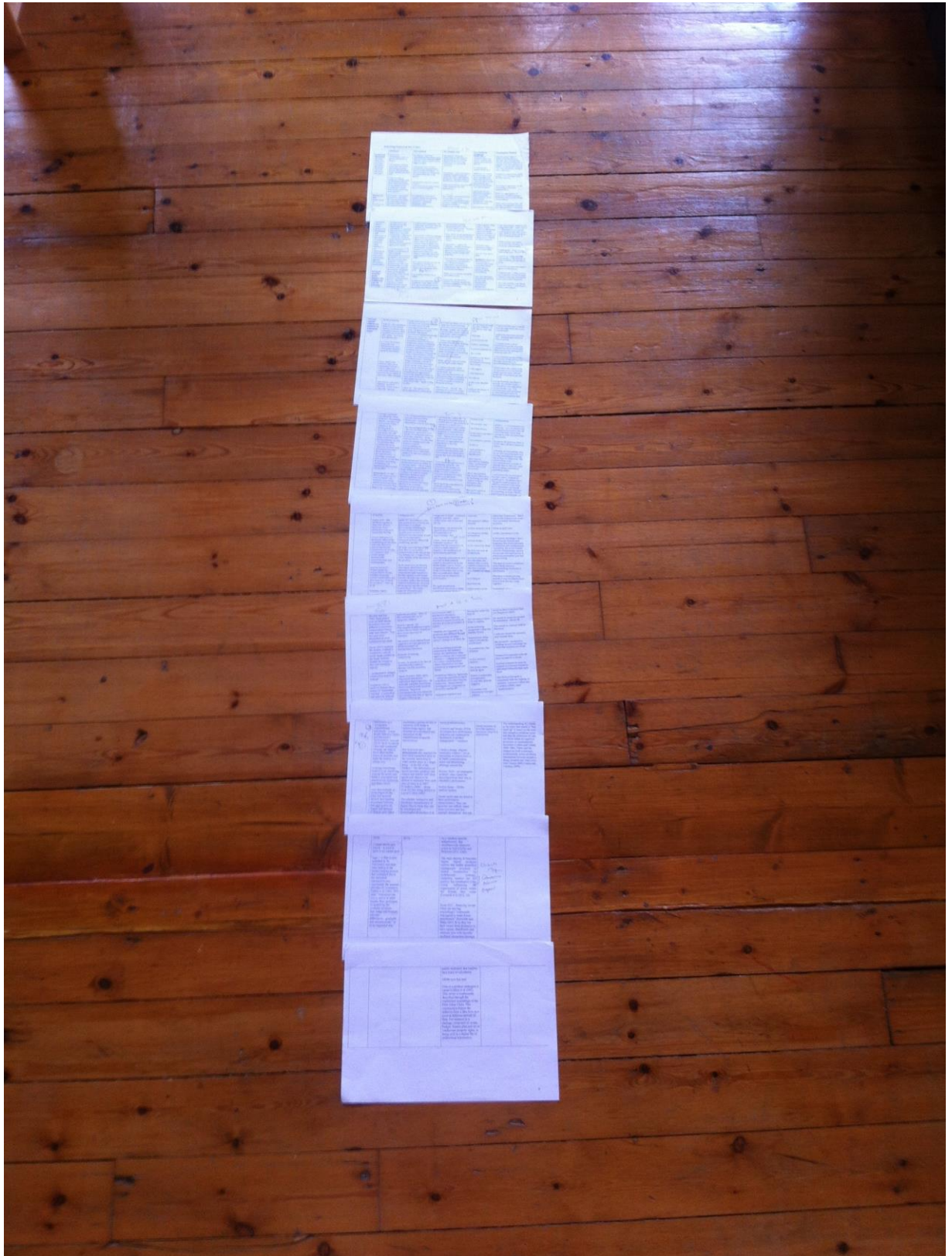
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p 149 'prevailing agency' probably no, but point out difference in assemblages established by summarising diff in configuration

Theory

SLATER BUZZ ENT

A.4



Appendix B. Research Ethics Documents



PARTICIPANT INFORMATION SHEET

Dear Participant,

Thank you for agreeing to participate in this research project. This sheet provides information detailing the aims and processes of the study and outlines your role and rights as a participant. Please read this alongside the *Participant Consent Form for Observations* and the *Participant Consent Form for Interviews* that give a greater breakdown of the protection of your rights to privacy, anonymity and confidentiality.

The Research Project: What is this Study About?

This research project aims at developing the knowledge and understanding of practitioners' conception and management of uncertainty in independent film businesses with reference to new digital technologies and their associated business models. This study is being conducted as part of my, Michael Franklin's PhD Thesis in the School of Management. It is facilitated in part by a Knowledge Transfer Project at Creative Scotland.

The study focuses on a selection of case study films, analysing at each stage of the lifecycle of the film the tacit and explicit identification, evaluation, assessment, communication and management of uncertainty. In particular the investigation assesses the impact of new digital technologies on the marketing and distribution of the films and the correlative development of new strategies for dealing with inherent uncertainty involved in their creation and exploitation.

By examining production company planning and action, relations with other entities in the film value chain and ultimate results, conventions and changes to conventional

behaviour in response to uncertainty are explored at the individual, company and industry levels.

Improved understanding of the management of uncertainty, in all its component parts, can enable improved recoupment for producers allowing them to make gains toward sustainability. It can also enable improved return on investment for financiers engendering greater economic and cultural returns thus influencing public funding policy.

Participant Involvement and the Research Process:

Do I have to take part and what would I be required to do?

This information sheet has been written to help you decide if you would like to take part. It is up to you and you alone whether or not to take part. If you do decide to take part you will be free to withdraw at any time without providing a reason.

As a participant your involvement will consist of allowing your involvement in meetings to be observed as per the *Participant Consent Form For Observations*, allowing your input to decision processes to be noted and possibly the provision of an interview as per the *Participant Consent Form For Interviews*.

Generally research will consist of observing meetings and decision processes, analysing company documents and public materials, assessing results and conducting informal conversational, semi-structured interviews. Observational notes, in conjunction with analysis of these various data will form case study reports on the film(s) and the businesses.

Anonymity, Privacy & Confidentiality

Will my participation be Anonymous and Confidential?

Participant participation can be made anonymous and confidential at the participant's request. Only the researcher and supervisor will have access to the data, which will be kept strictly confidential. Participant permission may be sought in the Participant Consent form for the data you provide. Should the participant request personal

anonymity and/or that of their company in the write-up and any publication of the final study as well as in any future publication, care will be taken to ensure contextual information that may indicate identities indirectly will be removed as far as possible in addition to direct signifiers.

Storage and Destruction of Data Collected

All research data will be collected ensuring the participant's privacy, be kept fully confidential, and protected from unauthorised access, accidental loss or destruction. It will only be seen by the researcher and supervisor (details below) and will be destroyed following the completion of the researcher's Ph.D. Program (ensuring the primary material is available to be checked). The researcher's Knowledge Transfer Project contract with Creative Scotland contractually demands all reasonable endeavours to protect confidentiality and this extends to proper precautions in the protection of data.

Output: What will happen to the results of the research study?

This research forms part of the researcher's doctoral studies at the University of St Andrews School of Management. The output of the research is intended to include the doctoral dissertation and conference papers and journal articles.

Rewards

No rewards are offered to the research participants.

Withdrawal

Please remember that your participation is voluntary and that you are free to withdraw from the study at any time without explanation. Should you do so all data relating to you will be destroyed.

Questions

If you have any questions at any time, please do not hesitate to contact me. You will have the opportunity to ask any questions in relation to this project before giving completing a Consent Form.

Consent and Approval

This research proposal has been scrutinised and been granted Ethical Approval through the University ethical approval process.

What should I do if I have concerns about this study?

A full outline of the procedures governed by the University Teaching and Research Ethical Committee is available at [://www.st-andrews.ac.uk/utrec/complaints/](http://www.st-andrews.ac.uk/utrec/complaints/)

Contact Details

Researcher: Michael Franklin
Contact Details: School of Management
University of St Andrews
The Gateway, North Haugh
St Andrews, Fife, KY165 9SS
T: 07921 471 513
E: mcbf@st-andrews.ac.uk

Supervisor: Professor Barbara Townley (Supervisor)
Contact Details: School of Management
University of St Andrews
The Gateway, North Haugh
St Andrews, Fife, KY16 9SS
T: 01334 461974
E: bt11@st-andrews.ac.uk



PARTICIPANT CONSENT FORM FOR OBSERVATION

Project Title

New models in managing uncertainty: digital tools for marketing and distributing independent Scottish films.

Contacts

Michael Franklin
(Researcher)
School of Management
University of St Andrews
The Gateway, North Haugh
St Andrews, Fife, KY16 9SS
T: 07921 471 513
E: mcbf@st-andrews.ac.uk

Professor Barbara Townley
(Supervisor)
School of Management
University of St Andrews
The Gateway, North Haugh
St Andrews, Fife, KY16 9SS
T: 01334 461974
E: bt11@st-andrews.ac.uk

The University of St Andrews attaches high priority to the ethical conduct of research. We therefore ask you to consider the following points before signing this form. Your signature confirms that you are happy to participate in the study.

- I have read and understood the *Participation Information Sheet*. ☐ Yes ☐ No
- I have been given the opportunity to ask questions about the study. ☐ Yes ☐ No
- I have had my questions answered satisfactorily. ☐ Yes ☐ No
- I understand that I can withdraw from the study at any time without having to give an explanation and related data will be destroyed. ☐ Yes ☐ No
- I agree to being identified in observational notes and any subsequent publications or use. ☐ Yes ☐ No
- I agree to my words being quoted ☐ Yes ☐ No
- I agree to my words being quoted provided that they are anonymised ☐ Yes ☐ No
- I understand I am able to request notes on quotes by myself for use in the research case study at any time and at no cost. ☐ Yes ☐ No
- I understand that my data, for the purposes outlined on the Participant Information Sheet, will not be anonymous (unless I request anonymity), but will be kept confidential and only the researcher(s) and supervisor will have access ☐ Yes ☐ No
- I understand that my data will be stored until the completion of the researcher's Ph.D. Program. ☐ Yes ☐ No
- I have been made fully aware of the potential risks associated with this research and am satisfied with the information provided. ☐ Yes ☐ No
- I agree to take part in the study ☐ Yes ☐ No

Consent

The purpose of this form is to ensure that you are willing to take part in this study and to let you understand what it entails. Signing this form does not commit you to anything you do not wish to do and you are free to withdraw at any stage.

Material gathered during this research will be treated as confidential and securely stored using password protected computers until the completion of

the researcher's Ph.D. Program. Observations will be documented in comments/notes and condensed into case study form. Elements of the case study relevant to the Participant are available free of charge on request.

Please answer each statement concerning the collection and use of the research data.

Participation in this research is completely voluntary and your consent is required before you can participate in this research. If you decide at a later date that data should be destroyed we will honour your request in writing.

Name in Block

Capitals

Signature

**Company /
Organisation**

Position

Date



30 March 2011
Michael Franklin
School of Management

Ethics Reference No:	MN7380
<i>Please quote this ref on all correspondence</i>	
Project Title:	New models in managing uncertainty: digital tools for marketing and distributing independent Scottish films.
Researchers Name(s):	Michael Franklin
Supervisor(s):	Professor Barbara Townley

Thank you for submitting your application which was considered by the School of Management's Ethics Committee. The following documents were reviewed:

- | | |
|---------------------------------------------|---------------|
| 1. Ethical Application Form | 24 March 2011 |
| 2. Participant Consent Form for Interview | 24 March 2011 |
| 3. Participant Consent form for Observation | 24 March 2011 |
| 4. Participant Information Sheet | 24 March 2011 |

The University Teaching and Research Ethics Committee (UTREC) approves this study from an ethical point of view. Please note that where approval is given by a School Ethics Committee that committee is part of UTREC and is delegated to act for UTREC.

Approval is given for three years. Projects, which have not commenced within two years of original approval, must be re-submitted to your School Ethics Committee.

You must inform your School Ethics Committee when the research has been completed. If you are unable to complete your research within the 3 three year validation period, you will be required to write to your School Ethics Committee and to UTREC (where approval was given by UTREC) to request an extension or you will need to re-apply.

Any serious adverse events or significant change which occurs in connection with this study and/or which may alter its ethical consideration, must be reported immediately to the School Ethics Committee, and an Ethical Amendment Form submitted where appropriate.

Approval is given on the understanding that the 'Guidelines for Ethical Research Practice' (<http://www.st-andrews.ac.uk/media/UTRECguidelines%20Feb%2008.pdf>) are adhered to.

Yours sincerely



Convenor of the School Ethics Committee

cc Shona Deigman
Professor Barbara Townley